

Entered June 30, 1972
A.C.P.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
ON ITS OWN MOTION TO CONSIDER
INSTITUTING GAS PRORATIONING IN
THE SOUTH CARLSBAD-MORROW GAS
POOL, EDDY COUNTY, NEW MEXICO.

CASE NO. 4693
Order No. R-1670-L

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 19, 1972, at Hobbs, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 30th day of June, 1972, 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:

(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 by Order No. R-3731, dated April 18, 1969, the Commission created the South Carlsbad-Morrow Gas Pool, Eddy County, New Mexico, for the production of gas from the Morrow formation.

(3) That the horizontal limits of said pool have been extended from time to time by order of the Commission.

(4) That the horizontal limits of the South Carlsbad-Morrow Pool, as defined by the Commission, at the time of hearing this case comprised the following described area:

EDDY COUNTY

TOWNSHIP 22 SOUTH, RANGE 26 EAST, NMPM
Section 25: S/2

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 19: S/2
Section 30: All
Section 31: All
Section 32: W/2

TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM
Section 1: W/2
Section 2: All
Section 11: All
Section 12: All

-2-
CASE NO. 4693
Order No. R-1670-L

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 6: All
Section 7: N/2

(5) That in February, 1972, there were 14 wells completed in the Morrow formation within the above-described area and connected to gas transportation facilities.

(6) That in February, 1972, 11 of the wells were connected only to the Transwestern Pipeline Company gas gathering system, that 2 of the wells were connected only to the Llano, Inc. gas gathering system, and that one of the wells was connected to both systems.

(7) That the South Carlsbad Field comprises the South Carlsbad-Atoka, South Carlsbad-Strawn, and South Carlsbad-Morrow Gas Pools.

(8) That the capacity of the Transwestern system serving the South Carlsbad Field is 90,000 MCF per day.

(9) That the capacity of the Llano system serving the South Carlsbad Field is 30,000 MCF per day.

(10) That the Transwestern system that takes gas from the South Carlsbad-Morrow Gas Pool also takes gas from the South Carlsbad-Strawn and South Carlsbad-Atoka Gas Pools.

(11) That the Llano system that takes gas from the South Carlsbad-Morrow Gas Pool also takes gas from the South Carlsbad-Strawn Gas Pool.

(12) That at the time of this hearing, the most recent month for which production figures were available was February, 1972.

(13) That there is evidence that additional wells have been connected to gas transportation facilities in the South Carlsbad-Morrow Gas Pool and the South Carlsbad-Strawn Gas Pool after February, 1972, and prior to the time of this hearing.

(14) That there is no substantial evidence that the manner of producing the wells in the South Carlsbad-Morrow Gas Pool has been substantially altered after February, 1972.

(15) That it can reasonably be inferred that the manner of producing the wells in the South Carlsbad-Morrow Gas Pool is substantially the same as it was in February, 1972.

(16) That at the time of the hearing of this case, the Transwestern system was purchasing approximately 41,000 MCF of gas per day from the three pools combined.

(17) That in February, 1972, the Transwestern system purchased an average of 27,972 MCF of gas per day from the South Carlsbad-Morrow Gas Pool.

(18) That at the time of this hearing Transwestern was purchasing gas from three wells producing from the South Carlsbad-Strawn Gas Pool, one well producing from the South Carlsbad-Atoka Gas Pool and thirteen wells producing from the South Carlsbad-Morrow Gas Pool.

(19) That considering the fact that Transwestern's system is taking gas from three wells in the South Carlsbad-Strawn Gas Pool and from one well in the South Carlsbad-Atoka Gas Pool, its capacity to take gas from the South Carlsbad-Morrow Gas Pool is substantially less than 90,000 MCF of gas per day.

(20) That in February, 1972, the Llano system purchased an average of 2858 MCF of gas per day from the South Carlsbad-Morrow Gas Pool.

(21) That at the time of this hearing Llano was purchasing gas from three wells producing from the South Carlsbad-Strawn Gas Pool and three wells producing from the South Carlsbad-Morrow Gas Pool.

(22) That considering the fact that Llano's system is taking gas from three wells in the South Carlsbad-Strawn Gas Pool, its capacity to take gas from the South Carlsbad-Morrow Gas Pool is substantially less than 30,000 MCF of gas per day.

(23) That the combined capacity of the two systems for gas from the South Carlsbad-Morrow Gas Pool is substantially less than 120,000 MCF of gas per day.

(24) That the thirteen available surface shut-in pressures of wells in the South Carlsbad-Morrow Gas Pool connected to gas transportation facilities in February, 1972, ranges from a low of 2865 psi to a high of 4389 psi; that the average of said pressures is 3475 psi.

