

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

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

CASE NO. 10462 (De Novo)
Order No. R-9677-A

APPLICATION OF MARATHON OIL
COMPANY FOR TERMINATION OF OIL
PRORATIONING IN THE VACUUM-
GLORIETA POOL, LEA COUNTY,
NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on August 13, 1992, at Santa Fe, New Mexico, before the Oil Conservation Commission (hereinafter called the "Commission").

NOW, on this 10th of September, 1992, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

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

(2) The applicant, Marathon Oil Company ("Marathon"), seeks exception to Division General Rule No. 505 for the Vacuum-Glorieta Pool, located in portions of Townships 17 and 18 South, Ranges 34 and 35 East, NMPM, Lea County, New Mexico, whereby the allowable for each well producing from said pool would equal its producing capability for a period of nine (9) months.

(3) There are currently seven (7) wells in the Vacuum-Glorieta Pool potentially capable of producing in excess of the pool allowable of 107 barrels of oil per day, these being Marathon's Warn State AC/3 Well Nos. 6 and 7, located respectively in Units G and F, Section 33, Township 17 South, Range 35 East, NMPM and the Exxon Company USA New Mexico "K" State Well Nos. 27, 28, 29, 34 and 36 located, respectively in Unit N of Section 28, Unit A of Section 32, Unit F, Unit L and Unit M of Section 28, all in Township 17 South, Range 35 East, NMPM.

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(4) The Vacuum-Glorieta Oil Pool is in an advanced stage of depletion with 48 wells out of 121 active wells producing less than 10 barrels of oil per day.

(5) Marathon estimates current recovery for the pool to be approximately 37 percent of the calculated 172 million barrels of oil originally in place in the reservoir.

(6) Unitization of the eastern portion of the pool for enhanced oil recovery is necessary in order to recover an estimated 22 million barrels of additional oil.

(7) There is not sufficient production data currently available to accurately determine the remaining recoverable primary oil for the top allowable wells.

(8) The absence of such data has frustrated efforts at unitization either by voluntary or by statutory means.

(9) On April 2, 1992, Marathon appeared before the Division Examiner seeking the permanent termination of oil prorationing in the Vacuum-Glorieta Pool. The granting of that request would have removed the production limitation which was affecting six (6) wells out of 121 active wells in the pool.

(10) One of the primary results of termination of prorationing would have been the production of the top allowable wells at capacity which would establish production decline curves from which accurate calculations of remaining recoverable reserves for those wells could be made and negotiations for unitization advanced.

(11) Phillips Petroleum Company and Exxon Corporation supported Marathon's application provided that termination of allowables was for a nine month period and subject to certain testing and data collection requirements.

(12) Mobil appeared at the Examiner's hearing in opposition to the application.

(13) On May 22, 1992, the Division entered order R-9677 denying Marathon's original application.

(14) Subsequent to the entry of that order, Marathon has modified its request and now seeks the following:

(a) The granting of a special allowable for the Vacuum-Glorieta Pool equal to the producing capacity of each well currently drilled in the pool for a period of nine months.

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(b) That the operators of any wells capable of producing in excess of 107 barrels of oil per day average during a month, regardless of how many wells are within a single spacing and proration unit, shall have the right to produce such well at capacity provided that the following tests are conducted and/or data are collected and provided to the unitization engineering committee:

(1) A minimum 24-hour production test of oil, water, and gas volumes to be performed twice monthly;

(2) Monthly pumping fluid levels, to coincide with a production test;

(3) A multi-rate flow test to enable calculations of the well's productivity index; and

(4) A shut-in bottom hole pressure test, either by direct measurement or fluid level, for any one well on the lease during the period. This test may be taken on any well, even non-top allowable wells.

