Mid-Continent Region
Production United States

Marathon Oil Company

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

March 10, 1992

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
State Land office Building
210 Old Santa Fe Trial
Santa Fe, New Mexico 87503

RE: Application for Authorization to Inject
Injection Well Conversions
South Eunice Seven Rivers Queen Unit
Lea County, New Mexico

Gentlemen:

Marathon Oil Company requests administrative approval of the enclosed Application for Authorization to Inject (Form C-108) for five proposed water injection well conversions. The five well conversions are located in the Marathon-operated South Eunice Seven Rivers Queen Unit in Sections 35 and 36, T-22-S, R-36-E.

Legal notice has been published in the Hobbs Daily News Sun and copies of the application sent to all offset operators, working interest owners, surface owners and lessees. Attached for your review are copies of the certified receipts received and the legal affidavit of publication.

Marathon appreciates your consideration of this application, should you have any questions or comments, please advise.

Yours very truly,

T. N. Tipton
Engineering Manager
Midland Operations

MTW/040.274/sk

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [X] yes [ ] no

II. Operator: Marathon Oil Company

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

Contact party: Engineering Manager Phone: (915) 687-8286

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? [X] yes [ ] no
If yes, give the Division order number authorizing the project R-4217.

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: Tim N. Tipton Title Engineering Manager, Midland Oper.

Signature: [signature] Date: 2/24/92

* 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.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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.

ATTACHMENT TO FORM C-108

MARATHON'S MCDONALD STATE A/C 1 LEASE

SECTION

III. WELL DATA:

See attached diagrams for proposed injection well schematics and proposed tubular data. The five proposed injection wells will be converted from oil producers to injection service. The next higher zone productive of hydrocarbons in the area around the proposed injection wells is the Jalmat zone (Jalmat Field) at approximately 3,491'. There are no hydrocarbon productive zones lower than the South Eunice Seven Rivers-Queen pool in the area around the proposed injections wells.

V. AREA OF REVIEW: See attached map.

VI. WELL DATA IN AREA OF REVIEW: See attached well data sheets.

VII. 1. Proposed average daily rate 1,500 BWPD, 300 BWPD/Well.
Proposed average maximum daily rate 2,500 BWPD, 500 BWPD/Well.

2. The proposed system will be closed.

3. Proposed average surface injection pressure 500 psi.
Proposed maximum surface injection pressure per well is listed below (Note: Surface pressure is equal to state mandated injection pressure of 0.2 psi/ft):

WELL NAME	INJECTION PRESSURE
Well No. 406	736 psig
Well No. 407	740 psig
Well No. 409	746 psig
Well No. 412	728 psig
Well No. 415	722 psig

4. Injection Water Source: Capitan Reef (Texaco's Jal Water Supply System), produced water.

Compatibility Tests (See attached water analysis)

5. Not Applicable

MTW/034.274/sk

VIII. Geologic Data Injection Zone: The proposed injection zone will be the bottom 100 feet of the Seven Rivers formation and the entire Queen formation. The productive intervals of the Seven Rivers and Queen formations are fine-grained, well cemented sandstones, interbedded with fine to medium crystalline gray dolomite. The injection interval occurs at a depth of 3,540 to 3,790 feet from the surface in the five proposed injection well conversions.

The underground source of drinking water overlying the zone of injection is the Ogallala, the bottom which occurs at a depth of 200' in Sections 35 and 36. There are no known sources of drinking water below the zone of injection.

IX. The stimulation program for the proposed injection wells consisted of acidizing the perforated interval with 4,000 gals of 15% HCl and hydraulically fracturing with 16,000 gals of gelled fluid and 34,000# of sand with ppgs ranging from 1 to 6.

X. See attached log copies.

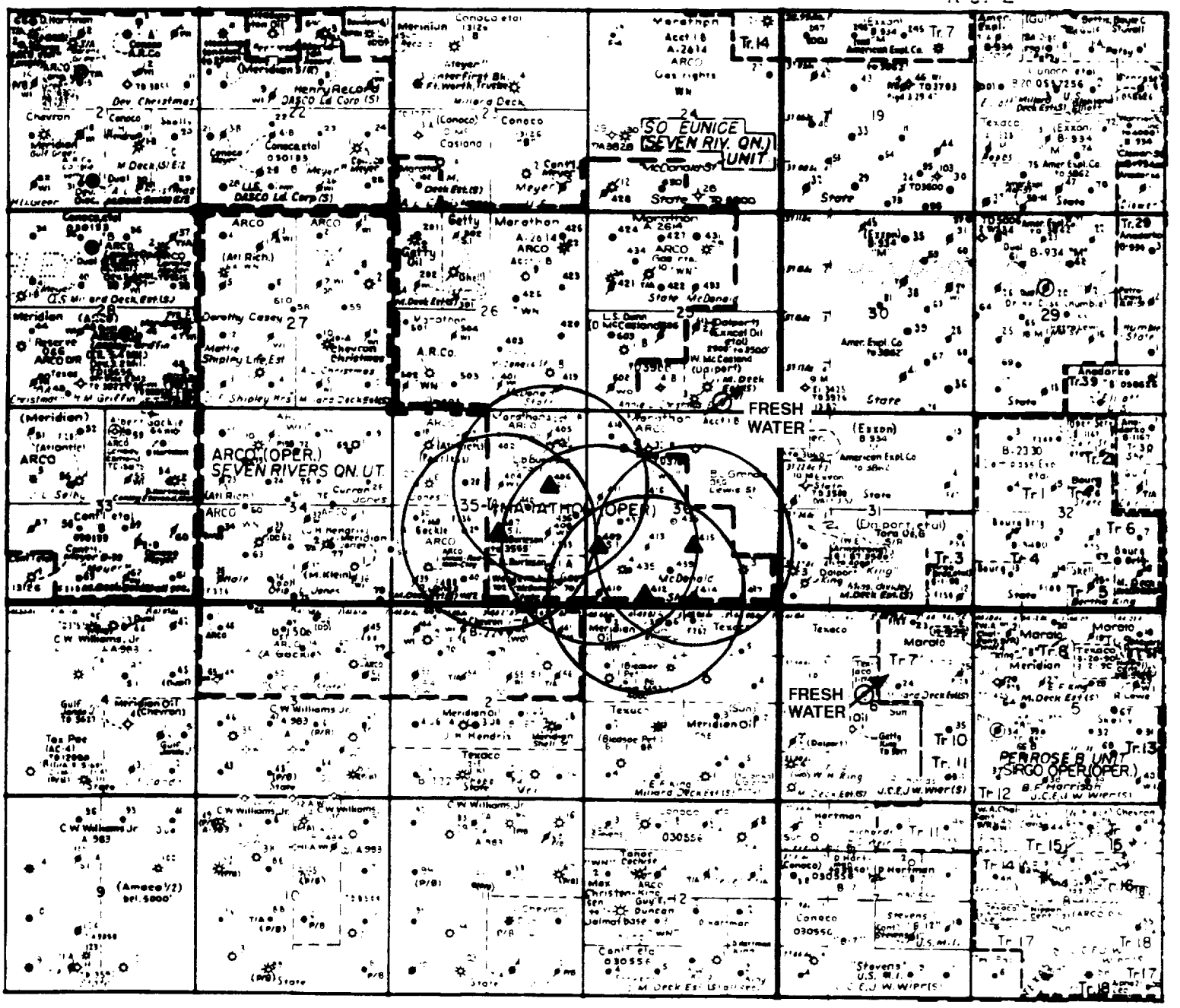
XI. See attached water analysis sheets for freshwater wells shown on the Area of Review map.

XII. Not applicable.

XIII. Proof of Notice:

1. See attached letter of notice to surface owners, surface lessees and offset operators sent by registered mail and return receipts.

2. See attached legal advertisement and affidavit of publication.



SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

EUNICE, SOUTH FIELD

LEA COUNTY, NEW MEXICO

AREA OF REVIEW

▲ PROPOSED WATER INJECTION WELL

0 1/2 1

MILE

PROPOSED INJECTION WELL LOCATIONS

SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

WELL NO.	LOCATION	SECTION	TOWNSHIP, RANGE
406	1,980' FNL and 990' FEL	35	T-22-S, R-36-E
407	1,980' FSL and 2,310' FEL	35	T-22-S, R-36-E
409	1,650' FSL and 300' FWL	36	T-22-S, R-36-E
412	330' FSL and 1,650' FWL	36	T-22-S, R-36-E
415	2,310' FEL and 1,650' FSL	36	T-22-S, R-36-E

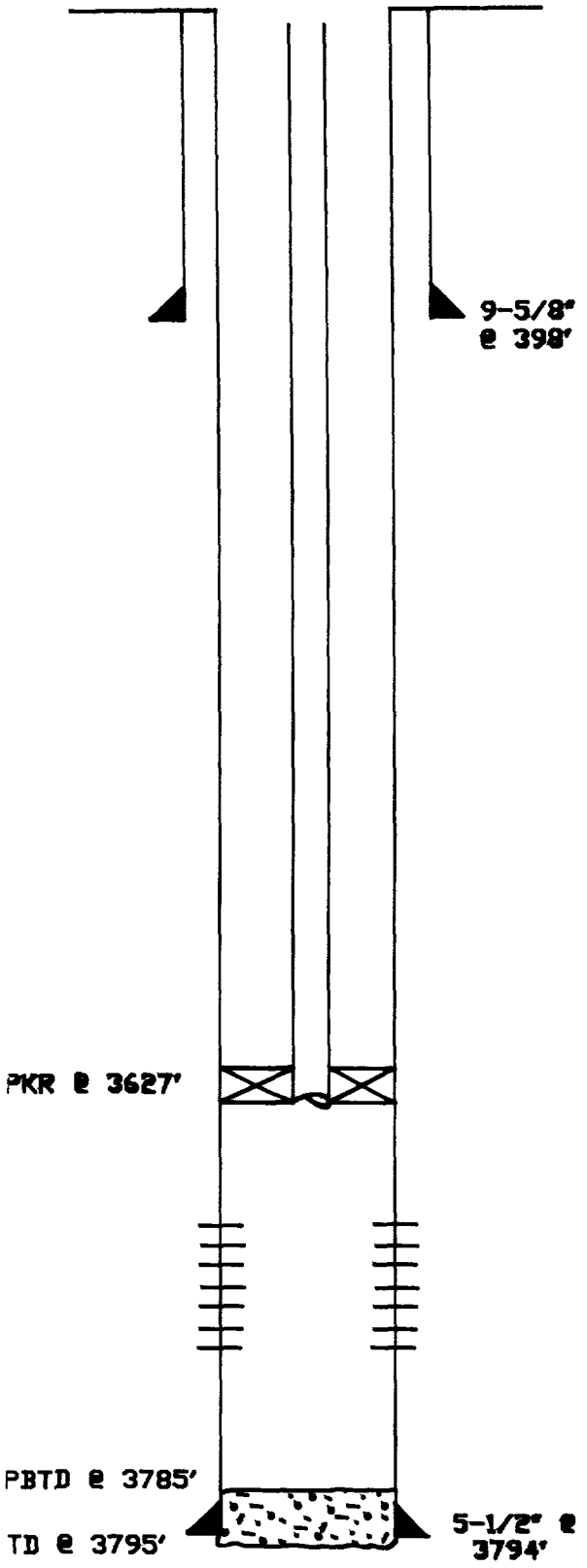
MTW/028.274/sk

WATER INJECTION WELL

SOUTH EUNICE FIELD
SOUTH EUNICE UNIT WELL NO. 406
UNIT H, 1980' FNL & 990' FEL
SECTION 35, T-22S,R-36E
LEA COUNTY, NEW MEXICO

TD: 3795' PBTD: 3785'

KB: 3484' GL: 3474'



FORMATION: SOUTH EUNICE POOL (SEVEN RIVERS - QUEEN)

SURFACE: 9-5/8" 32# SET @ 398', CEMENT W/250sx CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" 15.5# SET @ 3794', CEMENT W/ 1550sx, TOC @ 710'.

