

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 11705
Order No. R-10987**

**APPLICATION OF OIL CONSERVATION
DIVISION FOR TO AMEND ORDER R-8170,
AS AMENDED, "GENERAL RULES FOR THE
PRORATED POOLS OF NEW MEXICO" AND
ORDER NO. R-333, AS AMENDED, " RULES OF
PROCEDURE FOR PRORATED GAS POOLS IN
NORTHWEST NEW MEXICO"**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on April 9, 1998, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 7th day of May, 1998, the Commission, a quorum being present, having considered the record and being fully advised,

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) New Mexico Oil Conservation Division (the "Division") Order No. R-8170, as amended, sets forth the general rules for the prorated gas pools in New Mexico as well as special pool rules for the individual prorated gas pools. Order No. R-8170 has been amended several times throughout the years.

(3) Division Order No. R-333, as amended, sets forth the tests and test procedures for the prorated gas pools in Northwest New Mexico. Order No. R-333 has also been amended several times throughout the years.

(4) Early in the productive life of the San Juan Basin it was determined by testing and reservoir studies that the producing ability of a gas well and the acreage dedicated to that gas well were both indicators of the producible reserves of that well. The results of a standardized deliverability test combined with the amount of acreage dedicated to the well have been used by the Division in a complex formula to calculate that well's equitable share of the total amount of gas produced from the pool. This allocation of production has been performed by the Division in furtherance of its duties of protecting correlative rights and preventing waste. Due to the natural decline of producing wells, the drilling of new wells, and other changing conditions, wells within a pool have had to be tested periodically.

(5) Due to the declining productivity of wells in prorated pools, very few (approximately 6 of 4000 gas proration units) of these wells can produce more than their assigned allowables, i.e., are classified as nonmarginal. This is not anticipated to change in the foreseeable future. In addition, the current allowable calculation formula for the prorated gas pools in Northwest New Mexico may no longer be applicable due to the current gas market and the maturity of the reservoir production in the Northwest. However, existing Division rules require deliverability testing of many wells which will not be affected by allowable limitations and therefor will not affect correlative rights nor cause waste. This unnecessary testing is a burden on the operators as well as the Division.

(6) The Division determined, after consulting with numerous gas well operators in the Northwest, that the Division rules regarding testing of gas wells in prorated gas pools in the Northwest are in need of amendment to reduce the amount of gas well testing and change the basis for requiring testing. Frank Chaves, the District Supervisor of the Division Aztec District Office, formed a committee consisting of representatives from Amoco Production Company, Burlington Resources and Williams Field Services, that met several times to review the existing Division rules and recommend changes.

(7) The amendments recommended by the committee would limit the required deliverability testing to only nonmarginal wells and classify all wells in prorated gas pools in the Northwest as marginal by default unless substantial evidence indicates the well should be reclassified as nonmarginal.

(8) The information acquired from the testing of wells in non-prorated pools in Northwest New Mexico, required under Chapter IV of Order No. R-333, has become of little or no importance. This requirement should be eliminated which will eliminate testing of approximately 2500 wells.

(9) Since the general rules for prorated pools in New Mexico as contained in Order R-8170, as amended, are applicable statewide, the Division recommends that the general rules be formatted in compliance with the New Mexico Administrative Code (NMAC) and adopted in their amended form as Division Rule 605. Likewise, since the rules for testing and test procedures for gas wells in the prorated gas pools in Northwest New Mexico, as contained in Order No. R-333, as amended, are applicable to all such gas wells, the Division recommends that such rules be formatted in compliance with NMAC and adopted in their amended form as Division Rule 606.

(10) The Division also recommends that the special pool rules for the prorated pools in Northwest New Mexico, as set forth in Order No. R-8170, as amended, be amended to reflect the changes made in Rules 605 and 606.

(11) These amendments are in the best interests of conservation, the prevention of waste and the protection of correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) That portion of Division Order No. R-8170, as amended, entitled "General Rules for Prorated Gas Pools of New Mexico" is hereby amended and shall be promulgated as a Division Rule, Rule 605 (19 NMAC 15.H.605), entitled "Gas Proration" as shown on Exhibit A attached hereto and made part of this order. That portion of Order No. R-8170, as amended, setting forth special pool rules for individual prorated gas pools in New Mexico is also amended as shown on Exhibit B attached hereto and made part of this order.

(2) Division Order No. R-333, as amended, is hereby amended and promulgated as a Division Rule, Rule 606 (19 NMAC 15.H.606), entitled "Tests and Test Procedures for Prorated Gas Pools in Northwest New Mexico" as shown on Exhibit C attached hereto and made part of this order.

(3) Rules 605 and 606 shall be effective as of the date of publication in the New Mexico Register. The amendments to the special pool rules shall be effective as of the date of this order.

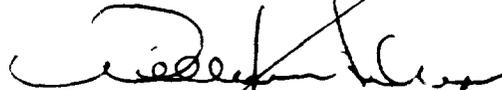
(4) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



JAMI BAILEY, Member



WILLIAM J. LEMAY, Member



LORI WROTENBERY, Chairman

S E A L

EXHIBIT "A"

605 GAS PRORATION RULES

605.A DEFINITIONS

(1) **ACREAGE FACTOR:** A GPU's acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage assigned to the GPU by a number equal to the number of acres in a standard GPU for such pool. However, the acreage tolerance provided in 605.B(2) shall apply. [5-30-98]

(2) **AD FACTOR:** An acreage times deliverability factor is calculated in pools in which acreage and deliverability are proration factors. The product obtained by multiplying the acreage factor by the calculated deliverability (expressed as MCF per day) for that GPU shall be known as the AD factor for that GPU. The AD Factor shall be computed to the nearest whole unit. [5-30-98]

(3) **ALLOCATION HEARING:** A hearing held by the Division twice each year to determine pool allocations for the ensuing allocation period. [5-30-98]

(4) **ALLOCATION PERIOD:** A six-month period beginning at 7:00 A.M. April 1 and October 1 of each year. [5-30-98]

(5) **BALANCING DATE:** The date 7:00 A.M. April 1 of each year shall be known as the balancing date, and the twelve months following this date shall be known as the gas proration period. [5-30-98]

(6) **BROKER:** A third party who negotiates contracts for purchase and resale. [5-30-98]

(7) **CLASSIFICATION PERIOD:** A three month period beginning at 7:00 A.M. April 1, July 1, October 1, and January 1 of each year. [5-30-98]

(8) **GAS POOL:** Any pool which has been designated as a gas pool by the Division after notice and hearing. [5-30-98]

(9) **GAS PRORATION UNIT (GPU):** The acreage allocated to a well, or in the case of an infill well or wells to a group of wells, for purposes of spacing and proration. GPU's may be either of a standard or nonstandard size as provided in these rules. (GPU's means plural GPU). [5-30-98]

(10) **GAS TRANSPORTER:** Any taker of gas, the party servicing the well meter, or the party responsible for measurement of gas sold from the well or beneficially used off-lease. This could be at the wellhead, at any other point on the lease, or at any other point authorized by the Division where connection is made for gas transportation or utilization (other than is necessary for maintaining the producing ability of the well). The Gas Transporter can be the gatherer, transporter, producer, or a delegate of one of those parties. The Gas Transporter shall be identified on Form C-104 and will be responsible for filing Form C-111 as required under the provisions of Rule 1111. [5-30-98]

(11) **GAS PURCHASER:** The purchaser (where ownership of the gas is first exchanged by the producer to the purchaser for an agreed value) of the gas from a gas well or GPU. [5-30-98]

(12) **HARDSHIP GAS WELL:** A gas well wherein underground waste will occur if the well is shut-in or curtailed below its minimum sustainable flow rate. No well shall be classified as a hardship gas well except after notice and hearing or upon appropriate administrative action of the Division. [5-30-98]

(13) **INFILL WELL:** An additional producing well on a GPU which serves as a companion well to an existing well on the GPU. [5-30-98]

(14) **MARGINAL GPU:** A proration unit which is incapable of producing or has not produced the non-marginal allowable based on pool allocation factors. Marginal GPU's do not accrue over or underproduction. [5-30-98]

(15) **NON-MARGINAL GPU:** A proration unit receiving an allowable based upon pool allocation factors. Non-marginal proration units accrue over or underproduction. [5-30-98]

(16) **OVERPRODUCTION:** The volume of gas produced on a GPU in any month greater than the assigned non-marginal allowable (does not include gas used in maintaining the producing ability of the well(s) of the GPU). Overproduction accumulates month to month during the proration period. [5-30-98]

(17) **PRORATED GAS POOL:** A prorated gas pool is a gas pool in which, after notice and hearing, the production is allocated by the Division according to these Rules and any applicable special pool rules. [5-30-98]

(18) **PRORATION PERIOD:** The twelve-month period beginning April 1 of each year shall be the gas proration period. [5-30-98]

(19) **SHADOW ALLOWABLE:** The gas volume calculated for a marginal GPU that is equal to the allowable assigned to a non-marginal GPU in the same pool of the same A (acreage) or A and AD (acreage deliverability) factors as the marginal GPU. [5-30-98]

(20) **UNDERPRODUCTION:** The volume of assigned non-marginal allowable not produced on a GPU. Underproduction accumulates month to month during the proration period. [5-30-98]

605.B. WELL ACREAGE AND LOCATION REQUIREMENTS

(1) **STANDARD GAS PRORATION UNIT SIZE AND WELL SPACING:**

- (a) Unless otherwise provided for in applicable special pool rules, gas wells in prorated gas pools shall be drilled according to the well spacing and acreage requirements contained in these Rules provided that when wells are drilled in pools with 640 acre spacing, a government section shall comprise the proration unit.
- (b) Any GPU drilled according to paragraph (a) which contains acreage within the tolerances below shall be considered a standard GPU for calculating allowables:

<u>STANDARD PRORATION UNIT</u>	<u>ACREAGE TOLERANCE</u>
160 acres	158-162 acres
320 acres	316-324 acres
640 acres	632-648 acres

[5-30-98]

(2) **NON-STANDARD GAS PRORATION UNITS:**

- (a) The District Supervisor of the appropriate district office of the Division has the authority to approve a nonstandard GPU without notice and hearing when the unorthodox size and shape of the GPU is necessitated by a variation in the legal subdivision of the U.S. Public Land Surveys and the nonstandard GPU is not less than 75% nor more than 125% of a standard GPU by accepting a Form C-102 land plat showing the proposed nonstandard GPU with the number of acres contained therein, and shall assign an allowable

to the nonstandard GPU based upon the acreage factor for that acreage.

- (b) Nonstandard proration units and unorthodox locations may be approved by the Division according to applicable special pool rules or Division Rules.

[5-30-98]

605. C. NOMINATIONS

(1) **GAS PURCHASERS OR GAS TRANSPORTERS SHALL NOMINATE:** Each gas purchaser or each gas transporter as herein provided shall file with the Division its nomination for the amount of gas which it in good faith desires to purchase and/or expects to transport during the ensuing allocation period from each gas pool regulated by this order. The purchaser may delegate the nomination responsibility to the transporter, operator, or broker by notifying the Division's Santa Fe office. One copy of such nomination for each pool shall be submitted to the Division's Santa Fe office on Form C-121-A by the first day of the month during which the Division will consider at its allocation hearing the nominations for the succeeding allocation period. The Division shall consider at its allocation hearing the nominations received, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste during the ensuing allocation period.

The Division Director may, at his discretion, suspend this rule whenever it appears that the nominations are of little or no value. [5-30-98]

(2) **SCHEDULE:** The Division shall issue a gas proration schedule for each allocation period showing the monthly allowable for each GPU that may be produced during each month of the ensuing allocation period, the current classification of each GPU, and such other information as is necessary to show the allowable production status of each GPU on the schedule. The Division may issue supplemental proration schedules during an allocation period as necessary to show changes in GPU classification, adjustments to allowables due to changes in market conditions, or to reflect any other changes as the Division deems necessary. [5-30-98]

(3) **PRORATION OF ALL GAS WELLS WITHIN A POOL:** The Division shall include in the proration schedule the gas wells in the gas pools regulated by this order delivering to a gas transporter, and shall include in the proration schedule 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 a well. [5-30-98]

605.D. ALLOCATION AND GRANTING OF ALLOWABLES

(1) **FILING OF FORM C-102 AND FORM C-104 REQUIRED:** No GPU shall be assigned an allowable before receipt of Form C-102 (well location and acreage dedication plat) and the approval date of Form C-104 (Request for Allowable and Authorization to Transport Oil and Natural Gas). [5-30-98]

(2) **HOW ALLOWABLES ARE CALCULATED:** The total allowable to be allocated to each gas pool regulated by this order for each allocation period shall be equal to the estimated market demand as determined by the Division, plus any adjustments the Director deems necessary to equate the total pool allowable to the estimated market demand. The Director may make such adjustments as he deems necessary to compensate for overproduction, underproduction, and other circumstances which may necessitate such adjustment to equate pool allowable to the anticipated market demand. The estimated market demand for each pool shall be established from any information the Director requires and can consist of nominations from purchasers, transporters or other parties having knowledge of market demand for gas from such pools, actual past production figures, seasonal trends, or any other factors deemed necessary to establish estimated market demand. The Director shall not be bound to use all the information requested and can establish market demand by any method so approved. A monthly allowable shall be assigned to each GPU entitled to an allowable for the ensuing allocation period by allocating the pool allowable among all such GPU's in that pool according to the procedure set forth in the following paragraphs of this order. Should market conditions indicate a change is necessary, the Director may adjust allowables up or down during the 6-month allocation period using a maximum of 10% as a guideline. [5-30-98]

(3) **MARGINAL GPU ALLOWABLE:** The monthly allowable to be assigned to each marginal GPU shall be equal to its average monthly production from its latest classification period. [5-30-98]

(4) **NON-MARGINAL GPU ALLOWABLE:** Non-marginal GPU allowables shall be determined in conformance with the applicable special pool rules. [5-30-98]

(a) In pools where acreage is the only proration factor, the total non-marginal allowable shall be allocated to each GPU in the proportion that each GPU acreage factor bears to the total acreage factor for all non-marginal GPU's. [5-30-98]

(b) In pools where acreage and deliverability are proration factors:

(i) A percentage as set forth in special pool rules, of the non-marginal allowable shall be allocated to each GPU in the proportion that each GPU's AD factor bears to the total AD factor for all non-marginal GPU's in the pool; and

- (ii) The remaining non-marginal allowable shall be allocated to non-marginal GPU's among each GPU in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

[5-30-98]

(5) **NEW CONNECTS ASSIGNMENT OF ALLOWABLES:** Allowables to newly completed gas wells shall commence, in pools where acreage is the only proration factor, on the date of first delivery of gas to a gas transporter as demonstrated by an affidavit furnished by the transporter to the appropriate Division district office or the approval date of Form C-102 and Form C-104, whichever is later. [5-30-98]

(6) **GAS CHARGED AGAINST GPU'S ALLOWABLE:** Except as provided in the Special Pool Rules, the volume of produced gas sold or beneficially used other than lease fuel from each GPU shall be charged against the GPU's allowable; however, the gas used in maintaining the producing ability of the well shall not be charged against the allowable. [5-30-98]

(7) **CHANGE IN ACREAGE:** If the acreage assigned to a GPU is changed, the operator shall notify the appropriate Division district office in writing of such change by filing a revised Plat (Form C-102). The revised allowable, as determined by the Division, assigned to the GPU shall be effective on the first day of the month following receipt of the notification. [5-30-98]

(8) **MINIMUM ALLOWABLES:** After notice and hearing, the Division may assign minimum allowables for prorated gas pools to avoid waste, encourage efficient operations, and to prevent the premature abandonment of wells. (See Special Pool Rules for minimum allowable amount.) In determining the volume of minimum allowable for a well with a standard proration unit, the Division shall take into account economic and engineering factors such as drilling and operating costs, anticipated revenues, taxes, and any similar data that will establish that the ultimate recovery of hydrocarbons will be increased from the pool because of the adoption of a minimum allowable for the pool. Once adopted, the minimum allowable for wells with nonstandard proration units shall be proportionally adjusted. [5-30-98]

(9) **DELIVERABILITY TESTS:** In pools where acreage and deliverability are proration factors, wells on non-marginal GPUs will be tested in accordance with Division Rules and the test results shall be used in calculating deliverabilities for the succeeding proration period. Wells on GPUs reclassified to non-marginal shall be tested within 90 days of the order and thereafter in accordance with the appropriate testing schedule for the pool. Wells on marginal GPUs are exempt from deliverability testing. [5-30-98]

605.E. BALANCING OF PRODUCTION

(1) **UNDERPRODUCTION:** Any non-marginal GPU which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward in the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any underproduction carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be canceled. [5-30-98]

(2) **BALANCING UNDERPRODUCTION:** Production during any one month of a gas proration period greater than the allowable assigned to a GPU for such a month shall be applied against the underproduction carried into such a period in determining the amount of allowable, if any, to be canceled. [5-30-98]

(3) **OVERPRODUCTION:** Any GPU which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period. Said overproduction shall be made up by underproduction during the succeeding gas proration period. Any GPU which has not made up the overproduction carried into a gas proration period by the end of said period shall be shut in until such overproduction is made up. [5-30-98]

(a) **TWELVE-TIMES OVERPRODUCED, NORTHWEST:** For the prorated gas pools of Northwest New Mexico, if it is determined that GPU is overproduced in an amount exceeding twelve times its current year January allowable (or, in the case of a newly connected well, a marginal well, or a well recently reclassified as non-marginal, twelve times the January allowable assigned to a non-marginal GPU of similar acreage and deliverability factors), it shall be shut in until its overproduction is less than twelve times its January allowable, as determined hereinabove. [5-30-98]

