

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 type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: UNKNOWN OTH		5. Lease Serial No. NMNM26105
2. Name of Operator CIMAREX ENERGY COMPANY		6. If Indian, Allottee or Tribe Name
Contact: CRISTEN BURDELL E-Mail: cburdell@cimarex.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 202 S. CHEYENNE AVE STE 1000 TULSA, OK 74103	3b. Phone No. (include area code) Ph: 918-560-7038	8. Well Name and No. LIBERTY 24 FEDERAL COM 1 SWD
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 24 T25S R26E 1650FNL 1200FWL		9. API Well No. 30-015-33094
		10. Field and Pool, or Exploratory COTTONWOOD DRAW; UPPERPEN
		11. County or Parish, and State EDDY COUNTY COUNTY, NM

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 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.)

H2S gas analysis for facility as requested

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 18 2015

RECEIVED

OCD 12/21/15
Accepted for record
NMOCD

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #273859 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
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By <u>James R. Bous</u>	Title <u>SAET</u>
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 <u>AFD</u>
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 ****

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:	33512
Region:	PERMIAN BASIN	Account Manager:	WAYNE PETERSON (575) 910-9389
Area:	CARLSBAD, NM	Sample #:	575020
Lease/Platform:	LIBERTY '24' FEDERAL COM	Analysis ID #:	113363
Entity (or well #):	1 SWD	Analysis Cost:	\$90.00
Formation:	MORROW		
Sample Point:	SWD TANK SAMPLE LINE		

Summary		Analysis of Sample 575020 @ 75 F					
		Anions		mg/l		meq/l	
Sampling Date:	10/05/11	Chloride:		83786.0		2363.3	
Analysis Date:	10/17/11	Bicarbonate:		61.0		1.	
Analyst:	SANDRA GOMEZ	Carbonate:		0.0		0.	
TDS (mg/l or g/m3):	137244.9	Sulfate:		510.0		10.62	
Density (g/cm3, tonne/m3):	1.098	Phosphate:					
Anion/Cation Ratio:	1	Borate:					
		Silicate:					
Carbon Dioxide:	170 PPM	Hydrogen Sulfide:				89 PPM	
Oxygen:		pH at time of sampling:				6.5	
Comments:		pH at time of analysis:					
		pH used in Calculation:				6.5	
		Cations		mg/l		meq/l	
		Sodium:		42585.9		1852.38	
		Magnesium:		1488.0		122.41	
		Calcium:		7275.0		363.02	
		Strontium:		849.0		19.38	
		Barium:		9.0		0.13	
		Iron:		16.0		0.58	
		Potassium:		664.0		16.98	
		Aluminum:					
		Chromium:					
		Copper:					
		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 ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.20	0.00	-0.49	0.00	-0.50	0.00	0.32	122.68	1.45	4.60	0.13
100	0	-0.11	0.00	-0.55	0.00	-0.49	0.00	0.30	117.46	1.26	4.60	0.17
120	0	-0.03	0.00	-0.59	0.00	-0.45	0.00	0.30	115.93	1.10	4.60	0.2
140	0	0.06	0.61	-0.62	0.00	-0.39	0.00	0.30	117.16	0.96	4.29	0.24

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.