

Santa Fe, New Mexico

OIL CONSERVATION COMMISSION OF NEW MEXICO
Santa Fe, New Mexico

Gentlemen:

The following is a brief of El Paso Natural Gas Company's recommendations to the Oil Conservation Commission of New Mexico in Case 673 held May 10-11, 1954 upon the Commission's own motion for an order amending, revising, or abrogating existing rules and regulations and/or promulgating new regulations relating to gas pool delineation, gas proration, etc., for the Jalco, Langmat, Eumont and Arrow gas pools, Lea County, New Mexico.

It is considered by El Paso Natural Gas Company that the present orders of the Commission setting out gas pool delineations and prorating gas within such pools are reasonable and workable in their present form, except for the manner in which gas demand is allocated to the wells within the individual pools. This problem will be discussed later in this brief.

During the hearing of Case 673 certain refinements and revisions in the rules for the above mentioned pools were recommended to the Commission which are believed to provide more clarity and ease of administration than the present rules and may remove inequities and prevent hardships in some instances. Should the Commission desire to revise their present rules, El Paso Natural Gas Company recommends the rewording and revising of some of the present rules as follows:

WELL SPACING AND ACREAGE REQUIREMENTS FOR DRILLING TRACTS

RULE 4. The Secretary of the Commission shall have authority to grant exception to the requirements of Rules 2 and 3 where application has been filed in due form and such exception is required because of conditions resulting from previously drilled wells in the area or, in the case of Rule 3, the necessity of exception is based on topographic conditions.

Applicants shall furnish all operators within a 1320 foot radius of the subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all operators within such radius, together with a written stipulation that all operators within such radius have been properly notified. The Secretary of the Commission shall wait at least 20 days before approving any such exception and shall approve such exception only in the absence of objection of any offset operators. In the event an operator objects to the exception the Commission shall consider the matter only after proper notice and hearing.

PRORATION UNITS

RULE 7. (a) For the purpose of gas allocation in the _____ Gas Pool a standard proration unit shall consist of between 158 and 162 contiguous surface acres substantially in the form of a square which shall be a legal subdivision (quarter section) of the U. S. Public Land Surveys; except that in the correction Sections located in Township 21 South, Ranges 35 through 38 East, the provision that such standard proration unit be a legal subdivision (quarter section) of the U. S. Public Land Surveys shall be waived; provided, however, that a gas proration unit other than a legal quarter section may be formed after notice and hearing by the Commission, or as

outlined in paragraph (b). Any standard proration unit consisting of between 158 and 162 contiguous surface acres shall be considered as containing 160 acres for the purpose of gas allocation.

(b) The Secretary of the Commission shall have authority to grant an exception to Rule 7 (a) without notice and hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The acreage assigned the non-standard unit lies wholly within a legal section.

2. The acreage assigned the non-standard unit is adjacent to or contiguous with the acreage containing said well.

3. The operator making application for such exception to Rule 7 (a) includes with such application:

(aa) waivers from (1) all operators owning interests in the quarter section in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard gas proration unit; and (2) all operators owning interests within 1500 feet of the well to which such gas proration unit is proposed to be allocated; or

(bb) a list of names and addresses of all operators outlined in paragraph (aa), together with a stipulation that proper notice has been given said operators at the addresses given and no objection is received by the Commission from such operators within 20 days after the Commission receives such application.

4. The entire non-standard proration unit may reasonably be presumed to be productive of gas.

5. The length or width of the non-standard gas proration unit does not exceed 5280 feet.

(c) The Secretary of the Commission shall have authority to grant an exception to Rule 7 (a) after notice and hearing, when the operator is unable to comply with the provisions of Rule 7 (b).

GAS ALLOCATION

RULE 8. At least 30 days prior to the beginning of each gas proration period the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser its nominations of the amount of gas which each in good faith actually desires to purchase within the ensuing proration period, by months, from the _____ Gas Pool.