(b) **SIX-TIMES OVERPRODUCED, SOUTHEAST:** For the prorated gas pools of southeast New Mexico, if it is determined that a GPU is overproduced in an amount exceeding six times its current year January allowable (or, in the case of a newly connected well, a marginal well, or a well recently reclassified as non-marginal, six times the January allowable assigned to a non-marginal GPU of a similar acreage factor), it shall be shut in until its overproduction is less than six times its January allowable, as determined hereinabove. [5-30-98]

(4) EXCEPTION TO SHUT IN FOR OVERPRODUCTION: The Director shall have authority to permit a GPU which is subject to shut-in, pursuant to (3) (a) or (b) above to produce up to 250 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission may be rescinded for any GPU produced greater than the monthly rate authorized by the Director. [5-30-98]

(5) BALANCING OVERPRODUCTION: Allowable assigned to a GPU during any one month of a gas proration period greater than the production for the same month shall be applied against the overproduction chargeable to such GPU in determining the overproduction which must be made up pursuant to the provisions of (3)(a) or (b) above. [5-30-98]

(6) EXCEPTION TO BALANCING OVERPRODUCTION: The Director may allow overproduction to be made up at a lesser rate than permitted under (3)(a) or (b) or (5) above upon a showing at public hearing that the same is necessary to avoid material damage to the well. [5-30-98]

(7) HARDSHIP GAS WELLS: If a GPU containing a hardship gas well is overproduced, the operator must take the necessary steps to reduce production in order to reduce the overproduction. Any overproduction existing at the time of designation of a well as a hardship gas well or accruing to the GPU thereafter shall be carried forward until it is made up by underproduction. No GPU containing a hardship gas well, which GPU is overproduced, shall be permitted to produce at a rate higher than the minimum producing rate authorized by the Division. [5-30-98]

(8) MORATORIUM ON SHUT-INS: The Director shall have authority to grant a pool-wide moratorium of up to three months as to the shutting in of gas wells in a pool during periods of high demand emergency upon proper showing that such emergency exists, and that a significant number of the wells in the pool are subject to shut-in pursuant to the provisions of (3)(a) or (b) above. No moratorium beyond the aforementioned three months shall be granted except after notice and hearing. [5-30-98]

(9) The Director may reinstate allowable to wells which suffered cancellation of allowable under (1) above or F.(3) below or loss of allowable due to reclassification of a well under F.(2) below. If such cancellation or loss of allowable was caused by non-access or limited access to the average market demand in the pool rather than inability of the well to produce. Upon petition, with a showing of circumstances which prevented production of the non-marginal allowable, and evidence that the well was capable of producing at allowable rates during the period for which reinstatement is requested, the allowable may be reinstated in such amounts needed to avoid curtailment or shut-in of the well for excessive overproduction. Such petition shall be approved administratively or docketed for hearing within 30 days after receipt in the Division's Santa Fe office. [5-30-98]

605.F. CLASSIFICATION OF GPU's

(1) RECLASSIFICATION BY THE DIRECTOR: The Director may reclassify a marginal or non-marginal GPU anytime the GPU's producing ability justifies such reclassification. The Director may suspend the reclassification of GPU's on his own initiative, or upon proper showing by an affected interest owner, should it appear that such suspension is necessary to permit underproduced GPU's, which would otherwise be reclassified, a proper opportunity to make up such underproduction. [5-30-98]

(2) RECLASSIFICATION TO MARGINAL: A non-marginal well may be reclassified as marginal in either of the following ways:

- (a) After the production data is available for the last month of each classification period, any GPU which had an underproduced status at the beginning of the allocation period shall be reclassified to marginal if its highest single month's production during the classification period is less than its average monthly allowable during such period; however, the operator of any GPU so classified, or other affected interest owner, shall have 30 days after receipt of notification of marginal classification in which to submit satisfactory evidence to the Division that the GPU is not of marginal character and should not be so classified; or
- (b) A GPU which is underproduced more than the overproduction limit as described in E.(3)(a) or (b) above, whichever is applicable, shall be reclassified as marginal.

[5-30-98]

(3) CANCELLATION OF UNDERPRODUCTION FOR MARGINAL GPU: A GPU which is classified as marginal shall not be permitted to accumulate underproduction, and any underproduction accrued to a GPU before its classification as marginal shall be canceled. [5-30-98]

(4) RECLASSIFICATION TO NON-MARGINAL: If, at the end of any classification period, a marginal GPU has produced more gas during the proration period to that time than its shadow allowable for that same period, the GPU shall be reclassified as a non-marginal GPU. [5-30-98]

(5) REINSTATEMENT OF STATUS: A GPU reclassified to non-marginal under the provisions of (4) above shall have reinstated to it all underproduction which accrued or would have accrued as a non-marginal GPU from the current proration period, underproduction from the prior proration period may be reinstated after notice and hearing. All uncompensated-for overproduction accruing to the GPU while marginal shall be chargeable upon reclassification to non-marginal. [5-30-98]

605.G. REPORTING OF PRODUCTION - FILING C-111 AND C-115 REPORTS: Transporters and operators shall file gas transportation and production reports pursuant to Rules 1111 and 1115 of the Division Rules provided that upon approval by the Director as to the specific program to be used, any producer or transporter of gas may be permitted to report metered production of gas on a chart-period basis; provided the following provisions shall be applicable to each gas well:

(1) Reports for a month shall include not less than 24 nor more than 32 reported days.

(2) Reported days may include as many as the last seven days of the previous month but no days of the succeeding month.

(3) The total of the monthly reports for a year shall include not less than 360 nor more than 368 reported days.

(4) For purposes of these rules, the term "month" shall mean "calendar month" for those reporting on a calendar month basis, and shall mean "reporting month" for those reporting on a chart-period basis according to the exception provided in this rule.

