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July 7, 1954

R. R. Spurrier, Secretary and Director
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Dear Dick:

Thank you for your letter of June 30. I am pleased to note that the Associated Press did not quote you correctly. I rarely pay much attention to newspaper articles, particularly such as those emanating from Professor Ximenes. However, I do become seriously concerned about a direct quote from a responsible person.

I listed a number of companies. Stanolind's position was definitely stated. The other companies listed were either represented at the hearing by persons who supported the high deliverability formula or who wrote letters giving the Commission their views. Many of the companies were kind enough to send me copies of the letters written the Commission. I think a tabulation of all parties expressing a preference will disclose an overwhelming majority of operators in favor of high deliverability formula.

I am enclosing a brief written argument and suggested rules submitted by El Paso Natural Gas Company.

I look forward to seeing you next week. With best personal regards,

Yours sincerely,

Ben R. Howell

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enc.

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

STANOLIND OIL AND GAS COMPANY'S APPLICATION FOR AMENDMENT OF ORDER R-110 RELATING TO THE BLANCO-MESAVERDE POOL, SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO, CONSOLIDATED WITH THE COMMISSION'S APPLICATION UPON ITS OWN MOTION TO CONSIDER AN ORDER PROMULGATING RULES AND REGULATIONS FOR THE BLANCO-MESAVERDE GAS POOL	CASES NOS. 330 AND 330-A

EL PASO NATURAL GAS COMPANY'S WRITTEN ARGUMENT

In approaching the problem of proration in the San Juan Basin, the basis of any proration order or proration rules must be the Statute. As the Commission well knows, the New Mexico Statute directs as follows:

> "In protecting correlative rights, the Commission may give equitable consideration to acreage, pressure, open flow, porosity, permeability, deliverability and quality of the gas and to such other pertinent factors as may from time to time exist, and in so far as is practicable, shall prevent drainage between producing tracts in a pool which is not equalized by counter-drainage." Section 12(c)
>
> "The rules, regulations or orders of the Commission shall, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas or both in the pool, and for this purpose to use his just and equitable share of the reservoir energy." Section 13(a) (underscoring ours)

The statutory directions have two points of special significance in this hearing: First, the protection of correlative rights and prevention of drainage must be tempered by that which is practicable; Second, consideration shall be given to recoverable gas rather than to gas in place.

We find no definition of "recoverable gas" in the Statute. A reasonable interpretation must mean the quantity of gas which can be recovered economically and which can be marketed at the time the gas production from the entire pool is being marketed. Gas reserves attributable to low deliverability wells admittedly cannot be fully marketed during the same time period as wells of higher deliverabilities. The practical operations of marketing gas require that gas be produced, transported and sold at the time the market exists. The millions of tons of coal which remain in the ground in the United States give no present economical benefit to the state, the landowner or the operator. The coal which was produced and sold when a market existed did give such benefit. Likewise, gas which remains in place after the field is generally depleted is of slight economic value and may be recoverable in theory but not in practical operation. Just as the depositor who draws upon his checking account needs payment when the check is presented, not at some future date, so the marketing program of gas must be based upon obtaining gas when needed, not at an uneconomical future date. While today natural gas markets are expanding, the future may see atomic energy or solar heat replace gas in the market.

All parties agree that the gas reserves (whether recoverable or reserves in place) underlying different tracts within the Blanco-Mesaverde Pool vary from tract to tract. The only difference among the parties is the extent or magnitude of the variances. The lowest estimate is two to one while the highest is thirty to one. A conservative median for the average variance that exists between wells in the pool is a ratio of five to one. This company's evidence supports that ratio as a pool-wide average.

The Commission's problem is to adopt a formula which, on a pool-wide basis, is designed to permit each owner, in so far as is practicable, to produce and recover his fair share of recoverable reserves. It is this company's considered opinion, based upon the drilling and operation of a majority of all existing wells in the Blanco-Mesaverde Field, and upon exhaustive and elaborate reserve studies, that there is a straight-line direct relationship between recoverable reserves and deliverability. This company recognizes that individual wells may not conform to the average but sincerely believes from all information currently available that a formula based upon deliverability is the only formula that would be fair and just for the entire pool. Various factors indicate reserves. Available evidence as to porosity and water content is fragmentary since few core analyses have been made. The use of pressure as a factor does not reflect differences in sand thicknesses and, in this field, would not initially give any consideration to substantial differences in underlying reserves. The pressures throughout the field show relatively slight differences. This company's studies indicate that there is a direct correlation between deliverability and the net effective pay of the producing sand. It would seem that deliverability is the single test reasonably reflecting the quantity of recoverable reserves which most quickly can be satisfactorily established for each well in the pool. Pending final deliverability tests, a percentage (18-20%) of the initial potential may be used as a temporary figure in lieu of tested deliverability.

