STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION



April 10, 1987

GARREY CARRUTHERS GOVERNOR

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-5800

Marathon Oil Company P.O. Box 3128 Houston, Texas 77253

Attention: R. J. Peterson

Re: Administrative Order NFL-171

Dear Mr. Peterman:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and Oil Conservation Division Order No. R-6013 for the following described well:

South Eunice (7RQ) Unit Well No. 436 located 2475 feet from the South line and 330 feet from the East line (Unit I) of Section 35, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) The well for which a finding is sought is to be completed in the South Eunice Seven Rivers Queen Pool, and the standard spacing unit in said pool is 40 acres. (4) A standard 40-acre oil proration unit comprising the NE/4 SE/4 of Section 35, Township 22 South, Range 36 East, is currently dedicated to the applicant's South Eunice (7RQ) Well No. 408 also located in Unit I of said Section 35.

(5) Said unit is not being effectively and efficiently drained by the existing well on the unit.

(6) The drilling and completion of the well for which a finding is sought should result in the production of an additional 24,000 MCF of gas from the proration unit which would not otherwise be recovered.

(7) All requirements of Division Order No. R-6013 have been complied with, and the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(8) In order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well-spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

. 54^{1 A}

(1) The applicant is hereby authorized to drill the South Eunice (7RQ) Unit Well No. 436 as described above, as an infill well on the existing 40-acre oil proration unit comprising the NE/4 SE/4 of Section 35, Township 22 South, Range 36 East, NMPM, South Eunice Seven Rivers Queen Pool, Lea County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Sincere

Michael E. Stogner Examiner

MES/et xc: Oil Conservation Division - Hobbs R. W. Byram & Co., - Mar., 1984

(C - DRILLING - Cont'd.)

₩2

In the event gas production is encountered in a well which was projected to an oil-producing horizon and which is located accordingly but does not conform to the above gas well location rules, it shall be necessary for the operator to bring the matter to a hearing before approval for the production of gas can be given.

III. All counties except Lea, Chaves, Eddy, Roosevelt, San Juan, Rio Arriba, and Sandoval (As Amended by Order No. R-6870, February 1, 1982.) Any wildcat well which is projected as an oil well in any

county other than Lea, Chaves, Eddy, Roosevelt, San Juan, Rio Arriba, and Sandoval shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a legal subdivision of the U.S. Public Land Surveys, or on a governmental quarter-quarter section or lot and shall be located not closer than 330 feet to any boundary of such tract.

Any wildcat well which is projected as a gas well to a formation and in an area which, in the opinion of the Division representative approving the application to drill, may reasonably be presumed to be productive of gas rather than oil shall be located on a drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U. S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

- C. ACREAGE AND WELL LOCATION REQUIREMENTS FOR DEVELOPMENT WELLS (As Amended by Order No. R-4383, September 6, 1972, and Order No. R-5113, November 1, 1975.)
- Oil Wells, All Counties (As Amended by Order No. R-4383, I. September 6, 1972.)

Unless otherwise provided in special pool rules, each development well for a defined oil pool shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a legal subdivision of the U.S. Public Land Surveys, or on a governmental quarter-quarter section or lot, and shall be located not closer than 330 feet to any boundary of such tract nor closer than 330 feet to the nearest well drilling to or capable of producing from the same pool, provided, however, only tracts committed to active secondary recovery projects shall be permitted more than four wells

II. Gas Wells

11. Gas Wells (a) Lea, Chaves, Eddy, and Roosevelt Counties Unless otherwise provided in special pool rules, each development well for a defined gas pool in a formation younger than the Wolfcamp formation, or in the Wolfcamp formation which was created and defined by the Division prior to November 1, 1975, or in a Pennsylvanian age or older formation which was created and defined by the Division prior to June 1, 1964 aball be located on a designated drilling tract consisting of 1964, shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section being a legal subdivision of the U. S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to the nearest well drilling to or capable of producing from the same pool.

Unless otherwise provided in the special pool rules, each development well for a defined gas pool in the Wolfcamp formation which was created and defined by the Division after November 1, 1975, or of Pennsylvanian age or older which was created and defined by the Division after June 1, 1964, shall be located on a designated drilling tract consisting of 320 surface contiguous acres, more or less, comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision of the U. S. Public Land Surveys. Any such well having more than 160 acres dedicated to it shall be located not closer than 660 feet to the nearest side boundary of the dedicated tract nor closer than 1980 feet to the nearest end boundary nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary. (For the purpose of this rule, 'side' boundary and 'end' boundary are as defined in Section B I (a) of this rule.)

(b) San Juan, Rio Arriba, and Sandoval Counties

Unless otherwise provided in special pool rules, each development well for a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U. S. Public Land Surveys, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.

All counties except Lea, Chaves, Eddy, Roosevelt, (c) San Juan, Rio Arriba, and Sandoval

Unless otherwise provided in special pool rules, each development well for a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U.S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to the nearest well drilling to or capable of producing from the same pool.

- ACREAGE ASSIGNMENT, COMPLETED WELLS D.
- Well Tests and Classification

It shall be the responsibility of the operator of any wildcat gas well or development gas well to which more than 40 acres has been dedicated to conduct a potential test within 30 days following completion of the well and to file the same with the Division within 10 days following completion of the tests. (See Rule 401.)

Date of completion for a gas well shall be the date a Christmas tree is installed or 30 days following conclusion of active comple-

tion work on the well, whichever date comes first. Upon making a determination that the well should not properly be classified as a gas well, the Division will reduce the acreage dedicated to the well.

Failure of the operator to file the aforesaid tests within the specified time will also subject the well to such acreage reduction.

II. Non-Standard Units

Any completed gas well which does not have the required amount of acreage dedicated to it for the pool or formation in which it is completed may not be produced until a standard unit for the well has been formed and dedicated or until a nonstandard unit has been approved.

The Division-Director may grant administrative approval to non-standard gas units without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

The non-standard unit lies wholly within a single governmental quarter section if the well is completed in a pool or formation for which 160 acres is the standard unit size or wholly within a single governmental half section if the well is completed in a pool or formation for which 320 acres is the standard unit size.



SECTION I

(C - DRILLING - Cont'd.)

Page 8 New Mexico

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the quarter section (for 160-acre pools or formations) or the half section (for 320-acre pools or formations) in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application.

E. (As Amended by Order No. R-2761, January 1, 1965.) Form C-101, Application for Permit to Drill, Deepen, or Plug Back for any well shall designate the exact legal subdivision allotted to the well and no Form C-101 will be approved by the Division or any of its agents without such proper designation of acreage.

F. Unorthodox Locations (As Amended by Order No. R-3038, February 9, 1966, Order No. R-5890. December 29, 1978, Order No. R-6870. February 1, 1982, and Order No. R-7451, March 2, 1984.)
I. The Division Director shall have authority to grant an

I. The Division Director shall have authority to grant an exception to the well location requirements of Sections B and C above without notice and hearing when the necessity for such unorthodox location is based upon topographical conditions, the recompletion of a well previously drilled to a deeper horizon, provided said well was drilled at an orthodox or approved unorthodox location for such original horizon, or to permit the completion of an efficient production and injection pattern within a secondary recovery or pressure maintenance project, provided that any such unorthodox location within such project is no closer than 330 feet to the outer boundary of the lease, or the unitized area, nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary.

II. The Division Director shall have authority to grant an exception to the well location requirements of Rule 104 B.I. (a) and Rule 104 C.II. (a) without notice and hearing when the necessity for such unorthodox location is based upon geologic conditions provided that any such unorthodox location shall be no closer than 660 feet to the nearest side boundary nor closer than 990 feet to the nearest end boundary of the proration unit.

III. Applications for administrative approval of unorthodox locations shall be filed in triplicate and shall be accompanied by plats, showing the ownership of all leases offsetting the proration or spacing unit for which the unorthodox location is sought, and also all wells completed thereon. If the proposed unorthodox location is based upon topography, the plat shall also show and describe the existent topographical conditions. If the proposed unorthodox location is based upon completion of an efficient production and injection pattern, the plat shall also show the project outline identifying all producing and injection wells therein, and the applicant shall further include a statement setting forth the necessity for such location. If the proposed unorthodox location is based upon geology as provided in Paragraph II above, the application shall include appropriate geologic maps, cross-sections, and/or logs, and a discussion of the geologic conditions which result in the necessity for the unorthodox location.

IV. All operators of proration or spacing units offsetting the unit for which the unorthodox location is sought shall be notified of the application by certified or registered mail, and the application shall state that such notification has been given. The Division Director may approve the unorthodox location upon receipt of waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Director may at big discretion set any

V. The Division Director may, at his discretion, set any application for administrative approval of an unorthodox location for public hearing.

R. W. Byram & Co., - Mar., 1984

G. Whenever an exception is granted, the Division may take such action as will offset any advantage which the person securing the exception may obtain over other producers by reason of the unorthodox location.

H. If the drilling tract is within an allocated oil pool or is placed within such allocated pool at any time after completion of the well and the drilling tract consists of less than $39\cdot1/2$ acres or more than $40\cdot1/2$ acres, the top unit allowable for such well shall be increased or decreased in the proportion that the number of acres in the drilling tract bears to 40.

I. If the drilling tract is within an allocated gas pool or is subsequently placed within an allocated gas pool, and the drilling tract consists of less than 158 acres or more than 162 acres in 160-acre pools, or less than 316 acres or more than 324 acres in 320-acre pools, the top allowable for such well shall be decreased or increased in the proportion that the number of acres in the drilling tract bears to a standard unit for the pool.

J. In computing acreage under H and I above, minor fractions of an acre shall not be counted but 1/2 acre or more shall count as 1 acre.

K. The provisions of H and I above shall apply only to wells completed after January 1, 1950. Nothing herein contained shall affect in any manner any well completed prior to the effective date of this rule and no adjustments shall be made in the allowable production for any such wells by reason of these rules.