[5-30-98]

EXHIBIT "B"

SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS

SPECIAL RULES AND REGULATIONS FOR THE BASIN-DAKOTA GAS POOL

The vertical limits for the Basin-Dakota Gas Pool shall be from the base of the Greenhorn Limestone to a point 400 feet below the base of the said formation and consisting of the Graneros formation, the Dakota formation and the productive upper portion of the Morrison formation.

The Basin-Dakota Gas Pool was created February 1, 1961, and gas proration became effective February 1, 1961.

WELL ACREAGE AND LOCATION REQUIREMENTS

The STANDARD GPU (Gas Proration Unit) in the Basin-Dakota Gas Pool shall be 320 acres.

WELL LOCATION:

- 1) THE INITIAL WELL drilled on a GPU shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- 2) THE INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Dakota well, and shall be located with respect to the GPU boundaries as described in the preceding paragraph.

No Dakota infill well shall be drilled nearer than 920 feet to an existing Dakota well on the same GPU.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or the federal form) for the subsequent well on a GPU shall have outlined thereon the boundaries of the GPU and shall show the location of all existing Dakota wells on the GPU plus the proposed new well.

In the event an infill well is drilled on any GPU, both wells shall be produced for so long as it is economically feasible to do so.

ALLOCATION AND GRANTING OF ALLOWABLES

NON-MARGINAL GPU ALLOWABLE: The pool allowable remaining each month after deducting the total allowable assigned to marginal GPU's shall be allocated among the non-marginal GPU's entitled to an allowable in the following manner:

- GPU's shall be allocated among such GPU's in the proportion that each GPU's AD Factor bears to the total AD Factor for all non-marginal GPU's in the pool.
- When calculating the allowable for a GPU containing an infill well, the deliverability of both wells shall be added in calculating the AD Factor and the allowable may be produced from both wells.
- Sixty percent (60%) of the pool allowable remaining to be allocated to non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

MINIMUM ALLOWABLES: A minimum allowable of 250 MCF per month per GPU will be assigned to prevent the premature abandonment of wells.

A GPU in the BASIN DAKOTA GAS POOL shall be classified as marginal unless reclassified by the Director pursuant to Rule 605.F.(2). Any operator in the BASIN DAKOTA GAS POOL may request a reclassification of a GPU in that pool.

(General Pool Rules also apply unless in conflict with these Special Pool Rules.)

**SPECIAL RULES AND REGULATIONS FOR THE
BLANCO-MESAVERDE GAS POOL**

The VERTICAL LIMITS for the Blanco-Mesaverde Gas Pool shall be as follows:

- North and east of a line generally running from the northwest corner of Township 31 North, Range 13 West, San Juan County, New Mexico, to the southwest corner of Township 24 North, Range 1 East, NMPM, Rio Arriba County, New Mexico, (as fully described on Exhibit "A" of Order R-5459, August 1, 1977, as amended, and in Rule 25 of this order), the vertical limits shall be from the Huerfanito Bentonite marker to a point 500 feet below the top of the Point Lookout Sandstone.
- South and west of the line described in (A) above, the vertical limits shall be from a point 750 feet below said Huerfanito Bentonite marker to a point 500 feet below the top of the Point Lookout Sandstone.
- The Blanco-Mesaverde Gas Pool was created February 25, 1949 and gas proration became effective March 1, 1955.

WELL ACREAGE AND LOCATION REQUIREMENTS

The STANDARD GPU (GAS PRORATION UNIT) in the Blanco-Mesaverde Gas Pool shall be 320 acres.

WELL LOCATION:

1. THE INITIAL WELL drilled on a GPU shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
2. THE INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well, and shall be located with respect to the GPU boundaries as described in the preceding paragraph.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or the federal form) for the subsequent well on a GPU shall have outlined thereon the boundaries of the GPU and shall show the location of all existing Mesaverde wells on the GPU plus the proposed new well.

In the event an infill well is drilled on any GPU, both wells shall be produced for so long as it is economically feasible to do so.

ALLOCATION AND GRANTING OF ALLOWABLES

NON-MARGINAL GPU ALLOWABLE: The pool allowable remaining each month after deducting the total allowable assigned to marginal GPU's shall be allocated among the non-marginal GPU's entitled to an allowable in the following manner:

- A) Seventy-five percent (75%) of the pool allowable remaining to be allocated to the non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's AD Factor bears to the total AD Factor for all non-marginal GPU's in the pool.

When calculating the allowable for a GPU containing an infill well, the deliverability of both wells shall be added in calculating the AD Factor and the allowable may be produced from both wells.

- B) Twenty-five percent (25%) of the pool allowable remaining to be allocated to non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

MINIMUM ALLOWABLES: A minimum allowable of 250 MCF per month per GPU will be assigned to prevent the premature abandonment of wells.

A GPU in the BLANCO MESAVERDE GAS POOL shall be classified as marginal unless reclassified by the Director pursuant to Rule 605.F.(2). Any operator in the BLANCO MESAVERDE GAS POOL may request a reclassification of a GPU in that pool.

MISCELLANEOUS SPECIAL POOL RULES

VERTICAL LIMIT BOUNDARY: Exhibit "A" of Order R-5459 which defines a dividing line across the Blanco-Mesaverde Pool reads as follows:

EXHIBIT "A"

This Exhibit defines the Northwest-Southeast trending line established by Order R-5459, as amended, that divides the Blanco-Mesaverde pool for defining the vertical limits of the pool. Said line traverses the South side or West side of the sections listed below:

TOWNSHIP 24 NORTH, RANGE 01 EAST, NMPM

Section 31: West

TOWNSHIP 24 NORTH, RANGE 01 WEST, NMPM

Section 03: West

Section 10: West and South

Section 14: West and South

Section 24: West

Section 25: West and South

TOWNSHIP 25 NORTH, RANGE 01 WEST, NMPM

Section 07: West
Section 18: West and South
Section 20: West and South
Section 28: West
Section 33: West and South

