

4157

Form 3160-5  
(June 1990)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

5. Lease Designation and Serial No.  
**NM-33437**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.  
**PMS 8 FED. # 4**

9. API Well No.  
**30-015-26218**

10. Field and Pool, or Exploratory Area  
**SHUGART BONE SPRING, N.**

11. County or Parish, State  
**EDDY CO., NM**

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  
**Harvey E. Yates Company**

3. Address and Telephone No.  
**P.O. Box 1993, Roswell, NM 88202 1-505-623-6601**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**G, 1880' FNL & 1980' FEL  
SEC. 8, T-18S, R-31E**

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

| TYPE OF SUBMISSION                                    | TYPE OF ACTION                           |                                                   |
|-------------------------------------------------------|------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> Notice of Intent             | <input type="checkbox"/> Abandonment     | <input type="checkbox"/> Change in Plans          |
| <input checked="" type="checkbox"/> Subsequent Report | <input type="checkbox"/> Recompletion    | <input type="checkbox"/> New Construction         |
| <input type="checkbox"/> Final Abandonment            | <input type="checkbox"/> Plugging Back   | <input type="checkbox"/> Non-Routine Fracturing   |
|                                                       | <input type="checkbox"/> Casing Repair   | <input type="checkbox"/> Water Shut-Off           |
|                                                       | <input type="checkbox"/> Altering Casing | <input type="checkbox"/> Conversion to Injection  |
|                                                       | <input type="checkbox"/> Other           | <input checked="" type="checkbox"/> 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.)

|                       |                                                                                                                     |                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 1. FORMATION:         | BONE SPRING                                                                                                         |                                                                                               |
| 2. BWPD:              | 1                                                                                                                   |                                                                                               |
| 3. WTR ANALYSIS:      | SEE ATTACHED                                                                                                        |                                                                                               |
| 4. LEASE STORAGE:     | IN FIBERGLASS TANK                                                                                                  |                                                                                               |
| 5. WATER TRANSPORTED: | BY TRUCK TO DISPOSAL                                                                                                |                                                                                               |
| 6. OPERATOR:          | TENNESSEE WATER DISPOSAL<br>TENNESSEE FEDERAL WELL #1<br>UNIT I, SEC. 21, T-19S, R-31E<br>EDDY COUNTY, NM<br>R-8173 | OR LOCO HILLS WATER DISPOSAL COMPANY<br>SEC. 16, T-17S, R-30E<br>EDDY COUNTY, NM<br>R-6811(B) |

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

Signed RAY T. NOKES Title PROD. MGR./ ENG. Date 12/21/94

(This space for Federal or State office use)

Approved by Shannon J. Shaw Title ENGINEER Date 1/18/95

Conditions of approval, if any:



## Water Analysis Report

Analysis Number : 000003169

|                    |                     |                         |               |
|--------------------|---------------------|-------------------------|---------------|
| Company.....:      | Keyco               | Date of Sampling.....:  | 10/19/94      |
| Location.....:     | Roswell, New Mexico | Date of Analysis.....:  | 10/19/94      |
| Field.....:        |                     | Baker Representative..: | Steven Stroud |
| Lease.....:        | Pms Fed.            | Well#.....:             | 8-4           |
| Sample Source....: | Wellhead            | Analysis by.....:       | Stroud        |

## DISSOLVED SOLIDS

## CATIONS:

|       | mg/l     | me/l    |
|-------|----------|---------|
| Ca++  | 4680.00  | 234.00  |
| Mg++  | 2952.40  | 242.00  |
| Fe+++ | 20.00    | 1.08    |
| Ba++  | 0.00     | 0.00    |
| Na+   | 47007.86 | 2043.82 |
| Mn++  | 0.00     | 0.00    |

## ANIONS:

|       | mg/l     | me/l    |
|-------|----------|---------|
| Cl-   | 88000.00 | 2478.87 |
| SO4-- | 1950.00  | 40.63   |
| HCO3- | 85.40    | 1.40    |
| CO3-- | 0.00     | 0.00    |
| OH-   | 0.00     | 0.00    |
| S-    | 0.00     | 0.00    |

TOTAL HARDNESS.....: 476.00

TOTAL SOLIDS (quantitative).....: 144695.70

RESIDUAL HYDROCARBONS(ppm).....: 0.00

# = not determined

## DISSOLVED GASES

|                             |       |
|-----------------------------|-------|
| Hydrogen Sulfide, H2S.....: | 0.0   |
| Carbon Dioxide, CO2.....:   | 110.9 |
| Oxygen, O2.....:            | 0.0   |

## PHYSICAL PROPERTIES

|                            |          |
|----------------------------|----------|
| pH.....:                   | 6.1      |
| Specific Gravity.....:     | 1.080    |
| TDS (calculated) ppm.....: | 144695.7 |
| TIS (calculated) .....     | 2.8      |

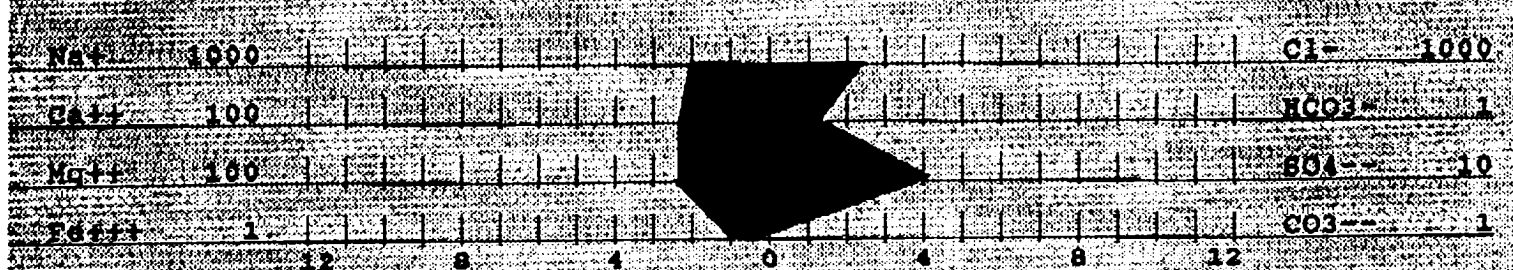
## SCALE STABILITIES

| Temp. | °C | °F  | CaCO3 | CaSO4 | BaSO4 |
|-------|----|-----|-------|-------|-------|
|       | 20 | 68  | -0.84 | 3939  | 0     |
|       | 30 | 86  | -0.65 | 4180  | 0     |
|       | 40 | 104 | -0.41 | 4762  | 0     |
|       |    |     |       | 2888  | 0     |

Max entity, (calculated):

## WATER ANALYSIS PATTERN

(Number beside ion symbol indicates me/l scale unit)



## NOTES: