

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

FORM APPROVED  
OMB No 1004-0135  
Expires July 31, 1996

Lease Serial No.

**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.*

NM-4314

6. If Indian, Allottee or Tribe Name

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

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Cimarex Energy Co. of Colorado

3a. Address

PO Box 140907; Irving, TX 75014-0907

3b. Phone No (include area code)

972-401-3111

4. Location of Well (Footage, Sec, T, R, M, or Survey Description)

660 FNL & 1650 FEL

5-19S-34E

Unit B

8. Well Name and No.

Pipeline B 5 Federal No. 1

9. API Well No

30-025-38043

10. Field and Pool, or Exploratory Area

E-K; Bone Spring

11. County or Parish, State

Lea County, NM

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

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent

☐ Acidize

☐ Deepen

☐ Production (Start/Resume)

☐ Water Shut-Off

☐ Subsequent Report

☐ Alter Casing

☐ Fracture Treat

☐ Reclamation

☐ Well Integrity

☐ Final Abandonment Notice

☐ Casing Repair

☐ New Construction

☐ Recomplete

☐ Other

☐ Change Plans

☐ Plug and Abandon

☐ Temporarily Abandon

☐ Convert to Injection

☐ Plug Back

☒ Water Disposal

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included 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 Co. of Colorado respectfully requests approval for disposal of produced water from the Pipeline B 5 Federal No. 1 per the attached Water Production and Disposal information.

RECEIVED

AUG 12 2008

HOBBS OCD

APPROVED

AUG 9 2008

JAMES A. AMOS  
SUPERVISOR-EPS

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

Name (Printed/Typed)

Natalie Krueger

Signature

Natalie Krueger

Title

Regulatory Analyst

Date

July 22, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Date

Office

Title 18 U.S.C. Section 1001, makes 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 reverse)

Analytical Laboratory Report for:  
**CIMAREX ENERGY COMPANY**



**Chemical Services**

Account Representative:  
Hanson, Lavell

## Production Water Analysis

Listed below please find water analysis report from: Pipeline B5 Fed., #1

Lab Test No: 2008126551      Sample Date: 07/01/2008  
Specific Gravity: 1.114

TDS: 174914  
pH: 7.00

Cations:	mg/L	as:
Calcium	669	(Ca <sup>++</sup> )
Magnesium	135	(Mg <sup>++</sup> )
Sodium	59900	(Na <sup>+</sup> )
Iron	23.30	(Fe <sup>++</sup> )
Potassium	1470.0	(K <sup>+</sup> )
Barium	0.79	(Ba <sup>++</sup> )
Strontium	261.00	(Sr <sup>++</sup> )
Manganese	0.20	(Mn <sup>++</sup> )
Anions:	mg/L	as:
Bicarbonate	305	(HCO <sub>3</sub> <sup>-</sup> )
Sulfate	1150	(SO <sub>4</sub> <sup>=</sup> )
Chloride	111000	(Cl <sup>-</sup> )
Gases:		
Carbon Dioxide	180	(CO <sub>2</sub> )
Hydrogen Sulfide	0	(H <sub>2</sub> S)

**DownHole SAT™ Scale Prediction**  
**@ 100 deg. F**



**Chemical Services**

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO <sub>3</sub> )	1.37	.145
Aragonite (CaCO <sub>3</sub> )	1.16	.0748
Witherite (BaCO <sub>3</sub> )	< 0.001	-79.13
Strontianite (SrCO <sub>3</sub> )	.394	-1.2
Magnesite (MgCO <sub>3</sub> )	.384	-.717
Anhydrite (CaSO <sub>4</sub> )	.0937	-2847
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	.106	-2940
Barite (BaSO <sub>4</sub> )	1.4	.386
Celestite (SrSO <sub>4</sub> )	.451	-361.69
Fluorite (CaF <sub>2</sub> )	0	-28.09
Calcium phosphate	0	>-0.001
Hydroxyapatite	0	-984.97
Silica (SiO <sub>2</sub> )	0	-119.68
Brucite (Mg(OH) <sub>2</sub> )	< 0.001	-2.45
Magnesium silicate	0	-312.99
Iron hydroxide (Fe(OH) <sub>3</sub> )	76.09	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	0	>-0.001
Siderite (FeCO <sub>3</sub> )	38.02	.599
Halite (NaCl)	.127	-312177
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	< 0.001	-242036

