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:

APPLICATION OF READ & STEVENS, INC. FOR AN UNORTHODOX INFILL GAS WELL LOCATION AND SIMULTANEOUS DEDICATION, CHAVES COUNTY, NEW MEXICO.

Case No. 11514 *(de novo)*
Order No. R-10622-A

ORDER OF THE COMMISSION
(Proposed by UMC Petroleum Corporation)

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on October 29, 1996, at Santa Fe, New Mexico, before the Oil Conservation Commission of the State of New Mexico, hereinafter referred to as the "Commission."

NOW, on this _____ day of _____, 1996, the Commission, having considered the testimony and the record, 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) Applicant, Read & Stevens, Inc., seeks approval to drill its Harris Federal Well No. 11 at an unorthodox gas well location 990 feet from the South line and 1980 feet from the West line (Unit N) of Section 26, Township 15 South, Range 27 East, NMPM, to test the Buffalo Valley-Pennsylvanian Gas Pool.

(3) Applicant further proposes to simultaneously dedicate the Harris Federal Well No. 11 with the existing Harris Federal Well No. 4, located at a standard gas well location in Unit P of said Section 26, to a standard 320-acre gas spacing and proration unit comprising the S½ of said Section 26.

(4) Applicant also operates the Harris Federal Well No. 8, located in Unit F of Section 26. The N½ of Section 26 is dedicated to said well.

(5) All of Section 26 is located within the Buffalo Valley-Pennsylvanian Gas Pool, which is a prorated gas pool currently governed by the General Rules for the Prorated Gas Pools of New Mexico as contained in Division Order No. R-8170, as amended, which

require standard 320-acre gas spacing and proration units with wells to be located in the NW¼ or SE¼ of a standard section, and no closer than 990 feet from the outer boundary of the quarter section nor closer than 330 feet from any governmental quarter-quarter section line or subdivision inner boundary.

(6) Matador Petroleum Company, an offset operator, appeared at the hearing in support of Read & Stevens, Inc.'s application.

(7) UMC Petroleum Corporation ("UMC"), operator of the following gas wells in Township 15 South, Range 27 East, appeared at the hearing and presented evidence in opposition to applicant's request:

(a) White State Well No. 1, located 660 feet from the South line and 1980 feet from the East line (Unit O) of Section 35. The S½ of Section 35 is dedicated to the well; and

(b) White State Well No. 2, located 1980 feet from the North and West lines (Unit F) of Section 35. The N½ of Section 35 is dedicated to the well.

(8) UMC's wells are completed in the Diamond Mound-Morrow Gas Pool, which is subject to statewide rules. However, UMC's wells are located in the NW¼ and SE¼ of Section 35, just as applicant's existing wells are located in the NW¼ and SE¼ of Section 26.

(9) *At the Examiner hearing in this matter, the geologic evidence and testimony presented by both applicant and UMC was in general agreement* **(See Order No. R-10622, Finding Paragraph (9))**, *and showed that*:

(a) The Buffalo Valley-Pennsylvanian Pool and Diamond Mound-Morrow Gas Pool, in the area of Sections 26 and 35, represent a single common source of supply in the Lower Pennsylvanian formation;

(b) The Lower Pennsylvanian interval being produced in the Harris Federal Well Nos. 4 and 8 and the White State Well Nos. 1 and 2 is a correlatable channel sand which traverses Sections 26 and 35 in a north-south direction;

(c) The reservoir sand generally thickens within the W½ and thins within the E½ of both Section 26 and Section 35;

(d) Applicant's Harris Federal Well No. 8, which encountered approximately 30 feet of net sand in the reservoir, and UMC's White State Well No. 2, which encountered approximately 22 feet of net sand

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in the reservoir, are the best producing wells within Sections 26 and 35, respectively;

(e) Applicant's Harris State Well No. 4 and UMC's White State Well No. 1 encountered approximately 5 and 10 feet of net sand, respectively, within the reservoir; and

(f) The Harris Federal Well No. 11, to be completed in the same Lower Pennsylvanian interval, is projected to encounter between 22-30 feet of net sand in the reservoir.

(10) At the Commission hearing, applicant substantially changed its geologic evidence. Applicant's new geologic interpretation increased the net sand thickness on applicant's acreage in Sections 23 and 26, and substantially reduced the net sand thickness in Section 35, operated by UMC. (Compare applicant's Commission Exhibits 2 and 3 with applicant's Examiner Exhibit 4 (submitted by UMC as its Commission Exhibit 1A)). These changes are not based on log analysis or new well control, and are not supported in the record.

(11) UMC presented engineering evidence before both the Examiner and the Commission showing that:

(a) Drainage in the Lower Pennsylvanian reservoir will not be radial, but will be along the North-South trend of the channel in an oblong manner;

(b) Bottom hole pressures in the reservoir have declined from a virgin pressure of 3300-3400 psi to 1000-1300 psi in 1993, evidencing substantial depletion of the reservoir;

(c) The producing rates and cumulative production of Applicant's and UMC's four existing wells in Sections 26 and 35, as of March 1996, are as follows:

Operator	Well	Producing Rate(MCFPD)	Cumulative Production (MMCF)
Read & Stevens, Inc.	Harris Fed. #8	1,049	5,576
Read & Stevens, Inc.	Harris Fed. #4	27	585
	Subtotal:	**1,076**	
UMC Petroleum Corp.	White St. #1	381	3,671
UMC Petroleum Corp.	White St. #2	694	5,573
	Subtotal:	**1,075**	

Thus, each section is currently producing an equal

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amount of gas, and production between Sections 26 and 35 is at an equilibrium;

(d) A well located at a standard location in the SE¼ of Section 26 will encounter as much net sand as at the proposed unorthodox location;

(e) UMC's wells were completed and began producing earlier than applicant's wells, accounting for part of the cumulative production imbalance; and

(f) All reserves in Sections 26 and 35 will be produced by existing wells.

