

SEP - 1 1989

APPLICATION FOR AUTHORIZATION TO INJECT

OIL CONSERVATION DIV.

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ Yes ☐ No

II. Operator: Marathon Oil Company

Address: P. O. Box 552 Midland, Texas 79702

Contact party: Allen Wilson Phone: (915) 682-1626

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no  
If yes, give the Division order number authorizing the project \_\_\_\_\_.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

\* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

\*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

\* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

\* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jack R. Jenkins Title Hobbs Production Superintendent

Signature: [Signature] Date: 8-24-89

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Section X - Filed with initial completion 10/8/82

## III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

## XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

---

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

# INJECTION WELL DATA SHEET

SIDE 1

Marathon Oil Company

Aetna Eaves  
LEAST

2 330' ENL & 990' FEL  
WELL NO. FOOTAGE LOCATION

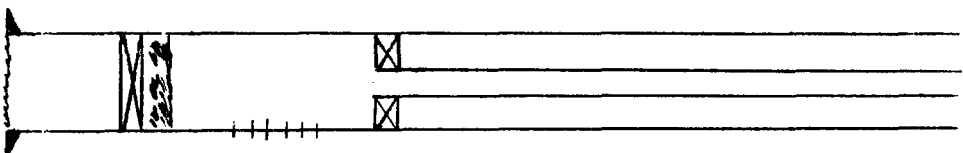
26  
SECTION

16 South 38 East  
TOWNSHIP RANGE

Proposed  
Schematic

Tabular Data

<u>Surface Casing</u> Set to 371'	
Size 13 3/8"	Cemented with 400 ss.
100' Surface	feet determined by Circulated
13 3/8" @ 371'	Hole size 17 1/2"
<u>Intermediate Casing</u> Set to 4653'	
Size 9 5/8"	Cemented with 1800 ss.
100' Surface	feet determined by circulated
9 5/8" @ 4653'	Hole size 12 1/4"
2 3/8" or 2 7/8" tubing @ 5900' Set to 8500' long string	
Guiberson Uni-VI size 5 1/2"	Cemented with 940 ss.
100' Packer	feet determined by Temp. Survey
5968' San Andres	Hole size 8 1/2"
6241'	Total depth 8500'
Cement @ 7965'	Injection interval
CIBP @ 8000'	5968 feet to 6241 feet Perforations
5 1/2 @ 8500'	(perforated or open-hole, indicate which)



INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 2 3/8" or 2 7/8" lined with Duo-Line or equivalent set in a  
Guiberson ER-VI or equivalent (material)  
 (brand and model) packer at ± 5900 feet  
 (or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres
2. Name of Field or Pool (if applicable) N/A
3. Is this a new well drilled for injection? ☐ Yes ☒ No  
 If no, for what purpose was the well originally drilled? Oil

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

Yes; Drinkard formation at 8119' - 8274', Plan to isolate be setting CIBP @ ± 8000' & dump bailing 35' cement on top.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

North Knowles (Devonian) Pool @ 13,072'; East Garrett (Drinkard) Pool @ 8119'; & Garrett (ABO Reef)

Pool @ 8314'

\* Depending on injection pressure & rate.