L. In order to prevent waste the Division may, after notice and hearing, fix different spacing requirements and require greater acreage for drilling tracts in any defined oil pool or in any defined gas pool notwithstanding the provisions of B and C above.

M. The Division may approve the pooling or communitization of fractional lots of 20.49 acres or less with another oil proration unit when:

1. The units involved are contiguous;

2. They are part of the same basic lease, carrying the same royalty interest; and

3. The ownership of the units involved is common.

Application to the Division for pooling shall be accompanied by three (3) copies of a certified plat showing the dimensions and acreage involved in the pooling, the ownership of all leases and royalty interests involved, and the location of any proposed wells.

Applicant shall furnish all operators who directly and diagonally offset the units involved a copy of the application to the Division, and shall include with his application a written statement that all offset operators have been properly notified. Offset operators shall include only those operators who have offset properties within the State of New Mexico. The Division shall wait at least ten days before approving any such pooling, and shall approve such pooling only in the absence of objection from any offset operator. In the event that an operator objects to the pooling, the Division shall consider the matter only after proper notice and hearing.

The Division may waive the ten-day waiting period requirement if the applicant furnishes the Division with the written consent to the pooling by all offset operators involved.

The Division may consider that the requirements of subparagraphs 2 and 3 of paragraph M of this rule have been fulfilled if the applicant furnishes with each copy of each application to the Division a copy of an executed pooling agreement communitizing the units involved.



* Request for Infill Well Finding South Eunice Unit Well No. 436 South Eunice (Seven Rivers Queen) Field Lea County, New Mexico

Infill Findings, Marathon is submitting a plat showing 40-acre spacing within the South Eunice Unit and a description of all wells drilled on the proration unit (including the completed infill well) which are completed in the same pool or reservoir as the proposed infill well. Also attached is a statement indicating why the existing well on the proration unit cannot effectively and efficiently drain the portion of the reservoir covered by the proration unit.

I. WELL ON WHICH FILING FOR INFILL FINDING IS BEING MADE

A. Lease Name & Well Location: South Eunice Unit No. 436

Unit I, Section 35, T-22-S, R-36-E, 2475 FSL & 330 FEL,

Lea County, New Mexico

- B. Spud Date: 8-31-85
- C. Completion Date: N/A
- D. Mechanical Problems: None

E. Current Rate of Production: N/A

F. Date of P&A: None

II. EXISTING WELL ON PRORATION UNIT

A. Lease Name & Well Location: South Eunice Unit No. 408

Unit I, Section 35, T-22-S, R-36-E, 1980' FSL & 990' FEL,

.

Lea County, New Mexico

B. Spud Date: 1-14-58

C. Completion Date: 1-23-58

D. Mechanical Problems: Converted to injection well 6-1-75

E. Current Rate of Production: None

F. Date of P&A: None

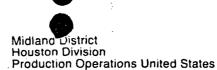
South Eunice Unit Well No's. 434, 435, 436, 437, & 439 Lea County, New Mexico

Reserves of 80,000 barrels of oil and 24,000 MCF of gas are expected from each of the wells listed above. This reserve figure was derived from volumetric calculations, using the following parameters: average porosity 15%, drainage area = 10 acres, net pay thickness = 50 feet, water saturation = 35%, formation volume factor = 1.2, recovery efficiency = 25%, and gas-oil ratio = 300 SCF/STB.

The area was originally developed on 40 acre spacing in the late 1950's and early 1960's. In the mid-1970's a pilot and later a unit-wide waterflood were implemented, utilizing the existing wells. It is believed that only a small portion of the unitized reservoir has been successfully waterflooded, due to the low permeability of the fine-grained Queen sandstone and the presence of high permeability streaks in portions of the Unit. Two-thirds of the waterflood production has come from several wells that encounter one particular high permeability sand member in the northeastern portion of the Unit.

Due to this low permeability of the majority of the Queen pay, each well has drained considerably less than the 40 acres currently assigned. As shown above, reserves of 80,000 barrels can be calculated assuming only 10 acre drainage, and many wells in the unit have not made that much. It is expected that these infill wells can recover primary reserves from tight Queen sands after adequate stimulation.

It is also believed that these wells will help to recover additional secondary reserves from higher permeability intervals which are floodable. Pressure testing of wells has indicated an unusually low reservoir pressure in some producing wells, indicating inadequate injection support. This may be caused by reservoir discontinuities between producing wells and injection wells. By infill drilling in the South Eunice Unit, more continuous pay will be developed which should improve waterflood recoveries.



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

July 18, 1985

MARATHON

Marathon

Oil Company

New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501 Attn: David Catanach

RE: Unorthodox Locations South Eunice (Seven Rivers, Queen) Unit Well Nos. 436, 437 and 439 Sec. 35 and 36, T-22-S, R-36-E Lea County, New Mexico

Marathon Oil Company, as operator of the referenced unit, respectfully requests administrative approval to drill three infill producing wells, Nos. 436, 437, and 439, at the following unorthodox locations: .

No. 4362475' FSL and 330' FEL, Sec. 35-22S-36E, Lea Co.No. 4372310' FSL and 890' FWL, Sec. 36-22S-36E, Lea Co.No. 439990' FSL and 2220' FWL, Sec. 36-22S-36E, Lea Co.

All of these wells will be drilled to about 3850' to test the Seven Rivers and Queen formations in the South Eunice (Seven Rivers, Queen) pool. It is expected that these wells will recover additional reserves within this secondary recovery project.

Copies of this application have been sent to the offset operators by registered mail.

Attached for your information is a map showing the proposed locations and a list of offset operators to these locations.

Very truly yours,

ac

C. R. Hubacher District Operations Engineer

DGJ/jdt/I

Attachments

OFFSET OPERATORS South Eunice (Seven Rivers, Queen) Unit Marathon Oil Company, Operator Well Nos. 436, 437 and 439

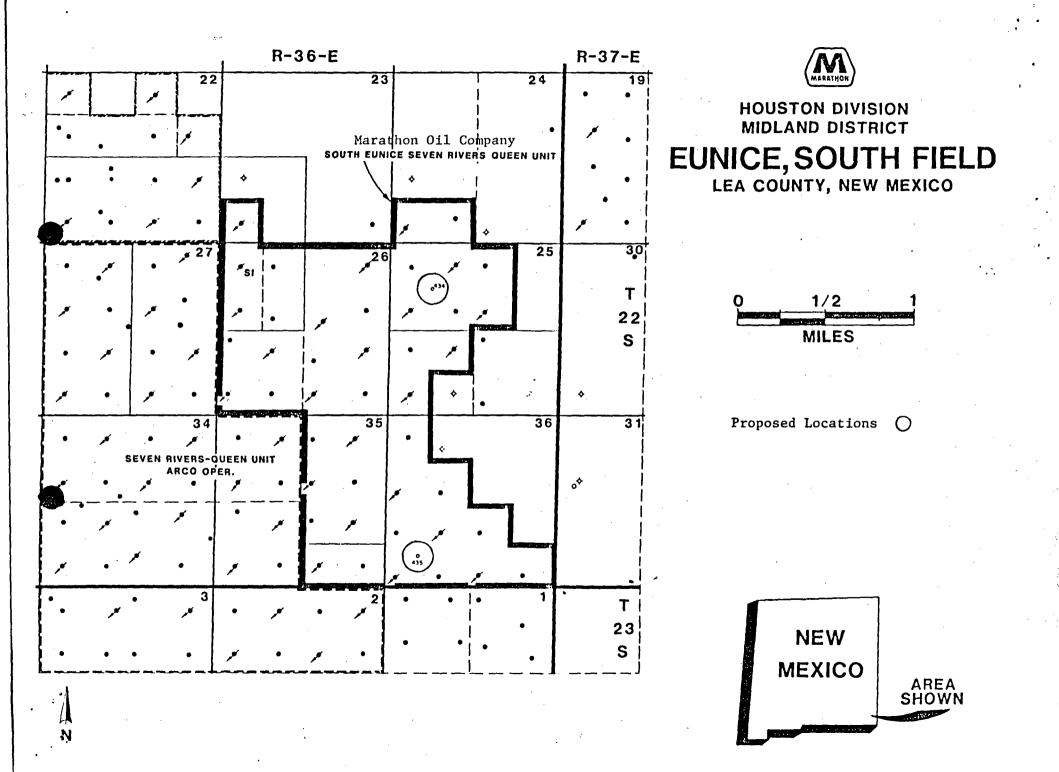
ARCO Oil and Gas P. O. Box 1610 Midland, Texas 79702 Attn: Jerry Tweed

