

Form 3160-5  
(June 1990)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

U.S. Oil and Gas Division  
1625 N. French Dr.  
Hobbs, NM 88240

FORM APPROVED  
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

ARCO Permian

3. Address and Telephone No.

P.O. Box 1089, Eunice, NM 88231

505-394-1649

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Barber Gas Com #1 - UL: E,990 FWL,1650 FNL,SEC. 8,T20S,R37E

#3 - UL: H, 1650 FNL, 330 FEL, SEC. 7, T20S, R37E #4 - UL: L,660

FWL,2310 FSL,SEC. 8,T20S,R37E

5. Lease Designation and Serial No.

14080013527

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation  
NMNM71098

8. Well Name and No.

Barber Gas Com  
Lease

9. API Well No.

30-025-06022 026029

10. Field and Pool, or exploratory Area  
Eumont Yates SRQ Gas

11. County or Parish, State

Lea nm

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

TYPE OF SUBMISSION

- ☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other \_\_\_\_\_
- ☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☒ Dispose Water

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

13. 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.)\*

ARCO PERMIAN REQUESTS PERMISSION TO DISPOSE OF WATER FROM THE FOLLOWING LEASE:  
BARBER GAS COM LEASE BWPID: 245

THE FOLLOWING INFORMATION IS FURNISHED TO HANDLE, STORE OR DISPOSE OF WATER  
PRODUCED FROM OIL AND GAS WELLS ON SAID FEDERAL LEASES AS FOLLOWS:

THIS LEASE DISPOSES WATER TO:

SWD SYSTEM: EME SWD SYSTEM M-9

OPERATOR: RICE OPERATING COMPANY

LOCATION OF DISPOSAL SITE: 100 FSL, 250 FWL, SEC. 9, T20S, R37E

WATER IS TRUCKED AND INJECTED INTO EME SWD SYSTEM M-9.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

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BUREAU OF LAND MGMT.  
OIL AND GAS RESOURCE AREA

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

Signed Alexis C. Swoboda Title Administrative Assistant

Date 3/24/00

(This space for Federal or State office use)

Approved by (ORIG. SGD.) ALEXIS C. SWOBODA PETROLEUM ENGINEER

Date 3/31/2000

Conditions of approval, if any:

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

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CARLSBAD RESOURCE AREA

## Water Analysis Report by Baker Petrolite

### ARCO PERMIAN

BARBER UNIT  
BATTERY  
WATER TANK

Account Manager  
RON MATTHEWS

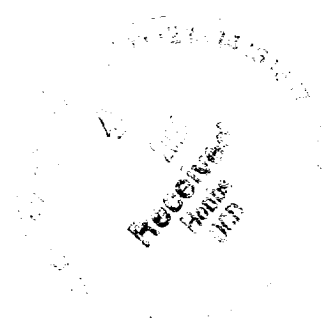
| Summary  |              |  | Analysis of Sample 108008 @ 75°F |       |        |                |       |       |
|--|--------------|--|----------------------------------|-------|--------|----------------|-------|-------|
| Sampling Date  | 3/1/00       |  | <b>Anions</b>                    |       |        | <b>Cations</b> |       |       |
| Analysis Date  | 3/14/00      |  |                                  | mg/l  | meq/l  |                | mg/l  | meq/l |
| Analyst  | JOANNA RAGAN |  | Chloride                         | 21433 | 605    | Sodium         | 11210 | 488   |
|  |              |  | Bicarbonate                      | 110   | 1.80   | Magnesium      | 918   | 75.5  |
|  |              |  | Carbonate                        | 0.00  | 0.00   | Calcium        | 1904  | 95.0  |
| TDS (mg/l or g/m <sup>3</sup> )                      | 39132        |  | Sulfate                          | 3075  | 64.0   | Strontium      | 36.0  | 0.82  |
| Density (g/cm <sup>3</sup> or tonne/m <sup>3</sup> ) | 1.031        |  | Phosphate                        | N/A   | N/A    | Barium         | 0.05  | 0.00  |
| Anion/Cation Ratio                                   | 1.00         |  | Borate                           | N/A   | N/A    | Iron           | 0.70  | 0.03  |
| Carbon Dioxide                                       | 60 PPM       |  | Silicate                         | N/A   | N/A    | Potassium      | 445   | 11.4  |
| Oxygen   |              |  | Hydrogen Sulfide                 |       | 80 PPM | Aluminum       | N/A   | N/A   |
|  |              |  | pH at time of sampling           |       | 6.60   | Chromium       | N/A   | N/A   |
|  |              |  | pH at time of analysis           |       |        | Copper         | N/A   | N/A   |
|  |              |  | pH used in Calculations          |       | 6.60   | Lead           | N/A   | N/A   |
|  |              |  |                                  |       |        | Manganese      | N/A   | N/A   |
|  |              |  |                                  |       |        | Nickel         | N/A   | N/A   |

| Conditions |              | Values Calculated at the Given Conditions - Amounts of Scale in lb/1000bbl |        |   |        |                                |        |                                |        |                             |        |                           |
|------------|--------------|--|--------|---|--------|--------------------------------|--------|--------------------------------|--------|-----------------------------|--------|---------------------------|
| Temp.      | Gauge Press. | Calcite<br>CaCO <sub>3</sub>   |        | Gypsum<br>CaSO <sub>4</sub> · 2H <sub>2</sub> O |        | Anhydrite<br>CaSO <sub>4</sub> |        | Celestite<br>SrSO <sub>4</sub> |        | Barite<br>BaSO <sub>4</sub> |        | CO <sub>2</sub><br>Press. |
| °F         | psi          | Index  | Amount | Index   | Amount | Index                          | Amount | Index                          | Amount | Index                       | Amount | psi                       |
| 80         | 0.           | -0.37  |        | 0.05  | 151    | -0.00                          |        | 0.09                           | 4.84   | 0.36                        | 0.02   | 0.25                      |
| 100        | 0.           | -0.25  |        | 0.03  | 85.7   | 0.04                           | 95.1   | 0.09                           | 4.85   | 0.20                        | 0.01   | 0.32                      |
| 120        | 0.           | -0.13  |        | 0.02  | 52.1   | 0.11                           | 238    | 0.10                           | 5.38   | 0.06                        | 0.00   | 0.40                      |
| 140        | 0.           | -0.00  |        | 0.02  | 45.8   | 0.20                           | 404    | 0.12                           | 6.30   | -0.05                       |        | 0.48                      |

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 CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.