It is elementary that proration must be upon a pool-wide basis rather than an individual well basis. The formula which most closely approximates for the entire pool the ratio of recoverable reserves to the average well is the formula that should be adopted. It is true that individual wells may deviate from the average. Is it not more reasonable to approach these deviations on an individual basis

after specific hearing than to attempt to pattern a pool-wide proration formula on the abnormal rather than the normal? No substantial evidence indicating uncompensated drainage of any particular well was introduced on this hearing. If any operator has suffered uncompensated drainage, it would seem only reasonable to think he would have elected to submit proof thereof. Fairness demands that the Commission should base its rules and formula upon the average of the entire pool rather than upon isolated cases involving two offset wells. When and if operations conducted under such a pool-wide formula develop inequities as between wells, then the operator suffering drainage should be permitted to apply for hearing and lower allowable may be imposed on the well causing the drainage. Such wells should be restricted by special rule rather than by general rule and only after notice and hearing.

A maximum allowable for any well has been suggested. This company believes such an approach unsound. If the Commission performs its duty and adopts that formula which most clearly reflects a direct relationship between recoverable reserves and well allowables, then each well should receive the allowable resulting from the application of that formula. To do otherwise is to concede that the formula is incorrect. To determine isolated cases by general rule rather than by special rule, after notice and hearing, would be without authority in law. A maximum allowable should be applied only on an individual well basis and afterfull opportunity to develop all facts surrounding the particular well.

The Commission properly expresses its concern about the weak well with the long payout period. El Paso Natural Gas Company has more cause to be concerned and is concerned about such wells than anyone else because this company, in its aggressive stepout program, has drilled more of these weak wells than any other operator. Regardless of which formula is adopted, many wells owned by this company will never pay out. Many wells owned by this company will never be able to make the allowable regardless of which formula may be adopted. All witnesses agree that day to day mechanics of operations and fluctuations of market demand would prevent the weakest wells from making any allowable that might be allocated to them. In so far as the 572 wells covered by the Phillips study were concerned, 30% appeared to be in this category on the basis of that study. El Paso Natural Gas Company has more weak wells than any other operator and has a sincere desire to protect its great investment in these wells. The company's recommendations protect the weak well. All witnesses admit that the effect of giving greater consideration to the acreage factor is to increase the number of limited wells. The Phillips study shows that the number of limited wells increases rapidly as the weight given to acreage increases. One objection to increasing the number of limited wells is that a deficiency will exist even between theoretical deliverability and the allowable resulting from such formula. In actual operations, this deficiency will be even greater because no well can actually make 100% of its theoretical deliverability. The effect of snowballing this deficiency is to require constant reallocation of such deficiencies to the

better wells. The result achieved by such reallocation brings the final result into nearly the same position as would have resulted had deliverability been given more weight in the first instance. It is undisputed that the existence of limited wells requires successive reallocations, creating substantially more clerical work and placing more wells in the underproduction group.

This company is deeply concerned with the prospect of under-production accumulating with the possibility of cancellation at the end of the balancing period. If under-production be cancelled rather than redistributed and reallocated on a retroactive basis to the over-producing wells, the field inevitably will fail to meet the market demand when the over-producing wells will have been shut in. If under-production at the end of the balancing period be reallocated to the over-producing wells, then unnecessary clerical work results and the final allocation comes close to that which would have been made in the first place had acreage been given less weight. This company would not be concerned about waste motion and a constant redistribution of under-production if any good purpose were achieved thereby. When the result is the same as would have been reached in the first instance by the application of a more practical formula, this company thinks the operator and the Commission both should be protected from such waste of time and money.

Whether the count be made on a well basis, acreage basis or individual operator basis, the overwhelming majority of operators favor the high deliverability formula. If the Commission has any doubt on this question, it is suggested that it take a poll. This

company has wells of all categories and sincerely believes that the fairest formula is one based upon deliverability. However, in deference to wishes of others, and as a middle-of-the road program which gives to every operator some consideration for his belief, El Paso Natural Gas Company earnestly recommends that the Commission adopt the formula based upon 75% deliverability times acreage plus 25% acreage. El Paso Natural Gas Company believes that a formula giving greater weight to the acreage factor would violate the directions of the law and would constitute a discrimination against the wells with the larger recoverable reserves. This is the considered judgment of the company from the standpoint of an operator, laying aside and disregarding any inconvenience, additional expense and operating difficulties that it may suffer as a pipe line purchaser and marketer of gas.

Respectfully submitted,

EL PASO NATURAL GAS COMPANY

By_____
Ben R. Howell, its attorney
of Jones,Hardie,Grambling & Howell
710 Bassett Tower,El Paso,Texas

EL PASO NATURAL GAS COMPANY

PROPOSED RULES AND REGULATIONS
FOR THE BLANCO MESAVERDE GAS POOL
SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO

WELL SPACING AND ACREAGE REQUIREMENTS FOR DRILLING TRACTS.