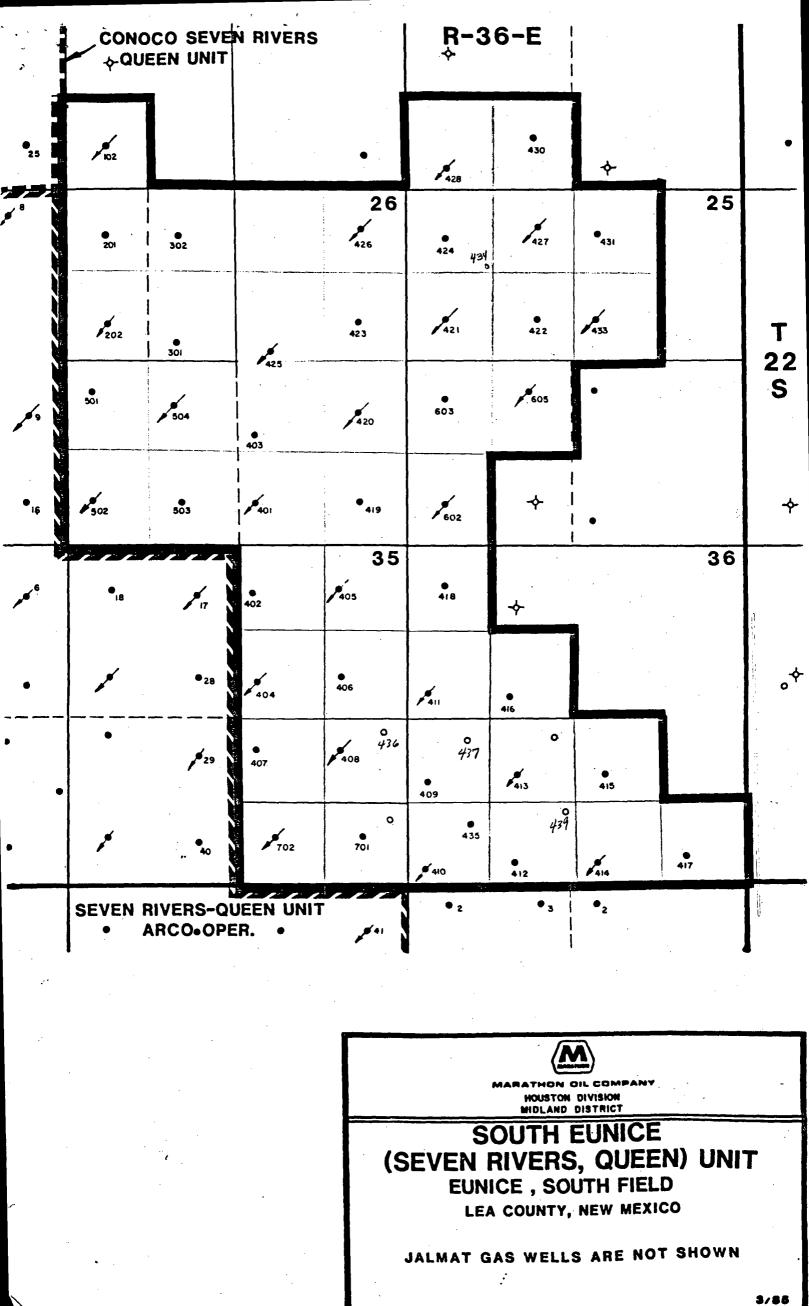
Conoco, Inc. 726 E. Michigan Hobbs, New Mexico 88240 Attn: Mark Mosley

Sun Production Company P. O. Box 1861 Midland, Texas 79702 Attn: Tom Hobbs

Texaco, Inc. P. O. Box 728 Hobbs, New Mexico 88240

		A.H.Co.	Ter Pochisl	<u>.</u>	(AG) S INF. Contrant MCC. Jb- A Guil S	N.B. Tarparc
· ·	200 M 6464 6		• 5 Sun • 4 • • • 3 A 2 • • 8	•' •' •' •	Gull (Duel) B (Cit Serv. (Duel) P (B Cit Serv. (Duel))	P/8
أنتهمهم	6 ⁴ 0 ^{47 W1} 9	U.R.CottleCo. UP Cattle Cols	9 ₀₀	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-2 p ³ (100) (100) -2 p ³ (100) -2 p ³ (100) -7 (1	ever and a
, •• [•] • ²⁴	32 32 TW1 38 2(S nciair) 59 7 157 402 1.W1 0 ⁷² ARC# (80)	3 A.R.Co. 9 9 4 96 7368 11 19 19	ti it tig Duai	4 4.R.Co	3 Sun (179 State) st 100 State - 3 (199 A 8 60765 	0 100 176 0177 50 M R Arthuell
.54 " 55	• ⁴ • ¹ • ¹ * ³	Henry S. Record of the second	Q ³⁶ Stote	-157-0* 	Song Martindale Stinen Natern Linne SS H.T. 4.4 180 (181)	571011 0 262 5 187 10190
	Wiserûl Marathan	4 Har 1970 Accl. HA	(Southwest Prad) 25 Marganan 26 Arganan	(w01255-012 5	Sun - ENOPERANA Sun 23	Sohio 3-PA DITT
•	Cont'	ARCO Gos rights is Wh Q	C ARCO Uas rights Wa	Author	(Tex Port) (Light	Amerada : 0
	16 22	36 15	85 ³⁰ 14	, e -	Atiliary Jeck (SI	A C S A C S
1CE	● ⁹ ● ¹⁰ ● ³ ● ²⁹ "McJonaia"	• ¹⁵	**		(P/B) Amerada (P/B) Amerada PA	Hedrick PEner PSS ARCO BELANTE ARCO
o ∎ • •uat	• ⁸ * ⁶ * ⁷ * ⁴	Vc Jonald JOavidson	44°Gosterd \$\$27 State	ngi3 ngi McDane d 1214	(P7B) amerado Petro Levus (P7B) amerado Petro Levus 1 Parto Levus 1 Part	Rebers Pall
ARCO MU	Sun Barenel D McChsiond	Sun CH, Juni Ali Percest	Conocularai	is Marathon 2147		Betty Boule C
Soren Suor	ARCO D	J ¹⁰ Sun HenryRecold URCartle Co.(5)	TOISOTS	ARCO 27 Gas rights WN"	42 46 m Conoco. 42 -3 -5 To 3703 De) - B-20 DS 3723	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ella Goren ord Dect (5) arc Deck to 4000 jie	Guif Conri, Scotty	UR Carrie Co. (5) 2222 21 3 4 23 24	Millard Deck.(S)	29. m 50 FUNICE	19 Gerry a (Exa	eck(S) Elliett : O 72 Sanna Warrig
Dechusy Dechusy Dechusy Daiporti soto	Droprimon Guiden M. Deca (S) 6/2	Cont1,etal 25 030183 ●2 8" ^{(*} Meyern™		TABLE DE VET ATV. UNIT	37 004 15 054 55 100 10 10 10 10 10 10 10 10 10 10 10 10	TA Commission
solo O mor Lun 31 Conoco,	Contilietai	12 LLS. 0:im 126 25 UR Cottle Co.151	A L Class Tree	428 Store 1 To 3500	Store 73 56 37 54 Sto	- 10 pl 210 Clawr
10	34 030191 36 37 35 0 ARCO 2 34 L2701/€00.	ARCO ARCO A. A IA (An Rich.)	Zeni Getty Marathan 426 A-2614 0 202 ARCO 202 Getty 1 ARCO 202	424 A 2614 427 431	(Frani) 35 31 (Wild to 1962	
030195	All Aderer #35		Dii 9 202 Dihein D 423 A Confishing 422 M Decassi 107 26 What	This Cas rts. 105 \$421 fix 422 g 433 State MicDonaid	104 7 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Anapari
	ARCO DECK 153 Reserve ARCO 44 ARCO DEC 1610 500 145 ARCO DE EL 34 MUL ARCO DE EL 34 MUL ARCO DE EL 34 MUL GALAS TO 392745 ML GALAS TO 392745 ML Christmas H M. Griffin	Derothy Casey 27 •12 \$11 1 •10 \$13	Warathon 420	C McCasianchos LiLDalaarti C McCasianchos LiLDalaarti Z TExxcel Oit		Bug greens Hums
, - -	ARCODIR EL 54 Mil. ARCODIR Dev.3.2 Mil. 48	Mathie DD Shipley Life,Est gill 1,54 (4 gls 15	502 Q 503 401 Q 419	D. McCastond	10 3062 67 68 59 59	Anadarka Tr.39 B osacto
1	ARCO	J F Shipley Hrs. Millord Deckus) ARLO	McDd fate	Anne L Chremon Accelia	ara (1-1) 51 State TS State	1
Conoco 10 3600	(Ationfic)	ARCO [*] (OPER.)	AREO 403 AREO 403 AREO 402 AREO 403 AREO 403 AREO 403 AREO 403	0 107 0 06	M B-2330	Seer Servi 6 IIIST Promotores Cale St Tr 30 Martin Cale Shell
² ` ¢	J L Solby Coniey Estmanderor	SEVEN RIVERS ON, UT.	27 +6 +28 +494 +406 "Jones"	411 416 Lewis St (DPRR) 36	Ot 1 421 Ot 1 421 Tr 1 350 Carle 1 32 Carle 1 32	Bourg & Guif Trade - Cigi State - Car fr
3	57 58 8 8 59 1204 8 60 50133 7	ARCO 60 3 4 32ARCO 31 34 WN 33 1 (J.H. Henoris) WW 51 1 34 Onoris (M.L. Kleini)	A- Sockie +** + #**	413 415	(Daiport, etal) Jonn Yuronka "" " " 3 S/R 34 8, 1480	Tr.6 7
· # ⁵	Cant letal D1 65 ^{9eyer} 62 61 13128 F111 Millard Deck(s)	33 FHole 36 93	Alco contia o IA 131 Jans car weyers har los		11/4 7 W3, Dalport "King" Sourg 13, 44	Skelle Prig. 16 Skelle Js. Ju. Deck
, ⁴ , +3	TB3151.0 0 2 2 41 144	aid 344 (107 344 /107 314 17	44 43 Guilt , -A R.Ca. 44 43 Guilt , -A R.Ca. 44 8-229 (word)	4447 - 4447 - 14	Million Deck (S1 3 7156 gr Shore Getty Shore State	Barrino King Moreto
4 S	4 ≟ Sun ⊥ 41'∂7 ₩15 € 43	(A. Gockie)	453 56 1 455 51 654	• NW 21 1	Marato King str.8	Tr.9_
0157	8.1. Duol 4	"Sinciair State"	El Paso Nat el ab	Q' S' .	Anning L King Millord Deckson To 4052 Millord	кінд ^{8 28} 9 ²³ Югеция ————————————————————————————————————
* * ₁ ⁷	1 - Q- 1 Tex Pee, 1103627	44 47 5 SUN 61 43	4-18 4-25-3-16 J.H. Hendrin	● ¹ # ² Sun •SL ⁻	1 10 39171 Tr. 10 234 A 033 10 39171 Tr. 10 224 C 0370 10 39171 Tr. 10 224 C 0370	#32 #31
1513/2	(AC-4) 17012066 (1) 17012066 (1) 17012066 (1) 1714 (1) 17	<mark>م⁴¹ م⁴⁴ م⁶⁴ 6</mark> 9 Store	B-1327 Hobbs Full Verico	Millard Crck4(5)	W H King Tr. 11 PENNOSE W H King Bichards Bos Qu Deck (S) 90 Mar 31 Tr. 12 Benj. F.	Y (OPER)
*	Sun Dual	12 Sun (Cit Ser) - A-1+ + 01 + 4 A-1+ + 01 + 4 A-3+ + + + Sun	92 53 54-1 62 14-16 42 9 7/4 62 14-16	-3	Sind Richards Tr II at Finn	(M. BIELD) Suit
са ма \$	115 ● 14 ● 14 1 100 ● 55 - 25	© 16 74 3 1 45 500 38 8-1484 51 0 65 7.PO. 4 3 • 5 • 7	•99 Bi /			
uert Fields A	9 • ¹⁰	10 12 6546 56 66 5	-	REA NEAR THE DUTH EUNICE (SEV	EN RIVERS, QUEEN) UNIT	4700
****	104 Trases	A37	T-	-22-S, R-36-E		Tr.18
* :3	Tre Pro 3592 State	all	Stare	EA COUNTY, NEW M	EXICO	54 Tc17
y. * Atl.Rich	WBornell BDAtest Varoneo	(Ares: 5) 5un	etat Sun (*A-115 PT	ROPOSED INFILL L	OCATIONS SHOWN	DE
25	And State	-36 Store	stole			VROSE .
A-1) - Mills	Titecenii Margial 6 La	Conaco, etoi 030556	ARCO •3'WN [*] #4 7 · · · · · · · · · · · · · · · · · · ·	• •		6 Corners
3	JVAN OF Highland And Spile Amer JNEvers Shill St. Petro INEvers (Mebu) 10 (65 I Highland Arod. Tex SA Lt alos 1 - Chill Br 22	Stevens Per wa-	Gently 2	پېستانسې کېست کې پېښې ۲۰ ۲۵ ۱۹۹۲ ۲۰ ۲۰ ۲۵ ۱۹۹۲ ۲۰		Tiller Lang
	tidite Siple # 028	# Car Carsi Duel U.R. Cartel a Care	M.Motkins U.R. Catre Ca (S)	Sun (Derra(Gull)	UR Cottin Co. (S) Anorris U.S. MI	IShelhal / (mp) pi
	ann 11 an Start	• • • • • • • • • • • •	• ⁶⁸ •• •• ··· • 5 * • ⁶⁵	Sun Laurs William	18 Sameden i diru in a 19	

