| 21(0.5  |  |  |   |   |  |
|---|--|--|---|---|--|
|   | UNITED STATES<br>EPARTMENT OF THE INTERI<br>UREAU OF LAND MANAGEMEI  |  | TESIA   | OMB N   | APPROVED<br>O. 1004-0135<br>July 31, 2010.   |
| SUNDRY NOTICES AND REPORTS ON WELLS<br>Do not use this form for proposals to drill or to re-enter an<br>abandoned well. Use form 3160-3 (APD) for such proposals.   |  |  |   | <ol> <li>Lease Serial No.<br/>NMNM0428854</li> <li>If Indian, Allottee or Tribe Name</li> <li>If Unit or CA/Agreement, Name and/or No.</li> </ol> |  |
|   |  |  |   |   |  |
| 1. Type of Well   |  | 8. Well Name and No.<br>BURTON FLAT DEEP UNIT 4  |   |   |  |
| Contact:     JEANETTE BARRON       DEVON ENERGY     E-Mail: jeanette.barron@dvn.com   |  |  |   | 9. API Well No.<br>30-015-20835   |  |
| <sup>3a.</sup> Address<br>PO BOX 250<br>ARTESIA, NM 88211   | none No. (include area code)<br>575-748-1813   |  | 10. Field and Pool, or Exploratory<br>STRAWN  |   |  |
| 4. Location of Well (Footage, Sec.,   | · · · · · · · · · · · · · · · · · · ·  |  | 11. County or Parish,   | and State   |  |
|   |  |  |   | EDDY COUNT  | Y, NM  |
| 12. CHECK APP   | ROPRIATE BOX(ES) TO INDI   | CATE NATURE OF N   | NOTICE, RE  | PORT, OR OTHE   | R DATA   |
| TYPE OF SUBMISSION  | TYPE OF ACTION   |  |   |   |  |
| Netice of Intent  |  | 🗖 Deepen   | Productio   | on (Start/Resume)   | U Water Shut-Off   |
| □ Notice of Intent  | Alter Casing   | □ Fracture Treat □ Reclar  |   | tion  | 🗖 Well Integrity   |
| 🛛 Subsequent Report   |  | □ New Construction □ Recom   |   | ete   | Other  |
| Final Abandonment Notice  |  | 🗖 Plug and Abandon   |   |   |  |
|   |  | Plug Back  |   |   |  |
| If the proposal is to deepen direction<br>Attach the Bond under which the we<br>following completion of the involve   | Peration (clearly state all pertinent details<br>ally or recomplete horizontally, give sub<br>ork will be performed or provide the Bon<br>d operations. If the operation results in a<br>bandonment Notices shall be filed only a  | , including estimated starting<br>surface locations and measu<br>d No. on file with BLM/BIA<br>multiple completion or reco   | g date of any pro<br>red and true vert<br>Required subs<br>impletion in a ne  | posed work and appro<br>tical depths of all perti-<br>sequent reports shall be<br>w interval, a Form 310  | nent markers and zones.<br>filed within 30 days<br>50-4 shall be filed once  |
| If the proposal is to deepen direction<br>Attach the Bond under which the wo<br>following completion of the involve<br>testing has been completed. Final A<br>determined that the site is ready for<br>1. This well is producing from<br>2. water produced from found.<br>3. There is one 500 BBL tank<br>4. water is trucked by Basic E<br>SWD units are owned by Bas<br>5.a) API # 30-015-22955 b) A<br>6.a) Section 24 Township 19   | peration (clearly state all pertinent details<br>heartion (clearly state all pertinent details<br>ally or recomplete horizontally, give sub<br>d operations. If the operation results in a<br>bandonment Notices shall be filed only a<br>final inspection.)<br>the Burton Flat Unit #4- Strawn fu<br>ation 2 BBL per Month .07 BBL p<br>on location<br>hergy to the a) State G SWD # 90<br>ic Energy<br>PI # 30-015-21515<br>South Range 27 East b) Section   | , including estimated starting<br>surface locations and measu<br>d No. on file with BLM/BIA<br>multiple completion or reco<br>fiter all requirements, includi<br>prmation<br>er day<br>64 & b) Myrtle Myra SM  | g date of any pro<br>red and true vert<br>Required subs<br>mipletion in a ne<br>ing reclamation,<br>VD #391 The   | two   | nent markers and zones.<br>filed within 30 days<br>50-4 shall be filed once<br>and the operator has  |
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\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

