

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE
HEARING CALLED BY THE OIL
CONSERVATION DIVISION FOR
THE PURPOSE OF
CONSIDERING:

NOMENCLATURE
CASE NO. 11333
ORDER NO. R-8170-O

**APPLICATION OF MARATHON
OIL COMPANY FOR THE
EXPANSION OF THE
CEMETERY-MORROW GAS
POOL AND THE CONTRACTION
OF THE INDIAN BASIN-
MORROW GAS POOL, EDDY
COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 13, 1995, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 27th day of November, 1995, the Division Director, having considered the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) By Division Order No. R-2679, dated March 31, 1964 and made effective April 1, 1964, the Cemetery-Morrow Gas Pool was created and designated as a gas pool for the production of gas from the Morrow formation underlying all of Section 17, Township 20 South, Range 25 East, NMPM, Eddy County, New Mexico.

(3) With amendments to this order the horizontal limits of said pool have been extended since that time and currently comprise the following described area in Eddy County, New Mexico:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM

Section 36: S/2

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM

Section 20: S/2
Section 21: S/2
Section 26: S/2
Section 28: All
Section 31: S/2 (equivalent)
Section 32: S/2
Sections 33 through 35: All

TOWNSHIP 20 SOUTH, RANGE 24 EAST, NMPM

Section 1: All
Section 2: S/2
Section 11: N/2
Section 24: N/2
Section 35: N/2
Section 36: All

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM

Section 2: W/2 (equivalent)
Sections 3 through 5: All
Section 7: E/2
Section 8: All
Section 10: S/2
Section 11: W/2
Section 14: N/2
Section 15: E/2
Section 16: W/2
Section 17: All
Section 18: S/2 (equivalent)
Sections 19 and 20: All
Section 21: W/2
Section 28: N/2
Sections 29 through 32: All

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Irregular Sections 4 and 5: All
Irregular Section 6: Lots 1, 2, 7, 8, 9, 10, 15, 16, 17, and 18, E/2 SW/4, and SE/4
Section 8: All
Section 9: N/2.

(4) By Division Order No. R-2707, dated May 25, 1964, **Rule 104** of the "*New Mexico Oil Conservation Division General Rules and Regulations*" was amended in order to provide for 320-acre spacing for gas wells in southeast New Mexico (Lea, Chaves, Eddy, and Roosevelt Counties) of Pennsylvanian age or older which were created and defined after June 1, 1964. Because the Cemetery-Morrow Gas Pool was of Pennsylvanian age, created and defined prior to the June 1, 1964 cut-off date, the statewide gas spacing rules of 160 acres applicable prior to June 1, 1964 were in effect. By Division Order No. R-3194, dated February 15, 1967, an exception to the 160-acre spacing rule for the Cemetery-Morrow Gas Pool was granted and said pool was thereafter subject to the "southeast/deeper" statewide rules requiring 320-acre spacing with wells to be no closer than 660 feet to the nearest side boundary of the dedicated tract nor closer than 1980 feet from the nearest end boundary nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

(5) By Division Order No. R-2441, dated February 28, 1963, the Indian Basin-Morrow Gas Pool was created and designated as a gas pool for the production of gas from the Morrow formation underlying all of Sections 22 and 23, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico. Said order further provided for 640-acre

spacing units with well location requirements such that each well completed or recompleted in the Indian Basin-Morrow Gas Pool shall be no closer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any quarter-quarter section or subdivision inner boundary.

(6) With amendments to this order the horizontal limits of said pool have been extended since that time and currently comprise the following described area in Eddy County, New Mexico:

<u>TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM</u>		<u>TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM</u>	
Section 2:	W/2 (equivalent)	Section 9:	S/2
Sections 9 and 10:	All	Section 15:	S/2
Section 11:	W/2	Sections 16 and 17:	All
Sections 14 and 15:	All	Sections 19 through 22:	All
Sections 22 through 25:	All	Sections 30 through 32:	All
Section 36:	All		

(7) Gas production allocation or gas prorationing based on acreage alone was instituted in the Indian Basin-Morrow Gas Pool by Division Order No. R-1670-F, issued in Case 3237 and dated May 6, 1965. Both the "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*" that were originally adopted by said Order No. R-2441 and the subsequent prorationing under R-1670-F were later recodified and combined in Division Order No. R-8170, as amended. Because this pool is "prorated" an infill or second well on an individual 640-acre gas spacing and proration unit is acceptable, further any allowable issued to such a unit can usually be produced from both wells in any proportion (see Division Memorandums dated July 27, 1988 and August 3, 1990)..