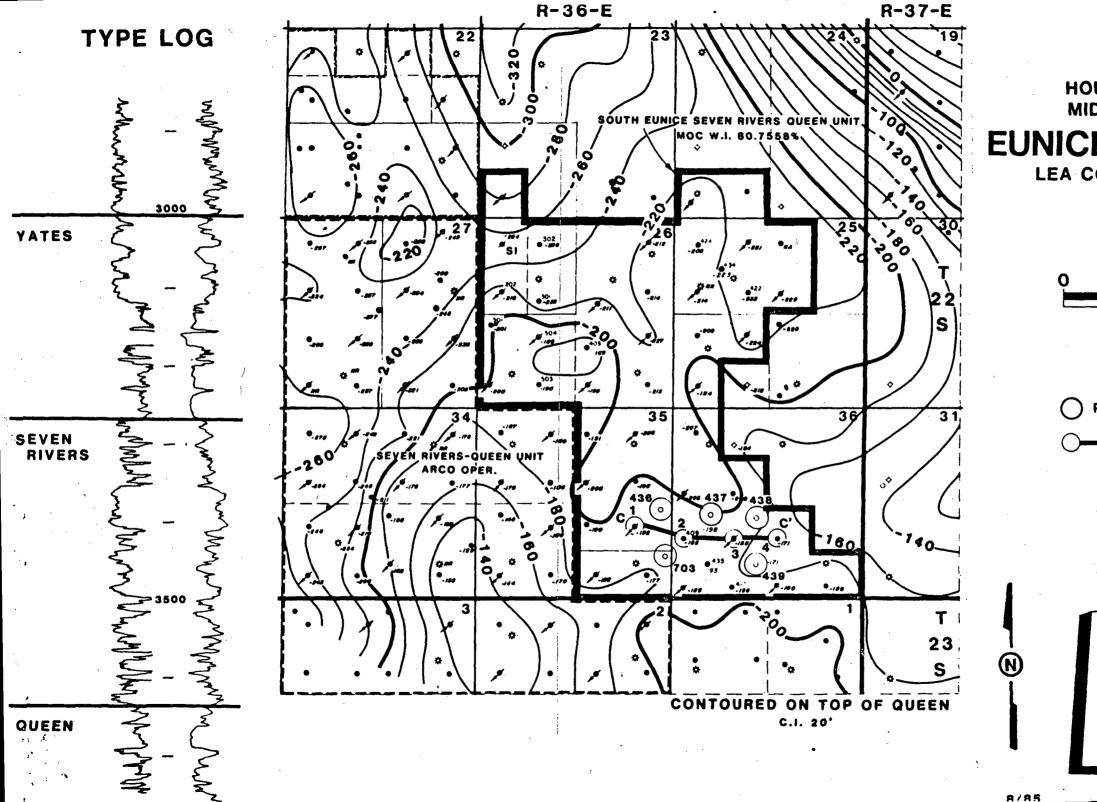




SCALE:1":1500'

and the second second second

DON JONES

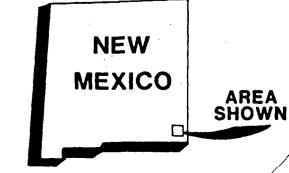




HOUSTON DIVISION MIDLAND DISTRICT EUNICE, SOUTH FIELD LEA COUNTY, NEW MEXICO



LEGEND PROPOSED LOCATIONS LINE OF SECTION



CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy, via registered mail, of Marathon Oil Company's request for Infill Well Finding for South Eunice Unit Well No. 436, South Eunice (Seven Rivers Queen) Field, Lea County, New Mexico upon all offset operators as listed below as required by New Mexico Order No. R-6013-A.

> Arco Oil and Gas P. O. Box 1610 Midland, Texas 79702 Attn: Jerry Tweed

Conoco, Inc. 726 E. Michigan Hobbs, New Mexico 88240 Attn: Mark Mosley

Sun Production Company P. O. Box 1861 Midland, Texas 79702 Attn: Tom Hobbs

Texaco, Inc. P. O. Box 728 Hobbs, New Mexico 88240

R. J. Peterman, Manager Contracts & Regulatory Compliance

Subscribed and sworn to before me, a Notary Public, toper 1985 0

¹2220000

Kayla R. Pigmae

NAVIA DI DE HANG Ratigy (no de la complete Ny Completed Completed State

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 4616 Order No. R-4217

APPLICATION OF MARATHON OIL COMPANY FOR A WATERFLOOD PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 27, 1971, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this <u>4th</u> day of November, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Marathon Oil Company, seeks authority to institute a waterflood project in the South Eunice (Seven Rivers-Queen) Unit Area, South Eunice Seven Rivers-Queen Pool, by the injection of water into the Seven Rivers and Queen formations through eight injection wells in Sections 24, 25, and 26, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks an administrative procedure whereby said project could be expanded to include additional injection wells in the area of the said project as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations. -2-CASE NO. 4616 Order No. R-4217

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided however, the showing of well response as required by Rule 701 E-5 should not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Marathon Oil Company is hereby authorized to institute a waterflood project in the South Eunice (Seven Rivers-Queen) Unit Area, South Eunice Seven Rivers-Queen Pool, by the injection of water into the Seven Rivers and Queen formations through the following-described wells in Township 22 South, Range 36 East, NMPM, Lea County, New Mexico:

Company	Lease and Well No.	Location
Marathon	McDonald State A/C "1-B"	
	No. 20	Unit I - Sec. 26
Marathon	McDonald State A/C "1-B"	
	No. 21	Unit E - Sec. 25
Marathon	McDonald State A/C "1-B"	
· · ·	No. 25	Unit G - Sec. 26
Marathon	McDonald State A/C "1-B"	
	No. 26	Unit A - Sec. 26
Marathon	McDonald State A/C "1-B"	
	No. 27	Unit C - Sec. 25
Marathon	McDonald State A/C "1-B"	
	No. 28	Unit M - Sec. 24
01 - 1 1		
Shell	A. L. Christmas "B" No. 2	
x	A. L. Christmas "B" No. 5	Unit K - Sec. 25

(2) That the subject waterflood project is hereby designated the Marathon South Eunice Unit Waterflood Project and shall be -3-CASE NO. 4616 Order No. R-4217

governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the above-described waterflood project to include such additional injection wells in the area of said project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem neces-sary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

> STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

SEAL

dr/

APPLICATION OF MARATHON OIL COMPANY TO EXPAND ITS SOUTH EUNICE (SEVEN RIVERS-QUEEN) UNIT WATER FLOOD PROJECT IN THE SOUTH EUNICE SEVEN RIVERS-QUEEN POOL IN LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER WFX NO. 414

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION COMMISSION

Under the provisions of Order No. R-4217, Marathon Oil Company has made application to the Commission on May 17, 1974, for permission to expand its South Eunice (Seven Rivers-Queen)Unit Water Flood Project in the South Eunice Seven Rivers-Queen Pool in Lea County, New Mexico.

NOW, on this 1st day of June, 1974, the Secretary-Director finds:

1. That application has been filed in due form;

2. That satisfactory information has been provided that all offset operators have been duly notified of the application;

3. That no objection has been received within the waiting period as prescribed by Order No. R-4217.

4. That the proposed injection wells are eligible for conversion to water injection under the terms of Order No. R-4217;

5. That the proposed expansion of the above-referenced water flood project will not cause waste nor impair correlative rights.