TUBING: 2-3/8" 4.7# J-55 DUOLINE TUBING SET @ 3627'

PACKER: 5-1/2" NICKEL PLATED BAKER AD-1 TENSION PKR. SET @ 3627'. TESTED ANNULUS TO 500# FOR 30 MINUTES.

PRESENT PERFS:

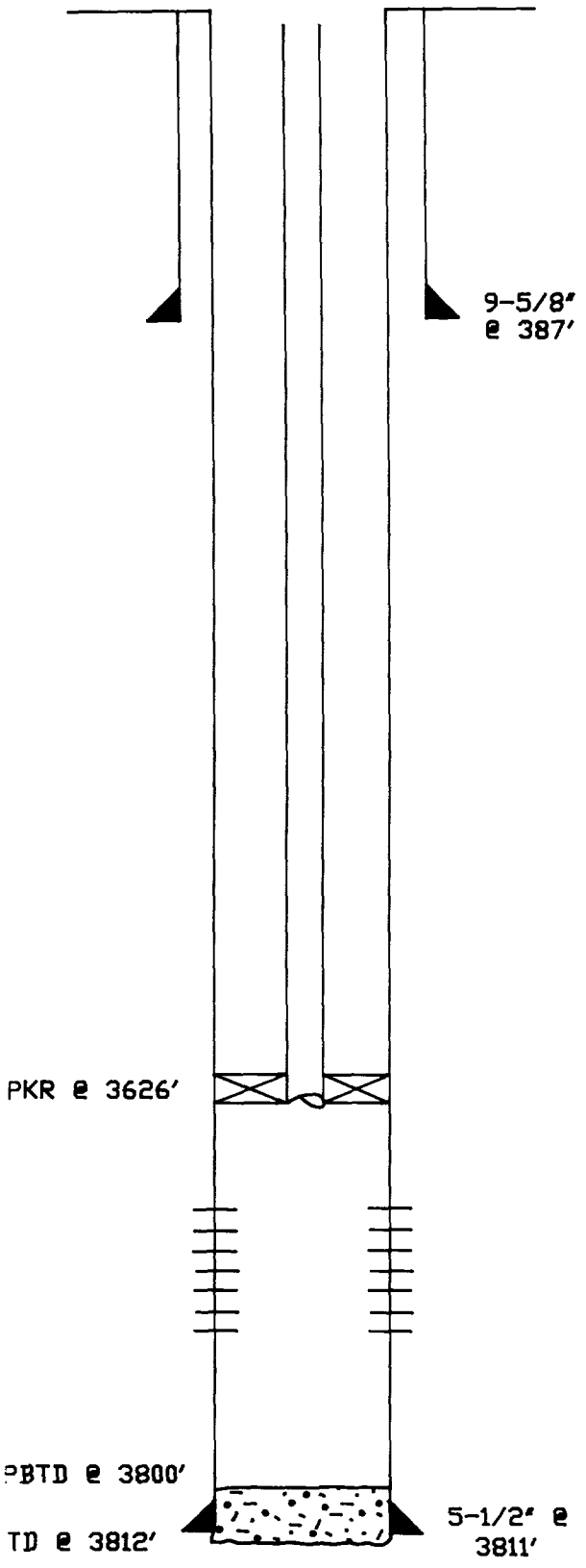
QUEEN - 3680'-3748' W/4 JSPF AND 3752'-60' W/1 JSPF FOR A TOTAL OF 280 HOLES.

HISTORY - DRILLED IN DECEMBER, 1957. PERF'D 3680'-3748' W/4 JSPF. ACIDIZED AND SAND FRAC W/10,000# OF SAND. IP - 180 BOPD, 0 BWPD & 152 MCFD. TA'D IN 1965. IN MARCH, 1975 INSTALLED ROD PUMP. IN FEBRUARY 1976 - PERF 3752'-3760' W/1 JSPF. ACIDIZED AND SAND FRAC W/20,000# OF SAND. 12/91 - ACIDIZE W/4000 GAL 15% NEFE ACID. SAND FRAC W/16,000 GAL OF GELLED FLUID CONTAINING 34,000# OF 20/40 SAND W/1-6 PPG, AIR 20 BPM. SHUT-IN OIL WELL. AWAITING PERMIT FOR INJECTION.

WATER INJECTION WELL

SOUTH EUNICE FIELD
SOUTH EUNICE UNIT WELL NO. 407
UNIT J, 1980' FSL & 2310' FEL
SECTION 35, T-22S, R-36E
LEA COUNTY, NEW MEXICO

TD: 3812' PBTD: 3800'
KB: 3502' GL: 3490'



FORMATION: SOUTH EUNICE POOL (SEVEN RIVERS - QUEEN)

SURFACE: 9-5/8" 32# SET @ 387', CEMENT W/250sx CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" 15.5# SET @ 3811', CEMENT W/ 1700sx, CIRCULATED TO SURFACE.

TUBING: 2-3/8" 4.7# J-55 DUOLINE TUBING SET @ 3626'

PACKER: 5-1/2" NICKEL PLATED BAKER AD-1 TENSION PKR, SET @ 3626'. TEST ANNULUS TO 500# FOR 30 MIN.

PRESENT PERFS:

QUEEN - 3700'-30', 36'-54' W/2 JSPF FOR A TOTAL OF 98 HOLES.

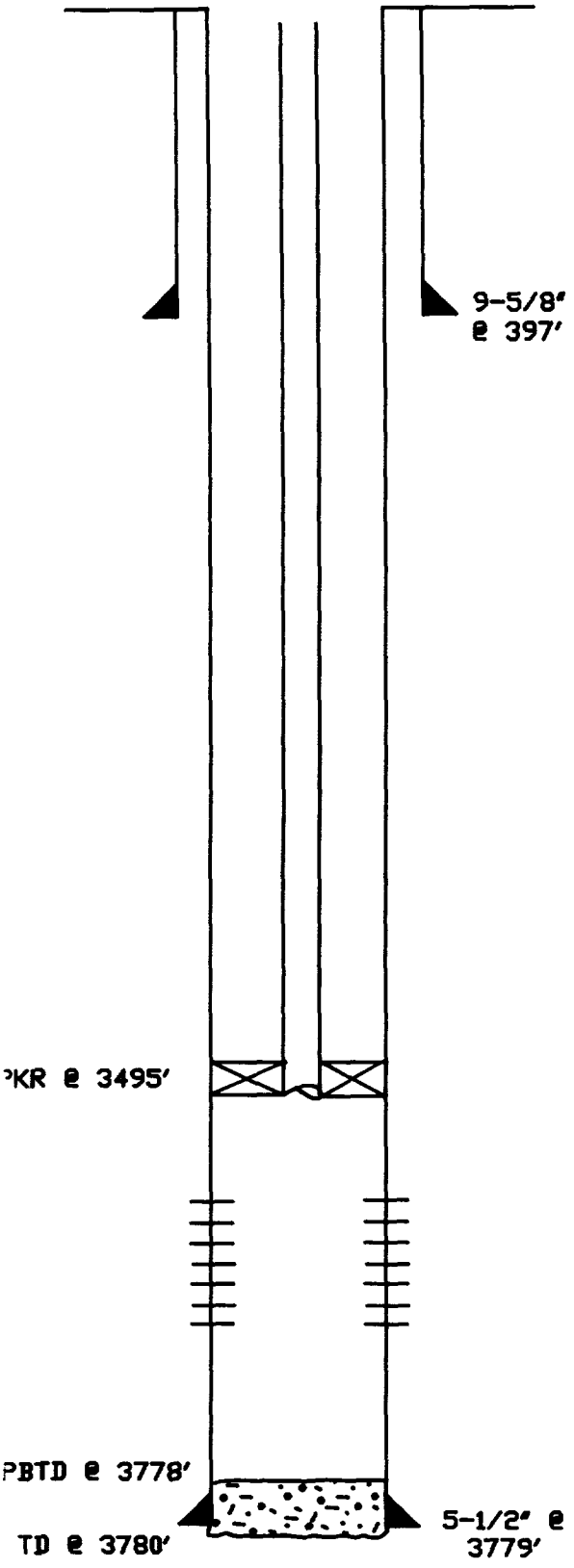
- ADDITIONAL PERFS 12/91
3700'-30', 36'-54', W/2 JSPF AND 3758'-66', 71'-80', W/4 JSPF FOR A TOTAL OF 166 HOLES.

HISTORY - DRILLED IN JANUARY, 1958. PERF'D 3700'-66' W/4 JSPF. ACIDIZED AND SAND FRAC W/10,000# OF SAND. IP - 190 BOPD,0 BWPD & 87 MCFD. TA'D IN 1966. IN MARCH, 1975 RETURN TO PRODUCTION. IN JANUARY, 1976 - PERF 3772'-78' W/1 JSPF. ACIDIZE AND SAND FRAC W/20,000# OF SAND. IN OCTOBER, 1983 - PERF 3637'-52',64'-74' W/2 JSPF. SQUEEZE ALL PERFS. PERF 3700'-30', & 3736'-54',. ACIDIZE AND SAND FRAC W/20,000# OF SAND. 12/91 - ACIDIZE W/4000 GAL OF 15% NEFE ACID. SAND FRAC W/16,000 GAL OF GELLED FLUID CONTAINING 34,300# OF 20/40 SAND W/1-6 PPG. AIR 20 BPM. SHUT-IN OIL WELL. AWAITING PERMIT FOR INJECTION.

WATER INJECTION WELL

SOUTH EUNICE FIELD
SOUTH EUNICE UNIT WELL NO. 409
UNIT L, 1650' FSL & 300' FWL
SECTION 36, T-22S, R-36E
LEA COUNTY, NEW MEXICO

TD: 3780' PBTD: 3778'
KB: 3469' GL: 3458'



FORMATION: SOUTH EUNICE POOL (SEVEN RIVERS - QUEEN)

SURFACE: 9-5/8" 32# SET @ 397', CEMENT W/250sx CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" 15.5# SET @ 3779', CEMENT W/ 1350sx, CIRCULATED TO SURFACE.

TUBING: 2-3/8" 4.7# J-55 DUOLINE TUBING SET @ 3495'

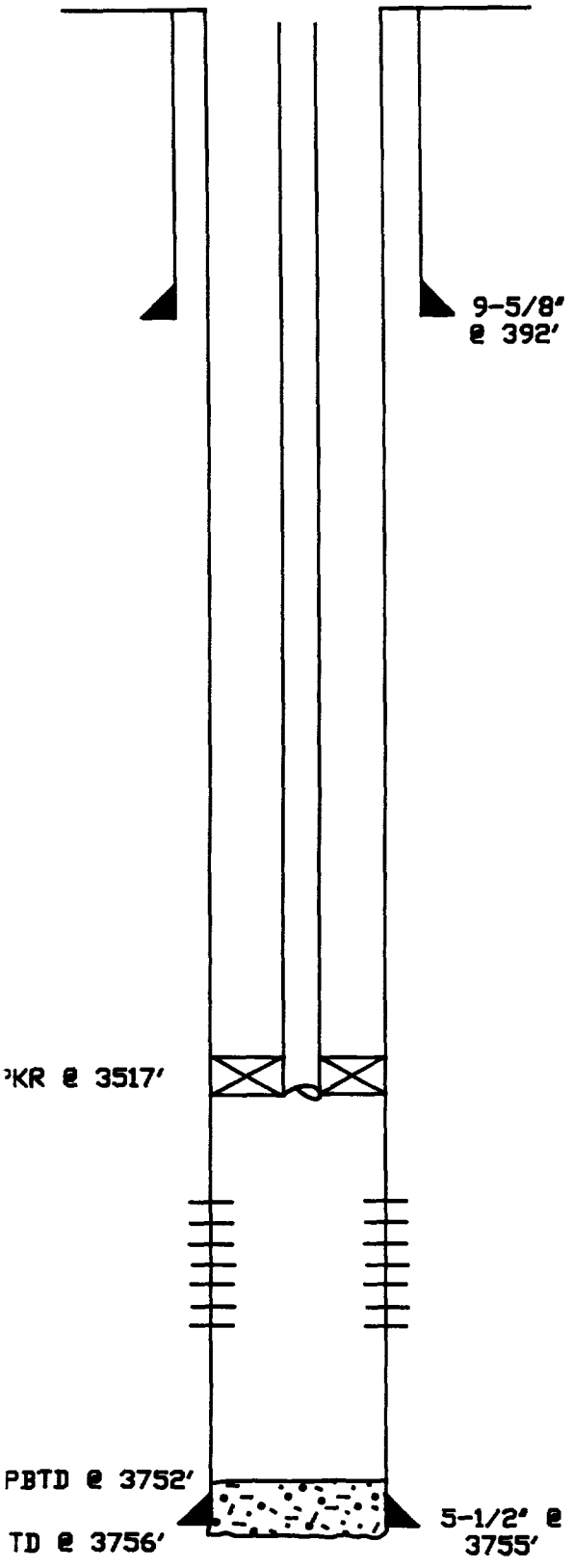
PACKER: 5-1/2" NICKEL PLATED BAKER AD-1, TENSION PKR SET @ 3495'. TESTED ANNULUS TO 500# FOR 30 MIN.