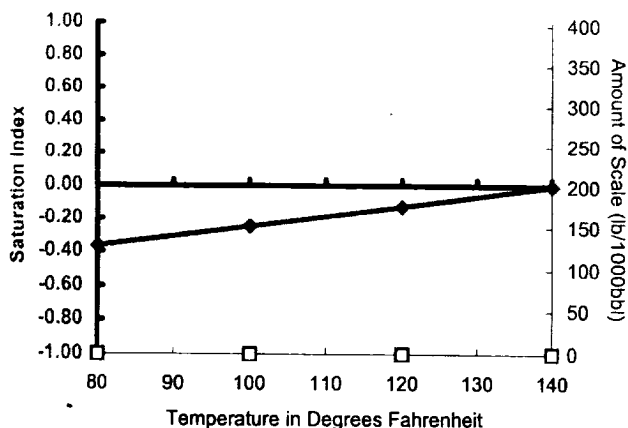
Baker Petrolite

# Scale Predictions from Baker Petrolite

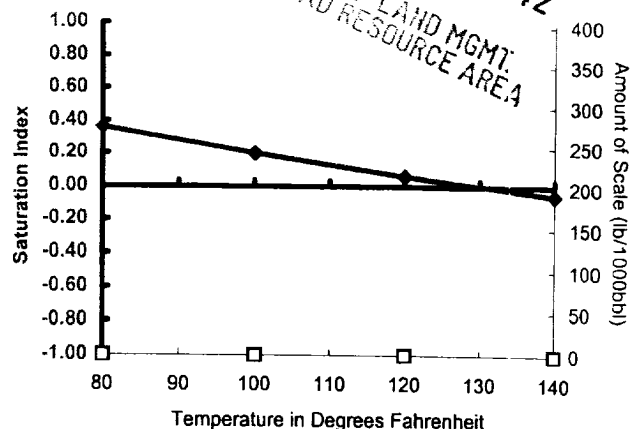
Analysis of Sample 108008 @ 75°F for ARCO PERMIAN, Mar/14/00

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CARLSBAD RESOURCE AREA

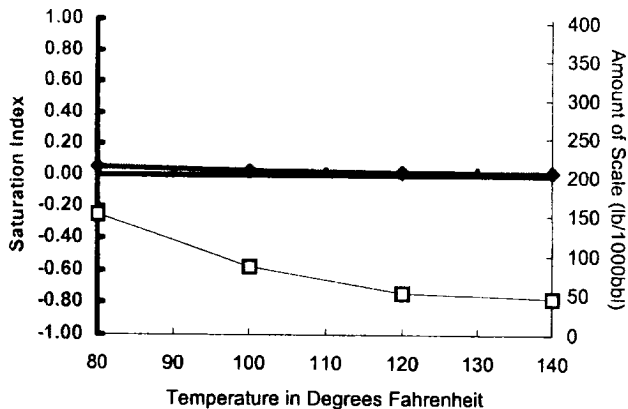
Calcite -  $\text{CaCO}_3$



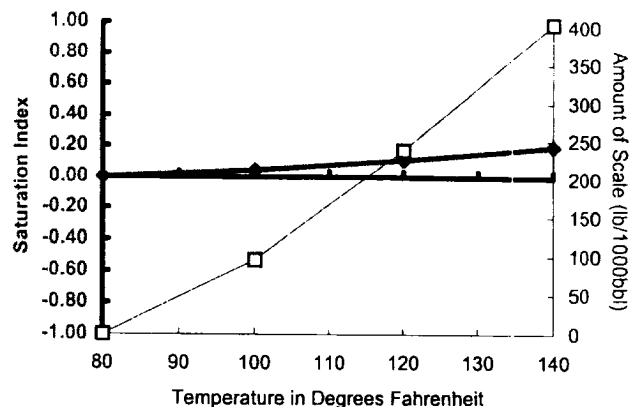
Barite -  $\text{BaSO}_4$



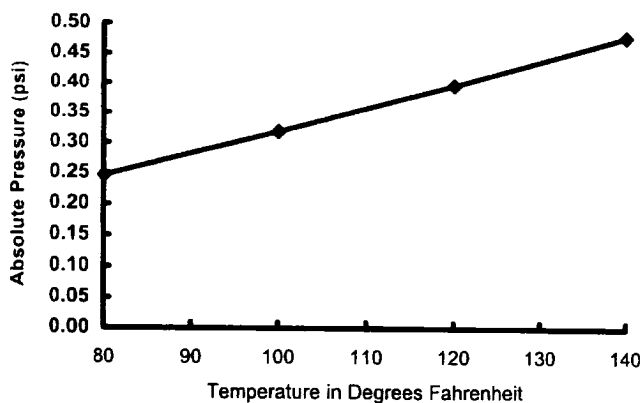
Gypsum -  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$



Anhydrite -  $\text{CaSO}_4$



Carbon Dioxide Partial Pressure



Celestite -  $\text{SrSO}_4$

