NM OIL CONS COMMISSION
Drawer DD
Artesia, FORM APPROVED

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Budget Bureau No. 1004-0135
Expires: March 31, 1993

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals

*SUBMIT IN TRIPLICATE*

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
**YATES PETROLEUM CORPORATION**

3. Address and Telephone No.
105 S. 4th Street, Artesia, NM 88210 (505) 748-1471

4. Location of Well (Footage, Sec., T., R., M., or Survey Description
Section 10-T20S-R24E

5. Lease Designation and Serial No.
NM-81893

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
Zorillo ANZ Fed. Com. #2

9. API Well No.
3001527802

10. Field and Pool, or Exploratory Area
South Dagger Draw Upper Penn

11. County or Parish, State
Eddy, N.M.

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

| TYPE OF SUBMISSION | TYPE OF ACTION | |
|---|---|---|
| ☒ Notice of Intent | ☐ Abandonment | ☐ Change of Plans |
| ☐ Subsequent Report | ☐ Recompletion | ☐ New Construction |
| ☐ Final Abandonment Notice | ☐ Plugging Back | ☐ Non-Routine Fracturing |
| | ☐ Casing Repair | ☐ Water Shut-Off |
| | ☐ Altering Casing | ☐ Conversion to Injection |
| | ☐ Other | ☒ Dispose Water |

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operatons (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Yates Petroleum Corporation is submitting application for produced water from the above well pursuant to NTL-2B, Section II, and requests your approval. The well produces approximately .09 bbls of water per day from the Upper Penn formation .The water is stored in a 210 barrel stock tank and pipelined to the Dagger Draw SWD Disposal System permit #SWD-285.

A water analysis is attached.

RECEIVED
Nov 22 11 00 AM '94
CARLSBAD, NEW MEXICO

14. I hereby certify that the foregoing is true and correct
Signed Shannon Cowland Title Production Clerk Date 11-16-94

(This space for Federal or State office use)
Approved by Orig. Signed by Adam Salameh Title **Petroleum Engineer** Date 12/13/94
Conditions of approval, if any:
- SEE ATTACHED -

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.

*See Instruction on Reverse Side

(rev. 3/10/94)

**BUREAU OF LAND MANAGEMENT**
**CARLSBAD RESOURCE AREA**

## 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 be notified of any change in your method or location of disposal.

2. Compliance with all provisions of Onshore Oil and Gas 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 aboveground structures on the lease shall be painted sandstone brown, Federal Std. 595-20318, or 30318, within 90 days if you have not already done so.

6. Any on lease open top storage tanks or pits shall be covered with a wire screen or plastic/nylon netting to prevent entry by birds and other wildlife.

7. This approval does not constitute right-of-way approval for any off lease activities. 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.

**TRETOLITE** DIVISION

(505) 746-3588
Fax (505) 746-3680

Reply to:
P.O. Box FF
Artesia, NM
88211-7531

# WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NM
Lease : ZORRILLO "ANZ"
Well : #2
Sample Pt. : WELLHEAD

Date : 4/26/94
Date Sampled : 4/25/94
Analysis No. : 680

| | ANALYSIS | | mg/L | | * meq/L |
|---|---|---|---|---|---|
| 1. | pH | 6.3 | | | |
| 2. | H2S | + | | | |
| 3. | Specific Gravity | 1.030 | | | |
| 4. | Total Dissolved Solids | | 56277.3 | | |
| 5. | Suspended Solids | | NR | | |
| 6. | Dissolved Oxygen | | NR | | |
| 7. | Dissolved CO2 | | NR | | |
| 8. | Oil In Water | | NR | | |
| 9. | Phenolphthalein Alkalinity (CaCO3) | | | | |
| 10. | Methyl Orange Alkalinity (CaCO3) | | | | |
| 11. | Bicarbonate | HCO3 | 268.0 | HCO3 | 4.4 |
| 12. | Chloride | Cl | 35145.0 | Cl | 991.4 |
| 13. | Sulfate | SO4 | 1625.0 | SO4 | 33.8 |
| 14. | Calcium | Ca | 7720.0 | Ca | 385.2 |
| 15. | Magnesium | Mg | 3696.9 | Mg | 304.2 |
| 16. | Sodium (calculated) | Na | 7822.3 | Na | 340.2 |
| 17. | Iron | Fe | NR | | |
| 18. | Barium | Ba | NR | | |
| 19. | Strontium | Sr | NR | | |
| 20. | Total Hardness (CaCO3) | | 34500.0 | | |

## PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

| | | |
|---|---|---|
| 385 | *Ca <----- *HCO3 | 4 |
| 304 | *Mg -----> *SO4 | 34 |
| 340 | *Na -----> *Cl | 991 |

Saturation Values Dist. Water 20 C
CaCO3 13 mg/L
CaSO4 * 2H2O 2090 mg/L
BaSO4 2.4 mg/L

| Compound | Equiv wt | X meq/L | = mg/L |
|---|---|---|---|
| Ca(HCO3)2 | 81.0 | 4.4 | 356 |
| CaSO4 | 68.1 | 33.8 | 2303 |
| CaCl2 | 55.5 | 347.0 | 19255 |
| Mg(HCO3)2 | 73.2 | | |
| MgSO4 | 60.2 | | |
| MgCl2 | 47.6 | 304.2 | 14479 |
| NaHCO3 | 84.0 | | |
| Na2SO4 | 71.0 | | |
| NaCl | 58.4 | 340.2 | 19884 |

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
A. MILLER

# SCALE TENDENCY REPORT

| | | | |
|---|---|---|---|
| Company | : YATES PETROLEUM | Date | : 4/26/94 |
| Address | : ARTESIA, NM | Date Sampled | : 4/25/94 |
| Lease | : ZORRILLO "ANZ" | Analysis No. | : 680 |
| Well | : #2 | Analyst | : A. MILLER |
| Sample Pt. | : WELLHEAD | | |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| S.I. = | 0.2 | at | 60 deg. F | or | 16 deg. C |
| S.I. = | 0.3 | at | 80 deg. F | or | 27 deg. C |
| S.I. = | 0.4 | at | 100 deg. F | or | 38 deg. C |
| S.I. = | 0.5 | at | 120 deg. F | or | 49 deg. C |
| S.I. = | 0.6 | at | 140 deg. F | or | 60 deg. C |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| S = | 1539 | at | 60 deg. F | or | 16 deg C |
| S = | 1687 | at | 80 deg. F | or | 27 deg C |
| S = | 1776 | at | 100 deg. F | or | 38 deg C |
| S = | 1810 | at | 120 deg. F | or | 49 deg C |
| S = | 1830 | at | 140 deg. F | or | 60 deg C |

Petrolite Oilfield Chemicals Group

Respectfully submitted,
A. MILLER