**Interpretation of DHSat Results:**

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e. a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

***WATER PRODUCTION & DISPOSAL INFORMATION***

In order to process your disposal request, the following information must be completed:

1. Name(s) of all formation(s) producing water on this lease.  
E-K; Bone Spring
2. Amount of water produced from all formations in barrels per day.  
2.4 bpd
3. Attach a current water analysis of produced water from all zones showing at least the total dissolved solids, pH, and the concentrations of chlorides and sulfates.
4. How water is stored on the lease.  
1 300 bbl fiberglass tank
5. How water is moved to the disposal facility.  
Trucked
6. Identify the disposal facility by:
  - A. Facility Operator's Name: Ruthco Oil, LLC
  - B. Name of facility or well name and number: Hobbs East S A No. 104
  - C. Type of facility or well (WDW, WIW), etc.: SWD
  - D. Location by  $\frac{1}{4}$   $\frac{1}{4}$ , Section, Township, and Range: SWNW 30-18S-39E
7. Attach a copy of the state-issued permit for the Disposal Facility.

Submit to this office (**414 West Taylor; Hobbs, NM 88240**) the above-required information on a sundry notice 3160-5. Submit 1 original and 5 copies within the required time frame. This form may be used as an attachment to the sundry notice. Call me at 505-393-3612 if you need to further discuss this matter.

*Encl. 12/1/68*  
*A.P.*

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 3844  
Order No. R-3500

APPLICATION OF RICE ENGINEERING  
& OPERATING, INC., FOR SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 21, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 12th day of September, 1968, the Commission,  
a quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Rice Engineering & Operating, Inc.,  
is the owner and operator of the Hobbs East San Andres SWD Well  
No. F-30 (formerly the Humble Oil & Refining Company S. E. Cain  
Well No. 1), located in Unit F of Section 30, Township 18 South,  
Range 39 East, NMPM, Hobbs East San Andres Pool, Lea County,  
New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Queen, San Andres, and  
Glorieta formations in the perforated intervals at approximately  
3808-3834, 3962-3992, 5248-5261, and 5980-6054 feet.

(4) That the injection should be accomplished through 2 1/2-  
inch plastic-lined tubing; that the casing-tubing annulus should  
be filled with an inert fluid; and that a pressure gauge should  
be attached to the annulus or the annulus left open at the surface  
in order to determine leakage in the tubing or casing.

-2-

CASE No. 3844  
Order No. R-3500

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Rice Engineering & Operating, Inc., is hereby authorized to utilize its Hobbs East San Andres SWD Well No. F-30 (formerly the Humble Oil & Refining Company S. E. Cain Well No. 1), located in Unit F of Section 30, Township 18 South, Range 39 East, NMPM, Hobbs East San Andres Pool, Lea County, New Mexico, to dispose of produced salt water into the Queen, San Andres, and Glorieta formations, injection to be through 2 1/2-inch tubing into the perforated intervals from approximately 3962-3992, 5248-5261, and 5980-6064 feet;

PROVIDED HOWEVER, that prior to said utilization, the applicant shall cause the perforated interval from 3808 feet to 3834 feet in the subject well to be squeezed with a minimum of 75 sacks of cement and the 4-inch liner set at 6480 feet to be perforated above 5200 feet and additional cementing of said liner effected to ensure the annular space is cemented from said liner shoe back into the 5 1/2-inch casing set at 4464 feet;

PROVIDED FURTHER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or casing.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUSTON A. BARR, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/