Burton Flat Deep Unit #4

# WATER PRODUCTION & DISPOSAL INFORMATION

\*In order to process your disposal request, the following information must be completed in full\*

- Name(s) of formation(s) producing water on the lease: 317000
- 2. Amount of water produced from all formations in barrels per day:

2 bbls a Month / .07 perday

- 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. (One sample will suffice if water is commingled)
- 4. How water is stored on lease:

1.

7.

1 - 500bbl

5. How water is moved to the disposal facility:

tructod

- Identify the Disposal Facility by:
   A. Facility Operators Name: <u>Facility Content</u>
  - B. Facility or well name/number: State G & Myrtle Nive
  - C. Type of Facility or well (WDW)(WIW):  $5MD^{\pm}9/_{6}4 \stackrel{e}{\leq} 5MD^{\pm}39/_{6}$
  - D. Location by  $\frac{14}{4}$  Section  $\frac{14}{14}$  Township <u>195</u> Range <u>27E</u> <u>4964</u> 21  $\frac{11}{215}$  <u>27E</u> <u>4364</u>
  - Attach a copy of the State issued permit for the Disposal Facility. (Info on the NMOCD Website or on the Artesia LDrive)

Submit to this office, 620 EAST GREENE ST, CARLSBAD NM, 88220, the above required information on a Sundry Notice 3160-5. Submit 1 original and 5 copies, within abatement period. (This form may be used as an attachment to the Sundry Notice.)

leope # NIMMINDU38854 gas well API 30.015-20835



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop Cabinet Secretary Mark E. Fesmire, P.E. Director Oil Conservation Division

#### ADMINISTRATIVE ORDER SWD-964

### APPLICATION OF RAY WESTALL FOR PRODUCED WATER DISPOSAL, EDDY COUNTY, NEW MEXICO

### ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Ray Westall made application to the New Mexico Oil Conservation Division on December 9, 2004, for permission to utilize for produced water disposal its State "G" Com Well No. 1 (API No. 30-015-22955) located 1980 feet from the North line and 660 feet from the West line of Section 24, Township 19 South, Range 27 East, NMPM, Eddy County, New Mexico.

#### THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and

(4) No objections have been received within the waiting period prescribed by said rule.

#### IT IS THEREFORE ORDERED THAT:

The applicant is hereby authorized to utilize its State "G" Com Well No. 1 (API No. 30-015-22955) located 1980 feet from the North line and 660 feet from the West line of Section 24, Township 19 South, Range 27 East, NMPM, Eddy County, New Mexico, in such manner as to permit the injection of produced water for disposal purposes into the Canyon formation through perforations from 8,730 feet to 9,220 and through plastic-lined tubing set with a packer located within 100 feet of the top of the injection interval.

> Oil Conservation Division \* 1220 South St. Francis Drive \* Santa Fe, New Mexico 87505 Phone: (505) 476-3440 \* Fax (505) 476-3462 \* <u>http://www.emnrd.state.nm.us</u>

#### IT IS FURTHER ORDERED THAT:

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

During completion operations, the operator shall swab test the disposal zone and supply the Division with the swab results as well as an analysis of a representative water sample obtained from the disposal interval.

The operator shall estimate the initial reservoir pressure of the injection interval, i.e. from stable fluid levels, and submit this in writing to the Division (referencing SWD-964).

