

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Albuquerque, NM 87102-2894

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

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, 1980' FNL & 1980' FEL
SEC. 4, T-18S, R-31E

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

TYPE OF SUBMISSION

☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment

☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other

TYPE OF ACTION

☐ Change in 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.)

1. FORMATION: DELAWARE
2. BWPD: 52
3. WTR ANALYSIS: SEE ATTACHED
4. LEASE STORAGE: NONE
5. WATER TRANSPORTED: DISPOSED OF IN APPROVED PIT ON 4 FED. #1 LOC. OCD ORDER R-8432 & BLM LETTER DATED: 2-9-94. IN EMERGENCY TRUCKED BY STEVE CARTER OR I & W INC. TO DISPOSAL FACILITIES BELOW.
6. OPERATOR: RAY WESTALL OR LOCO HILLS WATER DISPOSAL COMPANY
TENNESSEE FEDERAL WELL # 1 SEC. 16, T-17S, R-30E
UNIT I, SEC. 21, T-19S, R-31E EDDY COUNTY, NM
EDDY COUNTY, NM R-6811-B
R-8173 OR I&W INC.
WALTER SOLT STATE # 1
L, SEC. 5, T-18S, 28E, EDDY CO.,NM
SWD-318

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

Signed Ray F. Nokes RAY F. NOKES

Title PROD. MGR./ ENG.

Date 5/22/97

(This space for Federal or State office use)

(ORIG. SGD.) DAVID R. GLASS

Title PETROLEUM ENGINEER

Date JUN 11 1997

Approved by

Conditions of approval, if any:

This 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 the Reverse Side

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Permian Treating Chemicals

WATER ANALYSIS REPORT

SAMPLE

Oil Co.: Harvey E. Yates
Lease: Can-Ken 4
Well No.: # 2
Salesman:

Sample Loc.:
Date Analyzed: 02-May-1997
Date Sampled:

ANALYSIS

1. pH 7.530
2. Specific Gravity @ 60 F. 1.098
3. CaCO₃ Saturation Index @ 90 F. +1.597
@ 140 F. +2.457

Dissolved Gases

4. Hydrogen Sulfide Present
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

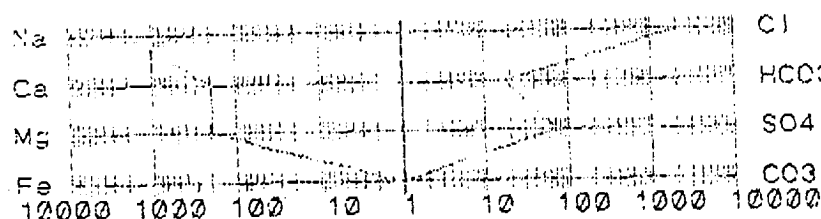
Cations

		MG/L	EQ. WT.	*MEQ/L
7. Calcium (Ca++)		3,788	/ 20.1 =	188.46
8. Magnesium (Mg++)		2,232	/ 12.2 =	182.95
9. Sodium (Na+)	(Calculated)	45,325	/ 23.0 =	1,970.65
10. Barium (Ba++)	Not Determined			

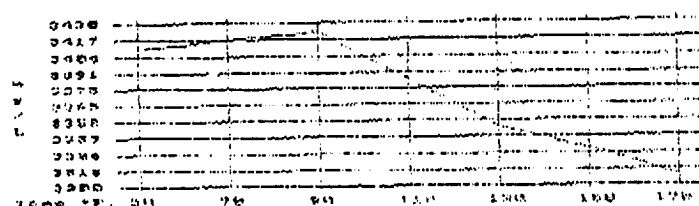
Anions

11. Hydroxyl (OH-)		0	/ 17.0 =	0.00
12. Carbonate (CO ₃ =)		0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ -)		998	/ 61.1 =	16.32
14. Sulfate (SO ₄ =)		3,450	/ 48.9 =	70.73
15. Chloride (Cl-)		79,982	/ 35.5 =	2,253.01
16. Total Dissolved Solids		135,773		
17. Total Iron (Fe)		20	/ 18.2 =	1.10
18. Total Hardness As CaCO ₃		18,847		
19. Resistivity @ 75 F. (Calculated)		0.052 /cm.		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION				
COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Cl	Ca(HCO ₃) ₂	81.04	16.30	1,321
HCO ₃	CaSO ₄	58.07	70.73	4,812
SO ₄	CaCl ₂	55.50	121.46	5,831
CO ₃	Mg(HCO ₃) ₂	73.17	0.00	0
	MgSO ₄	60.19	0.00	0
	MgCl ₂	47.62	182.95	8,712
	NaHCO ₃	84.00	0.00	0
	NaSO ₄	71.03	0.00	0
	NaCl	58.46	1,968.60	115,085

*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H₂S in solution.