TOWNSHIP 25 NORTH, RANGE 02 WEST, NMPM

Section 01: West and South

TOWNSHIP 26 NORTH, RANGE 02 WEST, NMPM

Sections 07 and 08: South
Section 16: West and South
Section 22: West and South
Section 26: West
Section 35: West and South

TOWNSHIP 26 NORTH, RANGE 03 WEST

Sections 02 and 03: South
Section 04: West and South
Section 12: West and South

TOWNSHIP 27 NORTH, RANGE 03 WEST, NMPM

Section 31 and 32: South

TOWNSHIP 27 NORTH, RANGE 04 WEST, NMPM

Sections 31 through 36: South

TOWNSHIP 27 NORTH, RANGE 05 WEST, NMPM

Section 31: West and South
Sections 32 through 36: South

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 06: West
Section 07: West and South
Sections 08 and 09: South
Section 14: South
Section 15: West and South
Section 24: West
Section 25: West and South

TOWNSHIP 28 NORTH, RANGE 06 WEST, NMPM

Sections 07, 18, 19, 30, and 31: West

TOWNSHIP 29 NORTH, RANGE 7 WEST, NMPM

Section 31: West and South
Sections 32 through 36: South

TOWNSHIP 29 NORTH, RANGE 08 WEST, NMPM

Section 17: South
Section 18: West and South
Section 21: West and South
Section 22: South
Section 25: South
Section 26: West and South

TOWNSHIP 29 NORTH, RANGE 09 WEST, NMPM

Section 03: South
Section 04: West and South
Section 11: West and South
Section 12: South

TOWNSHIP 30 NORTH, RANGE 09 WEST, NMPM

Section 31: West and South
Section 32: South

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM

Section 18: South
Section 20: West and South
Section 21 and 22: South
Section 25: South
South 26: West and South

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM

Section 06: West and South
Section 08: West and South
Sections 09, 10, 11: South
Section 13: West and South

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM

Section 19: South
Sections 27 and 28: South
Section 29: West and South
Section 35: West and South
Section 36: South

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM

Sections 07 and 08: South
Sections 14 and 15: South
Section 16: West and South
Section 24: West and South

TOWNSHIP 31 NORTH, RANGE 14 WEST, NMPM

Section 12: South

(General Pool Rules also apply unless in conflict with these Special Pool Rules.)

SOUTH BLANCO-PICTURED CLIFFS GAS POOL

THE VERTICAL LIMITS of the South Blanco-Pictured Cliffs Gas Pool shall be the Pictured Cliffs formation.

The South Blanco-Pictured Cliffs Gas Pool, Rio Arriba, San Juan, and Sandoval Counties, New Mexico, was created May 20, 1952 and gas proration became effective March 1, 1955.

WELL ACREAGE AND LOCATION REQUIREMENTS

STANDARD GPU (GAS PRORATION UNIT) in the South Blanco-Pictured Cliffs Gas Pool shall be 160 acres.

ALLOCATION AND GRANTING OF ALLOWABLES

NON-MARGINAL GPU ALLOWABLE: The pool allowable remaining each month after deducting the total allowable assigned to marginal GPU's shall be allocated among the non-marginal GPU's entitled to an allowable in the following manner:

A) Seventy-five percent (75%) of the pool allowable remaining to be allocated to the non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's AD Factor bears to the total AD Factor for all non-marginal GPU's in the pool.

B) Twenty-five percent (25%) of the pool allowable remaining to be allocated to non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

MINIMUM ALLOWABLES: A minimum allowable of 250 MCF per month per GPU will be assigned to prevent premature abandonment of wells.

A GPU in the **SOUTH BLANCO PICTURED CLIFFS GAS POOL** shall be classified as marginal unless reclassified by the Director pursuant to Rule 605.F.(2). Any operator in the **SOUTH BLANCO PICTURED CLIFFS GAS POOL** may request a reclassification of a GPU in that pool.

(General Pool Rules also apply unless in conflict with these Special Pool Rules.)

SOUTH BLANCO-PICTURED CLIFFS GAS POOL

THE VERTICAL LIMITS of the South Blanco-Pictured Cliffs Gas Pool shall be the Pictured Cliffs formation.

The South Blanco-Pictured Cliffs Gas Pool, Rio Arriba, San Juan, and Sandoval Counties, New Mexico, was created May 20, 1952 and gas proration became effective March 1, 1955.

WELL ACREAGE AND LOCATION REQUIREMENTS

STANDARD GPU (GAS PRORATION UNIT) in the South Blanco-Pictured Cliffs Gas Pool shall be 160 acres.

ALLOCATION AND GRANTING OF ALLOWABLES

NON-MARGINAL GPU ALLOWABLE: The pool allowable remaining each month after deducting the total allowable assigned to marginal GPU's shall be allocated among the non-marginal GPU's entitled to an allowable in the following manner:

A) Seventy-five percent (75%) of the pool allowable remaining to be allocated to the non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's AD Factor bears to the total AD Factor for all non-marginal GPU's in the pool.

B) Twenty-five percent (25%) of the pool allowable remaining to be allocated to non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

MINIMUM ALLOWABLES: A minimum allowable of 250 MCF per month per GPU will be assigned to prevent premature abandonment of wells.

A GPU in the SOUTH BLANCO PICTURED CLIFFS GAS POOL shall be classified as marginal unless reclassified by the Director pursuant to Rule 605.F.(2). Any operator in the SOUTH BLANCO PICTURED CLIFFS GAS POOL may request a reclassification of a GPU in that pool.

(General Pool Rules also apply unless in conflict with these Special Pool Rules.

SPECIAL RULES AND REGULATIONS FOR THE TAPACITO-PICTURED CLIFFS GAS POOL

THE VERTICAL LIMITS of the Tapacito-Pictured Cliffs Gas Pool shall be the Pictured Cliffs formation.

The Tapacito-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, was created April 18, 1956 and gas proration in this pool became effective August 1, 1958.