# LEA, Northeast

PART V

36										31										32										R38E										34										35									
R38E										R38E										R38E										R38E										R38E										R38E									
SODENTON										SODENTON										SODENTON										SODENTON										SODENTON										SODENTON									
Signal Toll 5528										Signal Toll 5528										Signal Toll 5528										Signal Toll 5528										Signal Toll 5528										Signal Toll 5528									
1. Est. 40 M.I.										1. Est. 40 M.I.										1. Est. 40 M.I.										1. Est. 40 M.I.										1. Est. 40 M.I.										1. Est. 40 M.I.									
Richmond Dr.										Richmond Dr.										Richmond Dr.										Richmond Dr.										Richmond Dr.										Richmond Dr.									
El 3754 105508 BA2-7240										El 3754 105508 BA2-7240										El 3754 105508 BA2-7240										El 3754 105508 BA2-7240										El 3754 105508 BA2-7240										El 3754 105508 BA2-7240									
State										State										State										State										State										State									
Harben Davis Grt Westn 72% B. 24-85										Harben Davis Grt Westn 72% B. 24-85										Harben Davis Grt Westn 72% B. 24-85										Harben Davis Grt Westn 72% B. 24-85										Harben Davis Grt Westn 72% B. 24-85										Harben Davis Grt Westn 72% B. 24-85									
First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence										First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence										First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence										First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence										First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence										First Nat'l Bank Lubbock, Tr. M.I. W.V. Lawrence									
Harben Davis Grt Westn 72% 12-13-86 12-14-86 12-15-86 12-16-86 12-17-86 12-18-86 12-19-86 12-20-86 12-21-86 12-22-86 12-23-86 12-24-86 12-25-86 12-26-86 12-27-86 12-28-86 12-29-86 12-30-86 12-31-86 1-1-87 1-2-87 1-3-87 1-4-87 1-5-87 1-6-87 1-7-87 1-8-87 1-9-87 1-10-87 1-11-87 1-12-87 1-13-87 1-14-87 1-15-87 1-16-87 1-17-87 1-18-87 1-19-87 1-20-87 1-21-87 1-22-87 1-23-87 1-24-87 1-25-87 1-26-87 1-27-87 1-28-87 1-29-87 1-30-87 1-31-87 2-1-87 2-2-87 2-3-87 2-4-87 2-5-87 2-6-87 2-7-87 2-8-87 2-9-87 2-10-87 2-11-87 2-12-87 2-13-87 2-14-87 2-15-87 2-16-87 2-17-87 2-18-87 2-19-87 2-20-87 2-21-87 2-22-87 2-23-87 2-24-87 2-25-87 2-26-87 2-27-87 2-28-87 2-29-87 2-30-87 2-31-87 3-1-87 3-2-87 3-3-87 3-4-87 3-5-87 3-6-87 3-7-87 3-8-87 3-9-87 3-10-87 3-11-87 3-12-87 3-13-87 3-14-87 3-15-87 3-16-87 3-17-87 3-18-87 3-19-87 3-20-87 3-21-87 3-22-87 3-23-87 3-24-87 3-25-87 3-26-87 3-27-87 3-28-87 3-29-87 3-30-87 3-31-87 4-1-87 4-2-87 4-3-87 4-4-87 4-5-87 4-6-87 4-7-87 4-8-87 4-9-87 4-10-87 4-11-87 4-12-87 4-13-87 4-14-87 4-15-87 4-16-87 4-17-87 4-18-87 4-19-87 4-20-87 4-21-87 4-22-87 4-23-87 4-24-87 4-25-87 4-26-87 4-27-87 4-28-87 4-29-87 4-30-87 4-31-87 5-1-87 5-2-87 5-3-87 5-4-87 5-5-87 5-6-87 5-7-87 5-8-87 5-9-87 5-10-87 5-11-87 5-12-87 5-13-87 5-14-87 5-15-87 5-16-87 5-17-87 5-18-87 5-19-87 5-20-87 5-21-87 5-22-87 5-23-87 5-24-87 5-25-87 5-26-87 5-27-87 5-28-87 5-29-87 5-30-87 5-31-87 6-1-87 6-2-87 6-3-87 6-4-87 6-5-87 6-6-87 6-7-87 6-8-87 6-9-87 6-10-87 6-11-87 6-12-87 6-13-87 6-14-87 6-15-87 6-16-87 6-17-87 6-18-87 6-19-87 6-20-87 6-21-87 6-22-87 6-23-87 6-24-87 6-25-87 6-26-87 6-27-87 6-28-87 6-29-87 6-30-87 6-31-87 7-1-87 7-2-87 7-3-87 7-4-87 7-5-87 7-6-87 7-7-87 7-8-87 7-9-87 7-10-87 7-11-87 7-12-87 7-13-87 7-14-87 7-15-87 7-16-87 7-17-87 7-18-87 7-19-87 7-20-87 7-21-87 7-22-87 7-23-87 7-24-87 7-25-87 7-26-87 7-27-87 7-28-87 7-29-87 7-30-87 7-31-87 8-1-87 8-2-87 8-3-87 8-4-87 8-5-87 8-6-87 8-7-87 8-8-87 8-9-87 8-10-87 8-11-87 8-12-87 8-13-87 8-14-87 8-15-87 8-16-87 8-17-87 8-18-87 8-19-87 8-20-87 8-21-87 8-22-87 8-23-87 8-24-87 8-25-87 8-26-87 8-27-87 8-28-87 8-29-87 8-30-87 8-31-87 9-1-87 9-2-87 9-3-87 9-4-87 9-5-87 9-6-87 9-7-87 9-8-87 9-9-87 9-10-87 9-11-87 9-12-87 