

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Oil Cons.  
N.M. Div-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
B No. 1004-0135  
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Matador Operating Company

3a. Address

310 W. Wall, Ste 906 Midland, TX 79703

3b. Phone No. (include area code)

915-687-5955

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

Sec 4, T21S., R27E  
660' FNL 1980' FWL

5. Lease Serial No.

NMNM98124

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

Exxon Federal 4

8. Well Name and No.

1

9. API Well No.

30-015-30449

10. Field and Pool, or Exploratory Area

Avalon; Bone Spring, East

11. County or Parish, State

Eddy County, NM

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"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input checked="" type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Producing Formation: Avalon; Bone Spring East

Amount Produced: 10 BWPD

Water Analysis: See Attached

Water is stored on lease in a 500 bbl steel water tank. The water is transported via pipeline to:

Operator: Exxon Mobile

Facility Name: Avalon Delaware Unit, ADU-CTB

Well Type: Water flood

Well Location: NE/NW Sec 31, T20S, R28E

Eddy County, NM

Lease # NMNM-01119

Unit # NMNM-94450X

Accepted for record - NMOCD

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

Name (Printed/Typed)

Russ Mathis

Title Production Manager

Signature

*Russ Mathis*

Date 3/12/02

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

(ORIG. SGD.) ALEXIS C. SWOBODA

PETROLEUM ENGINEER

Title

Date

MAR 20 2002

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

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# Schlumberger

Artesia Operating Center

Exxon Federal 4 #1  
Sec 4, T21S, R27E  
API #30-015-30449  
Eddy County, NM

Company: MATADOR  
Lease & Well: Exxon Federal #4  
County, State: \_\_\_\_\_  
Formation: \_\_\_\_\_  
BHT (F): \_\_\_\_\_

Report No.: ANM02W0001  
Service Point: ANMLAB  
Prepared by: Geraldine Perez/ Jason Reyes  
Prepared for: \_\_\_\_\_  
Date: 3/5/2002

Specific gravity: 1.135 @ 71.3 degrees F ph 6.30

## Anions

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		
							(mg/l)	(me/l)	(ppm)
Chlorides	3545	4.0	0.1	141800	0.0282	3998.76	1.9852	1.9994	124934
Sulfates	20			400	0.0208	8.32	0.0084	0.0083	352
Carbonates	492	0.0	10	0	0.0333	0.00	0.0000	0.0000	0
Bicarbonates	1000	4.3	10	430	0.0164	7.05	0.0034	0.0035	379

## Cations

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		
							(mg/l)	(me/l)	(ppm)
Calcium	401	3.8	1	1523.8	0.0499	76.04	0.0762	0.0760	1343
Magnesium	243	5.8	1	486	0.0823	40.00	0.0399	0.0400	428
Iron				50	0.0358	1.79	0.0004	0.0009	44
Sodium	0	0	0	89570	0.0435	3896.31	1.9705	1.9482	78917

Total Dissolved Solids: 234260.1

8028.26

Total Ionic Strength: 4.0840 4.0783

### Calcium Carbonate Deposition

Stiff-Davis Equation:  $\text{Stability Index (SI)} = \text{pH} - \text{pCa} - \text{pAlk} - K$

pH= 6.30

pCa= 1.41

pAlk= 2.44

K= 1.31

Total Ion Equivalent NaCl Concentration= 206260.8 ppm

SI= 1.14

The Stiff-Davis equation predicts this water does have a tendency toward calcium carbonate deposition.

### Calcium Sulfate Deposition

CaSO<sub>4</sub> Solubility:  $S = 1000 (\text{SQRT}(X^{**2} + 4*K) - X)$

Total Ionic Strength= 4.0840

Solubility Constant, K= 0.00290

X= 0.0339

S= 78.99 me/l

Laboratory analysis shows that this water contains 8.32 me/l, therefore the tendency towards calcium sulfate deposition does not exist.

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