

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 | | 5. Lease Serial No NMNM14124 |
| 2. Name of Operator CIMAREX ENERGY CO. OF COLORADO | | 6. If Indian, Allottee or Tribe Name |
| 3a. Address 600 N. MARIENFELD ST., STE. 600 MIDLAND, TX 79701 | | 7. If Unit or CA/Agreement, Name and/or No. |
| 3b. Phone No. (include area code) Ph: 432-620-1936 Fx: 432-620-1940 | | 8. Well Name and No MARQUARDT FEDERAL 008 |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 1 T25S R26E Mer NMP SWSW 330FSL 660FWL | | 9. API Well No. 30-015-36602 |
| | | 10. Field and Pool, or Exploratory WHITE CITY; PENN (GAS) |
| | | 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 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 checked="" 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.)

Cimarex Energy Co. of Colorado respectfully requests to dispose of water from the well above per the attached disposal information.

WATER PRODUCTION & DISPOSAL INFORMATION

1. Name(s) of all formation(s) producing water on this lease.
Black River; Delaware, South
2. Amount of water produced from all formations in barrels per day.
89 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

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Accepted for record

NMOCD 4F

7/21/11

ACCEPTED FOR RECORD

JUL 15 2011

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

| | |
|---|--------------------------|
| 14. I hereby certify that the foregoing is true and correct. | |
| Electronic Submission #111932 verified by the BLM Well Information System For CIMAREX ENERGY CO. OF COLORADO, sent to the Carlsbad | |
| Name (Printed/Typed) NATALIE E KRUEGER | Title REGULATORY ANALYST |
| Signature (Electronic Submission) | Date 06/29/2011 |

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 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 ****

Additional data for EC transaction #111932 that would not fit on the form

32. Additional remarks, continued

5. How water is moved to the disposal facility.

Trucked

6. Identify the disposal facility by:

A. Facility Operators Name: Cimarex Energy Co. of Colorado

B. Name of facility or well name and number: Liberty 24 Fed 1 SWD

C. Type of facility or well (WDW, WIW), etc.: SWD

D. Location by ??, Section, Township, and Range: SWNW 24-25S-26E

7. Attach a copy of the state-issued permit for the Disposal Facility.

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(808) 228-8121
Lab Team Leader - Shella 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: | HOBBS, NM | Sample #: | 427030 |
| Lease/Platform: | MARQUARDT '1' FEDERAL COM | Analysis ID #: | 90177 |
| Entity (or well #): | 8 | Analysis Cost: | \$90.00 |
| Formation: | UNKNOWN | | |
| Sample Point: | HEATER TREATER | | |


| Summary | | Analysis of Sample 427030 @ 75 °F | | | | | |
|----------------------------|---------------|-----------------------------------|----------|---------|------------|---------|---------|
| Sampling Date: | 03/12/09 | Anions | mg/l | meq/l | Cations | mg/l | meq/l |
| Analysis Date: | 03/20/09 | Chloride: | 139761.0 | 3942.15 | Sodium: | 56688.0 | 2466.22 |
| Analyst: | LISA HAMILTON | Bicarbonate: | 24.0 | 0.39 | Magnesium: | 4471.0 | 367.8 |
| TDS (mg/l or g/m3): | 224930.1 | Carbonate: | 0.0 | 0. | Calcium: | 21689.0 | 1082.29 |
| Density (g/cm3, tonne/m3): | 1.16 | Sulfate: | 666.0 | 13.85 | Strontium: | 579.0 | 13.22 |
| Anion/Cation Ratio: | 1 | Phosphate: | | | Barium: | 0.6 | 0.01 |
| | | Borate: | | | Iron: | 16.0 | 0.64 |
| | | Silicate: | | | Potassium: | 1024.0 | 28.19 |
| | | | | | Aluminum: | | |
| Carbon Dioxide: | 80 PPM | Hydrogen Sulfide: | | <1 PPM | Chromium: | | |
| Oxygen: | | pH at time of sampling: | | 5.8 | Copper: | | |
| Comments: | | pH at time of analysis: | | | Lead: | | |
| | | pH used in Calculation: | | 5.8 | Manganese: | 3.500 | 0.13 |
| | | | | | 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 | -0.84 | 0.00 | -0.03 | 0.00 | 0.00 | 0.00 | 0.02 | 9.81 | 0.12 | 0.00 | 0.2 |
| 100 | 0 | -0.78 | 0.00 | -0.10 | 0.00 | 0.00 | 0.00 | 0.01 | 2.28 | -0.08 | 0.00 | 0.24 |
| 120 | 0 | -0.68 | 0.00 | -0.15 | 0.00 | 0.02 | 14.97 | 0.00 | 0.85 | -0.22 | 0.00 | 0.28 |
| 140 | 0 | -0.59 | 0.00 | -0.19 | 0.00 | 0.07 | 44.08 | 0.01 | 4.24 | -0.36 | 0.00 | 0.31 |