RULE 1. Any well drilled a distance of one mile or more from the outer boundary of the Blanco Mesaverde Gas Pool shall be classified as a wildcat well. Any well drilled less than one mile from the outer boundary of the Blanco Mesaverde Gas Pool shall be spaced, drilled, operated and prorated in accordance with the Regulations in effect in the Blanco Mesaverde Gas Pool.

RULE 2. Each well drilled or recompleted within the Blanco Mesaverde Gas Pool shall be located on a tract consisting of not less than a half section of approximately 320 surface contiguous acres substantially in the form of a rectangle which shall be a legal subdivision (half section) of the U. S. Public Land Surveys.

RULE 3. Each well drilled within the Blanco Mesaverde Gas Pool shall be located in the northeast or southwest quarter of the section but shall not be drilled closer than 660 feet to any outer boundary line of such quarter section nor closer than 330 feet to a quarter-quarter section or subdivision inner boundary nor closer than 1320 feet to a well drilling to or capable of producing from the same pool.

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 of leases offsetting the lease containing 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 such operators, together with a written stipulation that all such operators 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.

RULE 5. The provision of Statewide Rule 104 Paragraph (k), shall not apply to the Blanco Mesaverde Gas Pool.

GAS PRORATION

RULE 6. The Commission after notice and hearing, shall consider the nominations of gas purchasers from the Blanco Mesaverde Gas Pool and other relevant data and shall fix the

allowable production in the Blanco-Mesaverde Gas Pool, and shall allocate production among the gas wells in the Blanco-Mesaverde Gas Pool delivering to a gas transportation facility upon a reasonable basis and recognizing correlative rights, and shall include in the proration of such 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.

PRORATION UNITS

RULE 7. A. For the purpose of gas allocation in the Blanco Mesaverde Gas Pool a standard proration unit shall consist of approximately 320 contiguous surface acres consisting of the North, South, East or West half of a section and being a legal subdivision of the U. S. Public Land Surveys; provided, however, that a gas proration unit other than a legal half section may be formed after notice and hearing by the Commission, or as outlined in paragraph B. Any standard proration unit consisting of between 315 and 325 contiguous surface acres shall be considered as containing 320 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:

1. Where the unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys; or

2. Where application has been filed in due form and where the following facts exist and the following provisions are complied with:

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

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

c. The operator making application for such exception to Rule 7 A includes with such application:

(1) waivers from (a) all operators owning interests in the half 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 (b) all operators owning interests in acreage offsetting the non-standard proration unit; or

(2) a list of names and addresses of all operators outlined in paragraph (1), 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.

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

e. 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 Blanco Mesaverde 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 tabulation 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 Blanco Mesaverde Gas Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of the Blanco Mesaverde 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 a pool shall be divided and allocated among the wells appearing on the proration schedule in the following manner: (1) a tentative allocation shall be made by dividing seventy-five per cent (75%) of the pool allocation among said wells in the proportion that the production of each well's calculated deliverability multiplied by the acreage comprising the standard proration unit or approved non-standard unit upon which the well is located bears to the sum of such products for all the wells on the proration schedule; (2) the remaining twenty-five per cent (25%) of the pool allocation shall be divided among said wells in the proportion that the acreage comprising the proration unit of each well bears to the sum of the acreage comprising the proration unit of all wells appearing on the proration schedule. When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classified as a marginal well and shall have its allowable limited to its producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

BALANCING OF PRODUCTION

RULE 10. Underproduction: The dates 7:00 A. M., March 1, and 7:00 A. M., September 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. All underproduction accumulated to a well classified as marginal shall be added to the allocation for non-marginal wells and distributed thereto. While classified as a marginal well, the well shall accrue neither underproduction nor overproduction and its actual production shall be restricted only by the allowable it would have been assigned if it had been a non-marginal well.

[illegible] succeeding proration period. Should the allowable so calculated be less than the accumulated overproduction at the beginning of the first succeeding proration period, the well must be shut-in until the overproduction has been reduced to such allowable. Should the well's cumulative status not be brought in balance during the first succeeding proration period, that overproduction accumulated at the end of the first succeeding proration period must be brought in balance during the second succeeding proration period or the well must be shut-in at the end of the second succeeding proration period until its cumulative status 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.

GRANTING OF ALLOWABLES

RULE 12. No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

RULE 13. Allowables to newly completed gas wells shall commence on the date of connection to a gas transportation facility, as determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser, or the date of filing of Form C-104 and Form C-110 and the plat described above, whichever date is the later.

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 871, Santa Fe; two copies to Oil Conservation Commission, Box 697, Aztec, New Mexico.