WELL ACREAGE AND LOCATION REQUIREMENTS

STANDARD GPU (GAS PRORATION UNIT) in the Tapacito-Pictured Cliffs Gas Pool shall be 160 acres.

ALLOCATION AND GRANTING OF ALLOWABLES

NON-MARGINAL GPU ALLOWABLE: The pool allowable remaining each month after deducting the total allowable assigned to marginal GPU's shall be allocated among the non-marginal GPU's entitled to an allowable in the following manner:

- A) Seventy-five percent (75%) of the pool allowable remaining to be allocated to the non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's "AD Factor" bears to the total "AD Factor" for all non-marginal GPU's in the pool.
- B) Twenty-five percent (25%) of the pool allowable remaining to be allocated to non-marginal GPU's shall be allocated among such GPU's in the proportion that each GPU's acreage factor bears to the total acreage factor for all non-marginal GPU's in the pool.

MINIMUM ALLOWABLES: A minimum allowable of 250 MCF per month per GPU will be assigned to prevent premature abandonment of wells.

A GPU in the TAPACITO PICTURED CLIFFS GAS POOL shall be classified as marginal unless reclassified by the Director pursuant to Rule 605.F.(2). Any operator in the GAS POOL may request a reclassification of a GPU in that pool.

(General Pool Rules also apply unless in conflict with these Special Pool Rules.)

EXHIBIT "C"

606 TESTS AND TEST PROCEDURES FOR PRORATED POOLS IN NORTHWEST NEW MEXICO

606.A. TYPE OF TESTS REQUIRED FOR WELLS COMPLETED IN PRORATED GAS POOLS

(1) **Reclassified GPUs:** An operator of a well on a Gas Proration Unit (GPU) that has been reclassified as non-marginal will conduct deliverability tests on that well within 90 days of the order reclassifying it, unless there are current tests on file with the Division or that order requires a new test. A current test is a test which was conducted during the last test period for that pool or later. [5-30-98]

(2) **Non-marginal GPUs:** Operators will conduct deliverability tests on wells on non-marginal GPUs every five years. If the Division determines that a well's test data and production data warrant more frequent testing of a well, the Division may set up special testing schedules for that well. [5-30-98]

(3) Scheduling of Tests

(a) **Notification of Pools to be Tested:** By September 1 of each year the Aztec District Office of the Division will notify operators of non-marginal GPUs if their wells will be tested during the following test period. [5-30-98]

(b) The results of all deliverability tests required must be filed with the Aztec District Office within 90 days following the completion of each test. Provided however, that any test completed between December 31 of the test year and March 10 of the following year are due no later than March 31. No extension of time for filing tests beyond March 31 will be granted except after notice and hearing. [5-30-98]

(c) Failure to file any test within the above-prescribed times will subject the GPU to the loss of one day's allowable for each day the test is late. [5-30-98]

- (d) Any well scheduled for testing during its test year may have the conditioning period, test flow period, and part of the seven-day shut-in period conducted in December of the previous year provided that, if the seven-day shut-in period immediately follows the test flow period, the seven-day shut-in pressure is to be measured in January of the test year. The earliest date that a well can be scheduled for a deliverability test would be such that the test flow period would end on December 25 of the previous year. [5-30-98]
- (e) Downhole commingled wells are to be scheduled for tests on dates for the pool of the lowermost prorated completion of the well. [5-30-98]
- (f) In the event a well is shut-in by the Division for overproduction, the operator may produce the well for a period of time to secure a test after written notification to the Division. All gas produced during this testing period will be used in determining the over/under produced status of the well. [5-30-98]
- (g) An operator may schedule a well for a deliverability retest upon notification to the Aztec District Office at least ten days before the test is to be commenced. Such retest will be for substantial reason and will be subject to the approval of the Division. A retest will be conducted in conformance with the deliverability test procedures of these rules. The Division, at its discretion, may require the retesting of any well by notification to the operator to schedule such retest. These tests, as filed on Form C-122A, should be identified as "RETEST" in the remarks column. [5-30-98]

(4) **Witnessing of Tests:** Any deliverability test may be witnessed by any or all of the following: a representative of the Division, an offset operator, a representative of the gas transportation facility connected to the well under test, or a representative of the gas transportation facility taking gas from an offset operator. [5-30-98]

606.B. PROCEDURE FOR TESTING

(1) The test shall begin by producing a well in the normal operating manner into the pipeline through either the casing or tubing, but not both, for a period of fourteen consecutive days. This shall be known as the conditioning period. The production valve and choke settings shall not be changed during either the conditioning or flow periods, except during

the first ten days of the conditioning period when maximum production would over-range the meter chart or location production equipment. The first ten days of the conditioning period shall not have more than 48 hours of cumulative interruptions of flow. The eleventh to fourteenth days, inclusive of the conditioning period, shall have no interruptions of flow whatsoever. Any interruption of flow that occurs as normal operation of the well as stop-cock flow, intermittent flow, or well blow down will not be counted as shut-in time in either the conditioning or flow period. [5-30-98]

(2) The daily flowing rate shall be determined from an average of seven or eight consecutive producing days, following a minimum conditioning period of 14 consecutive days of production. This shall be known as the flow period. [5-30-98]

(3) Instantaneous pressure shall be measured by a deadweight gauge or other method approved by the Division during the seven-day or eight-day flow period at the casinghead, tubinghead, and orifice meter, and shall be recorded along with instantaneous meter-chart static pressure reading. [5-30-98]

(4) If a well is producing through a compressor that is located between the wellhead and the meter run, the meter run pressure and the wellhead casing pressure and the wellhead tubing pressure are to be reported on Form C-122A. (Neither the suction pressure nor the discharge pressure of the compressor is considered wellhead pressure.) A note shall be entered in the remarks portion on Form C-122A stating: "This well produced through a compressor." [5-30-98]