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.



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary

Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order SWD-1216
April 26, 2010

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Rule 26.8B., Cimarex Energy Co. of Colorado seeks an administrative order to utilize its Liberty 24 Fed Com Well No. 1 (API 30-015-33094) located 1650 feet from the North line and 1200 feet from the West line, Unit E of Section 24, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 26.8B. Satisfactory information has been provided that affected parties as defined in Rule 26.8B.(2) have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 26.8 will be met and the operator is in compliance with Division Rule 5.9.

IT IS THEREFORE ORDERED THAT:

The applicant, Cimarex Energy Co. of Colorado, is hereby authorized to utilize its Liberty 24 Fed Com Well No. 1 (API 30-015-33094) located 1650 feet from the North line and 1200 feet from the West line, Unit E of Section 24, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water into the Devonian formation through an open hole gross interval of 12979 feet to 13900 feet through tubing and packer set within 100 feet of the disposal interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine

Oil Conservation Division * 1220 South St. Francis Drive
* Santa Fe, New Mexico 87505

* Phone: (505) 476-3440 * Fax (505) 476-3462* <http://www.emnrd.state.nm.us>



leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The wellhead injection pressure on the well shall be limited to **no more than 2596 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 26.13 and 7.24.

Without limitation on the duties of the operator as provided in Division Rules 30 and 29, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

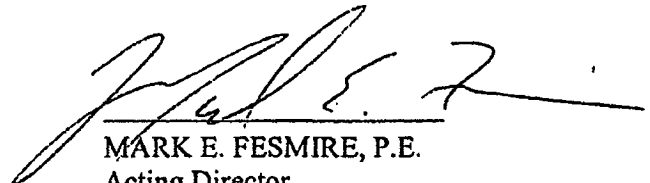
The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

In accordance with Division Rule No 26.12.C., the disposal authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause. One year after disposal into the well has ceased, the authority to dispose will terminate *ipso facto*.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the

operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



MARK E. FESMIRE, P.E.
Acting Director

MEF/wvjj

cc: Oil Conservation Division – Artesia
Bureau of Land Management – Carlsbad

**BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220
575-234-5972**

**Disposal of Produced Water From Federal Wells
Conditions of Approval**

Approval of the produced water disposal methodology is subject to the following conditions of approval:

1. This agency shall be notified of any change in your method or location of disposal.
2. Compliance with all provisions of Onshore Order No. 7.
3. This agency shall be notified of any spill or discharge as required by NTL-3A.
4. This agency reserves the right to modify or rescind approval whenever it determines continued use of the approved method may adversely affect the surface or subsurface environments.
5. All above ground structures on the lease shall be painted Shale Green (5Y 4/2), or as per approved APD stipulations. This is to be done within 90 days, if you have not already done so.
6. Any on-lease open top storage tanks shall be covered with a protective cover to prevent entry by birds and other wildlife.
7. This approval should not constitute the granting of any right-of-way or construction rights not granted by the lease instrument.
8. If water is transported via a pipeline that extends beyond the lease boundary, then you need to submit within 30 days an application for right-of-way approval to the Realty Section in this office if you have not already done so.
9. Disposal at any other site will require prior approval.
10. Subject to like approval by NMOCD.

6/17/2011