(8) The reasons stated in said Order No. R-1670-F for instituting gas prorationing in this pool in the year 1963 were as follows:

- (a). there were a total of eight wells completed in the Indian Basin-Morrow Gas Pool, however no Morrow gas had been transported from these wells because no transportation facilities to this area were in existence;
- (b). there existed a market demand for this production and two purchasers were planning construction of gas transportation facilities to these wells; and,
- (c). the wells that were completed at the time were capable of producing in excess of the reasonable market demand for gas from the pool and were capable of producing in excess of the gas transportation facilities to be constructed.

THEREFORE, production from the Indian Basin-Morrow Gas Pool was restricted to reasonable market demand and the capacity of the gas transportation facilities to be constructed.

(9) At this time the applicant in this matter, Marathon Oil Company ("Marathon"), seeks an order extending the horizontal limits of the Cemetery-Morrow Gas Pool in Eddy County, New Mexico to include therein:

TOWNSHIP 20-1/2 SOUTH, RANGE 23 EAST, NMPM
Irregular Sections 35 and 36: All

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM
Sections 1 and 2: All
Sections 11 through 14: All;

AND THE concomitant contraction of the Indian Basin-Morrow Gas Pool in Eddy County, New Mexico by deleting therefrom:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM
Section 2: W/2 (equivalent)
Section 11: W/2
Section 14: All.

(10) Marathon is the operator of the North Indian Basin Unit Area, approved by Division Order No. R-2456, dated March 27, 1963, comprising the following described 5,786 acres, more or less, of State and Federal lands in Eddy County, New Mexico:

TOWNSHIP 20-1/2 SOUTH, RANGE 23 EAST, NMPM
Irregular Sections 35 and 36: All

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM
Sections 1 and 2: All
Section 3: S/2
Section 4: S/2
Sections 9 through 12: All
Section 15: N/2
Section 16: All.

ALSO, Marathon operates the State lease covering all of Irregular Section 36, Township 20-1/2 South, Range 23 East, NMPM, and the Federal leases covering all of Section 1 and the W/2 of Section 12, Township 21 South, Range 23 East, NMPM, all in Eddy County, New Mexico. The E/2 of said Section 12 is an undeveloped Federal leasehold owned by Marathon.

(11) The South Dagger Draw-Upper Pennsylvanian Associated Pool is an associated oil and gas reservoir producing from the Cisco and Canyon formations and currently comprises the following described area in Eddy County, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 24 EAST, NMPM

Section 9:	E/2
Section 10:	S/2
Section 11:	S/2
Section 12:	S/2
Sections 13 through 15:	All
Section 16:	E/2
Sections 22 through 26:	All
Section 34:	E/2
Sections 35 and 36:	All

TOWNSHIP 20-1/2 SOUTH, RANGE 23 EAST, NMPM

Irregular Sections 35 and 36:	All
-------------------------------	-----

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Sections 1 and 2:	All
Sections 11 and 12:	All
Section 14:	All.

FURTHER, the "*Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool*", as promulgated by Division Order No. R-5353, as amended, provides among other things, for 320-acre spacing and proration units with standard well locations not closer than 660 feet to the outer boundary of said units.

(12) Within that area described in Finding Paragraph No. (8) above, that is "**Marathon's Area of Interest**":

- (a). only the W/2 of Section 2, the W/2 of Section 11, and all of Section 14, all in Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico are included within the boundary of the Indian Basin-Morrow (prorated) Pool;
- (b). the balance of the area (all of Irregular Sections 35 and 36, Township 20-1/2 South, Range 23 East, NMPM and all of Section 1, the E/2 equivalent of Section 2, the E/2 of Section 11, and all of Sections 12 and 13, of Township 21 South, Range 23 East, NMPM, all in Eddy County, New Mexico) is "sandwiched" in between the two Morrow gas pools, therefore the "one-mile rule" [see Division General Rule 104.A(1) and the first labeled paragraph under the heading "*General Rules for the Prorated Gas Pools of New*

