| Form 3160-5  | T 12 1000  |  |   |
|--|--|--|---|
| (June 1990)  |  | ED STATES  | FORM APPROVED<br>Budget Bureau No. 1004-0135    |
|  |  | OF THE INTERIOR  | Expires: March 31, 1993                         |
|  | DUNLAU OF LA   | NU MANAGEMENI  | 5. Lease Designation and Serial No.             |
| S  | SUNDRY NOTICES A   | ND REPORTS ON WELLS  | NM-9017   |
| Do not use this form   | n for proposals to drill   | or to deepen or reentry to a different reservoir.<br>PERMIT—" for such proposals   | 6. If Indian, Allottee or Tribe Name            |
| 1. Type of Well  | SUBMIT II  | N TRIPLICATE   | 7. If Unit or CA, Agreement Designati           |
| Oil Gas<br>Well Well [   | Other  |  | 8. Well Name and No.                            |
| 2. Name of Operator  |  |  | Conoco Federal #1                               |
| Manzano Oil C<br>3. Address and Telephone No.                                  | orporation   |  | 9. API Well No.                                 |
| •  | , Roswell, NM 88   | 3202-2107 (505) 623-1996   | 30-025-34958                                    |
|  | Sec., T., R., M., or Survey Descr  |  | 10. Field and Pool, or Exploratory Area         |
|  |  |  | V Young Delaware                                |
| 2310' FSL & 3<br>Sec 17, T18S,   |  |  | Lea County, NM                                  |
| 2. CHECK AP  | PROPRIATE BOX(s)   | TO INDICATE NATURE OF NOTICE, REPO   | RT, OR OTHER DATA                               |
|  |  | TYPE OF ACTION   |   |
| Notice of Int  | lent   |  | Change of Plans                                 |
|  |  |  |   |
| L Subsequent R   | Сероп  | Plugging Back  | Non-Routine Fracturing                          |
| Final Abanda   | onment Notice  | Casing Repair  | Water Shut-Off                                  |
|  | STRUCHT HOUCE  | L Altering Casing  |   |
|  |  |  | Conversion to Injection                         |
| <ol> <li>Describe Proposed or Complet<br/>give subsurface locations</li> </ol> | ted Operations (Clearly state all per<br>and measured and true vertical de | Dother   | (Note: Report results of multiple completion on |
|  |  | Other  | (Note: Report results of multiple completion or |
|  |  | Tinent details, and give pertinent dates, including estimated date of startin<br>epths for all markers and zones pertinent to this work.)* | (Note: Report results of multiple completion on |

#### Water Production & Disposal Information

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

- 2. Amount of water produced from all formations in barrels per day\_\_\_\_\_15 BOPD
- 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 the water is commingled) Attached.
- 4. How water is stored on the lease 500 bbl fiberglass tank
- 5. How water is moved to the disposal facility trucked
- 6. Identify the Disposal Facility by:

| Α. | Facility | operators | name | Manzano | 0i1 | Corporation |
|----|----------|-----------|------|---------|-----|-------------|
|----|----------|-----------|------|---------|-----|-------------|

- B. Name of facility or well name & number BSWU #34
- C. Type of facility or well (WDW)(WIW)etc. SWD
- D. Location by 1/4 1/4 NESW Section 30 Township 185

Range 31E

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

Attached

Submit to this office, **414 W. Taylor, Hobbs, NM 88240**, the above required information on a Sundry Notice, form 3160-5. Submit 1 original and 5 copies, within 20 days from receipt of notice. (This form may be used as an attachment to the Sundry Notice). Call at (505)393-3612 if you have any questions.

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# CI M CHEMICALS and CONSULTING

# MILLER CHEMICALS, INC.

Post Office Box 298 Artesia, N.M. 88211-0298 (505) 746-1919 Artesia Office (505) 393-2893 Hobbs Office (505) 746-1918 Fax