(15) The geologic and engineering evidence and testimony presented in this case by Marathon indicates the following:

(a) production of the remaining top allowable wells at capacity will result in a 14.42 percent increase in total oil production from the pool and will result in only a 2.21 percent increase in the total reservoir voidage from the pool;

(b) the average reservoir voidage of all wells within the pool is currently 359 reservoir barrels per well per day while the current average reservoir voidage for the top allowable wells is 272 reservoir barrels per well per day;

(c) if the remaining top allowable wells are produced at capacity, it will result in an average increase for those wells of 60 barrels of oil per well per day with an increase in reservoir voidage of approximately 137 reservoir barrels per well per day;

(d) the drilling of infill wells within the S/2 of Section 28 has not resulted in an increase in water production nor has it resulted in an increase in the water/oil ratio in the wells originally drilled on the proration units within said area; and

(e) The Vacuum-Glorieta reservoir is heterogeneous in nature in terms of the porosity, producing capabilities of the individual zones in the reservoir.

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(16) The applicant further presented evidence which indicates that the main water encroachment is from the far eastern portion of the pool and has advanced westward one mile in the past 30 years.

(17) The evidence further indicates that approval of the subject application will not reduce ultimate oil recovery under secondary recovery operations.

(18) Within the Vacuum-Glorieta Pool, there does not exist substantial geologic and engineering data with which to reach a reasonable agreement on remaining primary reserves underlying each of the spacing units currently dedicated to top allowable wells.

(19) Applicant's proponents in this case, Phillips and Exxon, contend that denial of this application may substantially delay or prevent the execution of a unitization agreement for the proposed Vacuum Glorieta East Unit, thereby causing the potential for waste by possibly damaging the reservoir.

(20) A disagreement regarding unitization parameters and allocations between various working interest owners in the proposed Vacuum Glorieta East Unit precludes Phillips Petroleum Company from initiating unitization proceedings under the "Statutory Unitization Act," Sections 70-7-1 through 70-7-21, NMSA, (1978).

(21) No party appeared at the hearings in opposition to Marathon's request.

(22) Approval of the subject application will afford an opportunity to increase ultimate oil recovery under secondary recovery operations, thereby preventing waste and protecting the correlative rights of the various working interest owners within the proposed Vacuum Glorieta East Unit, and is necessary for the effective unitization of the subject area for the purpose of conducting secondary recovery operations, and should therefore be granted.

IT IS THEREFORE ORDERED THAT:

(1) The application of Marathon Oil Company for an exception to Division General Rule No. 505 for the Vacuum-Glorieta Pool, located in portions of Townships 17 and 18 South, Ranges 34 and 35 East, NMPM, Lea County, New Mexico, whereby the allowable for each well producing from said pool would equal its producing capability in hereby GRANTED for a period of nine (9) months to commence on October 1, 1992 and end on July 1, 1993.

(2) The operators of any wells capable of producing in excess of 107 barrels of oil per day average during a month, regardless of how many wells are within a single spacing and proration unit, shall have the right to produce such wells at capacity provided that the following tests are conducted and/or data are collected and provided to the unitization engineering

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committee:

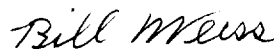
- (a) A minimum 24-hour production test of oil, water, and gas volumes to be performed twice monthly;
 - (b) Monthly pumping fluid levels, to coincide with a production test;
 - (c) A multi-rate flow test to enable calculations of the well's productivity index; and
 - (d) A shut-in bottom hole pressure test, either by direct measurement or fluid level, for any one well on the lease during this period.
- (3) Jurisdiction is hereby retained for the entry of such further orders as the Commission may deem necessary.

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

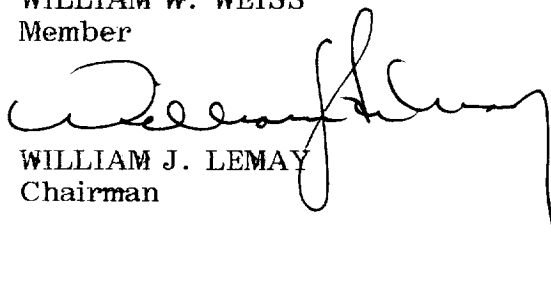
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



GARY CARLSON
Member



WILLIAM W. WEISS
Member



WILLIAM J. LEMAY
Chairman

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