6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Marathon Oil Company, be and the same is hereby authorized to inject water into the Seven Rivers-Queen formation through the following described wells for purposes of secondary recovery, to wit:

South Eunice Seven Rivers-Queen Unit Well No. 102 located in Unit M of Section 23,

South Eunice Seven Rivers-Queen Unit Well No. 202 located in Unit E of Section 26,

South Eunice Seven Rivers-Queen Unit Well No. 401 located in Unit 0 of Section 26,

South Eunice Seven Rivers-Queen Unit Well No. 404 located in Unit $^{\rm G}$ of Section 35,

South Eunice Seven Rivers-Queen Unit Well No. 405 located in Unit A of Section 35,

South Eunice Seven Rivers-Queen Unit Well No. 408 located in Unit I of Section 35,

South Eunice Seven Rivers-Queen Unit Well No. 410 located in Unit M of Section 36,

South Eunice Seven Rivers-Queen Unit Well No. 411 located in Unit E of Section 36,

South Eunice Seven Rivers-Queen Unit Well No. 413, located in Unit $\mathbb Z$ of Section 36, $\mathbb Z$

South Eunice Seven Rivers-Queen Unit Well No. 414, located in Unit O of Section 36,

South Eunice Seven Rivers-Queen Unit Well No. 433 located in Unit G of Section 25,

South Eunice Seven Rivers-Queen Unit Well No. 502 located in Unit M of Section 26,

South Eunice Seven Rivers-Queen Unit Well No. 504 located in Unit K of Section 26, and

South Eunice Seven Rivers-Queen Unit Well No. 702 located in Unit 0 of Section 35,

all in Township 22 South, Range 36 East, NMPM, Lea County, New Mexico.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO CONSER SSION • A. L. PORTER, Jr. Secretary-Director

SEAL

-2-

WELL LOCATION AND ACREAGE DEDICATION PLAT

1

.

.

Form C-102 Supersedes C-128 Effective 1-1-65

rator		•	1	uth Eunice		Weil tio.
and the second	Oil Company			ers Queen		436
Letter Sect		ownship	Range	County		
1	35	<u>22 S</u>	36	<u>E</u>	Lea	
al Footage Location 2475 fee	0					
ind Level Elev.	et from the SOU Producing Forma		330 Pool	feet from th	e East	line
3463.4				17 51		Dedicated Acreage:
	Seven Rive	rs, Queen	South Eunic	e (/ River	rs, Queen)	40 Act
	one lease is de	d to the subject w edicated to the wel				nereof (both as to workin
dated by comm	No If ans	tization, force-pool wer is "yes!" type o	ing. etc? of consolidation			all owners been consol ated. (Use reverse side
this form if ne No allowable w	cessary.) vill be assigned	to the well until al	l interests have	been consoli	dated (by com	munitization, unitizatio approved by the Commi
	1		1		7 .	CERTIFICATION
	1		1		I hereby	ertify that the information co
	1		· ·			rein is true and complete to t
	1		1		4 4	knowledge and belief.
	1					sil 1
	i		1		C.R.	Hubacher
	1				Name -	
	+ ·				C. R. Hu	bacher
	1		l		Position	
	1		I		District	Oper. Engineer
		1	1		Compony	
	1	1	1		1	
	l i				1	0il Company
					Marathor	
			1 1 1		Marathor	
	 		 		Marathor	
	 	Marasho. Souch Emir	Colling any	0	Marathor Doie July 18,	1985
	 	Seath France 10.11-00	40%	0	Marathor Date July 18,	1985 certify that the well locati
		Secch Erne 14.11-20 1990-1932 -	408 408 400 E	0	Marathor Date July 18,	1985 certify that the well locati this plat was plotted from fig
		Seath Eanie 10:11-00 1930 1532 - Sjon di 1114 Sanch Fanne	2 58.2. Vai t 403 450' FE 1 154 5 Seven Mindro	330	Marathor Date July 18, I heraby shown on notes of	1985 certify that the well locati this plat was plotted from fic actual surveys made by me
	D SURVE	Seith Einie 10.11-26 1990 1752 - Sjond i 1114 Suith Finance Burro C	2 SR. Con Unit 408 158 5 Seven Montes	L.	Marathor Date July 18, i heraby shown on nates of under my	1985 certify that the well locati this plat was plotted from fie actual surveys made by me supervision, and that the sa
	D SURIE	Seich Eunie Will We 930 1731 - Sjond i 1/14 Suich Eunie Buren C Guiren St	2 SR- Con Unit 408 9501-54 53 5501-6 Annors Supristion 5 Water Taylogica		Marathor Date July 18, I hereby shown on nates of under my is true	1985 certify that the well locati this plat was plotted from fie actual surveys made by me supervision, and that the sai and correct to the best of a
	D SUMAL	Souch Euni Will - W 1990 Fost Sjoud i Hilly Such Fonce Buren C Converted i Ricembe	2 58. 20 dan t 408 450 / FEL 550 / FEL 5 Storn Mores 5 Water Tales 700 t 1995 1 20 F		Marathor Date July 18, I hereby shown on nates of under my is true	
	NO. 676	Seven Euro Will - W 1990 - Fer Sjond I illy Sweek Evore Buren C Converted I Ricembo	e SR. Con danse 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Figure Start 1995 1995 1995 1995		Marathor Date July 18, I hereby shown on nates of under my is true	1985 certify that the well locati this plat was plotted from fie actual surveys made by me supervision, and that the sai and correct to the best of a
	10. 576	Seish Euni Will W 490 Visi- Sjord i 1114, Suich Eunie Buren C Converteut Dirembe Commutation Bas- 187	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt		Marathor Date July 18, I heraby shown on nates of under my is true to knowledg	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sal and correct to the Sest of the e and belief.
AND	NO. 576	Seven Euro Will - W 1990 - Fer Sjond I illy Sweek Evore Buren C Converted I Ricembo	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt		Marathor Date July 18, I heraby shown on nates of under my is true t knowledg	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sai and correct to the best of the e and belief.
	NO. STO	Seish Euni Will W 490 Visi- Sjord i 1114, Suich Eunie Buren C Converteut Dirembe Commutation Bas- 187	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt		Marathor Date July 18, I hernby shown on nates of under my is true of knowledg	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sai and correct to the best of the e and belief.
Colored and the second se	NO. STO	Seish Euni Will W 490 Visi- Sjord i 1114, Suich Eunie Buren C Converteut Dirembe Commutation Bas- 187	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt		Marathor Date July 18, I hernby shawn on notes of under my is true of knowledg Date Survey O Registered	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sai and correct to the best of the ond belief. red. 6/27/85 Professional Engineer
Contraction of the second seco	ND SURE CE	Seish Euni Will W 490 Visi- Sjord i 1114, Suich Eunie Buren C Converteut Dirembe Commutation Bas- 187	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt		Marathor Date July 18, I hernby shown on nates of under my is true of knowledg	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sai and correct to the best of the ond belief. red. 6/27/85 Professional Engineer
	NO. STO	Seish Euni Will W 490 Visi- Sjord i 1114, Suich Eunie Buren C Converteut Dirembe Commutation Bas- 187	e SR-Qn dans 408 158 Sourn Anders Sourn Anders Sourn Anders Sourn Frankers 1975 1975 Richard Sourt	× * * * * * * * * * * * * * * * * * * *	Marathor Date July 18, I hernby shawn on notes of under my is true of knowledg Date Survey O Registered	1985 certify that the well locati this plat was plotted from file actual surveys made by me supervision, and that the sa- and correct to the best of the e and belief. red. 6/27/85 Professional Engineer d Surveyor

-

- ··

R. W. Byram & Co., - Mar., 1984

(C - DRILLING - Cont'd.)

In the event gas production is encountered in a well which was projected to an oil-producing horizon and which is located accordingly but does not conform to the above gas well location rules, it shall be necessary for the operator to bring the matter to a hearing before approval for the production of gas can be given.

III. All counties except Lea, Chaves, Eddy, Roosevelt, San

 All countries except Lea, Chaves, Eduy, Roberts, Odar Juan, Rio Arriba, and Sandoval (As Amended by Order No. R-6870, February 1, 1982.)
 Any wildcat well which is projected as an oil well in any county other than Lea, Chaves, Eddy, Roosevelt, San Juan, Rio Arriba, and Sandoval shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a legal subdivision of the U.S. Public Land Surveys, or on a governmental quarter-quarter section or lot and shall be located not closer than 330 feet to any boundary of such tract.

Any wildcat well which is projected as a gas well to a formation and in an area which, in the opinion of the Division representative approving the application to drill, may reasonably be presumed to be productive of gas rather than oil shall be located on a drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U. S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 220 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

- ACREAGE AND WELL LOCATION REQUIREMENTS FOR DEVELOPMENT WELLS (As Amended by Order No. R-4383, September 6, 1972, and Order No. R-5113, C. November 1, 1975.)
- Oil Wells, All Counties (As Amended by Order No. R-4383, I. September 6, 1972.)

Unless otherwise provided in special pool rules, each development well for a defined oil pool shall be located on a tract consisting of approximately 40 surface contiguous acres substantially in the form of a square which is a legal subdivision of the U.S. Public Land Surveys, or on a governmental quarterquarter section or lot, and shall be located not closer than 330 feet to any boundary of such tract nor closer than 330 feet to the nearest well drilling to or capable of producing from the same pool, provided, however, only tracts committed to active secondary recovery projects shall be permitted more than four wells.

Gas Wells II.

 (a) Lea, Chaves, Eddy, and Roosevelt Counties
 Unless otherwise provided in special pool rules, each
 development well for a defined gas pool in a formation younger which was created and defined by the Division prior to November 1, 1975, or in a Pennsylvanian age or older formation which was created and defined by the Division prior to June 1, 1964, shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section being a legal subdivision of the U. S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to the nearest well drilling to or capable of producing from the same pool.