(25) That considering the nature of the South Carlsbad-Morrow Gas Pool reservoir and the high pressures existing in the pool, the daily deliverability of a well at 850 psi is essentially the same as it would be at 870 psi or 900 psi.

(26) That the combined producing capacity of the eleven South Carlsbad-Morrow wells connected only to the Transwestern system in February, 1972, at 850 psi is approximately 86,650 MCF per day; that the capacity of said wells at absolute open flow is approximately 97,423 MCF per day.

(27) That the combined producing capacity of the two South Carlsbad-Morrow wells connected only to the Llano system

in February, 1972, at 850 psi is approximately 18,200 MCF of gas per day; that the capacity of said wells at absolute open flow is approximately 19,240 MCF of gas per day.

(28) That the producing capacity of the South Carlsbad-Morrow well connected to both systems in February, 1972, at 850 psi is approximately 19,400 MCF of gas per day of which 9,545 MCF of gas per day is committed to Transwestern and 9,855 MCF of gas is committed to Llano; that the capacity of said well at absolute open flow is approximately 20,157 MCF of gas per day of which 9,917 MCF of gas per day is committed to Transwestern and 10,240 MCF of gas per day is committed to Llano.

(29) That the combined producing capacity of the fourteen South Carlsbad-Morrow wells connected to gas transportation facilities in February, 1972, at 850 psi is approximately 124,250 MCF of gas per day; that the capacity of said wells at absolute open flow is approximately 136,820 MCF of gas per day.

(30) That after February, 1972, and prior to time of this hearing, Transwestern connected to its system one additional well producing from the South Carlsbad-Morrow Gas Pool.

(31) That wells in the subject pool connected to the Transwestern system and as described in Findings (26), (28), and (30), above, are capable of producing gas substantially in excess of Transwestern's capacity to take gas from the South Carlsbad-Morrow Gas Pool.

(32) That wells in the subject pool connected to the Llano system and as described in Findings (27) and (28), above, are capable of producing gas substantially in excess of Llano's capacity to take gas from the South Carlsbad-Morrow Gas Pool.

(33) That the combined capacity of the wells connected to both systems in the subject pool is substantially in excess of the capacity of the combined gas transportation facilities in the pool.

(34) That the Transwestern system is currently purchasing approximately 41,000 MCF of gas per day at an average pipeline pressure of 870 psi from the seventeen wells in the South Carlsbad-Atoka, South Carlsbad-Strawn and South Carlsbad-Morrow Gas Pools connected to its system.

(35) That the Llano system is currently purchasing from the South Carlsbad-Strawn and South Carlsbad-Morrow Gas Pools substantially less than 25,000 MCF of gas per day at an average pipeline pressure of 900 psi.

(36) That in February, 1972, Transwestern purchased approximately 27,972 MCF of gas per day from the twelve wells connected to its system producing from the South Carlsbad-Morrow Gas Pool.

(37) That at the time of this hearing Transwestern was purchasing gas from thirteen wells producing from the South Carlsbad-Morrow Gas Pool, three wells producing from the South Carlsbad-Strawn Gas Pool, and one well producing from the South Carlsbad-Atoka Gas Pool.

(38) That in February, 1972, Llano purchased approximately 2858 MCF of gas per day from the three wells connected to its system producing from the South Carlsbad-Morrow Gas Pool.

(39) That at the time of this hearing Llano was purchasing gas from three wells producing from the South Carlsbad-Morrow Gas Pool and three wells producing from the South Carlsbad-Strawn Gas Pool.

(40) That considering the fact that Transwestern is taking gas from three wells in the South Carlsbad-Strawn Gas Pool and one well in the South Carlsbad-Atoka Gas Pool, it must be taking substantially less than 41,000 MCF per day from the South Carlsbad-Morrow Gas Pool.

(41) That considering the fact that Llano is taking gas from three wells in the South Carlsbad-Strawn Gas Pool, it must be taking substantially less than 25,000 MCF per day from the South Carlsbad-Morrow Gas Pool.

(42) That both systems combined are currently purchasing substantially less than 66,000 MCF per day from the South Carlsbad-Morrow Gas Pool.

(43) That the reasonable market demand for gas from the wells in the South Carlsbad-Morrow Gas Pool connected to the Transwestern system is substantially less than 41,000 MCF per day.

(44) That the reasonable market demand for gas from the wells in the South Carlsbad-Morrow Gas Pool connected to the Llano system is substantially less than 25,000 MCF per day.