After installing injection tubing, the casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

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 leakage in the casing, tubing, or packer.

The wellhead injection pressure on the well shall be limited to **no more than 1,746 psi**. In addition, the injection well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface injection pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division 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 immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

<u>PROVIDED FURTHER THAT</u>, 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 water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall provide written notice of the date of commencement of injection to the

Administrative Order SWD-964 Ray Westall January 27, 2005 Page 3 of 3

Artesia district office of the Division.

The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The injection 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 by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 27<sup>th</sup> day of January 2005.

1 de E Francis

MARK E. FESMIRE, P.E. Director

MEF/wvjj

cc: Oil Conservation Division – Artesia State Land Office – Oil, Gas, and Minerals Division



# Water Analysis

Date: 11/23/2004

## 2401 Sivley, Artesia NM 88210 Phone (505) 746-3140 Fax (505) 746-2293

#### Analyzed For

| Westall                  | SWSV                                   | V Scc 13 19                                    | .27 (      | Eddy    | New Mexico |  |
|--------------------------|--|--|------------|---------|------------|--|
| Sample Source            |  |  | Sample #   |         | 1          |  |
| Formation                | Fresh Wate                             | r Well   | Depth      |         | ^ ·        |  |
| Specific Gravity         | 1.000                                  | •9 • <b>•••••</b> •••••••••••••••••••••••••••• | SG @       | ) 60 °F | 1.002      |  |
| pH                       | 7.63                                   |  | S          | ulfides | Not Tested |  |
| Temperature (°F)         | 71                                     |  | Reducing / | Agents  | Not Tested |  |
| Cations                  |  |  |            |         |            |  |
| Sodium (Calc)            | ······································ | in Mg/L  | 5,278      | in PPM  | 5,267      |  |
| Calcium                  |  | in Mg/L  | 560        | in PPM  | 559        |  |
| Magnesium                |  | in My/L  | 43         | in PPM  | 43         |  |
| Soluable Iron (FE2)      |  | in Mg/L  | 0.0        | in PPM  | 0          |  |
| Anions                   |  |  | -          |         |            |  |
| Chiorides                |  | in Mg/L  | 8,000      | in PPM  | 7,982      |  |
| Sulfates                 |  | in Mg/L  | 1,600      | in PPM  | 1,586      |  |
| Bicarbonates             | •                                      | in Mg/L  | 68         | in PPM  | 68         |  |
| Total Hardness (as CaC   | ()3)                                   | in Mg/L  | 1.580      | in PPM  | 1,577      |  |
| Total Dissolved Solids ( | Calc)                                  | in Mg/L  | 15,550     | in PPM  | 15,515     |  |
| Equivalent NaCl Concer   | tration                                | in Mg/L  | 14,683     | in PPM  | 14,650     |  |

\*Calcium Carbonate Index 38,259 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable \*Calcium Sulfate (Gyp) Index 896,000 Below 500,000 Remote / 500,000 - 10,000,00 Possible / Above 10,000,000 Probable \*This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.

Remarks FAX 677-2361

Report #

1684

# ATTACHMENT XII

All available geologic and engineering data have been examined and there is no evidence of open faults or any other hydrologic connection between the disposal zone and any source of drinking water.

#### STATE OF NEW MEXICO

#### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

#### **OIL CONSERVATION DIVISION**

GARREY CARRUTHERS

POST OFFICE 50X 2086 STATE CAND OFFICE BUILD NG SANTA FEINEW MEXICO 87504 15051 822-5800

### ADMINISTRATIVE ORDER NO. SWD-391

#### APPLICATION OF RAY WESTALL

## ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Ray Westall made application to the New Mexico Oil Conservation Division on May 30, 1990, for permission to complete for salt water its Federal Well No. 1, located in Unit C of Section 21, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico.

### THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations.

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified; and

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met.

(4) No objections have been received within the waiting period prescribed by said rule.