9-13-87 9-14-87 9-15-87 9-16-87 9-17-87 9-18-87 9-19-87 9-20-87 9-21-87 9-22-87 9-23-87 9-24-87 9-25-87 9-26-87 9-27-87 9-28-87 9-29-87 9-30-87 9-31-87 10-1-87 10-2-87 10-3-87 10-4-87 10-5-87 10-6-87 10-7-87 10-8-87 10-9-87 10-10-87 10-11-87 10-12-87 10-13-87 10-14-87 10-15-87 10-16-87 10-17-87 10-18-87 10-19-87 10-20-87 10-21-87 10-22-87 10-23-87 10-24-87 10-25-87 10-26-87 10-27-87 10-28-87 10-29-87 10-30-87 10-31-87 11-1-87 11-2-87 11-3-87 11-4-87 11-5-87 11-6-87 11-7-87 11-8-87 11-9-87 11-10-87 11-11-87 11-12-87 11-13-87 11-14-87 11-15-87 11-16-87 11-17-87 11-18-87 11-19-87 11-20-87 11-21-87 11-22-87 11-23-87 11-24-87 11-25-87 11-26-87 11-27-87 11-28-87 11-29-87 11-30-87 11-31-87 12-1-87 12-2-87 12-3-87 12-4-87 12-5-87 12-6-87 12-7-87 12-8-87 12-9-87 12-10-87 12-11-87 12-12-87 12-13-87 12-14-87 12-15-87 12-16-87 12-17-87 12-18-87 12-19-87 12-20-87 12-21-87 12-22-87 12-23-87 12-24-87 12-25-87 12-26-87 12-27-87 12-28-87 12-29-87 12-30-87 12-31-87 1-1-88 1-2-88 1-3-88 1-4-88 1-5-88 1-6-88 1-7-88 1-8-88 1-9-88 1-10-88 1-11-88 1-12-88 1-13-88 1-14-88 1-15-88 1-16-88 1-17-88 1-18-88 1-19-88 1-20-88 1-21-88 1-22-88 1-23-88 1-24-88 1-25-88 1-26-88 1-27-88 1-28-88 1-29-88 1-30-88 1-31-88 2-1-88 2-2-88 2-3-88 2-4-88 2-5-88 2-6-88 2-7-88 2-8-88 2-9-88 2-10-88 2-11-88 2-12-88 2-13-88 2-14-88 2-15-88 2-16-88 2-17-88 2-18-88 2-19-88 2-20-88 2-21-88 2-22-88 2-23-88 2-24-88 2-25-88 2-26-88 2-27-88 2-28-88 2-29-88 2-30-88 2-31-88 3-1-88 3-2-88 3-3-88 3-4-88 3-5-88 3-6-88 3-7-88 3-8-88 3-9-88 3-10-88 3-11-88 3-12-88 3-13-88 3-14-88 3-15-88 3-16-88 3-17-88 3-18-88 3-19-88 3-20-88 3-21-88 3-22-88 3-23-88 3-24-88 3-25-88 3-26-88 3-27-88 3-28-88 3-29-88 3-30-88 3-31-88 4-1-88 4-2-88 4-3-88 4-4-88 4-5-88 4-6-88 4-7-88 4-8-88 4-9-88 4-10-88 4-11-88 4-12-88 4-13-88 4-14-88 4-15-88 4-16-88 4-17-88 4-18-88 4-19-88 4-20-88 4-21-88 4-22-88 4-23-88 4-24-88 4-25-88 4-26-88 4-27-88 4-28-88 4-29-88 4-30-88 4-31-88 5-1-88 5-2-88 5-3-88 5-4-88 5-5-88 5-6-88 5-7-88 5-8-88 5-9-88 5-10-88 5-11-88 5-12-88 5-13-88 5-14-88 5-15-88 5-16-88 5-17-88 5-18-88 5-19-88 5-20-88 5-21-88 5-22-88 5-23-88 5-24-88 5-25-88 5-26-88 5-27-88 5-28-88 5-29-88 5-30-88 5-31-88 6-1-88 6-2-88 6-3-88 6-4-88 6-5-88 6-6-88 6-7-88 6-8-88 6-9-88 6-10-88 6-11-88 6-12-88 6-13-88 6-14-88 6-15-88 6-16-88 6-17-88 6-18-88 6-19-88 6-20-88 6-21-88 6-22-88 6-23-88 6-24-88 6-25-88 6-26-88 6-27-88 6-28-88 6-29-88 6-30-88 6-31-88 7-1-88 7-2-88 7-3-88 7-4-88 7-5-88 7-6-88 7-7-88 7-8-88 7-9-88 7-10-88 7-11-88 7-12-88 7-13-88 7-14-88 7-15-88 7-16-88 7-17-88 7-18-88 7-19-88 7-20-88 7-21-88 7-22-88 7-23-88 7-24-88 7-25-88 7-26-88 7-27-88 7-28-88 7-29-88 7-30-88 7-31-88 8-1-88 8-2-88 8-3-88 8-4-88 8-5-88 8-6-88 8-7-88 8-8-88 8-9-88 8-10-88 8-11-88 8-12-88 8-13-88 8-14-88 8-15-88 8-16-88 8-17-88 8-18-88 8-19-88 8-20-88 8-21-88 8-22-88 8-23-88 8-24-88 8-25-88 8-26-88 8-27-88 8-28-88 8-29-88 8-30-88 8-31-88 9-1-88 9-2-88 9-3-88 9-4-88 9-5-88 9-6-88 9-7-88 9-8-88 9-9-88 9-10-88 9-11-88 9-12-88 9-13-88 9-14-88 9-15-88 9-16-88 9-17-88 9-18-88 9-19-88 9-20-88 9-21-88 9-22-88 9-23-88 9-24-88 9-25-88 9-26-88 9-27-88 9-28-88 9-29-88 9-30-88 9-31-88 10-1-88 10-2-88 10-3-88 10-4-88 10-5-88 10-6-88 10-7-88 10-8-88 10-9-88 10-10-88 10-11-88 10-12-88 10-13-88 10-14-88 10-15-88 10-16-88 10-17-88 10-18-88 10-19-88 10-20-88 10-21-88 10-22-88 10-23-88 10-24-88 10-25-88 10-26-88 10-27-88 10-28-88 10-29-88 10-30-88 10-31-88 11-1-88 11-2-88 11-3-88 11-4-88 11-5-88 11-6-88 11-7-88 11-8-88 11-9-88 11-10-88 11-11-88 11-12-88 11-13-88 11-14-88 11-15-88 11-16-88 11-17-88 11-18-88 11-19-88 11-20-88 11-21-88 11-22-88 11-23-88 11-24-88 11-25-88 11-26-88 11-27-88 11-28-88 11-29-88 11-30-88 11-31-88 12-1-88 12-2-88 12-3-88 12-4-88 12-5-88 12-6-88 12-7-88 12-8-88 12-9-88 12-10-88 12-11-88 12-12-88 12-13-88 12-14-88 12-15-88 12-16-88 12-17-88 12-18-88 12-19-88 12-20-88 12-21-88 12-22-88 12-23-88 12-24-88 12-25-88 12-26-88 12-27-88 12-28-88 12-29-88 