PRESENT PERFS:

QUEEN - 3653'-3728' W/4 JSPF AND 3732'-39' W/ 1 JSPF FOR A TOTAL OF 307 HOLES.

HISTORY - DRILLED IN FEBRUARY, 1958. PERF'D 3653'-3728' W/4 JSPF, ACIDIZED AND SAND FRAC W/10,000# SAND. IP - 135 BOPD, 0 BWPD & 61 MCFD. IN JANUARY, 1976 - PERF 3732'-39' W/1 JSPF, ACIDIZE AND SAND FRAC W/20,000# OF SAND. IN JULY, 1983 - ACIDIZE. 12/91 - ACIDIZE W/4000 GAL OF 15% NEFE ACID. SAND FRAC W/16,000 GAL OF GELLED FLUID CONTAINING 34,000# OF 20/40 SAND W/1-6 ppg. AIR 20 BPM. SHUT-IN OIL WELL. AWAITING PERMIT FOR INJECTION.

WATER INJECTION WELL



SOUTH EUNICE FIELD
SOUTH EUNICE UNIT WELL NO. 412
UNIT N, 330' FSL & 1650' FWL
SECTION 36, T-22S, R-36E
LEA COUNTY, NEW MEXICO

TD: 3756' PBTD: 3752'

KB: 3446' GL: 3435'

FORMATION: SOUTH EUNICE POOL (SEVEN RIVERS - QUEEN)

SURFACE: 9-5/8" 32# SET @ 392', CEMENT W/225sx CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" 15.5# SET @ 3755', CEMENT W/ 1200sx, CIRCULATED TO SURFACE.

TUBING: 2-3/8" 4.7# J-55 DUOLINE TUBING SET @ 3517'

PACKER: 5-1/2" NICKEL PLATED BAKER AD-1 TENSION PKR SET @ 3517'. TESTED ANNULUS TO 500# FOR 30 MIN.

PRESENT PERFS:

QUEEN - 3660'-66',72'-78',3730'-32' W/1 JSPF AND 3692'-3717' W/4 JSPF FOR A TOTAL OF 114 HOLES.

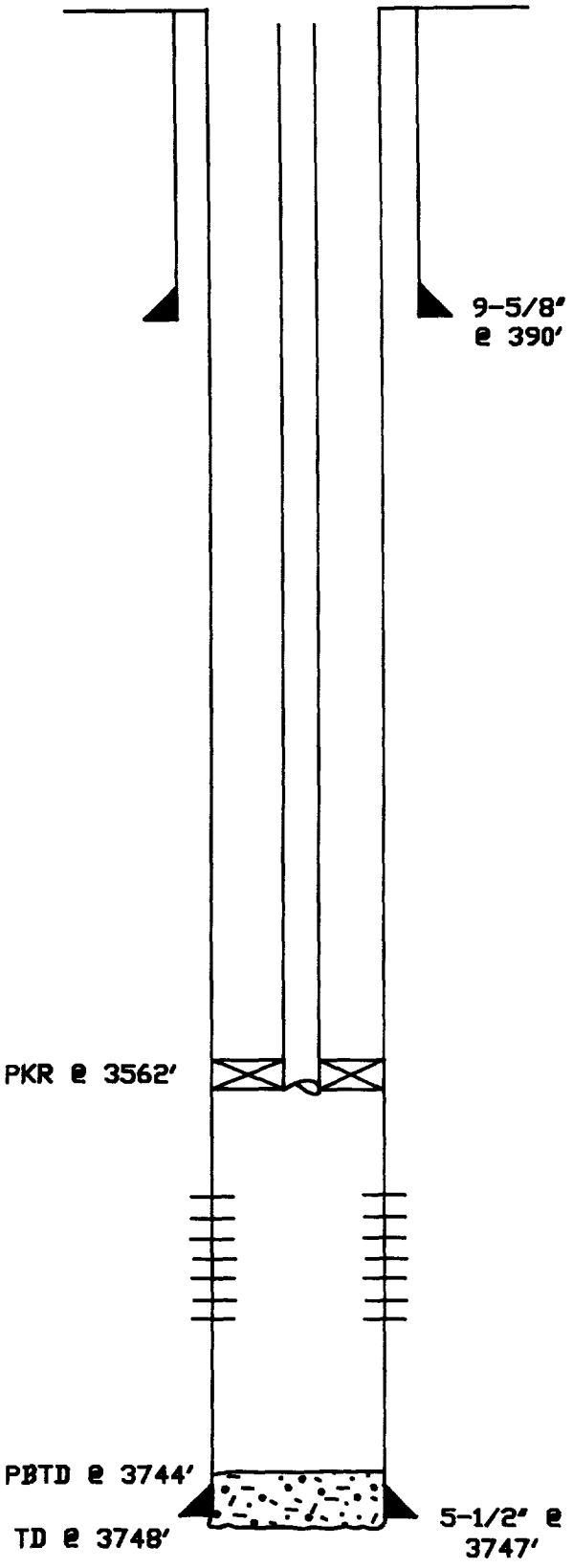
- ADDITIONAL PERFS 12/91
3642'-48', 58'-80', AND 3721'-38', W/4 JSPF FOR A TOTAL OF 180 HOLES.

HISTORY - DRILLED IN MARCH, 1958. PERF 3692'-3717' W/4 JSPF. ACIDIZED AND SAND FRAC W/2,500# OF SAND. IP - 183 BOPD, 0 BWPD & 86 MCFD. IN JANUARY, 1976 - PERF 3660'-66', 72'-78', 3730'-32' W/1 JSPF. ACIDIZED AND SAND FRAC W/20,000# OF SAND. 12/91 - ACIDIZE W/4000 GAL OF 15% NEFE ACID. SAND FRAC W/16,000 GAL OF GELLED FLUID CONTAINING 34,300# OF 20/40 SAND W/1-6 ppg. AIR 20 BPM. SHUT-IN OIL WELL. AWAITING PERMIT FOR INJECTION.

WATER INJECTION WELL

SOUTH EUNICE FIELD
SOUTH EUNICE UNIT WELL NO. 415
UNIT J, 2310' FEL & 1650' FSL
SECTION 36, T-22S, R-36E
LEA COUNTY, NEW MEXICO

TD: 3748' PBTD: 3744'
KB: 3438' GL: 3423'



FORMATION: SOUTH EUNICE POOL (SEVEN RIVERS - QUEEN)

SURFACE: 9-5/8" 32# SET @ 390', CEMENT W/225sx CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" 15.5# & 17# SET @ 3747', CEMENT W/1200sx, CIRCULATED TO SURFACE.

TUBING: 2-3/8" 4.7# J-55 DUOLINE TUBING SET @ 3562'

PACKER: 5-1/2" NICKEL PLATED BAKER AD-1 TENSION PKR SET @ 3562'. TESTED ANNULUS TO 500# FOR 30 MIN.

PRESENT PERFS:

QUEEN - 3623'-24',32'-33' W/4 JSPF, 3641'-42', 52'-53',68'-69' W/2 JSPF AND 3694'-3722' W/ 4 JSPF FOR A TOTAL OF 126 HOLES.

- ADDITIONAL PERFS 12/91
3608'-20', 39'-56', 62'-75', 79'-83', & 87'-90' W/4 JSPF FOR A TOTAL OF 196 HOLES.

HISTORY - DRILLED IN MAY, 1958. PERF 3694'-3722' ACIDIZED AND SAND FRAC W/10,000# OF SAND. IP - 44 BOPD, 0 BWPD & 287 MCFD. IN FEBRUARY, 1965 - PERF 3623'-24',32'-33' W/ 4 JSPF AND 3641'-42',52'-53',68'-69' W/2 JSPF. ACIDIZED AND SAND FRAC W/12,500# OF SAND. 12/91 - ACIDIZE W/4000 GAL OF 15% NEFE ACID. SAND FRAC W/16,000 GAL OF GELLED FLUID CONTAINING 34,300# OF 20/40 SAND W/1-6 ppg. AIR 20 BPM. SHUT-IN OIL WELL. AWAITING PERMIT FOR INJECTION.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 29235

TO: Mr. Donald Price
P. O. Box 552, Midland, TX 79702

SAMPLE RECEIVED 2-10-92
RESULTS REPORTED 2-10-92

COMPANY Marathon Oil Company LEASE South Eunice Unit
FIELD OR POOL Eunice
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Drinking water - taken from ranch house water well. 2-10-92

NO. 2 Drinking water - taken from ranch water well (½ mile Southeast of South Eunice Unit #417). 2-10-92

~~NO. 3~~

NO. 4

REMARKS: Samples taken by Tom Elrod, Martin Water Laboratories, Inc.

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0015	1.0012		
pH When Sampled				
pH When Received	6.85	6.84		
Bicarbonate as HCO_3	268	229		
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	164	188		
Calcium as Ca	47	50		
Magnesium as Mg	11	16		
Sodium and/or Potassium	72	64		
Sulfate as SO_4	61	99		
Chloride as Cl	26	26		
Iron as Fe	0.36	0.18		
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	485	484		
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	19.15	17.50		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	4.2	6.6		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Waylan C. Martin, M.A.