#### IT IS THEREFORE ORDERED THAT:

(1) The applicant herein, Ray Westall is hereby authorized to complete its Federal Well No. 1 located in Unit C of Section 21, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Delaware formation at approximately 3002 feet to approximately 5050 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 2950 feet.

#### IT IS FURTHER ORDERED THAT:

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

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 600 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

<u>PROVIDED FURTHER THAT</u>, jurisdiction of this cause is hereby retained by the Division for such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule 706 and 1120 of the Division Rules and Regulations.

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Approved at Santa Fe, New Mexico, on this 24th day of July, 1990.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. LEMAY Director

SEAL

### THE WESTERN COMPANY

WATER ANALYSIS

ANALYSIS NO.

| GENE                 | RALINFORMATION          |
|----------------------|-------------------------|
| OPERATOR Ray Westall | DATE SAMPLED            |
| WELL Myrtle Myra #3  | DATE RECEIVED 2-26-90   |
| FIELD LA HUERTA      | SUBMITTED BY            |
| FORMATION DELAWARE   | WORKED BY Brewer        |
| COUNTY Eddy          | SAMPLE DESCRIPTION:     |
| STATE N M            |                         |
| DEPTH 3000 - 5000'   | , I                     |
| PHYSICAL AND         | CHEMICAL DETERMINATIONS |

|                   |             |     | AF SELECTION OF         | ····· |
|-------------------|-------------|-----|-------------------------|-------|
| SPECIFIC GRAVITY  | 1.149 AT 74 | ۰°F | TOTAL DISSOLVED SOLIDS  |       |
| рН                | 6.0         |     | RESISTIVITY 0.042 @ 74° | РРМ   |
| IRON              | Faint Trace | ·   | SULFATE 383             | РРМ   |
| HYDROGEN SULFIDE  |             |     | BICARBONATE 403         | PPM   |
| HARDNESS          |             |     | CHLORIDE 128,807        | PPM   |
| CALCIUM           | 5,988       |     | SODIUM CHLORIDE         | PPM   |
| MAGNESIUM         | 14,931      | PPM | SODIUM                  | PPM   |
| SODIUM & POTASSIU | м 48,873    | PPM | POTASSIUM               | PPM   |
| PHOSPHATE         |             |     |                         |       |

REMARKS: for Stiff type plot (in meq./1.) -50 40 30 20 10 10 30 0 20 40 50-<del>┥┯┥┼┥┇╽╞┥┥┊╷╎╎╏╏╔┉╧╒╪╪┿┊╊┨╆┣╵╔╏┇</del>╦<del>┍┝┊┠┨┣╏┊╧╎┝┇╋</del> Na & K C1 100 100 ┍╋╍╋╾┼╾╈╾╋┶╅╾╋╼┝┝┣╪╾┼┅┦╌┠╸╿╏┙┆╴╎╴╉╍╠╍╉╶╣╌╣╍╉╍┦╂╌╢╼┨╺┝╌╪╢┥╴┠╶╢╴╁╍╎┉╅╼╂╼╆╼╅ -+++ +-+-+-+ +++++ HCO3 10 Ca ++ ++ +++++-+-+-+ ++++┽┼┽┼ ┽╌┼╌┼╌┼╴ ++++ ++++ ++++ 10 Mg 10 SO<sub>4</sub> 10 ------++++ -- į-- ž ╺╆╍╊╾╈┉╪╶┦╏╶┧╴┦╮╞╶╿╽╶╠╌┡╸╅╶╢╍╊╍╉╍╠╸ 1 

ANALYST\_\_\_

FORM 052-1025 (3/81)

LOCATION

YOUR EXT. NO.

Х.

# DATA ON INJECTION WELL

# 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. Any on-lease open top storage tanks shall be covered with a protective cover to prevent entry by birds and other wildlife.

6. This approval should not constitute the granting of any right-of-way or construction rights not granted by the lease instrument.

7. 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.

6/2/14