12-30-88 12-31-88 1-1-89 1-2-89 1-3-89 1-4-89 1-5-89 1-6-89 1-7-89 1-8-89 1-9-89 1-10-89 1-11-89 1-12-89 1-13-89 1-14-89 1-15-89 1-16-89 1-17-89 1-18-89 1-19-89 1-20-89 1-21-89 1-22-89 1-23-89 1-24-89 1-25-89 1-26-89 1-27-89 1-28-89 1-29-89 1-30-89 1-31-89 2-1-89 2-2-89 2-3-89 2-4-89 2-5-89 2-6-89 2-7-89 2-8-89 2-9-89 2-10-89 2-11-89 2-12-89 2-13-89 2-14-89 2-15-89 2-16-89 2-17-89 2-18-89 2-19-89 2-20-89 2-21-89 2-22-89 2-23-89 2-24-89 2-25-89 2-26-89 2-27-89 2-28-89 2-29-89 2-30-89 2-31-89 3-1-89 3-2-89 3-3-89 3-4-89 3-5-89 3-6-89 3-7-89 3-8-89 3-9-89 3-10-89 3-11-89 3-12-89 3-13-89 3-14-89 3-15-89 3-16-89 3-17-89 3-18-89 3-19-89 3-20-89 3-21-89 3-22-89 3-23-89 3-24-89 3-25-89 3-26-89 3-27-89 3-28-89 3-29-89 3-30-89 3-31-89 4-1-89 4-2-89 4-3-89 4-4-89 4-5-89 4-6-89 4-7-89 4-8-89 4-9-89 4-10-89 4-11-89 4-12-89 4-13-89 4-14-89 4-15-89 4-16-89 4-17-89 4-18-89 4-19-89 4-20-89 4-21-89 4-22-89 4-23-89 4-24-89 4-25-89 4-26-89 4-27-89 4-28-89 4-29-89 4-30-89 4-31-89 5-1-89 5-2-89 5-3-89 5-4-89 5-5-89 5-6-89 5-7-89 5-8-89 5-9-89 5-10-89 5-11-89 5-12-89 5-13-89 5-14-89 5-15-89 5-16-89 5-17-89 5-18-89 5-19-89 5-20-89 5-21-89 5-22-89 5-23-89 5-24-89 5-25-89 5-26-89 5-27-89 5-28-89 5-29-89 5-30-89 5-31-89 6-1-89 6-2-89 6-3-89 6-4-89 6-5-89 6-6-89 6-7-89 6-8-89 6-9-89 6-10-89 6-11-89 6-12-89 6-13-89 6-14-89 6-15-89 6-16-89 6-17-89 6-18-89 6-19-89 6-20-89 6-21-89 6-22-89 6-23-89 6-24-89 6-25-89 6-26-89 6-27-89 6-28-89 6-29-89 6-30-89 6-31-89 7-1-89 7-2-89 7-3-89 7-4-89 7-5-89 7-6-89 7-7-89 7-8-89 7-9-89 7-10-89 7-11-89 7-12-89 7-13-89 7-14-89 7-15-89 7-16-89 7-17-89 7-18-89 7-19-89 7-20-89 7-21-89 7-22-89 7-23-89 7-24-89 7-25-89 7-26-89 7-27-89 7-28-89 7-29-89 7-30-89 7-31-89 8-1-89 8-2-89 8-3-89 8-4-89 8-5-89 8-6-89 8-7-89 8-8-89 8-9-89 8-10-89 8-11-89 8-12-89 8-13-89 8-14-89 8-15-89 8-16-89 8-17-89 8-18-89 8-19-89 8-20-89 8-21-89 8-22-89 8-23-89 8-24-89 8-25-89 8-26-89 8-27-89 8-28-89 8-29-89 8-30-89 8-31-89 9-1-89 9-2-89 9-3-89 9-4-89 9-5-89 9-6-89 9-7-89 9-8-89 9-9-89 9-10-89 9-11-89 9-12-89 9-13-89 9-14-89 9-15-89 9-16-89 9-17-89 9-18-89 9-19-89 9-20-89 9-21-89 9-22-89 9-23-89 9-24-89 9-25-89 9-26-89 9-27-89 9-28-89 9-29-89 9-30-89 9-31-89 10-1-89 10-2-89 10-3-89 10-4-89 10-5-89 10-6-89 10-7-89 10-8-89 10-9-89 10-10-89 10-11-89 10-12-89 10-13-89 10-14-89 10-15-89 10-16-89 10-17-89 10-18-89 10-19-89 10-20-89 10-21-89 10-22-89 10-23-89 10-24-89 10-25-89 10-26-89 10-27-89 10-28-89 10-29-89 10-30-89 10-31-89 11-1-89 11-2-89 11-3-89 11-4-89 11-5-89 11-6-89 11-7-89 11-8-89 11-9-89 11-10-89 11-11-89 11-12-89 11-13-89 11-14-89 11-15-89 11-16-89 11-17-89 11-18-89 11-19-89 11-20-89 11-21-89 11-22-89 11-23-89 11-24-89 11-25-89 11-26-89 11-27-89 11-28-89 11-29-89 11-30-89 11-31-89 12-1-89 12-2-89 12-3-89 12-4-89 12-5-89 12-6-89 12-7-89 12-8-89 12-9-89 12-10-89 12-11-89 12-12-89 12-13-89 12-14-89 12-15-89 12-16-89 12-17-89 12-18-89 12-19-89 12-20-89 12-21-89 12-22-89 12-23-89 12-24-89 12-25-89 12-26-89 12-27-89 12-28-89 12-29-89 12-30-89 12-31-89 1-1-90 1-2-90 1-3-90 1-4-90 1-5-90 1-6-90 1-7-90 1-8-90 1-9-90 1-10-90 1-11-90 1-12-90 1-13-90 1-14-90 1-15-90 1-16-90 1-17-90 1-18-90 1-19-90 1-20-90 1-21-90 1-22-90 1-23-90 1-24-90 1-25-90 1-26-90 1-27-90 1-28-90 1-29-90 1-30-90 1-31-90 2-1-90 2-2-90 2-3-90 2-4-90 2-5-90 2-6-90 2-7-90 2-8-90 2-9-90 2-10-90 2-11-90 2-12-90 2-13-90 2-14-90 2-15-90 2-16-90 2-17-90 2-18-90 2-19-90 2-20-90 2-21-90 2-22-90 2-23-90 2-24-90 2-25-90 2-26-90 2-27-90 2-28-90 2-29-90 2-30-90 2-31-90 3-1-90 3-2-90 3-3-90 3-4-90 3-5-90 3-6-90 3-7-90 3-8-90 3-9-90 3-10-90 3-11-90 3-12-90 3-13-90 3-14-90 3-15-90 3-16-90 3-17-90 3-18-90 3-19-90 3-20-90 3-21-90 3-22-90 3-23-90 3-24-90 3-25-90 3-26-90 3-27-90 3-28-90 3-29-90 3-30-90 3-31-90 4-1-90 4-2-90 4-3-90 4-4-90 4-5-90 4-6-90 4-7-90 4-8-90 4-9-90 4-10-90 4-11-90 4-12-90 4-13-90 4-14-90 4-15-90 4-16-90 4-17-90 4-18-90 4-19-90 4-2																																																											