Unless otherwise provided in the special pool rules, each development well for a defined gas pool in the Wolfcamp formation which was created and defined by the Division after November 1, 1975, or of Pennsylvanian age or older which was created and defined by the Division after June 1, 1964, shall be located on a designated drilling tract consisting of 320 surface contiguous acres, more or less, comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision of the U. S. Public Land Surveys. Any such well having more than 160 acres dedicated to it shall be located not closer than 660 feet to the nearest side boundary of the dedicated tract nor closer than 1980 feet to the nearest end boundary nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary. (For the purpose of this rule, 'side' boundary and 'end' boundary are as defined in Section B I (a) of this rule.)

(b) San Juan, Rio Arriba, and Sandoval Counties

SECTION I

Unless otherwise provided in special pool rules, each development well for a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U.S. Public Land Surveys, and shall be located not closer than 790 feet to any outer boundary of the tract nor closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.

All counties except Lea, Chaves, Eddy, Roosevelt, (c) San Juan, Rio Arriba, and Sandoval

Unless otherwise provided in special pool rules, each development well for a defined gas pool shall be located on a designated drilling tract consisting of 160 surface contiguous acres, more or less, substantially in the form of a square which is a quarter section, being a legal subdivision of the U.S. Public Land Surveys, and shall be located not closer than 660 feet to any outer boundary of such tract nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to the nearest well drilling to or capable of producing from the same pool.

ACREAGE ASSIGNMENT, COMPLETED WELLS D.

Well Tests and Classification I.

It shall be the responsibility of the operator of any wildcat gas well or development gas well to which more than 40 acres has been dedicated to conduct a potential test within 30 days following completion of the well and to file the same with the Division within 10 days following completion of the tests. (See Rule 401.)

Date of completion for a gas well shall be the date a Christmas tree is installed or 30 days following conclusion of active comple-

tion work on the well, whichever date comes first. Upon making a determination that the well should not properly be classified as a gas well, the Division will reduce the acreage dedicated to the well.

Failure of the operator to file the aforesaid tests within the specified time will also subject the well to such acreage reduction.

II. Non-Standard Units

Any completed gas well which does not have the required amount of acreage dedicated to it for the pool or formation in which it is completed may not be produced until a standard unit for the well has been formed and dedicated or until a nonstandard unit has been approved.

The Division-Director may grant administrative approval to non-standard gas units without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a single governmental quarter section if the well is completed in a pool or formation for which 160 acres is the standard unit size or wholly within a single governmental half section if the well is completed in a pool or formation for which 320 acres is the standard unit size.

New Mexico Page 7

Page 8 New Mexico

(C - DRILLING - Cont'd.)

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the quarter section (for 160-acre pools or formations) or the half section (for 320-acre pools or formations) in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application.

E. (As Amended by Order No. R-2761, January 1, 1965.) Form C-101, Application for Permit to Drill, Deepen, or Plug Back for any well shall designate the exact legal subdivision allotted to the well and no Form C-101 will be approved by the Division or any of its agents without such proper designation of acreage.

F. Unorthodox Locations (As Amended by Order No. R-3038, February 9, 1966. Order No. R-5890. December 29, 1978, Order No. R-6870. February 1, 1982, and Order No. R-7451. March 2, 1984.)

T The Division Director shall have authority to grant an exception to the well location requirements of Sections B and C above without notice and hearing when the necessity for such unorthodox location is based upon topographical conditions, the recompletion of a well previously drilled to a deeper horizon, provided said well was drilled at an orthodox or approved unorthodox location for such original horizon. or to permit the completion of an efficient production and injection pattern within a secondary recovery or pressure maintenance project, provided that any such unorthodox location within such project is no closer than 330 feet to the outer boundary of the lease, or the unitized area, nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary.

II. The Division Director shall have authority to grant an exception to the well location requirements of Rule 104 B.I. (a) and Rule 104 C.II. (a) without notice and hearing when the necessity for such unorthodox location is based upon geologic conditions provided that any such unorthodox location shall be no closer than 660 feet to the nearest side boundary nor closer than 990 feet to the nearest end boundary of the proration unit.

III. Applications for administrative approval of unorthodox locations shall be filed in triplicate and shall be accompanied by plats, showing the ownership of all leases offsetting the proration or spacing unit for which the unorthodox location is sought, and also all wells completed thereon. If the proposed unorthodox location is based upon topography, the plat shall also show and describe the existent topographical conditions. If the proposed unorthodox location is based upon completion of an efficient production and injection pattern the plat shall also efficient production and injection is based upon completion of an efficient production and injection pattern, the plat shall also show the project outline identifying all producing and injection wells therein, and the applicant shall further include a statement setting forth the necessity for such location. If the proposed unorthodox location is based upon geology as provided in Paragraph II above, the application shall include appropriate geologic mans cross-settions and on loga and a discussion of geologic maps, cross-sections, and/or logs, and a discussion of the geologic conditions which result in the necessity for the unorthodox location.

IV. All operators of proration or spacing units offsetting the IV. All operators of proration or spacing units offsetting the unit for which the unorthodox location is sought shall be notified of the application by certified or registered mail, and the application shall state that such notification has been given. The Division Director may approve the unorthodox location upon receipt of waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Director has received the application. V. The Division Director may, at his discretion, set any application for administrative approval of an unorthodox location for public hearing.

R. W. Byram & Co., - Mar., 1984

Whenever an exception is granted, the Division may take G. such action as will offset any advantage which the person securing the exception may obtain over other producers by reason of the unorthodox location.

H. If the drilling tract is within an allocated oil pool or is placed within such allocated pool at any time after completion of the well and the drilling tract consists of less than 39-1/2 acres or more than 40-1/2 acres, the top unit allowable for such well shall be increased or decreased in the proportion that the number of acres in the drilling tract bears to 40.

I. If the drilling tract is within an allocated gas pool or is subsequently placed within an allocated gas pool, and the drilling tract consists of less than 158 acres or more than 162 acres in 160-acre pools, or less than 316 acres or more than 324 acres in 320-acre pools, the top allowable for such well shall be decreased or increased in the proportion that the number of acres in the drilling tract bears to a standard unit for the pool.

J. In computing acreage under H and I above, minor fractions of an acre shall not be counted but 1/2 acre or more shall count as 1 acre.

K. The provisions of H and I above shall apply only to wells completed after January 1, 1950. Nothing herein contained shall affect in any manner any well completed prior to the effective date of this rule and no adjustments shall be made in the allowable production for any such wells by reason of these rules.

L. In order to prevent waste the Division may, after notice and hearing, fix different spacing requirements and require greater acreage for drilling tracts in any defined oil pool or in any defined gas pool notwithstanding the provisions of B and C above.

M. The Division may approve the pooling or communitization of fractional lots of 20.49 acres or less with another oil proration unit when:

1. The units involved are contiguous;

2. They are part of the same basic lease, carrying the same royalty interest; and

. .

3. The ownership of the units involved is common.

Application to the Division for pooling shall be accompanied by three (3) copies of a certified plat showing the dimensions and acreage involved in the pooling, the ownership of all leases and royalty interests involved, and the location of any proposed wella

Applicant shall furnish all operators who directly and diagonally offset the units involved a copy of the application to the Division, and shall include with his application a written statement that all offset operators have been properly notified. Offset operators shall include only those operators who have offset properties within the State of New Mexico. The Division shall wait at least ten days before approving any such pooling, and shall approve such pooling only in the absence of objection from any offset operator. In the event that an operator objects to the pooling, the Division shall consider the matter only after proper notice and hearing.

The Division may waive the ten-day waiting period requirement if the applicant furnishes the Division with the written consent to the pooling by all offset operators involved.

The Division may consider that the requirements of subparagraphs 2 and 3 of paragraph M of this rule have been fulfilled if the applicant furnishes with each copy of each application to the Division a copy of an executed pooling agreement communitizing the units involved. Request for Infill Well Finding South Eunice Unit Well No. 436 South Eunice (Seven Rivers Queen) Field Lea County, New Mexico

.

I.

II.

Infill Findings, Marathon is submitting a plat showing 40-acre spacing within the South Eunice Unit and a description of all wells drilled on the proration unit (including the completed infill well) which are completed in the same pool or reservoir as the proposed infill well. Also attached is a statement indicating why the existing well on the proration unit cannot effectively and efficiently drain the portion of the reservoir covered by the proration unit.

WEL	L ON WHICH FILING FOR INFILL FINDING IS BEING MADE
A.	Lease Name & Well Location: South Eunice Unit No. 436
	Unit I, Section 35, T-22-S, R-36-E, 2475 FSL & 330 FEL,
•	Lea County, New Mexico
B.	Spud Date: 8-31-85
C.	Completion Date: N/A
D.	Mechanical Problems: None
•	
E.	Current Rate of Production: N/A
F.	Date of P&A: None
EXI A.	STING WELL ON PRORATION UNIT Lease Name & Well Location: South Eunice Unit No. 408
	Unit I, Section 35, T-22-S, R-36-E, 1980' FSL & 990' FEL,
	Lea County, New Mexico
Β.	Spud Date: 1-14-58
c.	Completion Date: 1-23-58
D.	Mechanical Problems: <u>Converted to injection well 6-1-75</u>
E.	Current Rate of Production: None

F. Date of P&A: None

South Eunice Unit Well No's. 434, 435, 436, 437, & 439 Lea County, New Mexico

Reserves of 80,000 barrels of oil and 24,000 MCF of gas are expected from each of the wells listed above. This reserve figure was derived from volumetric calculations, using the following parameters: average porosity 15%, drainage area = 10 acres, net pay thickness = 50 feet, water saturation = 35%, formation volume factor = 1.2, recovery efficiency = 25%, and gas-oil ratio = 300 SCF/STB.

The area was originally developed on 40 acre spacing in the late 1950's and early 1960's. In the mid-1970's a pilot and later a unit-wide waterflood were implemented, utilizing the existing wells. It is believed that only a small portion of the unitized reservoir has been successfully waterflooded, due to the low permeability of the fine-grained Queen sandstone and the presence of high permeability streaks in portions of the Unit. Two-thirds of the waterflood production has come from several wells that encounter one particular high permeability sand member in the northeastern portion of the Unit.