WATER ANALYSIS REPORT 

| Company<br>Address<br>Lease<br>Well<br>Sample | :<br>: CCNOCO FED.    | GAS          | Date<br>Date Sampled<br>Analysis No. | : 5-3-00 |         |
|---|-----------------------|--------------|--------------------------------------|----------|---------|
|   | ANALYSIS              |              | mg/L                                 |          | • meq/L |
|   |                       |              |                                      |          |         |
|   | рН                    | 5.7          |                                      |          |         |
| -   | H2S                   | 0            |                                      |          |         |
|   | Specific Gravity      | 1.140        | 100.01 f                             |          |         |
| 4.  | Total Dissolved Solid | S            | 197485.6                             |          |         |
| 5.  | Suspended Solids      |              | NR                                   |          |         |
|   | Dissolved Oxygen      |              | NR                                   |          |         |
| 7.  | Dissolved CO2         |              | NR                                   |          |         |
| 9.  | Oil In Water          |              | NR                                   |          |         |
| 9.  | Phenolphthalein Alkal | inity (CaCO3 | )                                    |          |         |
| 10.   | Methyl Orange Alkalin |              |                                      |          |         |
| 11.   | Bicarbonate           | HCO          | 3 122.0                              |          |         |
| 12.   | Chloride              | Cl           |                                      |          | 3442.8  |
| 13.   | Sulfate               |              | 125.0                                |          | 2.6     |
| 14.   | Calcium               |              | 18880.0                              |          |         |
| 15.   | Magnesium             | Mg           | 1445.6                               |          |         |
| 16.   | Sodium (calculated)   | Na           | 54863.5                              | Na       | 2386.4  |
| 17.   | Iron                  | Fe           | 0.5                                  |          |         |
| 18.   | Barium                | Ba           | С.О                                  |          |         |
| 19.   | Strontium             | Sr           | 0.0                                  |          |         |
| 20.   | Total Hardness (CaCO3 | 3)           | 53100.0                              |          |         |

#### PROBABLE MINERAL COMPOSITION

|                                    |             | _        |         |        |
|------------------------------------|-------------|----------|---------|--------|
| *milli equivalents per Liter       | Compound    | Equiv wt | X meg/L | = mg/L |
| ++ ++                              |             |          |         |        |
| 942  *Ca < *HCO3   2               | Ca (HCO3) 2 | 81.0     | 2.0     | 162    |
| > /> />                            | CaSO4       | 68.1     | 2.6     | 177    |
| 119  *Mg> *SO4   3                 | CaCl2       | 55.5     | 937.5   | 52023  |
| /  /                               | Mg (HCO3) 2 | 73.2     |         |        |
| 2386 *Na> *C1   3443               | MgSO4       | 60.2     |         |        |
| ++ ++                              | MgC12       | 47.6     | 118.9   | 5662   |
| Saturation Values Dist. Water 20 C | NaHCO3      | 84.0     |         |        |
| CaCO3 13 mg/L                      | Na2SO4      | 71.0     |         |        |
| CaSO4 * 2H2O 2090 mg/L             | NaCl        | 58.4     | 2386.4  | 139462 |
| BaSO4 2.4 mg/L                     | Nuci        | 0011     | 20000   |        |

#### REMARKS :

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SCALE TENDENCY REPORT

#### STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO3 Scaling Tendency

| S.I. =<br>S.I. =<br>S.I. = | -0.1 | at | 90  | deg. | F | or | 32 | deg. | С |
|----------------------------|------|----|-----|------|---|----|----|------|---|
| S.I. =<br>S.I. =           | 0.0  | at | 130 | deg. | F | or | 54 | deg. | С |

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#### CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

| s | Ξ | 861 at | : 70  | deg. | F | or | 21 | deg | С |
|---|---|--------|-------|------|---|----|----|-----|---|
| s | = | 928 at |       |      |   |    |    |     |   |
| s | = | 974 at | : 110 | deg. | F | or | 43 | deg | С |
| S | = | 992 at | : 130 | deg. | F | or | 54 | deg | С |
|   | = | 993 at |       |      |   |    |    |     |   |

Respectfully submitted, S.TIGERT



]) NEW MEXICO EL RGY, MINERALS & NATURAL RESOURCES DEPARTMENT



**OIL CONSERVATION DIVISION** 2040 South Pacheco Street Santa Fe, New Mexico 87505

ADMINISTRATIVE ORDER SWD-701 Sile

# APPLICATION OF MANZANO OIL CORPORATION FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.

### ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Manzano Oil Corporation made application to the New Mexico Oil Conservation Division on November 24, 1997, for permission to complete for salt water disposal its Benson Shugart Waterflood Unit Well No.34 (formerly the Kenwood Well No.4) located 2310 feet from the South line and 2160 feet from the West line (Unit K) of Section 30, Township 18 South, Range 31 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:

(4) When designated as the Kenwood Well No.4, the well had been authorized for salt water disposal by Division Order R-4741, but had been converted back to production by a previous operator; and,

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

### IT IS THEREFORE ORDERED THAT:

The applicant herein, Manzano Oil Corporation, is hereby authorized to complete its Benson Shugart Waterflood Unit Well No.34 located 2310 feet from the South line and 2160 feet from the West line (Unit K) of Section 30, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Queen and Grayburg formations at approximately 3378 feet to 3614 feet through 2 3/8-inch plastic-lined tubing set in a packer located at approximately 3310 feet.

Administrative Order SWD-701 Manzano Oil Company April 15, 1998 Page 3

Approved at Santa Fe, New Mexico, on this 15th day April, 1998.

For Wrotenbery, Director

LW/BES/kv

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cc: Oil Conservation Division - Artesia