FORM C - 108

PART VI

1. Marathon Oil Company  
Delmont L. Hatfield Well No. 1  
1980' FSL & 1765' FEL, Section 23, T16S, R38E  
Producing Oil Well (Abo Reef @ 8314 - 8337)  
Date Drilled: 9-4-81  
Total Depth: 9000'  
Surface Casing: 13 3/8" 48# H-40  
Set to 342'. Cemented with 375 sacks - circulated.  
Intermediate Casing: 9 5/8" 36 & 40#  
K-55 & N-80 to 4229'  
Cemented with 1700 sacks - circulated.  
Production Casing - 5 1/2" 15.5 & 17#  
K-55 Set to 8625'. Cemented with 3025 sacks - circulated.  
3025 sacks - circulated.
2. Marathon Oil Company  
Anderson Carter Well No. 1  
660' FEL & 990' FSL Section 23, T16S, R38E  
Dry Hole - Plugged & abandoned 2-29-83  
Total Depth: 8435'  
Plugging Record & Schematic: See attached.

075-89/ASW

## WELL DATA SHEET

7/16" Steel  
Plate

10' FIELD Undesignated

LEASE AND WELL NO. Anderson Carter Well No. 1

LOCATION 990' FSL &amp; 660' FEL, Sec. 23, T16S, R38E

COUNTY AND STATE Lea, New Mexico

STATUS Plugged and Abandoned

TD 8435' PBTD 8379' KB 3707' GL 3692'

SURFACE CASING 13 3/8", 48#, H40, ST&amp;C at 374'

Top of 5 1/2" @ 3165'  
Cemented w/400 Sacks - CirculatedTop of cement outside  
5 1/2" @ 3450' INTERMEDIATE CASING 9 5/8", 36# & 40#, K55, LT&C

4299' Cemented w/1710 Sacks - Circulated

PRODUCTION CASING 5 1/2", 15.5# &amp; 17#, K55, LT&amp;C

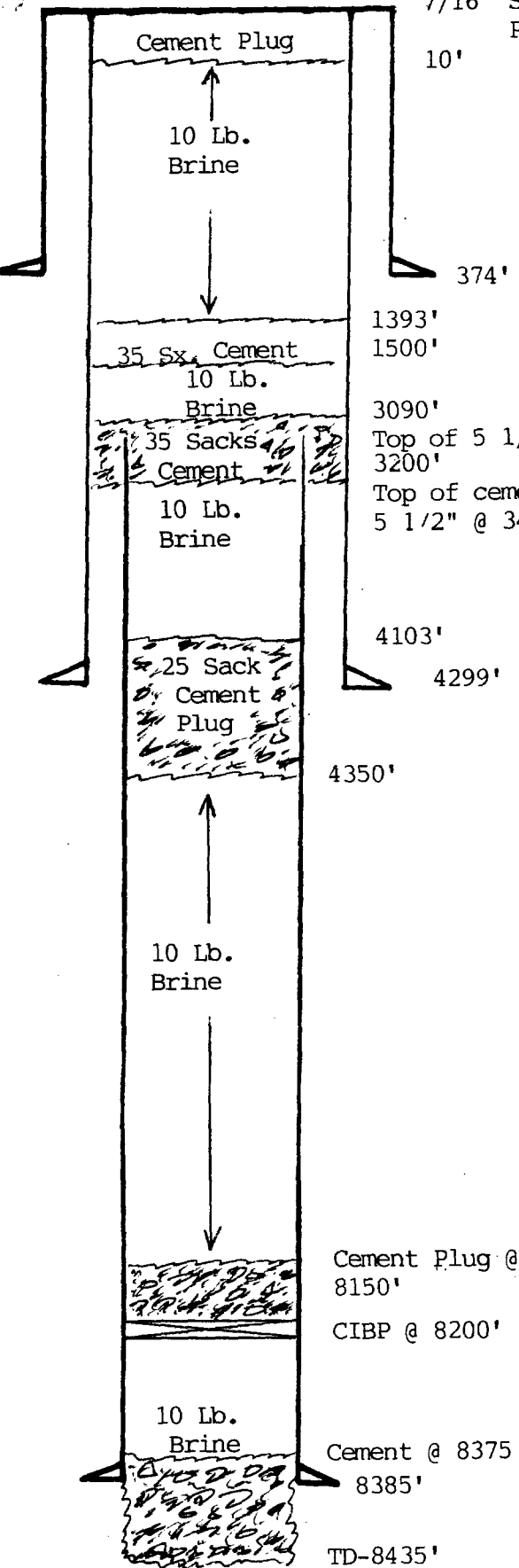
at 8385'. Cemented w/1230 sacks. Top of  
cement at 3450'.

TUBING

RODS

PUMPING UNIT

PRESENT COMPLETION: N/A



HISTORY Drilled in March 1982. Tested following zones:

Abo (8367 - 72). (8350 - 63). (8340 - 47).

Drinkard (8234 - 42). Perfs from 8367 - 72 are still open, all others are squeezed.

Plugged &amp; Abandoned 2/9/83

PREPARED BY: Allen S. Wilson  
004-89wds

DATE August 8, 1989

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	
7. Unit Agreement Name	
8. Farm or Lease Name	
Anderson Carter	
9. Well No.	
1	
10. Field and Pool, or Wildcat	
Undesignated	
12. County	
Lea	

1a. TYPE OF WELL					
OIL WELL <input type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>		
b. TYPE OF COMPLETION					
NEW WELL <input type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEPEN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>	DIFF. RESVR. <input type="checkbox"/>	OTHER <input type="checkbox"/>

2. Name of Operator  
Marathon Oil Company3. Address of Operator  
P.O. Box 2409, Hobbs, New Mexico 882404. Location of Well  
UNIT LETTER P LOCATED 990 FEET FROM THE South LINE AND 660 FEET FROMTHE East LINE OF SEC. 23 TWP. 16S RGE. 38E NMPM

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
2-2-82	3-12-82		GR 3692 KB 3707	3692'
20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools Cable Tools
8435	Surface		→ All	
24. Producing Interval(s), of this completion - Top, Bottom, Name				25. Was Directional Survey Made
				Deviation Survey
26. Type Electric and Other Logs Run				27. Was Well Cored
CNL- FDC- GR- Cal., DLL-MSFL-GR, BHC- Sonic-GR				Yes

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	374'	17 1/2"	400 SX	
9 5/8"	36# & 40#	4299'	12 1/4"	1710 SX	
5 1/2"	15.5# & 17#	8385'	8 1/2"	1230 SX	3165'

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
						Plug & Abandoned	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
			→				
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	→	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)
34. Disposition of Gas (Sold, used for fuel, vented, etc.)							Test Witnessed By

35. List of Attachments  
CNL - FDC - GR-C; DLL - MSFL - GR; BHC - Sonic - GR; Deviation Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED Thomas F. ZaparkaTITLE Production EngineerDATE March 9, 1983

DIST.: NRD, SRB, WEN, FLE



NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEEN OR PLUG BACK TO A DIFFERENT RESERVOIR.  
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Marathon Oil Company	8. Farm or Lease Name Anderson Carter
3. Address of Operator P.O. Box 2409 Hobbs, NM 88240	9. Well No. 1
4. Location of Well UNIT LETTER <u>P</u> <u>990</u> FEET FROM THE <u>South</u> LINE AND <u>660</u> FEET FROM THE <u>East</u> LINE, SECTION <u>23</u> TOWNSHIP <u>16S</u> RANGE <u>38E</u> NMPM.	10. Field and Pool, or Wildcat Undesignated
15. Elevation (Show whether DF, RT, GR, etc.) 3692 GL	12. County Lea

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

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work; SEE RULE 1103.

