N. M. OIL CONS. COMMISSION
P. O. BOX 1980 CONTACT RECEIVING OFFICE FOR NUMBER OF COPIES REQUIRED
HOBBS, NEW MEXICO 88241

Form 3160-5
(July 1989)
(Formerly 9-331)

# UNITED STATES
# DEPARTMENT OF THE INTERIOR
## BUREAU OF LAND MANAGEMENT

(Other instructions on reverse side)

NM Roswell District
Modified Form No.
NM060-3160-4

## SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: NM-27805

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Strata Production Company

3a. Area Code & Phone No.: 505-622-1127

8. FARM OR LEASE NAME: Paisano Federal

3. ADDRESS OF OPERATOR: P. O. Box 1030, Roswell, New Mexico 88202-1030

9. WELL NO.: #2

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: Unit F 2310' FNL & 1650' FWL

10. FIELD AND POOL, OR WILDCAT: East Livingston Ridge Delaware

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 15-22S-32E

14. PERMIT NO.: 30-025-31615 ✓

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 3758' GR

12. COUNTY OR PARISH: Lea

13. STATE: NM

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| TEST WATER SHUT-OFF | [ ] | PULL OR ALTER CASING | [ ] | WATER SHUT-OFF | [ ] | REPAIRING WELL | [ ] |
| FRACTURE TREAT | [ ] | MULTIPLE COMPLETE | [ ] | FRACTURE TREATMENT | [ ] | ALTERING CASING | [ ] |
| SHOOT OR ACIDIZE | [ ] | ABANDON* | [ ] | SHOOTING OR ACIDIZING | [ ] | ABANDONMENT* | [X] |
| REPAIR WELL | [ ] | CHANGE PLANS | [ ] | (Other) NTL-2B Approval | | | |
| (Other) | | | | (NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) | | | |

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (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.)*

In response to your letter dated February 4, 1993 regarding the NTL-2B approval, please review the following:

a) Produces from the Delaware formation.
b) Produces approximately 110 bbls water per day.
c) Water analysis attached.
d) Produced water is moved via 3" poly pipe to the Gilmore Federal #1 SWD. Water is not stored on location.
e) Gilmore Federal #1 SWD is operated by Strata Production Company and is located 1980' FSL & 660' FEL in Section 21, Township 22 South, Range 32 East, Lea County. SWD-470.
f) No pits on location.
g) SWD-470.

18. I hereby certify that the foregoing is true and correct

SIGNED Carol J. Parris TITLE Production Supervisor DATE 3/12/93

(This space for Federal or State office use)

APPROVED BY Orig. Signed by Adam Salameh TITLE PETROLEUM ENGINEER DATE 4-19-93

CONDITIONS OF APPROVAL, IF ANY:

ATTACHED

*See Instructions on Reverse Side

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

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

2. Compliance with all provisions of NTL-2B.

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 shall be covered with a wire screen 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.

TRETOLITE
Chemicals and Services

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

# WATER ANALYSIS REPORT

Company : STRATA PRODUCTION
Address : ARTESIA, NEW MEXICO
Lease : PAISANO FEDERAL
Well : #2
Sample Pt. : WELLHEAD

Date : 11/25/92
Date Sampled : 11/20/92
Analysis No. : 2823

| | ANALYSIS | | mg/L | | * meq/L |
|---|---|---|---|---|---|
| 1. | pH | 5.6 | | | |
| 2. | H2S | 4 PPM | | | |
| 3. | Specific Gravity | 1.190 | | | |
| 4. | Total Dissolved Solids | | 301454.9 | | |
| 5. | Suspended Solids | | NR | | |
| 6. | Dissolved Oxygen | | NR | | |
| 7. | Dissolved CO2 | | 100 PPM | | |
| 8. | Oil In Water | | NR | | |
| 9. | Phenolphthalein Alkalinity (CaCO3) | | | | |
| 10. | Methyl Orange Alkalinity (CaCO3) | | 40.0 | | |
| 11. | Bicarbonate | HCO3 | 48.8 | HCO3 | 0.8 |
| 12. | Chloride | Cl | 188497.2 | Cl | 5317.3 |
| 13. | Sulfate | SO4 | 52.5 | SO4 | 1.1 |
| 14. | Calcium | Ca | 26773.4 | Ca | 1336.0 |
| 15. | Magnesium | Mg | 6194.2 | Mg | 509.6 |
| 16. | Sodium (calculated) | Na | 79857.2 | Na | 3473.6 |
| 17. | Iron | Fe | 31.5 | | |
| 18. | Barium | Ba | NR | | |
| 19. | Strontium | Sr | NR | | |
| 20. | Total Hardness (CaCO3) | | 92363.1 | | |

## PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

| | | |
|---|---|---|
| 1336 | *Ca <----- *HCO3 | 1 |
| | /-------> | |
| 510 | *Mg -----> *SO4 | 1 |
| | <---------/ | |
| 3474 | *Na -----> *Cl | 5317 |

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 | 0.8 | 65 |
| CaSO4 | 68.1 | 1.1 | 74 |
| CaCl2 | 55.5 | 1334.1 | 74030 |
| Mg(HCO3)2 | 73.2 | | |
| MgSO4 | 60.2 | | |
| MgCl2 | 47.6 | 509.6 | 24260 |
| NaHCO3 | 84.0 | | |
| Na2SO4 | 71.0 | | |
| NaCl | 58.4 | 3473.6 | 202995 |

REMARKS
D. CANADA / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHELIA DEARMAN

PETROLITE

# SCALE TENDENCY REPORT

| | | | |
|---|---|---|---|
| Company | : STRATA PRODUCTION | Date | : 11/25/92 |
| Address | : ARTESIA, NEW MEXICO | Date Sampled | : 11/20/92 |
| Lease | : PAISANO FEDERAL | Analysis No. | : 2823 |
| Well | : #2 | Analyst | : SHELIA DEARMAN |
| 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. = -0.2 at 80 deg. F or 27 deg. C
S.I. = -0.2 at 100 deg. F or 38 deg. C
S.I. = -0.3 at 120 deg. F or 49 deg. C
S.I. = -0.3 at 140 deg. F or 60 deg. C

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

S = 431 at 60 deg. F or 16 deg C
S = 480 at 80 deg. F or 27 deg C
S = 510 at 100 deg. F or 38 deg C
S = 522 at 120 deg. F or 49 deg C
S = 530 at 140 deg. F or 60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHELIA DEARMAN