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Lewis B. Burleson State "35" No. 1 860' FNL and 660' FEL Section 35, T-22-S, R-36-E (A)	8/85	3,600'	3,600'	8-5/8" 5-1/2"	1,497' 3,600'	725/338' Cal 250/2,648' Cal	3,258'-3,318'	A 2,000 Gal	GW	
ARCO McDonald WN State No. 7 990' FNL and 990' FEL Section 35, T-22-S, R-36-E (A)	6/53	3,550'	3,500'	12-3/4" 8-5/8" 5-1/2"	24' 1,469' 2,978'	20/7' Cal 500/669' Cal 400/1,455' Cal	2,978'-3,550' OH	A 1,000 Gal	P&A	Originally Western Natural Gas Company's McDonald No. 7 Well Plugged in 4/76
Marathon S. Eunice (7R-Q) Unit No. 405 660' FNL and 990' FEL Section 35, T-22-S, R-36-E (A)	2/58	3,795'	3,787'	9-5/8" 5-1/2"	391' 3,794'	250/Circ 1,035/360'	3,692'-3,765' 3,650'-3,660' 3,692'-3,748' 3,692'-3,776'	A 500 Gal F 10,000 Gal, 10,000# A 500 Gal F 5,000 Gal, 5,000# A 1,000 Gal F 10,000 Gal, 10,000# A 2,000 Gal F 10,000 Gal, 20,000# A 1,000 Gal	WIW	Originally Marathon Oil Company's McDonald State A/C 1B No. 5 Converted to WIW in 3/75 Sqz'd perfs 3,650'-3,765' in 1/58
Marathon S. Eunice (7R-Q) Unit No. 402 660' FNL and 2,310' FEL Section 35, T-22-S, R-36-E (B)	9/57	3,810'	3,807'	9-5/8" 5-1/2"	394' 3,809'	250/Circ 700/1,240'	3,686'-3,768' 3,626'-3,667'	A 500 Gal F 10,000 Gal, 10,000# A 3,000 Gal	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 2
ARCO Rodman Jones No. 6 1,980' FNL and 990' FWL Section 35, T-22-S, R-36-E (E)	5/80	3,704'	3,648'	8-5/8" 5-1/2"	1,200' 3,700'	350/600' Cal 525/1,701' Cal	3,173'-3,596'	A 3,500 Gal F 30,000 Gal, 84,000#	GW	

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
ARCO Seven Rivers Queen Unit No. 28 1,980' FNL and 1,980' FWL Section 35, T-22-S, R-36-E (F)	10/57	3,825'	3,820'	8-5/8" 5-1/2"	331' 3,824'	200/11' Cal 200/3,062' Cal	3,703'-3,761'	F 20,000 Gal, 20,000#	OW	Originally Sinclair Oil & Gas Company's Rodman M. Jones No. 4
Marathon S. Eunice (7R-Q) Unit No.404 1,980' FNL and 2,310' FEL Section 35, T-22-S, R-36-E (G)	10/57	3,815'	3,806'	9-5/8" 5-1/2"	397' 3,814'	250/Circ 700/2,190'	3,712'-3,782' 3,789'-3,797' 3,652'-3,690' 3,712'-3,797'	A 500 Gal F 10,000 Gal, 10,000# A 1,000 Gal F 10,000 Gal, 15,000# A 3,000 Gal A 5,500 Gal	WIW	Originally Marathon Oil Company's McDonald State A/C 1B No. 4 Converted to WIW 1/76. Sqz'd perfs 3,652'-3,690' in 12/91
Marathon S. Eunice (7R-Q) Unit No.440 2,630' FNL and 1,550' FEL Section 35, T-22-S, R-36E (G)	3/86	3,850'	3,806'	8-5/8" 5-1/2"	413' 3,850'	300/Circ 725/Circ	3,695'-3,714' 3,693'-3,768'	A 2,000 Gal F 30,000 Gal, 39,000# A 3,500 Gal F 25,000 Gal, 63,500#	OW	
Marathon S. Eunice (7R-Q) Unit No. 406 1,980' FNL and 990' FEL Section 35, T-22-S, R-36-E (H)	1/58	3,795'	3,789'	9-5/8" 5-1/2"	398' 3,794'	250/Circ 1,550/710'	3,680'-3,748' 3,752'-3,760' 3,680'-3,760'	A 500 Gal F 10,000 Gal, 10,000# A 2,000 Gal F 10,000 Gal, 20,000# A 4,000 Gal F 16,000 Gal, 34,300#	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 6
Marathon S. Eunice (7R-Q) Unit No. 408 1,980' FSL and 990' FEL Section 35, T-22-S, R-36-E (I)	1/58	3,800'	3,794'	9-5/8" 5-1/2"	389' 3,799'	250/Circ 1,500/Circ	3,676'-3,747' 3,750'-3,758' 3,676'-3,758'	A 500 Gal F 10,000 Gal, 10,000# A 1,500 Gal AF 12,000 Gal A 2,000 Gal F 10,000 Gal, 20,000# A 4,000 Gal F 18,000 Gal, 34,300#	WIW	Originally Marathon Oil Companys' McDonald State A/C 1B No. 8 Converted to WIW in 4/76

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Marathon S. Eunice (7R-Q) Unit No. 436 2,475' FS [redacted] and 330' FEL Section 3 [redacted], T-22-S, R-36-E (I)	10/85	3,850'	3,803'	8-5/8" 5-1/2"	433' 3,850'	300/Circ 1,200/Circ	3,661-3,751' 3,661'-3,753'	A 2,000 Gal F 20,000 Gal, 39,000# A 3,500 Gal F 25,000 Gal, 63,500#	OW	
Marathon S. Eunice (7R-Q) Unit No. 407 1,980' FS [redacted] and 2,310' FEL Section 3 [redacted], T-22-S, R-36-E (J)	1/58	3,812'	3,781'	9-5/8" 5-1/2"	387' 3,811'	250/Circ 1,700/Circ	3,700'-3,766' 3,772'-3,778' 3,637'-3,674' 3,700'-3,778' 3,700'-3,754' 3,700'-3,780'	A 500 Gal F 10,000 Gal, 10,000# A 2,000 Gal F 10,000 Gal, 20,000# A 2,900 Gal A 1,500 Gal A 5,000 Gal A 5,000 Gal F 10,000 Gal, 20,000# A 4,000 Gal F 16,000 Gal, 34,300#	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 7 Sqz'd perfs 3,637'-3,778' in 1/84
ARCO Seven [redacted]ivers Queen Unit No. 29 1,980' FS [redacted] and 1,980' FWL Section 3 [redacted], T-22-S, R-36-E (K)	8/58	4,024'	4,000'	8-5/8" 5-1/2"	312' 4,024'	250/Circ 1,400/Circ	3,684'-3,762'	A 500 Gal F 10,000 Gal, 10,000# A 500 Gal F 10,000 Gal, 10,000#	WIW	Originally Albert Gackle's Rodman Jones No. 3
ARCO Seven [redacted]ivers Queen Unit No. 30 2,310' FS [redacted] and 660' FWL Section 3 [redacted], T-22-S, R-36-E (L)	7/58	4,010'	4,000'	8-5/8" 5-1/2"	340' 4,010'	250/Circ 1,830/Circ	3,712'-3,772' 3,648'-3,665'	A 750 Gal F 15,000 Gal, 15,000# A 1,000 Gal F 40,000 Gal, 40,000#	OW	Originally Albert Gackle's Rodman Jones No.2

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
ARCO Seven Rivers Queen Unit No. 40 660' FSL and 1,980' FWL Section 35, T-22-S, R-36-E (N)	9/59	3,860'	3,830'	8-5/8" 5-1/2"	315' 3,860'	250/Circ 1,590/Circ	3,660'-3,798'	A 4,000 Gal F 30,000 Gal, 30,000#	OW	Originally Albert Gackle's Rodman Jones No. 5
Marathon S. Eunice (7R-Q) Unit No. 702 660' FSL and 1,980' FEL Section 35, T-22-S, R-36-E (O)	9/58	3,780'	3,773'	8-5/8" 5-1/2"	377' 3,779'	300/Circ 1,150/1,425	3,678'-3,747' 3,678'-3,747'	A 1,500 Gal F 15,000 Gal, 15,000# A 2,000 Gal F 10,000 Gal, 20,000#	WIW	Originally Continental Oil Company's State A-35 "A" No. 2 Converted to WIW in 4/75 Sqz'd perfs 3,678'-3,707' in 2/76
Marathon S. Eunice (7R-Q) Unit No. 701 660' FSL and 660' FEL Section 35, T-22-S, R-36-E (P)	5/58	3,802'	3,802'	8-5/8" 5-1/2"	376' 3,801'	300/Circ 1,285/Circ	3,652'-3,743'	A 1,500 Gal F 15,000 Gal, 15,000#	OW	Originally Continental Oil Company's State A-35 "A" No. 1
L. B. Burleson McDonald State A-35 No. 1 990' FSL and 990' FEL Section 35, T-22-S, R-36-E (P)	12/53	3,555'	3,555'	12-3/4" 9-5/8" 5-1/2"	32' 1,404' 2,981'	25'/11' Cal 450/456' Cal 350/1,648' Cal	2,981'-3,555' OH	A 1,000 Gal	GW	Originally Western Natural Gas Company's McDonald State A-35 No. 1
Marathon S. Eunice (7R-Q) Unit No. 418 660' FNL and 660' FWL Section 36, T-22-S, R-36-E (D)	8/61	3,800'	3,760'	8-5/8" 4-1/2"	439' 3,800'	150/Circ 950/Circ	3,704'-3,750' 3,690'-3,696'	F 20,000 Gal, 30,000# A 500 Gal F 10,000 Gal, 12,500#	OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 18

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Marathon S. Eunice (7R-Q) Unit No. 411 2,310' FNL and 330' FWL Section 36, T-22-S, R-36-E (E)	3/58	3,780'	3,775'	9-5/8" 5-1/2"	383' 3,779'	225/Circ 1,070/Circ	3,672'-3,726' 3,730-3,752' 3,672'-3,752'	A 500 Gal F 10,000 Gal, 10,000# A 2,600 Gal F 10,000 Gal, 20,000# A 2,600 Gal A 4,000 Gal F 18,000 Gal, 34,300#	WIW	Originally Marathon Oil Company's McDonald State A/C 1B No. 11 Converted to WIW in 4/75
Marathon S. Eunice (7R-Q) Unit No. 416 2,310' FNL and 1,650' FWL Section 36, T-22-S, R-36-E (F)	6/58	3,904'	3,847'	9-5/8" 5-1/2"	391' 3,903'	225/Circ 1,200/350'	3,866'-3,898' 3,704'-3,744' 3,684'-3,744'	A 500 Gal F 5,000 Gal, 5,000# A 500 Gal F 5,000 Gal, 5,000# A 2,000 Gal F 10,000 Gal, 20,000#	OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 16 Sqz'd perfs 3,866'-3,898' in 6/58
Marathon S. Eunice (7R-Q) Unit No. 415 1,650' FSL and 2,310' FEL Section 36, T-22-S, R-36-E (J)	6/58	3,748'	3,744'	9-5/8" 5-1/2"	390' 3,747'	225/Circ 1,200/Circ	3,694'-3,722' 3,623'-3,669' 3,608'-3,722'	A 500 Gal F 10,000 Gal, 10,000# A 1,000 Gal F 10,000 Gal, 12,500# A 4,000 Gal F 16,000 Gal, 34,300#	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 15
Marathon S. Eunice (7R-Q) Unit No. 413 1,650' FSL and 1,650' FWL Section 36, T-22-S, R-36-E (K)	4/58	3,760'	3,757'	9-5/8" 5-1/2"	403' 3,759'	225/Circ 1,200/Circ	3,700'-3,730' 3,665'-3,682' 3,665'-3,741' 3,648'-3,741'	A 500 Gal F 3,000 Gal, 3,000# A 2,000 Gal F 10,000 Gal, 15,000# A 2,000 Gal F 10,000 Gal, 20,000# A 840 Gal A 3,200 Gal A 4,000 Gal F 18,000 Gal, 34,300#	WIW	Originally Marathon Oil Company's McDonald State A/C 1B No. 13. Converted to WIW in 4/75

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Marathon S. Eunice (7R-Q) Unit No. 438 2,310' FSL and 2,310' FWL Section 36, T-22-S, R-36-E (K)	3/86	3,869'	3,814'	8-5/8" 5-1/2"	406' 3,864'	300/Circ 700/Circ	3,655'-3,726'	A 2,000 Gal F 20,000 Gal, 39,000#	OW	
Marathon S. Eunice (7R-Q) Unit No. 412 330' FSL and 1,650' FWL Section 36, T-22-S, R-36-E (N)	3/58	3,756'	3,752'	9-5/8" 5-1/2"	392' 3,755'	225/Circ 1,200/Circ	3,660'-3,678' 3,692'-3,717' 3,660'-3,732' 3,642'-3,738'	A 2,000 Gal A 500 Gal F 2,500 Gal, 2,500# F 10,000 Gal, 20,000# A 4,000 Gal F 16,000 Gal, 34,300#	SI OW	Originally Marathon Oil Comp McDonald State A/C 1B No. 12
Marathon S. Eunice (7R-Q) Unit No. 439 990' FSL and 2,220' FWL Section 36, T-22-S, R-36-E (N)	11/85	3,818'	3,775'	8-5/8" 5-1/2"	402' 3,814'	300/Circ 1,500/Circ	3,646'-3,703' 3,646'-3,726' 3,624'-3,668'	A 1,500 Gal F 16,500 Gal, 30,500# A 2,500 Gal A 3,500 Gal	OW	
Marathon S. Eunice (7R-Q) Unit No. 414 330' FSL and 2,310' FEL Section 36, T-22-S, R-36-E (O)	5/58	3,742'	3,738'	9-5/8" 5-1/2"	388' 3,741'	225/Circ 1,200/Circ	3,694'-3,718' 3,652'-3,674' 3,722'-3,726' 3,652'-3,726' 3,626'-3,728'	A 500 Gal F 3,000 Gal, 3,000# A 250 Gal F 1,000 Gal, 15,000# A 2,000 Gal F 10,000 Gal, 20,000# A 500 Gal A 4,000 Gal F 18,000 Gal, 34,300#	WIW	Originally Marathon Oil Comp McDonald State A/C 1B No. 14 Converted to WIW in 1/76