PLUG AND ABANDON (Tony Plattsmier, NMOCD representative present for witnessing.)

02-24-83 Rigged up Baber casing pulling rig, installed BOP and pulled out of the hole with 271 joints of 2 3/8" tubing and seating nipple. Ran a cast iron bridge plug on wireline and set it at 8200'. Ran in the hole with 2 3/8" tubing open ended to 8196'. Shut down for the night.

02-25-83 Loaded the hole with mud laden 10# brine. Spotted 5 sacks Class "C" neat cement on top of the cast iron bridge plug. Pulled the tubing up to 4350' and spotted 25 sacks of Class "C" neat cement. Pulled out of the hole laying down the tubing. Removed BOP and wellhead. Welded lift nipple into 5 1/2" casing. Shut down for the night.

02-26-83 Rigged up casing jacks, pulled slips free and found the 5 1/2" casing free at 3150'. Rigged down casing jacks and installed BOP. Rigged up wireline truck and casing cutter failed to cut casing. Pulled out of the hole with the casing cutter. Shut down for the night.

(cont.)

8. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

CHD Steven A. Pohler TITLE Production Engineer DATE 3-01-83

PROVED BY David R. Catanach TITLE OIL & GAS INSPECTOR DATE JUN 1 1983

CONDITIONS OF APPROVAL, IF ANY:

DIST.: NRD, BRB, WDH, FILE

02-27-83 Went in the hole with a casing cutter and cut the 5 1/2" casing off at 3150' and pulled 79 joints of 5 1/2" casing. Ran in the hole with 2 3/8" tubing to 3200' and spotted 35 sacks of Class "C" cement. Pulled the tubing up the hole. Shut down for the night.

02-28-83 Shut down for Sunday.

02-29-83 Went back in the hole with the tubing and tagged the top of the cement at 3090'. Pulled up the hole with the tubing to 1500' and spotted 35 sacks of Class "C" cement. Pulled out of the hole with the tubing. Removed the BOP's, dug out the cellar and cut off the wellhead. Mixed 3 sacks of Class "C" cement and spotted a 10' plug at the surface in the 9 5/8" hole on top of empty mud sacks. Welded on 7/16" metal plate over 13 3/8" surface pipe and installed dry hole marker. Rigged down Baker casing pulling rig.

Class "C" cement was used for plugging operation. 371' of 13 3/8", 48# casing set at 374' and 4296' of 9 5/8", 36# casing set at 4299' and 5235' of 5 1/2", 15.5# and 17# casing set at 8385' were left in the hole.

Waiting on pits to dry out before leveling and inspection.

ALL INFORMATION CONTAINED  
HEREIN IS UNCLASSIFIED  
DATE 10/1/83 BY 1043

1043

Form C-108  
Part VII

1. Proposed average and maximum injection rates:  
300 BWPD & 1000 BWPD respectively.
2. Type of system:  
This will be a closed system.
3. Proposed average and maximum injection pressures:  
300 psig and 1000 psig respectively.
4. See attached.
5. See attached.

068-89/ASW

LAB V.I.L  
No. 445

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : Marathon Oil Company  
Date : 11-14-1988  
Location: V. E. Roddy - Heater (on 11-10-1988)

	<u>Sample 1</u>
Specific Gravity:	1.036
Total Dissolved Solids:	51030
pH:	0.00
IONIC STRENGTH:	0.964

---

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	100	2000
Magnesium	(Mg <sup>+2</sup> )	44.0	535
Sodium	(Na <sup>+1</sup> )	734	16900
Iron (total)	(Fe <sup>+2</sup> )	0.183	5.10
Barium	(Ba <sup>+2</sup> )	0.022	1.50

<u>ANIONS:</u>			
Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	6.00	366
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	26.0	1250
Chloride	(Cl <sup>-1</sup> )	846	30000

---

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>	<u>Calcium</u>	<u>Calcium</u>
	<u>Carbonate</u>	<u>Sulfate</u>
86°F      30°C	-6.9	-29



Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : Marathon Oil Company  
Date : 11-14-1988  
Location: Benson - Heater (on 11-10-1988)

	<u>Sample 1</u>
Specific Gravity:	1.034
Total Dissolved Solids:	47746
pH:	0.00
IONIC STRENGTH:	0.912

---

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	84.0	1680
Magnesium	(Mg <sup>+2</sup> )	60.0	729
Sodium	(Na <sup>+1</sup> )	680	15600
Iron (total)	(Fe <sup>+2</sup> )	14.6	409
Barium	(Ba <sup>+2</sup> )	0.013	0.900

<u>ANIONS:</u>			
Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	5.00	305
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	29.1	1400
Chloride	(Cl <sup>-1</sup> )	790	28000

---

SCALING INDEX (positive value indicates scale)

	<u>Temperature</u>	<u>Calcium</u>	<u>Calcium</u>
86°F	30°C	<u>Carbonate</u>	<u>Sulfate</u>
		-7.0	-30

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : Marathon Oil Company

Date : 11-14-1988

Location: Hatfield - Heater (on 11-10-1988)

	<u>Sample 1</u>
Specific Gravity:	1.050
Total Dissolved Solids:	70258
pH:	0.00
IONIC STRENGTH:	1.281

---

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	60.0	1200
Magnesium	(Mg <sup>+2</sup> )	52.0	632
Sodium	(Na <sup>+1</sup> )	1080	24800
Iron (total)	(Fe <sup>+2</sup> )	0.039	1.10
Barium	(Ba <sup>+2</sup> )	0.009	0.600

<u>ANIONS:</u>			
Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	21.0	1280
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	60.4	2900
Chloride	(Cl <sup>-1</sup> )	1110	39400

---

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>		<u>Calcium</u>	<u>Calcium</u>
		<u>Carbonate</u>	<u>Sulfate</u>
86°F	30°C	-6.5	-33

## TYPICAL SAN ANDRES WATER

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : MARATHON

Date : 08-21-1989

Location: LEA UNIT #7 (on 9-27-82)

LEA SAN ANDRES FIELD

Specific Gravity:

Total Dissolved Solids:

pH:

IONIC STRENGTH:

Sample 1

1.173

242214

5.73

5.083

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	1200	24000
Magnesium	(Mg <sup>+2</sup> )	400	4860
Sodium	(Na <sup>+1</sup> )	2670	61500
Iron (total)	(Fe <sup>+2</sup> )	19.6	547
Barium	(Ba <sup>+2</sup> )	0.014	0.980

ANIONS:

Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	3.00	183
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	14.6	700
Chloride	(Cl <sup>-1</sup> )	4260	151000

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>	<u>Calcium</u>	<u>Calcium</u>
	<u>Carbonate</u>	<u>Sulfate</u>
86°F      30°C	1.3	6.7

## Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : MARATHON

Date : 08-21-1989

Location: COMMINGLED @ 33.3% EACH - RODDY/BENSON/HATFIELD (on 11-10-88)

Specific Gravity:

Total Dissolved Solids:

pH:

IONIC STRENGTH:

Sample 1

1.040

56234

6.10

1.051

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	81.5	1630
Magnesium	(Mg <sup>+2</sup> )	51.9	631
Sodium	(Na <sup>+1</sup> )	830	19100
Iron (total)	(Fe <sup>+2</sup> )	4.94	138
Barium	(Ba <sup>+2</sup> )	0.014	0.990

ANIONS:

Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	10.7	650
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	38.5	1850
Chloride	(Cl <sup>-1</sup> )	914	32400

SCALING INDEX (positive value indicates scale)

Temperature  
86°F      30°C

<u>Calcium</u>	<u>Calcium</u>
<u>Carbonate</u>	<u>Sulfate</u>
-0.65	-29



## Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : MARATHON

Date : 08-21-1989

Sample 1: COMMINGLED = 50% LEA UNIT #7 = 50%

Sample 2: COMMINGLED = 60% LEA UNIT #7 = 40%

Sample 3: COMMINGLED = 70% LEA UNIT #7 = 30%

	Sample 1	Sample 2	Sample 3
Specific Gravity:	1.107	1.093	1.080
Total Dissolved Solids:	149224	130626	112028
pH:	5.92	5.95	5.99
IONIC STRENGTH:	3.067	2.664	2.260

CATIONS:		me/liter	mg/liter	me/liter	mg/liter	me/liter	mg/liter
Calcium	(Ca <sup>+2</sup> )	642	12800	530	10600	418	8360
Magnesium	(Mg <sup>+2</sup> )	226	2750	191	2320	156	1900
Sodium	(Na <sup>+1</sup> )	1750	40300	1570	36000	1380	31800
Iron (total)	(Fe <sup>+2</sup> )	12.3	343	10.8	302	9.34	261
Barium	(Ba <sup>+2</sup> )	0.014	0.985	0.014	0.986	0.014	0.9

ANIONS:		me/liter	mg/liter	me/liter	mg/liter	me/liter	mg/liter
Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	6.83	417	7.59	463	8.36	510
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0	0	0	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0	0	0	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	26.5	1280	28.9	1390	31.3	1510
Chloride	(Cl <sup>-1</sup> )	2590	91700	2250	79800	1920	68000

## DISSOLVED GASES

Carbon Dioxide	(CO <sub>2</sub> )	0	0	0
Hydrogen Sulfide	(H <sub>2</sub> S)	0	0	0
Oxygen	(O <sub>2</sub> )	0	0	0

## SCALING INDEX (positive value indicates scale)

Temperature	Calcium Carbonate	Calcium Sulfate	Calcium Carbonate	Calcium Sulfate	Calcium Carbonate	Calcium Sulfate
86°F 30°C	0.33	7.1	0.18	6.1	0.02	3.1

## Comments:

COMMINGLED = 33.3% EACH RODDY/BENSON/HATFIELD (ON 11-10-99)  
 LEA UNIT #7 (ON 9-27-82)

Form C-108  
Part VIII

1. Injection zone: San Andres  
Lithology : Dolomite  
Top : 4695'  
Bottom : 6315'  
Thickness : 1620'  
Perforations : 5968' - 6241'
2. Fresh water zone: Ogallala Formation  
Depth to bottom :  $\pm$  60' to 120'

069-89/ASW

FORM C - 108  
PART IX

The proposed stimulation program is a ball-out acid job with 5000 gallons of 15% HCl Acid.

067-89/ASW



Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

August 17, 1989

Ralph Skinner  
Marathon Oil Company  
P. O. Box 2409  
Hobbs, NM 88241

Dear Mr. Skinner:

Enclosed please find our water analysis report on the sample submitted to our laboratory on August 10, 1989. Location of sample point was closest point (windmill) from Aetna Eaves Sec 26-T16S-R38E.

If you have any questions or require further information, please contact us.

Sincerely,

A handwritten signature in cursive script that reads 'Sharon Wright'. Below the signature, the name and title are printed in a standard font.

Sharon Wright  
Laboratory Technician

SW/sr

Enclosure

cc: John Offutt  
Technician Dept - Marathon  
Allen Wilson  
Joe Hay

DEPTH IS  $\pm 60'$  TO  $\pm 120'$



Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : MARATHON OIL

Date : 08-17-1989

Location: Aetna Eaves - SWD (on 8-10-89)

	<u>Sample 1</u>
Specific Gravity:	1.000
Total Dissolved Solids:	632
pH:	8.60
IONIC STRENGTH:	0.012

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca <sup>+2</sup> )	3.47	69.3
Magnesium	(Mg <sup>+2</sup> )	0.933	11.3
Sodium	(Na <sup>+1</sup> )	4.59	105
Iron (total)	(Fe <sup>+2</sup> )	1.00	28.0
Barium	(Ba <sup>+2</sup> )	0.001	0.100

<u>ANIONS:</u>			
Bicarbonate	(HCO <sub>3</sub> <sup>-1</sup> )	3.80	232
Carbonate	(CO <sub>3</sub> <sup>-2</sup> )	0	0
Hydroxide	(OH <sup>-1</sup> )	0	0
Sulfate	(SO <sub>4</sub> <sup>-2</sup> )	2.37	114
Chloride	(Cl <sup>-1</sup> )	2.82	100

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>		<u>Calcium</u>	<u>Calcium</u>
86°F	30°C	<u>Carbonate</u>	<u>Sulfate</u>
		1.3	-17

Comment: Fresh water sample taken within one mile radius Aetna-Eaves Sec 26 T16S-R38E  
Eaves is a proposed SWD well.