(12) *At the Examiner hearing, the engineering testimony presented by applicant and UMC was also in general agreement.* **See Order No. R-10622, Finding Paragraph (10).**

(13) At the Commission hearing, Applicant changed its engineering evidence to show that:

(a) **Based on applicant's revised geology**, the remaining recoverable gas in place in Section 26 is approximately 5 BCF, while remaining recoverable gas in place in Section 35 is approximately 3.4 BCF; and

(b) As a result, applicant should be allowed to produce 5/8.4, or approximately 60%, of the remaining recoverable gas in place from the two sections.

OPTION A (denial of application):

(i) The Lower Pennsylvanian reserves in Sections 26 and 35 will be recovered by existing wells.

(ii) The application should be denied.

OPTION B (granting of application with a production penalty):

(i) The evidence and testimony show that:

(a) The Harris Federal Well No. 4, which will ultimately recover 0.6 BCF of gas, will not adequately drain and develop the S½ of Section 26;

(b) The Harris Federal Well No. 8 has probably drained a portion of the SW¼ of Section 26. However, the engineering evidence is not sufficient to determine whether this well can ultimately recover all of the remaining gas reserves within the SW¼;

(c) The initial producing rate of the proposed Harris Federal Well No. 11 will be 1300-1400 MCFPD;

(d) With the addition of the proposed Harris Federal Well No. 11, the combined daily producing rate from the Harris Federal wells in Section 26 is projected to be approximately 2,400 MCFG, which is 225% higher than the combined daily producing rate of UMC's White State wells in Section 35; and

(e) Due to the north-south drainage pattern in the reservoir, by locating the Harris Federal Well No. 11 990 feet off the common lease line, the applicant will be gaining an advantage over UMC, whose White State Well No. 2 is located 1980 feet off the common lease line.

(ii) The applicant should be authorized to drill the Harris Federal Well No. 11 at the proposed unorthodox location. However, in order to protect the correlative rights of UMC, the well should be assessed a production penalty.

(iii) Based on applicant's engineering testimony, applicant should be allowed to produce 60% of remaining reserves under Sections 26 and 35. Therefore, the combined producing rate from all wells in Section 26 should be 60% ÷ 40% = 150% of the combined producing rate from all wells in Section 35. Since producing rates are now at equilibrium between the two sections, a 50% penalty should be assessed on the producing rate of the proposed well.

(iv) A production penalty of 50 percent is fair and reasonable and should be adopted in this case.

(v) Approval of the subject application with a 50 percent production 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.

(vi) The production penalty should be applied towards the Harris Federal Well No. 11's ability to produce into a pipeline, as determined from a deliverability test to be conducted on the well on a semi-annual basis.

(vii) The applicant should advise the supervisor of the Artesia district office of the Division of the date and time the above-described production test(s) will be conducted in order that they may be witnessed.

IT IS THEREFORE ORDERED THAT:

OPTION A:

(1) The Application of Read & Stevens, Inc. for approval of an unorthodox infill gas well location in the Buffalo Valley-Pennsylvanian Gas Pool for a well to be drilled 990 feet from the South line and 1980 feet from the West line (Unit N) of Section 26, Township 15 South, Range 27 East, NMPM, to be simultaneously dedicated with the existing Harris Federal Well No. 4, located at a standard gas well location in Unit P of said Section 26, to a standard 320-acre spacing and proration unit comprising the S½ of said Section 26, is hereby **denied**.

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

OPTION B:

(1) The applicant, Read & Stevens, Inc., is hereby authorized to drill its Harris Federal Well No. 11 at an unorthodox gas well location 990 feet from the South line and 1980 feet from the West line (Unit N) of Section 26, Township 15 South, Range 27 East, Chaves County, New Mexico, to test the Buffalo Valley-Pennsylvanian (Prorated) Gas Pool.

(2) The Harris Federal Well No. 11 will be simultaneously dedicated with applicant's existing Harris Federal Well No. 4, located at a standard gas well location in Unit P of said Section 26, to a standard 320-acre gas spacing and proration unit comprising the S½ of said Section 26.

(3) The Harris Federal Well No. 11 is hereby assessed a production penalty of 50 percent. The production penalty shall be applied towards the well's ability to produce into a pipeline, as determined from a deliverability test to be conducted on the well on a semi-annual basis.

(4) The applicant shall advise the supervisor of the Artesia district office of the Division of the date and time the above-described production test(s) will be conducted in order that they may be witnessed.

(5) 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 COMMISSION

Jami Bailey, Member

William W. Weiss, Member

William J. Lemay, Chairman