

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)

1650 FSL & 1980 FWL
5-19S-34E

Unit K

8. Well Name and No

Pipeline B 5 Federal No. 2

9 API Well No

30-025-38044

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

☐ Subsequent Report

☐ Final Abandonment Notice

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☒ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other

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. 2 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

Title

Regulatory Analyst

Date

July 22, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

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 FEDERAL, #2

Lab Test No: 2007152973 Sample Date: 11/08/2007
Specific Gravity: 1.101

TDS: 153688
pH: 7.10

Cations:	mg/L	as:
Calcium	1588	(Ca ⁺⁺)
Magnesium	377	(Mg ⁺⁺)
Sodium	50351	(Na ⁺)
Iron	11.07	(Fe ⁺⁺)
Potassium	1691.2	(K ⁺)
Barium	0.51	(Ba ⁺⁺)
Strontium	121.12	(Sr ⁺⁺)
Manganese	0.63	(Mn ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	549	(HCO ₃ ⁻)
Sulfate	1600	(SO ₄ ⁼)
Chloride	97400	(Cl ⁻)
Gases:		
Carbon Dioxide	170	(CO ₂)
Hydrogen Sulfide	17	(H ₂ S)

CIMAREX ENERGY COMPANY Lab Test No: 2007152973

DownHole SAT™ Scale Prediction
@ 100 deg. F



Chemical Services

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO ₃)	5.88	.314
Aragonite (CaCO ₃)	4.98	.302
Witherite (BaCO ₃)	< 0.001	-26.93
Strontianite (SrCO ₃)	.388	-.864
Magnesite (MgCO ₃)	1.86	.147
Anhydrite (CaSO ₄)	.266	-635.16
Gypsum (CaSO ₄ *2H ₂ O)	.311	-600.65
Barite (BaSO ₄)	1.27	.0647
Celestite (SrSO ₄)	.294	-144.1
Silica (SiO ₂)	0	-43.65
Brucite (Mg(OH) ₂)	< 0.001	-.556
Magnesium silicate	0	-112.25
Siderite (FeCO ₃)	37.79	.425
Halite (NaCl)	.0894	-123013
Thenardite (Na ₂ SO ₄)	< 0.001	-83327
Iron sulfide (FeS)	54.44	.894

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.
10.7 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.
1 535.79 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.

Entered September 12, 1968
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.

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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 D. HARRIS, Member

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

S E A L

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