

**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. 9802 DE NOVO  
Order No. R-9050-A**

**APPLICATION OF MARATHON OIL COMPANY  
FOR AN UNORTHODOX GAS WELL LOCATION  
AND SIMULTANEOUS DEDICATION, EDDY  
COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9:00 a.m. on January 18, 1990, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 22nd day of March, 1990, the Commission, a quorum being present, having considered the testimony presented and 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, seeks approval of an unorthodox gas well location 330 feet from the South line and 1650 feet from the West line (Unit N) of Section 9, Township 21 South, Range 23 East, NMPM, to produce from the Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

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(3) This matter came on for hearing at 8:15 a.m. on November 1, 1989, at Santa Fe, New Mexico before Examiner Victor T. Lyon and pursuant to this hearing, Order No. R-9050 was issued on November 21, 1989 which granted Marathon's application but imposed an eighty percent (80%) penalty factor to offset the advantage gained over the diagonal offset operator as a result of the unorthodox location.

(4) All of said Section 9 is proposed to be dedicated to said well replacing the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) of said Section 9 forming a 640-acre gas spacing and proration unit for said pool.

(5) Oryx Energy Company (Oryx), owner of 54.1% working interest and operator of Section 17, Township 21 South, Range 23 East, NMPM, appeared in protest of the application and presented evidence designed to show the unorthodox location was contrary to the field rules and would adversely affect Oryx's correlative rights.

(6) Applicant's testimony showed that its North Indian Basin Well No. 5 ceased to flow because of mechanical conditions in the wellbore and needed to be replaced to permit the owners under the gas proration unit (GPU) to recover their just and equitable share of gas from the reservoir.

(7) The testimony showed that the Indian Basin-Upper Pennsylvanian Gas Pool is a water drive reservoir and it is logical and prudent in such a reservoir to locate wells as high as possible on the structure to maximize recovery of gas from the GPU.

(8) Testimony also showed a dolomite/limestone reservoir facies change striking northeast-southwest through the W/2 of Section 9 which is a major factor in governing the quality of gas production encountered, the better quality wells being located in the dolomite reservoir facies and the poor quality wells and dry holes being located in the limestone facies.

(9) The Indian Basin-Upper Pennsylvanian Gas Pool is prorated under the provisions of Order No. R-8170, and its special pool rules are designed to place wells a minimum of 1650 feet from the outer boundary of the gas proration unit.

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**(10) Marathon's proposed location in Section 9 is located within the North Indian Basin Unit which also includes Section 16 to the South, so crowding Section 16 with a 330 foot offset location does not violate the correlative rights of working interest and royalty interest owners in Section 16.**

**(11) Both applicant and Oryx presented geologic testimony which, though differing in some details, generally agreed that the proposed location for the replacement well was up-dip from the present well and closer to Oryx's GPU located in Section 17 than a standard location. The expert witnesses did not agree on the extent to which Oryx's correlative rights would be impaired by production from the proposed location.**

**(12) The diagonal offset interest owner is the only party affected so a penalty should be assessed which reflects the encroachment toward the diagonal interest owners' acreage.**

**(13) The Oryx expert witness testified that Oryx would not object to any unorthodox location in Section 9 which would be no closer to the corner point of Sections 8, 9, 16 and 17 than a standard location 1650 feet from the South and West lines of Section 9.**

**(14) The calculated distance from the aforementioned corner point to the aforementioned standard location is 2,333 feet.**

**(15) The distance from the aforementioned corner point to the proposed location is calculated to be 1,683 feet.**

**(16) In order to protect correlative rights a penalty should be assigned to the applicant's GPU which will reflect the proportionate distance the proposed location is moved toward the aforementioned corner point.**

**(17) Ratio penalties have historically been assigned to wells which crowd objecting parties whose acreage directly offsets the crowding well.**

**(18) When ratio penalties are applied because of objections from parties owning diagonal offsetting acreage, penalty adjustments must be made to account for lesser acreage being effected by drainage from the crowding well.**

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(19) Mathematical computations show that approximately two times as much direct offset acreage is effected by drainage as diagonal offset acreage assuming theoretical circular drainage and equal radii.

(20) Correlative rights will be protected by assigning a penalty to the allowable of the proposed location based upon the formula:  $(0.5) (1-1683/2333)$  or 14% penalty.

(21) Approval of the subject application with a 14% penalty will afford the applicant the opportunity to produce its just and equitable share of the gas in the affected pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Marathon Oil Company for an unorthodox gas well location is hereby approved for a well to be located at a point 330 feet from the South line and 1650 feet from the West line of Section 9, Township 21 South, Range 23 East, NMPM, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

(2) All of said Section 9 shall be simultaneously dedicated to the above-described well and the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) forming a 640-acre gas spacing and proration unit for said pool.

(3) The above described proposed location and gas proration unit shall be assigned a 14% penalty, or an allowable equal to 86% (.86) of the normal monthly allowable assigned to a standard gas proration unit in the Indian Basin-Upper Pennsylvanian Gas Pool.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

WILLIAM R. HUMPHRIES, Member

*William W. Weiss*  
WILLIAM W. WEISS, Member

*William J. Lemay*  
WILLIAM J. LEMAY, Chairman  
and Secretary

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