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Marathon S. Eunice (7R-Q) Unit No. 417 330' FSL and 990' FEL Section 36, T-22-S, R-36-E (P)	7/58	3,870'	3,600'	9-5/8" 7"	384' 3,869'	225/Circ 200/2,702'	3,556'-3,580' 3,610'-3,704' 3,750'-3,824'	A 500 Gal F 10,000 Gal, 10,000# A 500 Gal F 10,000 Gal, 10,000# A 500 Gal F 5,000 Gal, 5,000#	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 17 Abandoned Perfs 3,750'-3,824 in 6/58' Sqz'd Perfs 3,610'-3,704' in 7/58
Marathon S. Eunice (7R-Q) Unit No. 409 1,650' FSL and 330' FWL Section 36, T-22-S, R-36-E (L)	2/58	3,780'	3,778'	9-5/8" 5-1/2"	397' 3,779'	250/Circ 1,350/Circ	3,653'-3,728' 3,732'-3,739' 3,653'-3,739'	A 500 Gal F 10,000 Gal, 10,000# A 2,000 Gal F 10,000 Gal, 20,000# A 7,500 Gal F 16,000 Gal, 34,000#	SI OW	Originally Marathon Oil Company's McDonald State A/C 1B No. 9
Marathon S. Eunice (7R-Q) Unit No. 437 2,310' FSL and 890' FWL Section 36, T-22-S, R-36-E (L)	11/85	3,850'	3,805'	8-5/8" 5-1/2"	415' 3,850'	300/Circ 1,500/Circ	3,730'-3,743' 3,676'-3,718' 3,676'-3,743'	A 4,200 Gal A 700 Gal F 16,500 Gal, 30,500#	OW	
Marathon S. Eunice (7R-Q) Unit No. 410 330' FSL and 330' FWL Section 36, T-22-S, R-36-E (M)	2/58	3,776'	3,770'	9-5/8" 5-1/2"	382' 3,772'	225/Circ 1,270/Circ	3,651'-3,724' 3,729'-3,736' 3,651'-3,736'	A 500 Gal F 10,000 Gal, 10,000# A 2,000 Gal F 10,000 Gal, 20,000# A 5,000 Gal A 4,000 Gal F 18,000 Gal, 34,300#	WIW	Originally Marathon Oil Company's McDonald State A/C 1B No. 10 Converted to WIW in 5/75

WELL DATA

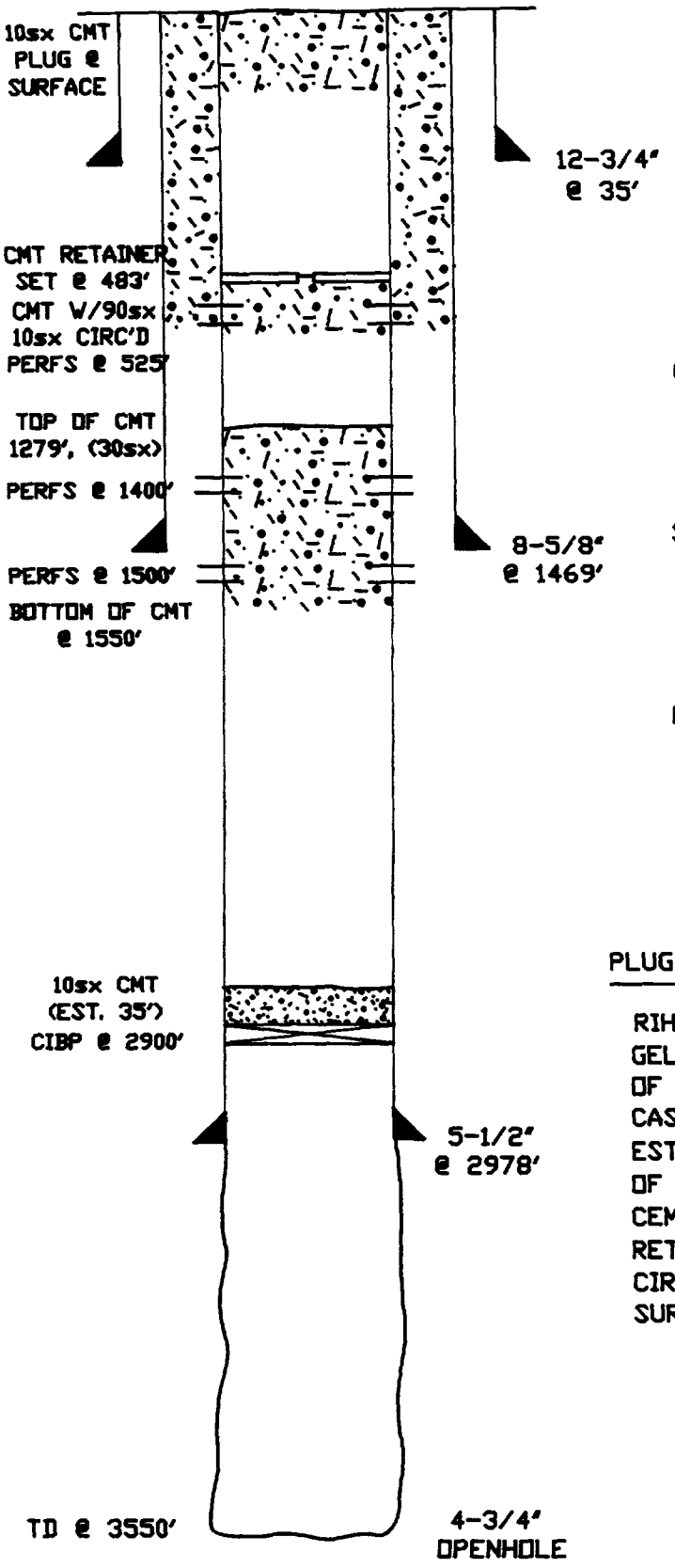
AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Marathon S. Eunice (7R-Q) Unit No. 435 978' FSL and 1,137' FWL Section 36, T-22-S, R-36-E (M)	2/84	3,800'	3,752'	9-5/8" 5-1/2"	385' 3,799'	300/Circ 1,600/Circ	3,672'-3,688' 3,701'-3,720' 3,730'-3,743' 3,672'-3,743'	A 1,500 Gal A 2,000 Gal A 1,500 Gal F 15,000 Gal, 30,000# A 3,500 Gal F 25,000 Gal, 63,500#	OW	
Texaco Exp & Prod, Inc. King "C" No. 2 330' FNL and 2,310' FEL Section 1, T-23-S, R-36-E (B)	8/58	3,720'	3,720'	8-5/8" 5-1/2"	375' 3,720'	250/Circ 250/2,768' Cal	3,638'-3,713'	F 43,000 Gal, 43,000# A 1,000 Gal F 40,000 Gal, 40,000#	OW	
Sun Exp & Production Emery King NW No. 3 330' FNL and 1,980' FWL Section 1, T-23-S, R-36-E (C)	4/59	3,792'	3,762'	8-5/8" 5-1/2"	308' 3,790'	250/Circ 600/1,505' Cal	3,676'-3,739'	F 40,000 Gal, 40,000#	P&A	Well plugged in 1986.
Meridian Emery King NW No. 6 440' FNL and 2,200 FWL Section 1, T-23-S, R-36-E (C)	7/84	3,800'	3,784'	8-5/8" 5-1/2"	568' 3,800'	400/Circ 925/284' Cal	3,582'-3,746'	A 9,000 Gal F 61,800 Gal, 105,000#	OW	Originally Sun Exploration and Production Company's Emery King NW No. 6
Meridian Emery King NW No. 2 330' FNL and 660' FWL Section 1, T-23-S, R-36-E (D)	11/58	3,790'	3,781'	9-5/8" 5-1/2"	301' 3,781'	300/Circ 400/2,258' Cal	3,670'-3,750' 3,572'-3,654'	F 10,000 Gal, 10,000# A 4,000 Gal F 35,000 Gal, 62,500#	SI OW	Originally R. Olsen Oil Company's Emery F. King No. 2.
Meridian Emery King No. 5 1,650' FNL and 660' FWL Section 1, T-23-S, R-36-E (E)	5/59	3,800'	3,761'	8-5/8" 5-1/2" 4"	318' 3,797' 1,076'	250/Circ 600/1,512' Cal 100/227' Cal	3,673'-3,744'	F 15,000 Gal, 15,000#	SI OW	Originally R. Olsen Oil Company's Emery King No. 5

WELL DATA

AREA OF REVIEW: SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

OPERATOR-WELL NAME LOCATION	COMPLETION DATE	TD	PBTD	CASING SIZE	CASING DEPTH	CEMENT SACKS/TOP	PRODUCING INTERVAL	STIMULATION	CURRENT STATUS	REMARKS
Meridian Emery King NW No. 4 1,650' FNL and 2,310' FWL Section 1, T-23-S, R-36-E (F)	5/59	3,806'	3,390'	8-5/8" 5-1/2"	313' 3,797'	200/Circ 600/1,512' Cal	3,690'-3,758' 3,125'-3,353'	F 40,000 Gal, 40,000# A 1,500 Gal F 20,000 Gal, 30,000#	SI GW	Originally Olsen Oil, Inc.'s Emery King NW No. 4
ARCO Seven Rivers Queen Unit No. 41 660' FNL and 660' FEL Section 2, T-23-S, R-36-E (A)	7/58	3,800'	3,796'	8-5/8" 5-1/2"	432' 3,800'	300/Circ 1,100/Circ	3,652'-3,755'	A 500 Gal F 40,000 Gal, 40,000#	WIW	Originally Gulf Oil Corporation's J. F. Janda "I" No. 4 Converted to WIW



McDONALD STATE "WN" NO. 7
UNIT A, 990' FNL & 990' FEL
SECTION 35, T-22S, R-36E
LEA COUNTY, NEW MEXICO

TD: 3550' GR: 3475'

CONDUCTOR: 12-3/4" 33.3# SET @ 35'. CEMENT W/25sx

SURFACE: 8-5/8" 24.7# SET @ 1469', CEMENT W/500sx. CIRC'D TO SURFACE.

PRODUCTION: 5-1/2" 17# SET @ 2978', CEMENT W/400sx CEMENT TOP @ 1417' (CALCULATED).

PLUG & ABANDONMENT PROCEDURE:

RIH W/5-1/2" CIBP, SET @ 2900'. FILLED HOLE W/HEAVY GELLED MUD BETWEEN ALL CEMENT PLUGS. SPOTTED 10sx OF CEMENT ON TOP OF CIBP (EST. 35'). PERF'D 5-1/2" CASING @ 1500' AND THEN @ 1400' AND WAS NOT ABLE TO ESTABLISH CIRCULATION AT EITHER DEPTH. SPOTTED 30sx OF CEMENT FROM 1300'-1550'. TAGGED TOC @ 1279' (271' CEMENT PLUG). PERF'D 5-1/2" CASING @ 525'. SET CEMENT RETAINER @ 483'. CEMENTED ANNULUS W/90sx OF CEMENT CIRC'D 10sx TO SURFACE. SPOTTED 10sx CEMENT PLUG @ SURFACE.