(45) That the reasonable market demand for gas from the wells in the South Carlsbad-Morrow Gas Pool connected to both systems is less than 66,000 MCF per day.

(46) That the wells in the South Carlsbad-Morrow Gas Pool connected to the Transwestern system are capable of producing gas in excess of Transwestern's reasonable market demand for gas from those wells.

(47) That the wells in the South Carlsbad-Morrow Gas Pool connected to the Llano system are capable of producing gas in excess of Llano's reasonable market demand for gas from those wells.

(48) That the wells in the South Carlsbad-Morrow Gas Pool are capable of producing gas in excess of the combined reasonable market demand for gas from the South Carlsbad-Morrow Gas Pool.

(49) That in February, 1972, gas was taken from the better wells in the South Carlsbad-Morrow Gas Pool connected to Transwestern's system at a rate varying from 45.6% of Transwestern's average take per connection day to 240.8% of said average take.

(50) That in February, 1972, gas was taken from the two wells in the subject pool connected to Llano's system at a rate varying from 80.9% of Llano's average take per connection day to 119.0% of said average take.

(51) That in February, 1972, gas was taken from the wells in the subject pool connected to Transwestern's system at a rate varying from 1.6% of Transwestern's monthly market for gas from the pool to 26.5% of said market.

(52) That in February, 1972, gas was taken from the wells in the subject pool connected to Llano's system at a rate varying from 40.5% of Llano's monthly market for gas from the pool to 59.5% of said market.

(53) That in February, 1972, gas was taken from the wells in the subject pool at a rate varying from approximately 1.5% of the monthly market for gas from the pool to 24.0% of the monthly market for gas from the pool.

(54) That in February, 1972, gas was taken from the better wells in the pool at a rate varying from 44.0% of a well's fair share of the total pool monthly market to 368.3% of a well's fair share of the total pool monthly market.

(55) That in February, 1972, gas was taken from the wells in the subject pool connected to Transwestern's system at a rate varying from 9.5% of a well's daily deliverability to 86.6% of a well's daily deliverability.

(56) That in February, 1972, gas was taken from the wells in the subject pool connected to Llano's system at a rate varying from 10.6% of a well's daily deliverability to 53.2% of a well's daily deliverability.

(57) That in February, 1972, gas was taken from the wells in the subject pool at a rate varying from 9.5% of a well's daily deliverability to 86.6% of a well's daily deliverability.

(58) That the reasonable market demand for gas from a well is that well's fair share of the total market demand for gas from that pool that can be produced without waste.

(59) That gas is being produced from some wells in the subject pool in excess of the reasonable market demand for gas from those wells.

(60) That gas is being produced from some wells in the subject pool in an amount less than the reasonable market demand for gas from those wells.

(61) That gas is not being taken ratably from the various producers in the pool.

(62) That there are owners of property in the subject pool who are being denied the opportunity to produce without waste their just and equitable share of the gas in the pool.

(63) That there are owners of property in the subject pool that are producing more than their just and equitable share of the gas in the pool.

(64) That drainage is occurring between tracts in the pool which is not equalized by counter drainage.

(65) That the correlative rights of some producers in the pool are being violated.

(66) That waste is occurring in the subject pool.

(67) That in order to prevent waste and to ensure that all owners of property in the subject pool have the opportunity to produce their share of the gas, the subject pool should be prorated in order to limit the amount of gas to be recovered from each tract to the reasonable market demand for gas from that tract that can be produced without waste.

(68) That to ensure that each owner of property in the subject pool has the opportunity to produce that amount of gas that can be practicably obtained without waste substantially in the proportion that the recoverable gas under his tract bears to the total recoverable gas in the pool, the subject pool should be prorated in order to limit the amount of gas to be produced from the pool to the reasonable market demand and the capacity of the gas transportation facilities.

(69) That the subject pool has not been completely developed.

(70) That production from the Morrow formation in the subject pool is from many separate stringers which vary greatly in porosity, water saturation, and thickness, both within individual stringers and between stringers.

(71) That the above-described stringers are not continuous across the pool, but are interconnected by the perforations in the various completions in the pool.

(72) That due to the above-described variations in the stringers and the lack of continuity of the stringers, the effective feet of pay, porosity of the pay, and water saturation of the pay underlying each developed tract cannot be practically determined from the data obtained at the wellbore.

(73) That there are recoverable gas reserves underlying each of the developed 320-acre tracts within the horizontal limits of the subject pool; that there are 15 developed 320-acre tracts in the pool as defined by the Commission.

(74) That due to the nature of the reservoir the amount of recoverable gas under each producer's tract cannot be practically determined in the subject pool by a formula which considers effective feet of pay, porosity, and water saturation.