When a purchaser of gas, after filing its nominations for the proration period shall find that its requirements for gas have increased or decreased from the amount nominated for any month during the proration period, such purchaser shall indicate its revised estimated requirements during such month by filing supplemental nominations with the Commission at least three days prior to the regular hearing of the Commission for the month preceding such changed requirements.

All nominations shall be filed on a form prescribed by the Commission.

RULE 9. The Commission shall hold a public hearing between the 15th and 20th days of each month to determine the reasonable market demand for gas for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. Included in the monthly

proration schedule shall be a tab^ulation of allowable and production for the second preceding month, together with an adjusted allowable computation for the second preceding month, said adjusted allowable shall be computed^{by} comparing the actual allowable assigned with the actual production. In the event the allowable assigned is greater than the actual production, the allowable assigned the top allowable units shall be reduced proportionately; and in the event the allowable assigned is less than the production, then the allowable assigned the top allowable units shall be increased proportionately.

The Commission shall include in the proration schedule the gas wells in the _____ Gas Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of the _____ Gas Pool any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to the pool each month shall be equal to the sum of the nominations together with any adjustment which the Commission deems advisable. * The allocation to the pool remaining after subtracting the capacities of marginal units shall be divided and allocated among the non-marginal units in the following manner: fifty percent (50%) of such remaining allocation shall be divided among the non-marginal wells in the proportion that the individual well's calculated deliverability is to the sum of the calculated deliverabilities of all the non-marginal wells. The other fifty percent (50%) of such remaining allocation shall be divided among the non-marginal wells in the proportion that the acreage assigned the

proration unit of ~~said~~^{each} well is to the sum of the acreage assigned the proration units of all non-marginal wells. The calculated deliverability mentioned above shall be that deliverability as determined by a test taken in accordance with the directive of the New Mexico Oil Conservation Commission dated March 15, 1954, to "Operators of Gas Wells in Prorated Gas Pools - Lea County"

BALANCING OF PRODUCTION

RULE 10. Underproduction: The dates 7:00 A.M., January 1, and 7:00 A.M., July 1, shall be known as balancing dates and the periods of time bounded by these dates shall be known as gas proration periods. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the first succeeding proration period in addition to the normal gas allowable for such succeeding period. That portion of such cumulative underproduction carried forward into the first succeeding proration period, which is not made up during said period shall be deducted from the total underproduction at the end of the period, resulting in only that volume of underproduction accrued during said period being carried forward as cumulative underproduction into the next succeeding proration period.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the well's ability to produce.

*The wording recommended in brackets should be substituted for the presently existing wording at such time as the deliverability data presently being accrued by the Commission required tests is available to the Commission.

RULE 11. Overproduction: An operator of a well from which was produced a greater amount of gas than was allowed during a given proration period shall underproduce such well's allowable for the first succeeding proration period by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If the overproduction is in excess of the well's expected total of monthly allowables as determined from the nominations of purchasers for the first succeeding proration period, the well must be shut in at the beginning of said period until the resultant underproduction accumulated has equaled the cumulative overproduction accredited thereto. If at the end of the first succeeding proration period, the well is still overproduced and has not been in balance since the beginning of said proration period, then it shall be shut in and its current monthly allowable charged against said overproduction until the well is in balance.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in upon a showing at public hearing after due notice that complete shut-in of the well would result in material damage to the well.

REPORTING OF PRODUCTION

RULE 14. The monthly gas production from each gas proration unit shall be metered separately and the gas production therefrom shall be reported to the Commission by the operator so as to reach the Commission on or before the twentieth day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the gas produced. The full production of gas from each well shall be charged against the well's allowable regardless of what disposition has been

made of the gas; provided, however, that gas used on the lease for consumption in lease houses, heaters, treaters, combustion engines and other similar lease equipment shall not be charged against the well's allowable.

Copies of Form C-115, Monthly Production Report, submitted in compliance with Rule 14, shall be distributed by the operator as follows: Original to Oil Conservation Commission, Box 371, Santa Fe; two copies of Oil Conservation Commission, Box 2045, Hobbs, New Mexico.