HISTORY: DRILLED AND COMPLETED IN APRIL, 1953. ACIDIZE OPENHOLE SECTION W/1000 GAL OF ACID. IP - 4350 MCFD. IN MARCH, 1976 THE WELL WAS MAKING 14 MCFD AND WAS PLUGGED AND ABANDONED.

EMERY KING NW WELL NO. 3

UNIT C, 1980' FWL & 330' FNL

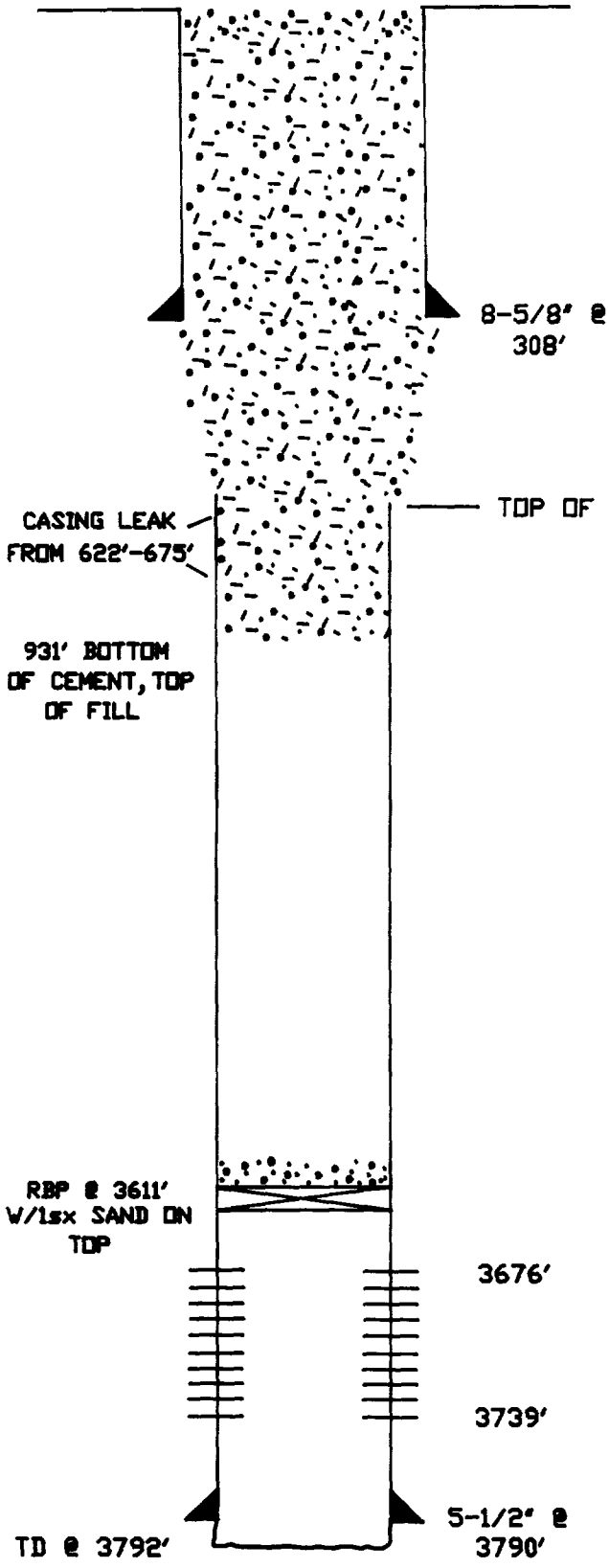
SECTION 1, T-23S, R-36E

LEA COUNTY, NEW MEXICO

TD: 3792' GL: 3429'

DF: 3437'

STATUS: PLUG & ABANDONED



SURFACE: 8-5/8" SET @ 308', CEMENT W/250sx, CEMENT CIRCULATED TO SURFACE.

PRODUCTION: 5-1/2" SET @ 3790', CEMENT W/600sx. CEMENT TOP @ 890'.

** TOP OF 5-1/2" CASING @ 619'. THIS WAS CREATED WHEN THE WELL WAS PLUG AND ABANDONED.

THE WELL WAS PLUG AND ABANDONED WITH 700sx OF CEMENT FROM 931' TO SURFACE. 30sx WERE CIRCULATED.

PERFORATIONS: 3676'-3739', 132 HOLES.

HISTORY: WELL WAS DRILLED AND COMPLETED IN APRIL 1959. PERF'D FROM 3676'-3739' W/132 HOLES. WELL WAS SAND FRAC'D W/40,000 GAL OF LEASE OIL AND 40,000# OF 20/40 SAND. IP - 216 BOPD AND 7 BWPD. FOUND CASING LEAK FROM 622'-675' IN JUNE 1982. RBP WAS SET @ 3611' AND A CEMENT SQUEEZE WAS ATTEMPTED. THE SQUEEZE WAS UNSUCESSFUL. THE WELL WAS P&A'D IN MAY, 1984 AFTER SEVERAL ATTEMPTS OF TRYING TO WASH OVER THE 5-1/2". FILL WAS CLEANED OUT OF THE INSIDE OF THE 5-1/2" TO 931' AND THE WELL WAS PLUGGED TO SURFACE. W/700sx.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 191128

TO: Mr. Jim Keil
P. O. Box 552, Midland, TX 79702

SAMPLE RECEIVED 1-18-91
RESULTS REPORTED 1-18-91

COMPANY Marathon Oil Company LEASE McDonald Acct.

FIELD OR POOL

SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced water - taken from heater-treater @ #1-A. 1-18-91

NO. 2 Raw water - taken from Texaco Supply Line. 1-18-91

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0265	1.0075		
pH When Sampled	6.8	6.8		
pH When Received	6.98	6.79		
Bicarbonate as HCO_3	1,781	1,098		
Supersaturation as $CaCO_3$	0	0		
Undersaturation as $CaCO_3$	--	--		
Total Hardness as $CaCO_3$	8,100	2,700		
Calcium as Ca	940	660		
Magnesium as Mg	1,397	255		
Sodium and/or Potassium	10,819	2,186		
Sulfate as SO_4	2,038	1,388		
Chloride as Cl	19,885	3,622		
Iron as Fe	0.04	0.08		
Barium as Ba	0	0		
Turbidity, Electric	38	261		
Color as Pt	25	20		
Total Solids, Calculated	36,861	9,209		
Temperature °F.	65	60		
Carbon Dioxide, Calculated	463	285		
Dissolved Oxygen,	0.000	*		
Hydrogen Sulfide	159	477		
Resistivity, ohms/m at 77° F.	0.220	0.750		
Suspended Oil	27	500		
Filtrable Solids as mg/l	22.3	71.4		
Volume Filtered, ml	750	650		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks *Unable to determine due to high oil content.

It is apparent in the turbidity readings of the mixtures that due to the substantial amount of oil in the supply water, they do not reflect what would be expected from any influence from compatibility but rather reflect oil separation at different rates. A careful examination of the analytical results has revealed no evidence of any potential incompatibility between these waters, therefore clearly indicating that no scaling potential or precipitation would be expected to result from combining these waters. We do note that the supply water has a rather high level of

- CONTINUED ON PAGE 2 -

Form No. 3

By ___

P O BOX 1468
MONAHANS, TEXAS 79756
PH 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W INDIANA
MIDLAND TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 191128 (Page 2)

TO: Mr. Jim Keil
P. O. Box 552, Midland, TX 79702

SAMPLE RECEIVED 1-18-91

RESULTS REPORTED 1-18-91

COMPANY Marathon Oil Company LEASE McDonald Acct.

FIELD OR POOL

SECTION BLOCK SURVEY COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Mixture of 25% Produced Water and 75% Supply Water.

NO. 2 Mixture of 50% Produced Water and 50% Supply Water.

NO. 3 Mixture of 75% Produced Water and 25% Supply Water.

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.				
pH When Sampled				
pH When Received				
Bicarbonate as HCO_3				
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$				
Calcium as Ca				
Magnesium as Mg				
Sodium and/or Potassium				
Sulfate as SO_4				
Chloride as Cl				
Iron as Fe				
Barium as Ba				
Turbidity, Electric - actual	175	153	59	
Color as Pt				
Total Solids, Calculated				
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide				
Resistivity, ohms/m at 77° F.				
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Theoretical Compatible Turbidity	205	150	94	

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks suspended oil, but we suspect this is at least partially the result of the sample point. However, some oil would be expected to be present in this supply water. We note in our microscopic examination of the suspended solids that the particles were all extremely fine material associated with the suspended oil. Therefore, the level of the filtrable solids is of questionable significance in regard to injection quality.

Form No. 3

By W. C. Martin

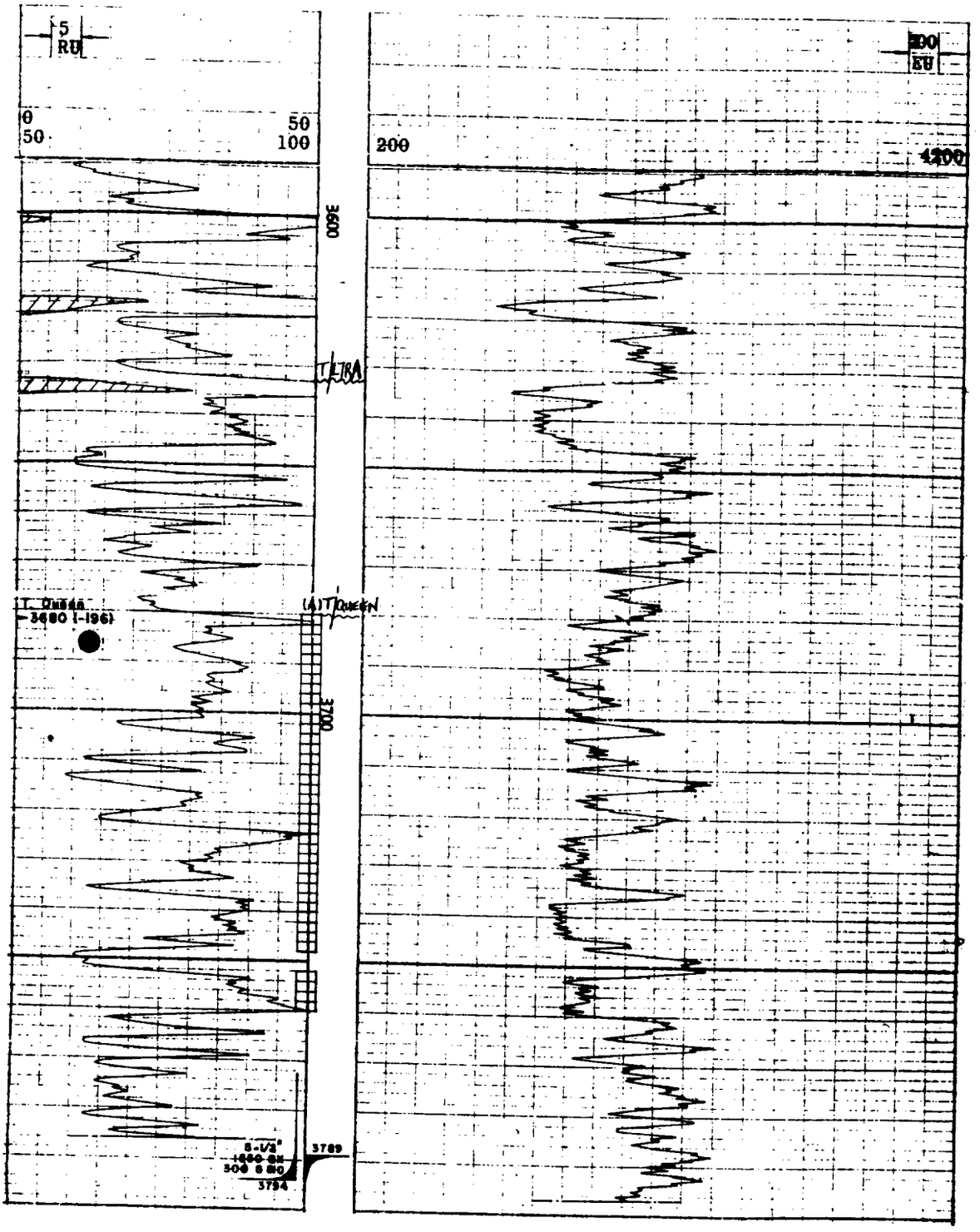
Waylan C. Martin, M.A.