(75) That due to the nature of the reservoir the amount of recoverable gas under each producer's tract cannot be practically determined in the subject pool by a formula which considers only the deliverability of a well.

(76) That the amount of gas that can be practicably obtained without waste by the owner of each property in the subject pool substantially in the proportion that the recoverable gas under his tract bears to the total recoverable gas in the pool can be practically determined best by allocating the allowable production among the wells on the basis of developed tract acreage compared to total developed tract acreage in the pool.

(77) That considering the nature of the reservoir and the known extent of development, a proration formula based upon surface acreage will afford the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool so far as such can be practicably obtained without waste substantially in the proportion that the recoverable gas under such property bears to the total recoverable gas in the pool.

(78) That in order to prevent waste the total allowable production from each gas well producing from the subject pool should be limited to the reasonable market demand for gas from that well.

(79) That in order to prevent waste the total allowable production from all gas wells producing from the subject pool should be limited to the reasonable market demand for gas from the pool.

(80) That in order to prevent waste the total allowable production from gas wells in the subject pool should be limited to the capacity of the gas transportation system for the subject pool's share of said transportation facility.

(81) That considering the available reservoir information, a 100% surface acreage formula is presently the most reasonable basis for allocating the allowable production among the wells delivering to the gas transportation facilities.

(82) That in order to prevent drainage between tracts that is not equalized by counter drainage the allowable production from the pool should be prorated to the various producers upon a just and equitable basis.

(83) That the adoption of a 100% surface acreage formula for allocating the allowable production in the subject pool will, insofar as is presently practicable, prevent drainage between producing tracts which is not equalized by counter-drainage.

(84) That in order to ensure that each operator is afforded the opportunity to produce his property ratably with all other operators connected to the same gas transportation facility, allowable production from the pool should be prorated to the various producers upon a just and equitable basis.

(85) That the adoption of a 100% surface acreage formula for allocating the allowable production in the subject pool will, insofar as is presently practicable, allow each operator the opportunity to produce his property ratably with all other operators connected to the same transportation facility.

(86) That the subject pool should be governed by the General Rules and Regulations for the Prorated Gas Pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, insofar as said General Rules and Regulations are not inconsistent with this order or the Special Rules and Regulations for the subject pool promulgated by this order.

IT IS THEREFORE ORDERED:

(1) That the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, is hereby prorated, effective September 1, 1972.

(2) That the subject pool shall be governed by the General Rules and Regulations for the Prorated Gas Pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, insofar as said General Rules and Regulations are not inconsistent with this order or the Special Rules and Regulations for the subject pool as hereinafter set forth, in which event the Special Rules shall apply.

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTH CARLSBAD-MORROW GAS POOL

A. WELL LOCATION AND ACREAGE REQUIREMENTS

-10-
CASE NO. 4693
Order No. R-1670-L

RULE 2. Each well completed or recompleted in the South Carlsbad-Morrow Gas Pool shall be located no 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 governmental quarter-quarter section line.

RULE 5(A). Each well completed or recompleted in the South Carlsbad-Morrow Gas Pool shall be located on a standard proration unit consisting of any two contiguous quarter sections of a single governmental section, being a legal subdivision (half section) of the United States Public Land Surveys. For purposes of these rules, a standard proration unit shall consist of 316 through 324 contiguous surface acres.

C. ALLOCATION AND GRANTING OF ALLOWABLES

RULE 8(A). The allowable production in the South Carlsbad-Morrow Gas Pool shall be allocated as follows:

The pool allowable remaining each month after deducting the total allowable assigned to marginal wells shall be allocated among the non-marginal wells entitled to an allowable in the proportion that each well's acreage factor bears to the total of the acreage factors for all non-marginal wells in the pool.

C. GENERAL

RULE 25. The vertical limits of the South Carlsbad-Morrow Gas Pool shall be the Morrow formation.

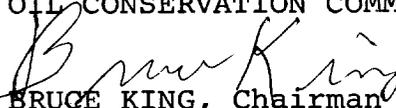
RULE 26. The first proration period for the South Carlsbad-Morrow Gas Pool shall commence September 1, 1972, and shall terminate December 31, 1973. Subsequent proration periods shall be the twelve-month periods as provided in the General Rules.

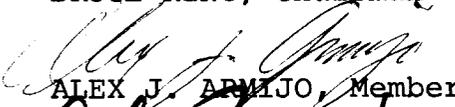
IT IS FURTHER ORDERED:

(1) That jurisdiction of this cause is 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


BRUCE KING, Chairman


ALEX J. ARMILJO, Member


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

S E A L

dr/