The following comments are made concerning recommendations of witnesses at the May 10-11, 1954 hearing on Case 673:

1. Combining the Jalco and Langmat Pools should not cause additional administrative difficulties, and will remove present inequities existing because of offsetting wells having different allowables due to different demands for gas from the two pools.

2. Proration of the gas and oil pools as they were found when proration was initiated is thought to be proper and is reasonably accomplished by the rules and administrative procedure presently in effect whereby wells producing from a gas pool are prorated as gas wells and wells producing from an oil pool are prorated as oil wells without restriction of either because of the occurrence of both types of production on the same lease.

3. Underlying the areal extent of the Jalco and Langmat Pools, the Yates formation and all of the Seven Rivers formation, except the bottom 100 feet, should continue to be considered as primarily a gas reservoir and prorated as a common source of gas supply.

The lower 100 feet of the Seven Rivers formation and the Queen formation underlying such areal extent, as well as that portion outside that area, should continue to be considered as primarily an oil reservoir and prorated as a common source of oil supply.

4. Underlying the areal extent of the Eumont Pool, the Yates, Seven Rivers, and Queen formations should continue to be considered as primarily a gas reservoir and prorated as a common source of gas supply. The Grayburg and San Andres formations should continue to be considered as primarily an oil reservoir and prorated as a common source of oil supply.

5. The Arrow Gas Pool's vertical delineation should be amended to provide the same division as exists in the Eumont Pool.

6. Completion of new wells and recompletion of existing wells should be permitted either in (a) a common source of gas supply, or (b) a common source of oil supply, but production from the two sources should not be permitted, except in properly authorized dually completed wells.

7. A gas/oil ratio limit for those pools with no limit, coupled with a no-flare order, will put a stop to the wastive flaring of casinghead gas and should be instituted. A 10,000/1 ratio is recommended. From studies made by El Paso Natural Gas Company, it was determined that such a ratio limit would stop the flaring of gas from all wells to which El Paso is connected, and, in addition thereto, would decrease the gas available to El Paso plants by 18 million cubic feet per day, which should be more than ample to provide capacity for that gas produced from unconnected wells which will be commercially feasible to connect. No apparent additional waste preventive measures would be accomplished by establishment of a lower gas/oil ratio limit, but would result in excessive and unnecessary restriction of the casinghead gas available to plants serving the ^{fields} ~~fields~~ which presently have no gas/oil ratio restriction.

8. The rule defining a gas well as a well which produces with a gas/oil ratio of or in excess of 100,000 cubic feet of gas per barrel of oil produced is unnecessary in the four gas pools under consideration and would result in more problems than it would solve. The basis for such a rule is to prevent the wasteful flaring of gas theretofore permitted while the gas/oil ratio remained below 100,000/1, and the well was produced as an oil well. All gas, regardless of definition as dry gas or casinghead gas, will be conserved with application of a no-flare order, thereby making a gas well definition other than the present statewide definition unnecessary.

9. A proration schedule should continue to be issued monthly. The procedure outlined in the present rules for preparation of such a schedule is believed to be the most workable with the fluctuating conditions of demand apparent in these pools.

In order for the correlative rights of owners of gas within the four gas pools under discussion to be protected, the Commission must consider the relationship between the producible reserves underlying one tract as compared to such reserves underlying another tract. Actual determination of reserves in old pools such as these under consideration is difficult, if not impossible, to accomplish. In an area where all the acreage assigned to a well is productive, the reserves underlying one tract will vary from the reserves underlying another tract because of differences in pressure, porosity, thickness and interstitial water content. These same factors influence the deliverability calculated for a well. The deliverability test presently

being required by the Commission for gas wells in the designated gas pools of southeast Lea County, New Mexico, is a calculated deliverability which reflects the formation's ability to deliver gas into the well bore. The use of such deliverability in an allocation formula is recommended to the Commission because it is a reflection of the reserves available to each well. The pressure variation between the extremities of these pools and the variation in thickness between different portions of these pools reflect differences in reserves available to wells in different areas of the same pool, which makes it imperative that consideration be given to variations in reserves if correlative rights are to be protected.

Respectfully Submitted,

EL PASO NATURAL GAS COMPANY

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