SOUTH EUNICE UNIT WELL NO. 406

UNIT H, 1980' FNL & 990' FEL

SECTION 35, T-22S, R-36E

LEA COUNTY, NEW MEXICO



PRESENT PERFS:

3680'-3748', W/4 JSPF AND 3752'-60',

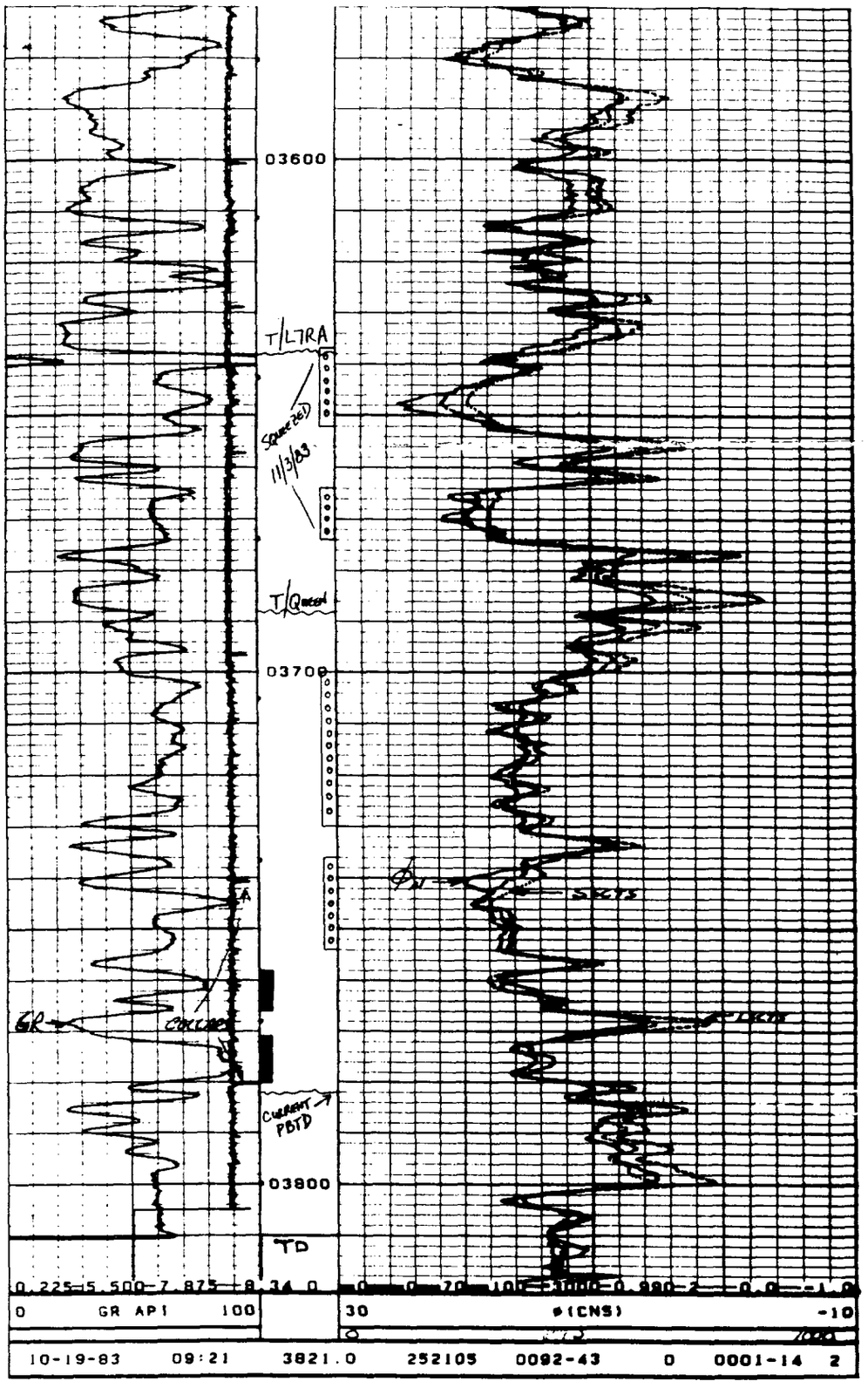
W/1 JSPF FOR A TOTAL OF 280 HOLES

SOUTH EUNICE UNIT WELL NO. 407

UNIT J, 1980' FSL & 2310' FEL

SECTION 35, T-22S, R-36E

LEA COUNTY, NEW MEXICO



PRESENT PERFS:

3700'-30', 36'-54',

W/2 JSPF, 98 HOLES

PROPOSED PERFS:

3700'-30', 36'-54',

W/2 JSPF AND 3758'-66',

3771'-80', W/4 JSPF,

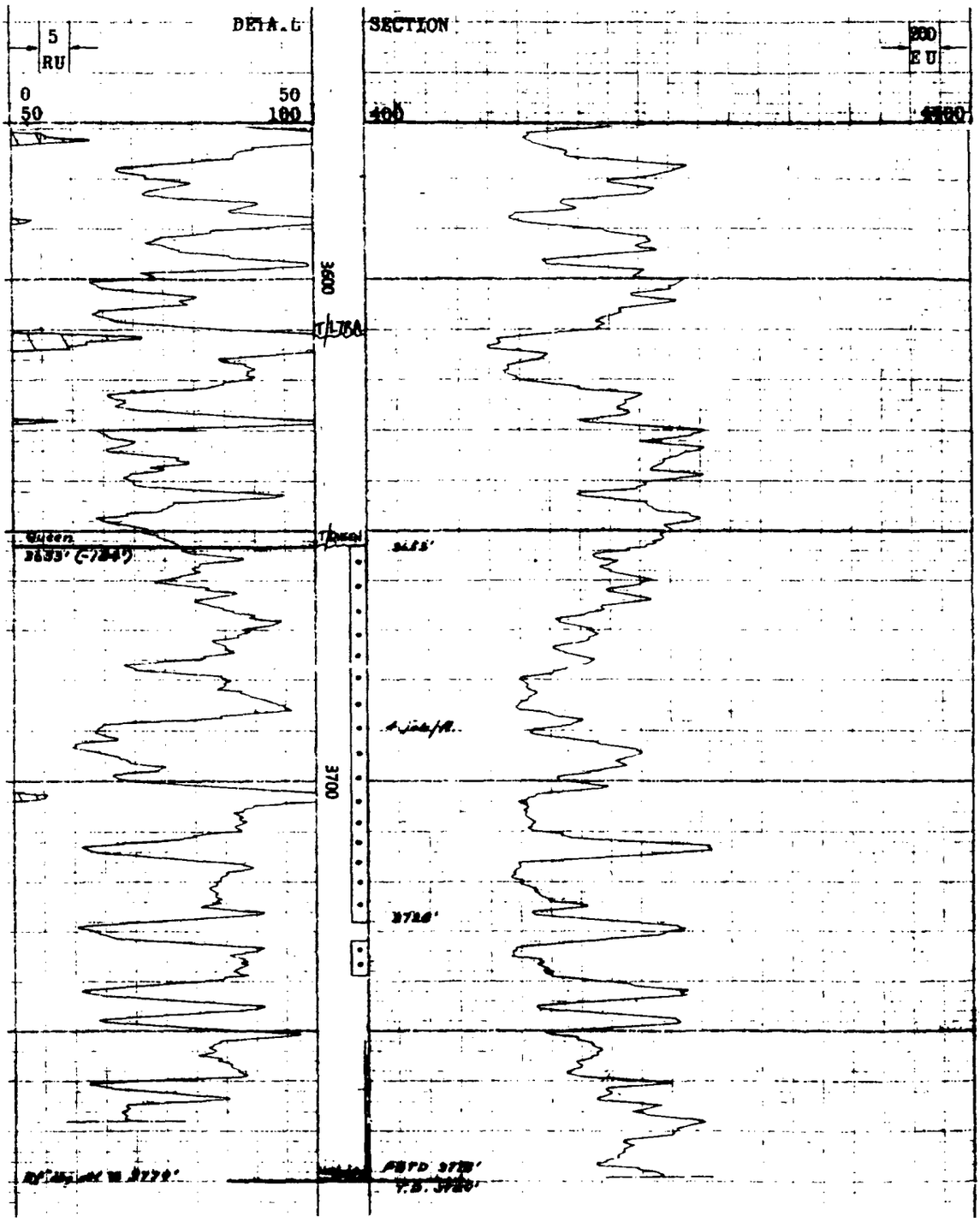
166 HOLES

SOUTH EUNICE UNIT WELL NO. 409

UNIT L, 1650' FSL & 300' FWL

SECTION 36, T-22S, R-36E

LEA COUNTY, NEW MEXICO



PRESENT PERFS:

3653'-3728', W/4 JSPF AND 3732'-39',

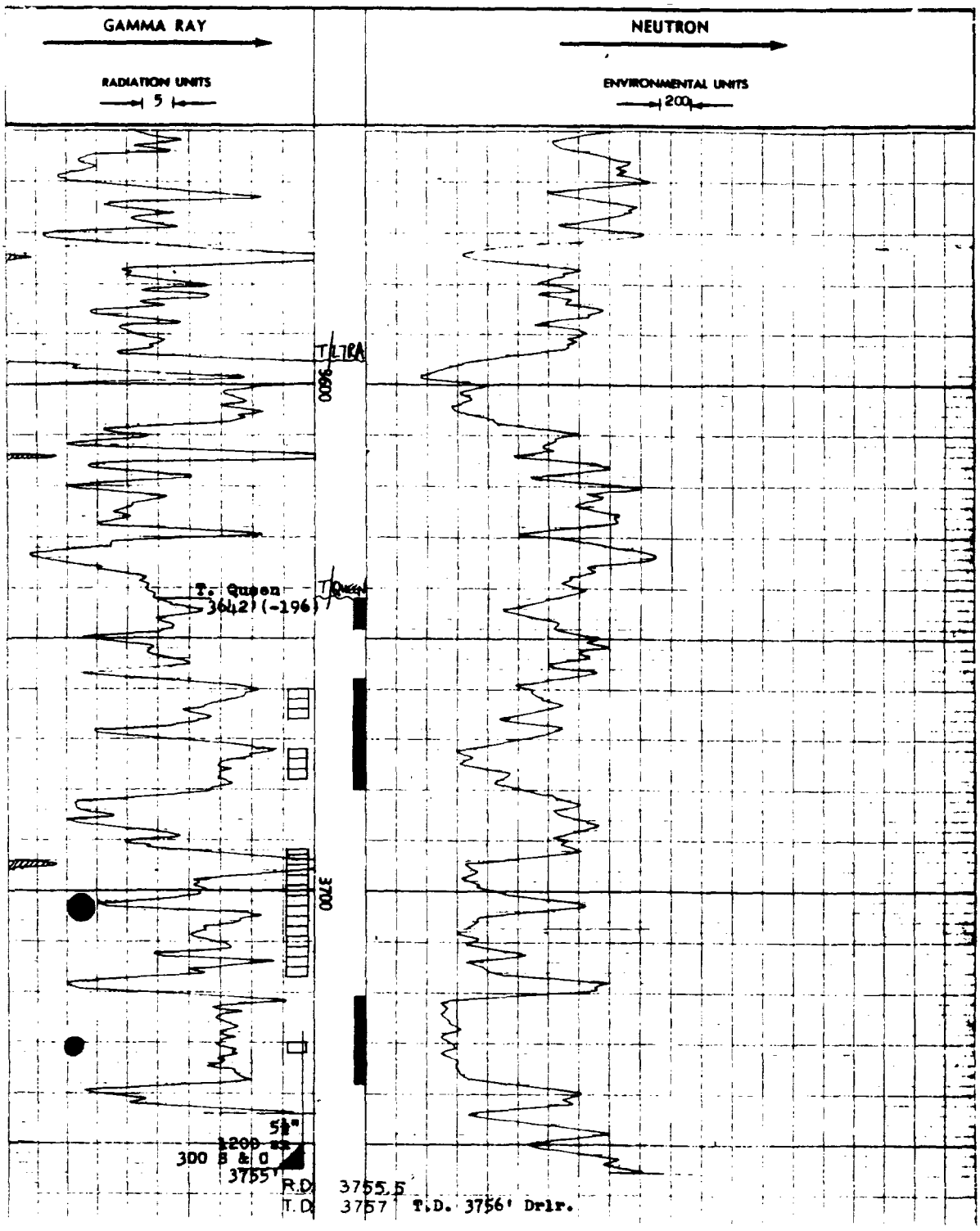
W/1 JSPF, 307 HOLES

SOUTH EUNICE UNIT WELL NO. 412

UNIT N, 330' FSL & 1650' FWL

SECTION 36, T-22S, R-36E

LEA COUNTY, NEW MEXICO



PRESENT PERFS:

3660'-66', 72'-78', 3730'-32', W/1 JSPF
AND 3692'-3717', W/4 JSPF, 114 HOLES

PROPOSED PERFS:

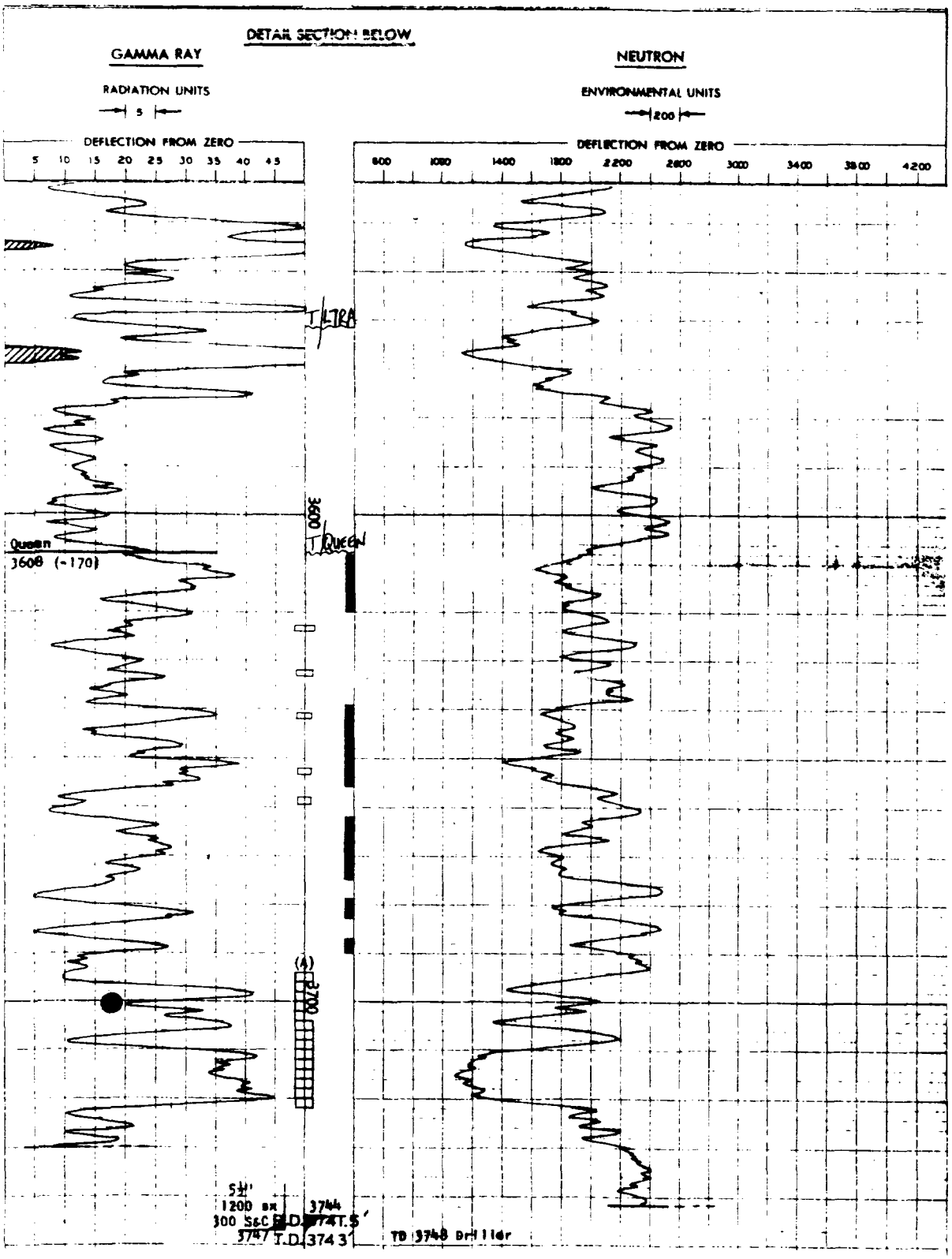
3642'-48', 3658'-80' AND
3721'-38', W/4 JSPF, 180 HOLES

SOUTH EUNICE UNIT WELL NO. 415

UNIT J, 2310' FEL & 1650' FSL

SECTION 36, T-22S, R-36E

LEA COUNTY, NEW MEXICO



PRESENT PERFS:

3623'-24', 32'-33', W/4 JSPF, 3641'-42',
52'-53', 68'-69', W/2 JSPF AND
3694'-3722', W/4 JSPF, 126 HOLES

PROPOSED PERFS:

3608'-20', 39'-56', 62'-75', 79'-83',
87'-90', W/4 JSPF, 196 HOLES

OFFSET OPERATORS AND UNIT WORKING INTEREST OWNERS

SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

ARCO Oil and Gas Company
P. O. Box 1610
Midland, TX 79702
Attn: Ken Gosnell

Meridian Oil
P. O. Box 51810
Midland, TX 79710
Attn: Rich Smiley

Texaco Exploration
P. O. Box 3109
Midland, TX 79702
Attn: Production Department

Conoco, Inc.
10 Desta Drive West, Suite 100
Midland, TX 79705
Attn: Rhonda White

Chevron USA, Inc.
P. O. Box 1150
Midland, TX 79702
Attn: Roy Matthews, Room 4115

Tora Oil and Gas
Oil Reports and Gas Services
P. O. Box 755
Hobbs, NM 88241
Attn: Donna Holer

Lewis B. Burleson, Inc.
P. O. Box 2479
Midland, Texas 79702

SKP/102.274/sk

SURFACE OWNERS AND LESSEES

SOUTH EUNICE SEVEN RIVERS QUEEN UNIT

State of New Mexico
C/O Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

Millard Deck Estate
C/O Trust Real Estate Dept.
P. O. Box 1479
Fort Worth, TX 79101

MTW/027.274/sk

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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 fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Tora Oil & Gas
Oil Reports & Gas Services
P. O. Box 755
Hobbs, NM 88241
Attn: Donna Holer

4. Article Number
P-355-206-427

Type of Service: SE TRQU
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X [signature]

6. Signature — Agent
X

7. Date of Delivery
2-26-92

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

[redacted]

Article Addressed to:

Texaco Inc.
P. O. Box 3109
Midland, TX 79702
Attn: Production Dept.

4. Article Number
P-355-206-423

Type of Service: SE TRQU
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

6. Signature — Agent
[signature]

7. Date of Delivery
FEB 26 1992

8. Addressee's Address *(ONLY if requested and fee paid)*

Form 3811, Mar. 1988 * [redacted] DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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 fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

State of New Mexico
C/O Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

4. Article Number
P-355-206-421

Type of Service: SE TRQU
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X [signature]

6. Signature — Agent
X

7. Date of Delivery
FEB 28 1992

SANTA FE, NM 87501 USPS

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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 fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Lewis B. Burleson, Inc.
P. O. Box 2479
Midland, TX 79702

4. Article Number
P-355-206-428

Type of Service: SE TRQU
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X [signature]

7. Date of Delivery

DOWNTOWN STA FEB

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

[illegible] Receipt for Certified Mail. No Insurance Coverage Provided. Do not use for International Mail. See [illegible]

[illegible] to [illegible] will provide you the name of the person delivered to and the date delivered. For additional fees the following services are available. Check item [illegible] for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Millard Deck Estate
C/O Trust Real Estate Dept.
P.O. Box 1479
Fort Worth, TX 79101

4. Article Number
P-355-206-420

Type of Service: SERVICE
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Address
X

6. Signature – Agent
X

7. Date of Delivery
MAR 05 1992

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RE[illegible]

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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 fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:

ARCO Oil and Gas Company
P. O. Box 1610
Midland, TX 79702
Attn: Ken Gosnell

4. Article Number
P-355-206-426

Type of Service: SERVICE
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X [signature]

6. Signature — Agent
X

7. Date of Delivery
FEB 26 1992

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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 fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:

Meridian Oil
P. O. Box 51810
Midland, TX 79710
Attn: Rich Smiley

4. Article Number
P-355-206-42[illegible]

Type of Service: SERVICE
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

6. Signature — Agent
[signature]

7. Date of Delivery
2-26-92

8. Addressee's Address (ONLY if requested and fee paid)

Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:

Conoco, Inc.
10 Desta Drive, Ste. 100
Midland, TX 79705
Attn: Rhonda White

4. Article Number
P-355-206-42[illegible]

Type of Service: SERVICE
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X [signature]

7. Date of Delivery
2-26-92

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

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1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:

Chevron U. S. A. Inc.
P. O. Box 1150
Midland, TX 79702
Attn: Roy Matthews
Rm. 4115

4. Article Number
P-355-206-42[illegible]

Type of Service: SERVICE
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

6. Signature — Agent
[signature]

7. Date of Delivery
FEB [illegible]

8. Addressee's Address (ONLY if requested and fee paid)

Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

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

One weeks.
Beginning with the issue dated

Jan. 31, 1992
and ending with the issue dated

Jan. 31, 1992

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 31 day of

January, 1992

Paula P. Johnson
Notary Public.

My Commission expires

Aug. 5, 1995
(Seal)

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

LEGAL NOTICE
January 31, 1992

Notice is hereby given of the Application of Marathon Oil Company, Attention: David J. Loran, Engineering Manager, P.O. Box 552, Midland, Texas 79702, telephone (915)682-1626, to the New Mexico Oil Conservation Commission, Energy and Minerals Department, for approval of the Amendment to Order R-4217 for the conversion of the following wells to injection service for the purpose of secondary recovery.

Lease/Unit Name: South Eunice (Seven Rivers, Queen) Unit Well Number(s) and Location(s):

406 Unit Letter H, 1,980' FNL and 990' FEL, Section 35, T-22-S, R-36-E
407 Unit Letter J, 1,980' FSL and 2,310' FEL, Section 35, T-22-S, R-36-E
409 Unit Letter L, 1,650' FSL and 300' FWL, Section 36, T-22-S, R-36-E
412 Unit Letter N, 300' FSL and 1,650' FWL, Section 36, T-22-S, R-36-E
415 Unit Letter J, 2,310' FEL and 1,650' FSL, Section 36, T-22-S, R-36-E

The injection formation is the South Eunice Pool at a depth of ±3,700 feet below the surface of the ground. Expected maximum injection rate is 500 barrels of water per day/well, and expected maximum surface injection pressure is approximately 790 pounds per square inch. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen (15) days of this publication.