Due to this low permeability of the majority of the Queen pay, each well has drained considerably less than the 40 acres currently assigned. As shown above, reserves of 80,000 barrels can be calculated assuming only 10 acre drainage, and many wells in the unit have not made that much. It is expected that these infill wells can recover primary reserves from tight Queen sands after adequate stimulation.

It is also believed that these wells will help to recover additional secondary reserves from higher permeability intervals which are floodable. Pressure testing of wells has indicated an unusually low reservoir pressure in some producing wells, indicating inadequate injection support. This may be caused by reservoir discontinuities between producing wells and injection wells. By infill drilling in the South Eunice Unit, more continuous pay will be developed which should improve waterflood recoveries.



Midlano District Houston Division Production Operations United States

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

July 18, 1985

New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501 Attn: David Catanach

RE: Unorthodox Locations South Eunice (Seven Rivers, Queen) Unit Well Nos. 436, 437 and 439 Sec. 35 and 36, T-22-S, R-36-E Lea County, New Mexico

Marathon Oil Company, as operator of the referenced unit, respectfully requests administrative approval to drill three infill producing wells, Nos. 436, 437, and 439, at the following unorthodox locations: .

No. 4362475' FSL and 330' FEL, Sec. 35-22S-36E, Lea Co.No. 4372310' FSL and 890' FWL, Sec. 36-22S-36E, Lea Co.No. 439990' FSL and 2220' FWL, Sec. 36-22S-36E, Lea Co.

All of these wells will be drilled to about 3850' to test the Seven Rivers and Queen formations in the South Eunice (Seven Rivers, Queen) pool. It is expected that these wells will recover additional reserves within this secondary recovery project.

Copies of this application have been sent to the offset operators by registered mail.

Attached for your information is a map showing the proposed locations and a list of offset operators to these locations.

Very truly yours,

C. R. Hubacher District Operations Engineer

DGJ/jdt/I

Attachments

xc: NMOCD - District I (Hobbs) Offset Operators OFFSET OPERATORS South Eunice (Seven Rivers, Queen) Unit Marathon Oil Company, Operator Well Nos. 436, 437 and 439

ARCO Oil and Gas P. O. Box 1610 Midland, Texas 79702 Attn: Jerry Tweed

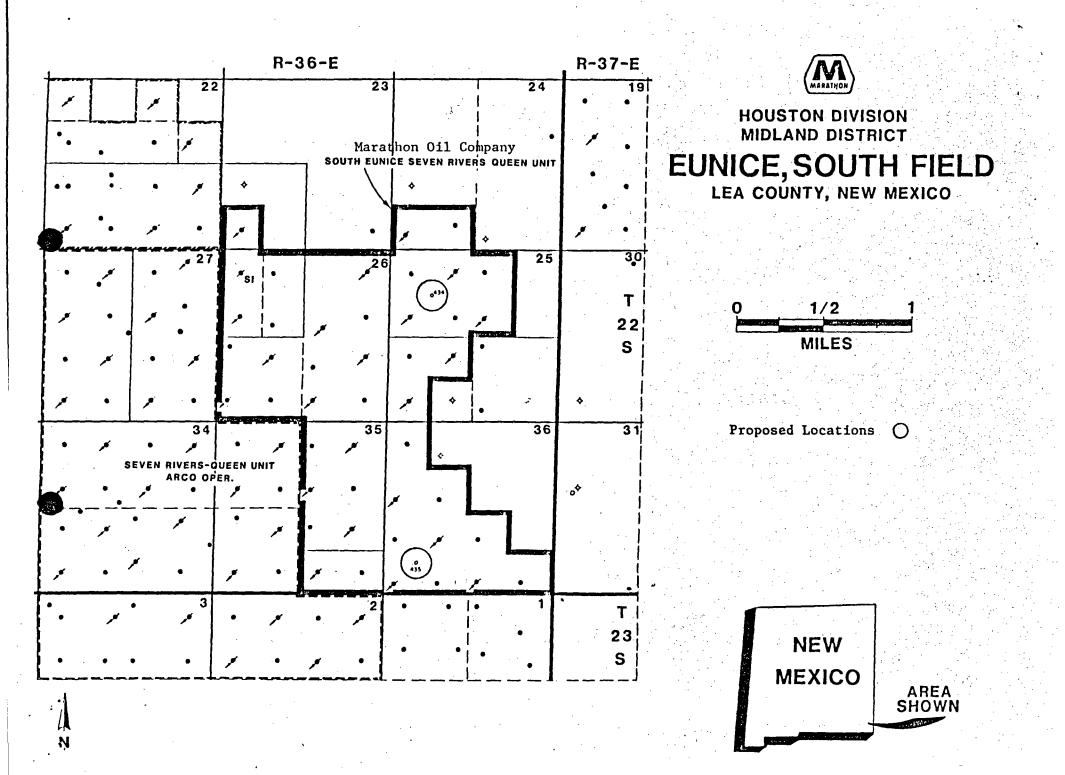
Conoco, Inc. 726 E. Michigan Hobbs, New Mexico 88240 Attn: Mark Mosley

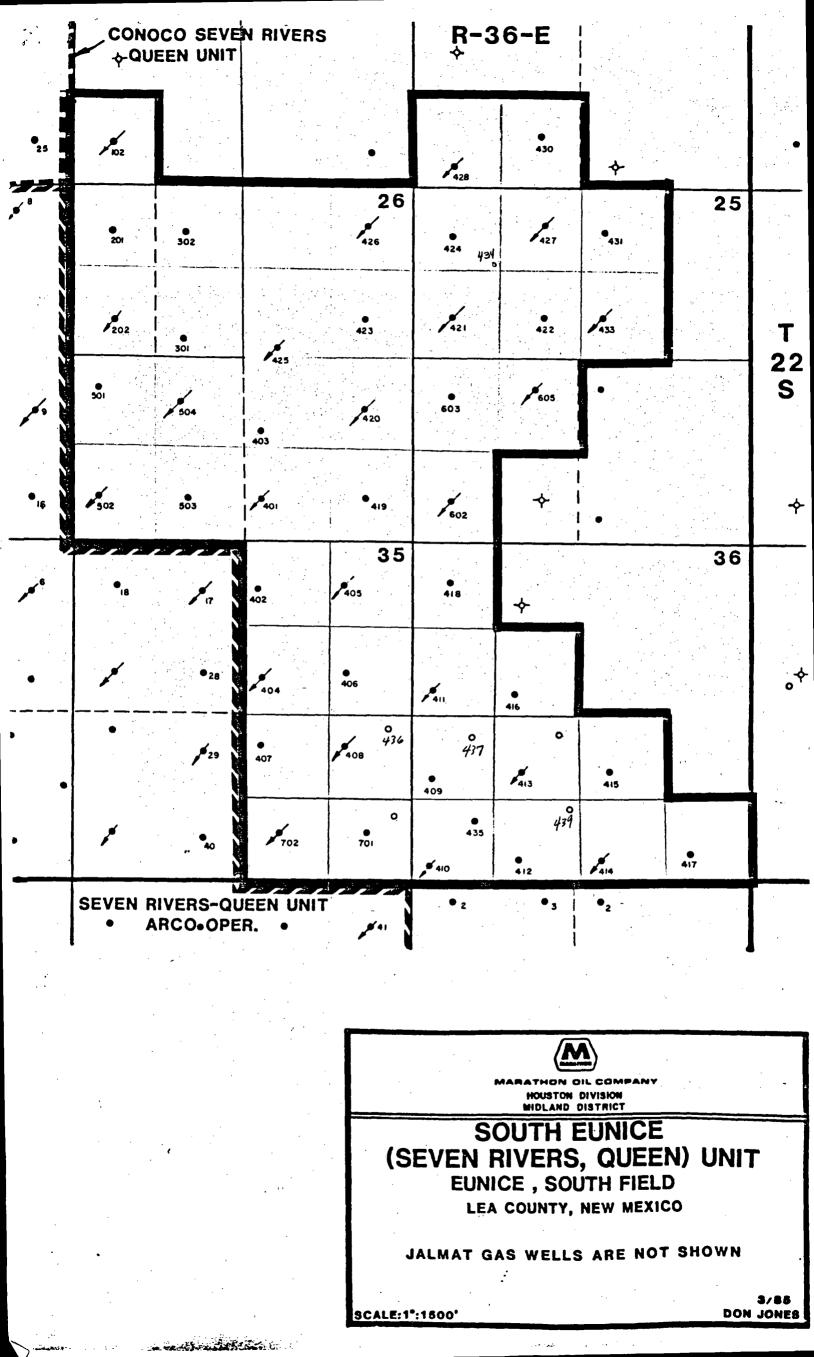
Sun Production Company P. O. Box 1861 Midland, Texas 79702 Attn: Tom Hobbs

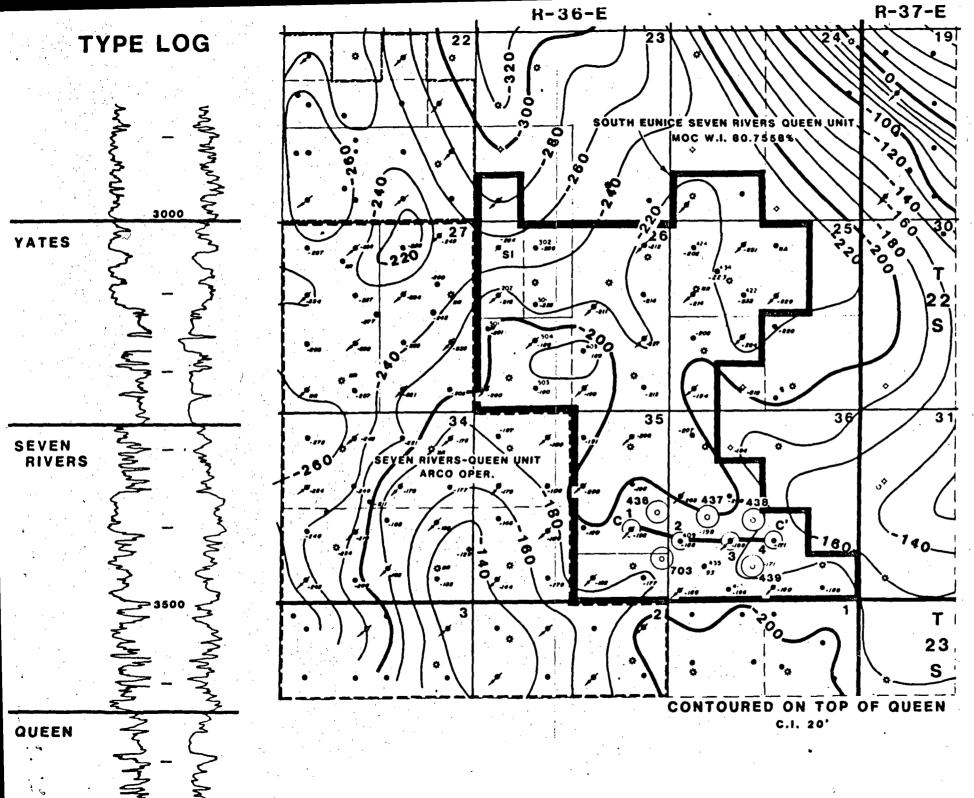
Texaco, Inc. P. O. Box 728 Hobbs, New Mexico 88240

· · · .