Mexico" on Exhibit "A" of Division Order No. R-8170, dated March 28, 1986] applies;

(c). In Section 2, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico:

- (1). the Marathon North Indian Basin Unit Well No. 15 (30-015-28305), in Unit "F", is currently producing from the Indian Basin-Morrow Gas Pool and has dedicated thereon all of the section, being a standard 640-acre, more or less, gas spacing and proration unit;
- (2). Marathon currently has six wells (the North Indian Basin Unit Well Nos. 11, 13, 14, 18, 20, and 23 in Units "O", "H", "B", "J", "K", and "D", respectively) either producing from or completed in the South Dagger Draw-Upper Pennsylvanian Associated Pool, Division records indicate the two 320-acre, more or less, standard spacing and proration units for this production will comprise the E/2 and W/2 equivalencies; and,
- (3). all categories of mineral interest owners in said Section 2 have common ownership throughout.

(d). In Section 14, Township 21 South, Range 23 East, NMPM, all in Eddy County, New Mexico: the Marathon Indian Basin "B" Gas Com Well No. 1 in Unit "K" was drilled to and completed in the Indian Basin-Morrow Gas Pool in 1963 and had dedicated thereon all of the section, being a standard 640-acre gas spacing and proration unit, cumulative production to October, 1984 when the Morrow ceased producing is 5,726,748 MCF of gas and 3,535 barrels of condensate. This information is historical and is carried by the Division and the New Mexico Oil and Gas Engineering Committee in its records as such.

(13) At the time of the hearing the applicant presented land, geological, and petroleum engineering evidence to demonstrate that:

- (a). the Morrow formation underlying this area is approximately 1,600 feet deeper than the producing Cisco/Canyon interval of the South Dagger Draw-Upper Pennsylvanian Associated Pool and is now treated as a secondary objective, which can be more economically feasible to exploit and develop in conjunction with the drilling or deepening of a well for production from the primary objective or Cisco/Canyon formation;
- (b). according to production and performance records Indian Basin-Morrow gas wells in the vicinity either can not or can no longer efficiently, adequately, or economically drain 640 acres;
- (c). there is no physical or impermeable barrier within the Morrow interval separating the two pools, this would indicate further that the Morrow formation in this area is geologically connected, signifying therefore that Morrow gas production in this general area is attributable to one common source of supply ("reservoir");
- (d). in order to afford an opportunity to drill a well to test both the Cisco/Canyon formation of the South Dagger Draw-Upper Pennsylvanian Associated Pool and the Morrow formation, it is necessary to have the Morrow formation spaced on the same 320-acre standard spacing pattern as established for the South Dagger Draw-Upper Pennsylvanian Associated Pool; and,
- (e). the granting of Marathon's request will allow the same ownership in the two formations because the spacing units will be the same.

(14) While no evidence was presented, nor did the application request, to "de-prorate" the Indian Basin-Morrow Gas Pool, there appears no reason to subject any additional acreage to the Indian Basin-Morrow Gas Pool nor restrict any such production under the applicable special rules and regulations.

(15) Marathon's request is not unreasonable and in order to prevent the drilling of unnecessary wells, to protect correlative rights and provide for a more orderly development of the Morrow reservoir as a secondary objective in conjunction with the

drilling of Cisco/Canyon wells within "**Marathon's Area of Interest**", it will be necessary to adjust the governing limits of the Indian Basin-Morrow and Cemetery-Morrow Gas Pools. Notwithstanding however, it is the Division's longstanding policy and practice:

- (a). not to extend pool boundaries to include non-producing acreage;
- (b). to extend pool boundaries to include only acreage dedicated to wells capable of producing from that pool and to include enough acreage to the well in order to form a standard spacing and proration unit for that particular pool;
- (c). the exception being in those instances where connecting acreage is necessary to extend pool boundaries to include a well's dedicated acreage that is not already contiguous to the pool; and,
- (d). not to "down-space" pools or portions of pools in areas where there are existing/producing spacing and proration units;
- (e). not to adjust portions of pool boundaries that will effect or change historical production and records without extenuating circumstances.