Form C-108  
Part XII

Marathon Oil Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone (San Andres) and the underground source of drinking water (Ogallala).

070-89/ASW

**AFFIDAVIT OF PUBLICATION**

State of New Mexico,  
County of Lea.

I, George W. Moore

of the Hobbs Daily News-Sun, a  
daily newspaper published at  
Hobbs, New Mexico, do solemnly  
swear that the clipping attached  
hereto was published once a week  
in the regular and entire issue of  
said paper, and not a supplement  
thereof for a period

of \_\_\_\_\_

Three Days.  
Beginning with the issue dated

August 14, 1989  
and ending with the issue dated

August 16, 1989

George W. Moore  
Publisher.

Sworn and subscribed to before

me this 21 day of

August, 1989

Samela A. Cole  
Notary Public.

My Commission expires \_\_\_\_\_

July 12, 1993  
(Seal)

This newspaper is duly qualified to  
publish legal notices or adver-  
tisements within the meaning of  
Section 3, Chapter 167, Laws of  
1937, and payment of fees for said  
publication has been made.

**LEGAL NOTICE**

Aug. 14, 15, 16, 1989

Marathon Oil Company  
P.O. Box 532, Midland,  
Texas 79702 (915-682-1626)  
has applied to the New  
Mexico Oil Conservation  
Division for a permit to  
inject fluid into the San  
Andres formation, Un-  
designated field, Lea  
County, New Mexico, Sec-  
tion 26, T-16-S, R-38-E. The  
proposed well known as the  
Aetna Eaves well No. 2 will  
be used to dispose of a  
maximum of 1000 BWPD at  
a maximum pressure of  
1000 psig through perfora-  
tions at 5968' - 6241'. Inter-  
ested parties should direct  
questions to Jack Jenkins  
at the above address or file  
objections or request for a  
hearing with the Oil Con-  
servation Division, P.O.  
Box 2088, Santa Fe, New  
Mexico 87501 within 15  
days.

FORM C-108  
Landowner - Aetna Eaves

1. Mr. & Mrs. Walter V. Lawrence  
P. O. Box 2309  
Hobbs, New Mexico 88240



**Marathon  
Oil Company**

P.O. Box 552  
Midland, Texas 79702  
Telephone 915/682-1626

August 24, 1989

Mr. & Mrs. Walter V. Lawrence  
P. O. Box 2309  
Hobbs, New Mexico 88240

Re: Application for Authorization to Inject  
Aetna Eaves Well No. 2  
330' FNL & 990' FEL Section 26, T16S, R38E

Dear Mr. & Mrs. Lawrence:

In accordance with the New Mexico Oil Conservation Division Rule 701, Marathon Oil Company is furnishing you with a copy of the Form C-108 for the Aetna Eaves Well No. 2. If additional information is required, please contact the undersigned at (915) 682-1626. If you have an objection to this application, a request for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 must be filed within 15 days.

Sincerely,

*J. R. Jenkins*  
J. R. Jenkins  
Hobbs Production Superintendent

075-89/ASW

<p>Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.</p> <p>Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for rates and attach boxes for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Base charge)</p> <p>2. <input type="checkbox"/> Restricted Delivery (Extra charge)</p>	
3. Article Addressed to: <b>MR. &amp; MRS. W. V. LAWRENCE P.O. Box 2309 HOBBS, NEW MEXICO 88240</b>	4. Article Number <b>P046660889</b>
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <b>X</b>	6. Addressee's Address (ONLY if requested and fee paid)
7. Signature - Agent <b>J. R. Jenkins</b>	
8. Date of Delivery <b>8-28-89</b>	

A subsidiary of USX Corporation

FORM C-108  
List of Offset Leasehold Operators

1. Marathon Oil Company
2. Amoco Production Company  
P. O. Box 3092  
Houston, Texas 77253



**Marathon  
Oil Company**

P.O. Box 552  
Midland, Texas 79702  
Telephone 915/682-1626

August 24, 1989

Amoco Production Company  
P. O. Box 3092  
Houston, Texas 77253

Re: Application for Authorization to Inject  
Aetna Eaves Well No. 2  
330' FNL & 990' FEL Section 26, T16S, R38E  
Lea County, New Mexico

Gentlemen:

In accordance with the New Mexico Oil Conservation Division Rule 701, Marathon Oil Company is furnishing Amoco with a copy of the Form C-108 for the Aetna Eaves Well No. 2. If additional information is required, please contact the undersigned at (915) 682-1626. If Amoco has an objection to this application, a request for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 must be filed within 15 days.

Sincerely,

J. R. Jenkins  
Hobbs Production Superintendent

147-89/JRJ

<b>SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.</b> Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivering to and the date of delivery. For additional fees the following services are available. Check boxes for fees and check boxes for additional service(s) requested. 1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (State charge) 2. <input type="checkbox"/> Registered Mail. (State charge)	
3. Article Addressed to: <i>AMOCO PRODUCTION CO. P.O. Box 3092 HOUSTON, TEXAS 77253</i>	4. Article Number: <i>1046260</i> Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Addressee <i>X</i>	6. Addressee's Address (ONLY if registered and fee paid)
6. Signature - Agent <i>X</i>	
7. Date of Delivery <i>Aug 28 1989</i>	

A subsidiary of USX Corporation



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

9-1-89

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

GARREY CARRUTHERS  
GOVERNOR

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC	_____
DHC	_____
NSL	_____
NSP	_____
SWD	<input checked="" type="checkbox"/> _____
WFX	_____
PMX	_____

Gentlemen:

I have examined the application for the:

<i>Marathon Oil Co.</i>	<i>Aetna Ears</i>	<i>#2-A</i>	<i>26-16-38</i>
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

*OK*

Yours very truly,

*Jerry Sexton*  
Jerry Sexton  
Supervisor, District 1

/ed

RECEIVED

SEP 15 1989

OIL CONSERVATION DIV.  
SANTA FE