11 11 101 00 00 11	A H.Co. ex. Officient				
30 JI 57 51		• 3 5un • • • 3 A :		4 Gulf of gazan Isa	eisra V.B. tarpart
24 232 TWI 18 2 (5 Octour)	.R.Co++le Co UP Cot+'e C= (5)	4 ⁴²	N + Mattern T-		(Triple) Amaco'
0 ⁷⁰ 0 ⁷² ARC (100) F1		li ;∈ terre Duoi	•1 #2 (5-12) 3 11 12 •1 #2 (5-12) 3 11 12 •14 11 12 12	Sun Martinges	10/by 1000 600 0
54 g55 e4 e1 e1 #3	Henry S. Record	Q ³⁶	A.R.Co 157.0*	tong & Martindale Star	Pripid OSSTOR MR Shell
Marathan	• ¹¹ 0A-2614	Stote Stote Storest Stad Varysman	(w0) # 5 . 3 . 6 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5	Gir SveMattern Tr	6180 6181 3 8187
ary Per a suit A under 252 Setting Monument Constitution Setting Setting Se	Gos rights	ARLO as rights	A::+ 2	Dia	B-914
	6 15	\$2+**	1 B. S	Internet Sulf 3	(Ten Por) E o Liner Se india 11
•7 • • 9 • 10 • 3 • 29 //	·5 •2	14 **		millorg Jeck(S)	filie Toto 17 Linet Juier
	• Wr. Jonald J. Davidson ;	MCGoncid"			US THAT PSE
ARC2 in I/2 CONTI Single States Conting Supervisioner Supervision States	a Sun a latt	State Conocujetaj	McDone c	€ 342 3 3 1 7m 1 15tole matrice	M Dechaitage Anap ANC: Exam Berna Trirose Marris 34 12 Gunt 2 Rase 9 rt
ARCO 101		13126 (13126) econo 141 8 (0) ARCO Conymy Lamona T013015	Fin Acet 1.8 A-2614	●3	A Dige Baller Bartis, Boyne C
Too (Ar. 1'mos	URCortie Co.(S)	Meyer"	ARCO Gas rights 27 WN	1034 7 10 3867" #42 •13 #4 TO 3703	Conoco. etal Conoco. etal B200557256 2 Procos
Dectad Starte M Dectado	3 64 673 24 Cont1.etal 424	JA (Shell) Cont's, etal 2	9, 20 SO. EUNICE	"at a 19	
1000 ()	a1 '6' "Ateupert 31.0		VICCOTONOST UNIT	1 A	Setty i (Excan) there i 1321 t (Excan) T i i 1321 t (Excan) T i b 934 inc. bbg i 8 934 inc. bbg i 74 Cases
	ARCO ARLO	zen Getty Marathan	420 Stone V 10 3500	Store 13 16	10 3062 (vanar) 47 10 11 17 56 State
A Constant of the Constant of	n Rich 3	A-2614	- 427 431 	45 37 7 (Tron) 35 31 3 8 534 0 35 4 31 3 M ⁻ 59 60	05006 Permitewill 12 Tr.29
Mitterd Deck (S)	610 58 59 MD		10 00 000 000 000 \$421 10 00 \$421 10 00 \$1000 000000000000000000000000000000000		61 8-934 Wr
O Reserve ARLO 44 41 41		403 429 201	Shell 25 Dalaorn 50	a4, 7 30 • ⁵³ 64 ●32 25	a 200. c
5445 4TO 3927665 M	1 A.L.Christmos 501	Q 503 401 Q 419	O McCastond	Petro-Lewis 0 10 3062 67 68	25 (0. m / 0.5 / 0. m /
Conoco ARCO Aibers Gachie 22	ARLO ARLO 10 d 21 WN 20	ARCO Corstnor Acco A	Anne L (9 M	17 IS Tr.39 "B'03067"
TA ATIONTICE PER ARC	O (OPER)	AHCO 405 Atlani.Rienu 402 67	44 ARCO	6 (Erron) 8 934 M	S rate Life liter Bradora
33 Contry Esmone and GLAH. Ric	(h) 61 Currentiness		Wh" BJGraham 37. 411 416 Lewis Sr	◆ <u>(1,343)</u>	B-2330 [Care 37 + 1730 ampass Evel 1 - 1 - 2 - 5 - 6// etal 1 - 8 - 4 - 9 - 5 - 6// • Tr. 1 - 5 - Tr. 4 - 1 - 5 - 1
100 8 639 (100 30133 92 60 10034		ARCO	UPARI 36 🖛 🐂 🐪 🥵	Ma ji 31	
*5 01 Meyer 62 61 33 13128 113 Willord Deck(S) 1314		O Contia o 1.A		S/R 51	6.3480 PTS Bourg
4 €3 Teansr	11 10 10 10 10 10 10 10 10 10 10 10 10 1	d Sect as Single States	10 412 Ala 417 5	Millart Deck 151 STISE	Store Cias Tr 5 Wisein
Ančo A 5 4 ⊥ Sun ⊥ Ančo A 5 4 15 ∂7 45 449	ARCO Het	4 4 4 Guili , -A A Ca		Cerry Marolo Kin	Maraia Maraia
2157 3.1. Out #45	50 51 51 51	53 554 J 555 21. 64		10 I AT TE TE A SUN GUI	Union Tex.
Tex Pee utoace a			tty Oil	Gerru 5	Shelly stall
1 (AC 4) ***********************************	· . F		O 5 6 5	- Kings	
3 36 33 61 45 Sur Sun Dial 45 - 74-1	n ●81 ●4 ●4 ●1	Sun		Deck an 1 2 2 2 1 - SI TH	GETTY (OPER)
(Gama) (15	016 4 3' 10'Sun 38 8-1484 9 66 T.PO. A 3	0 ^{-10-1/A} 612 (16)			45 Guif (M. Bia(A) Guif Al Dong 44 Bran 2 43.
	• • 5 • 7 • 9 10 108500		NEAR THE		
10 3734 FIC4 •**	•°° • • • • • • • • • • • • • • • • • •	SOUTH	EUNICE (SEVEN	RIVERS, QUEEN) U	IF HE
* ² * ⁹ ¹¹ A 11 ⁵ ¹⁰ ¹⁰ ¹¹ ¹² ¹² ¹²	•13 •1 •1 · #101	um :	S, R-36-E COUNTY, NEW MEXI		NIT T .18
y Barnell BA Ares State	01 01 00 102		NEW MEXT		54 Tel7
Art. Rich Warmell D. Art urons Areist	33 (3)	A PROPO	SED INFILL LOCA	FIONS SUCCES	
	Signo • • •	Stole		TIONS SHOWN	NOLIE NROSE
Mes. June D' Bist Bial O 030556 Superior Hightend Doct Amor Bis	2 Cleary ARCO	*4	• • •		n umy
L stot i inc entir et 17er SA		¹¹ y 2 (3) (1)	1000 inon Short Ser. 21 U 1187		L Sterier Gaise
The state of the s	ALL (Free)	UR Cerreco (S)	Stole Stole	U.S. Jai al U.S. J	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	••••••••••••••••••••••••••••••••••••••	11	(Perre Gyl) Piere		





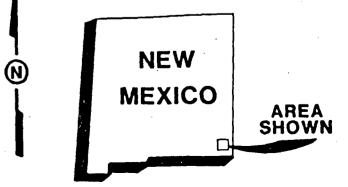




HOUSTON DIVISION MIDLAND DISTRICT EUNICE, SOUTH FIELD LEA COUNTY, NEW MEXICO



LEGEND PROPOSED LOCATIONS LINE OF SECTION



CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy, via registered mail, of Marathon Oil Company's request for Infill Well Finding for South Eunice Unit Well No. 436, South Eunice (Seven Rivers Queen) Field, Lea County, New Mexico upon all offset operators as listed below as required by New Mexico Order No. R-6013-A.

> Arco Oil and Gas P. O. Box 1610 Midland, Texas 79702 Attn: Jerry Tweed

Conoco, Inc. 726 E. Michigan Hobbs, New Mexico 88240 Attn: Mark Mosley

Sun Production Company P. O. Box 1861 Midland, Texas 79702 Attn: Tom Hobbs

Texaco, Inc. P. O. Box 728 Hobbs, New Mexico 88240

R. J. Peterman, Manager Contracts & Regulatory Compliance

Subscribed and sworn to before me, a Notary Public, Mars) Cong Hipfel ANT

Kayla R. Pigmai

KAYLA RAE PIGMAN Notary Public, State of Texas My Commission Expires 7-16-89