(16) Many of Marathon's objectives in its application may be obtained in a manner consistent with Division policy and practices by the following:

- (a). contracting the N/2 and SE/4 of Section 14, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico;
- (b). confining the governing limits of the "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*" to only that area that lies within the boundaries of said pool and that any subsequent wells completed within one mile of the boundary of the Indian Basin-Morrow Gas Pool be thoroughly evaluated by the Artesia District Office of the Division to adequately determine if such well and corresponding acreage should be included within the boundaries of the Indian Basin-Morrow Gas Pool, which

may then be extended accordingly; and,

- (c). allowing those wells drilled to the Morrow formation in Irregular Sections 35 and 36, Township 20-1/2 South, Range 23 East, NMPM and all of Section 1, the E/2 of Section 11, all of Sections 12 and 13, and the N/2 and SE/4 of Section 14 of Township 21 South, Range 23 East, NMPM, all in Eddy County, New Mexico to be subject either to the applicable sub-parts of Division General Rule 104 (statewide spacing and well locations) or to the Cemetery-Morrow Gas Pool rules as appropriate.

HOWEVER, FOR consistency purposes, it will be necessary to extend the Indian Basin-Morrow Gas Pool boundary to include Lots 1 and 2, the S/2 NE/4 and SE/4 (E/2 equivalent) of Section 2, Township 21 South, Range 23 East, NMPM, Eddy County, New Mexico.

(17) Marathon was the only interested party to appear and provide technical, land, geologic, and engineering testimony concerning the reservoir, these pools and their classifications. No other operator and/or interest owner appeared at the hearing either in opposition or in support of this application. Subsequent to the hearing however the Division received, for the most part, favorable responses to a questionnaire provided them by Marathon from the following six oil and gas interest owners and/or operators: Oryx Energy Company of Dallas, Texas; Kerr-McGee Corporation of Oklahoma City, Oklahoma; Barbara Fasken of Midland, Texas; Citation Oil & Gas Corporation of Houston, Texas; Santa Fe Energy Resources of Midland, Texas; and, Yates Petroleum Corporation of Artesia, New Mexico.

(18) Extending and contracting the boundaries of the Indian Basin-Morrow Gas Pool as provided above and restricting the governing limits of the "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*" to only that area within the pool boundary will serve to allow the interest owners in "**Marathon's Area of Interest**" the opportunity to economically recover their share of the gas in the subject pool, will serve to prevent waste, will not reduce ultimate recovery from the subject pool, could serve to enhance Morrow gas production by providing operators an incentive to drill or recomplete into the deeper Morrow interval, and will not violate correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The **Indian Basin-Morrow Gas Pool** in Eddy County, New Mexico, as heretofore defined and described is hereby extended to include therein:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 2: Lots 1 and 2, S/2 NE/4, and SE/4.

FURTHER, said pool is hereby contracted by the deletion therefrom of the following described acreage:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 14: N/2 and SE/4.

IT IS FURTHER ORDERED THAT:

(2) The "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*", as promulgated by Division Order No. R-8170, as amended, shall apply only to such lands as shall from time to time lie within the horizontal limits of the **Indian Basin-Morrow Gas Pool**. Said special rules shall therefore be amended to reflect said mandate. On page 19 of **EXHIBIT "B"** of Division Order No. R-8170, dated March 28, 1986, under sub-heading "A. **DEFINITIONS**" of the "*Special Rules and Regulations for the Indian Basin-Morrow Gas Pool*", the following provision is to be included:

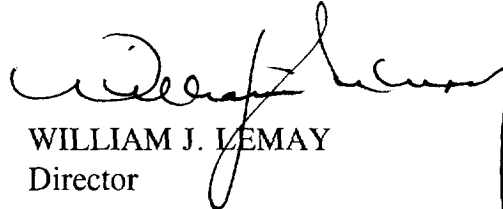
"CONFINEMENT of the special rules governing the Indian Basin-Morrow Gas Pool shall apply only to such lands as shall from time to time lie within the horizontal limits of said pool."

(3) All extensions to the horizontal limits of the Cemetery-Morrow Gas Pool in Eddy County, New Mexico and any additional contractions to the Indian Basin-Morrow Gas Pool proposed by Marathon Oil Company in this matter are hereby denied.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L