(5) When it is necessary to restrict the flow of gas between the wellhead and the orifice meter, the ratio of the downstream pressure, psia, to the upstream pressure, psia, shall be determined. When this ratio is 0.57 or less, critical flow conditions shall be considered to exist across the restriction. [5-30-98]

(6) When more than one restriction between the wellhead and the orifice meter causes the pressures to reflect critical flow between the wellhead and the orifice meter, the pressures across each of these restrictions shall be measured to determine whether critical flow exists at any restriction. When critical flow does not exist at any restriction, the pressures taken to disprove the critical flow shall be reported to the Division on Form C-122A in item (n) of the form. When critical flow conditions exist, the instantaneous flowing pressures required above shall be measured during the last 48 hours of the seven-day or eight-day flow period. [5-30-98]

(7) When critical flow exists between the wellhead and the orifice meter, the measured wellhead flowing pressure of the string through which the well flowed during the test shall be used as P_i when calculating the static wellhead working pressure (P_w) using the method established below. [5-30-98]

(8) When critical flow does not exist at any restriction, P_c shall be the corrected average static pressure from the meter chart plus friction loss from the wellhead to the orifice meter. [5-30-98]

(9) The static wellhead working pressure (P_w) of any well under test shall be the calculated seven-day or eight-day average static tubing pressure if the well is flowing through the casing; it shall be the calculated seven-day or eight-day average static casing pressure if the well is flowing through the tubing. The static wellhead working pressure (P_w) shall be calculated by applying the tables and procedures set out in the "Gas Well Testing Manual for Northwest New Mexico" ("the Manual") available from the Division. [5-30-98]

(10) To obtain the shut-in pressure of a well under test, the well shall be shut-in some time during the current testing season for a period of seven to fourteen consecutive days, which have been preceded by a minimum of seven days of uninterrupted production. Such shut-in pressure shall be measured on the seventh to fourteenth day of shut-in of the well with a deadweight gauge or other method approved by the Division. The seven-day shut-in pressure shall be measured on both the tubing and the casing when communication exists between the two strings. The higher of such pressures shall be used as P_c in the deliverability calculation. When any such shut-in pressure is determined by the Division to be abnormally low or the well can not be shut-in due to "HARDSHIP" classification, the shut-in pressure to be used as P_c shall be determined by one of the following methods:

- (a) A Division-designated value.
- (b) An average shut-in pressure of all offset wells completed in the same zone. Offset wells include the four side and four corner wells, if available.
- (c) A calculated surface pressure based on a calculated bottom-hole pressure. Such calculations shall be made in accordance with the examples in the Manual.

[5-30-98]

(11) All wellhead pressures, as well as the flowing meter pressure tests which are to be taken during the seven-day or eight-day deliverability test period as required above, shall be taken with a deadweight gauge or other method approved by the Division. The pressure readings and the date and time according to the chart shall be recorded and maintained in the operator's records with the test information. [5-30-98]

(12) Orifice meter charts shall be changed and arranged so as to reflect upon a single chart the flow data for the gas from each well for the full seven-day or eight-day deliverability test period; however, no tests shall be voided if satisfactory explanation is made as to the necessity for using test volumes through two chart periods. Corrections shall be made for pressure base, measured flowing temperature, specific gravity, and supercompressibility; provided however, if the specific gravity of the gas from any well under test is not available, an estimated specific gravity may be assumed therefore, based upon that of gas from near-by wells, the specific gravity of which has been actually determined by measurement. [5-30-98]

(13) The average flowing meter pressure for the seven-day or eight-day flow period and the corrected integrated volume shall be determined by the purchasing company that integrates the flow charts and furnished to the operator or testing agency. [5-30-98]

(14) The seven-day or eight-day flow period volume shall be calculated from the integrated readings as determined from the flow period orifice meter chart. The volume so calculated shall be divided by the number of testing days on the chart to determine the average daily rate of flow during said flow period. The flow period shall have a minimum of seven and a maximum of eight legibly recorded flowing days to be acceptable for test purposes. The volume used in this calculation shall be corrected to the Division's standard conditions of 15.025 psia pressure base, 60° F. temperature base and 0.60 specific gravity base. [5-30-98]

(15) The daily volume of flow, as determined from the flow period chart readings, shall be calculated by applying the Basic Orifice Meter Formula or other acceptable industry standard practices.

$$Q = C' (h_w P_f)^{.5}$$

Where:

Q = Metered volume of flow Mcf/d @ 15.025 psia, 60° F., and 0.60 specific gravity.

C' = The 24-hour basic orifice meter flow factor corrected for flowing temperature, gravity, and supercompressibility.

h_w = Daily average differential meter pressure from flow period chart.

P_f = Daily average flowing meter pressure from flow period chart.

[5-30-98]

(16) The basic orifice meter flow factors, flowing temperature factor, and specific gravity factor shall be determined from the tables in the Manual. [5-30-98]

(17) The daily flow period average corrected flowing meter pressure, psig, shall be used to determine the supercompressibility factor. Supercompressibility tables may be obtained from the Division. [5-30-98]

(18) When supercompressibility correction is made for a gas containing either nitrogen or carbon dioxide in excess of two percent, the supercompressibility factors of such gas shall be determined by the use of Table V of the C.N.G.A. Bulletin TS-402 for pressures 100-500 psig, or Table II, TS-461 for pressures in excess of 500 psig. [5-30-98]

(19) The use of tables for calculating rates of flow from integrator readings which do not specifically conform to the Division's "Back Pressure Test Manual", or the Manual, may be approved for determining the daily flow period rates of flow upon a showing that such tables are appropriate and necessary. [5-30-98]

(20) The daily average integrated rate of flow for the seven-day or eight-day flow period shall be corrected for meter error by multiplication by a correction factor. Said correction factor shall be determined by dividing the square root of the deadweight flowing meter pressure, psia, by the square root of the chart flowing meter pressure, psia. [5-30-98]

(21) "Deliverability pressure" is a defined pressure applied to each well and used in the process of comparing the abilities of wells in a pool to produce at static wellhead working pressures equal to a percentage of the seven-day shut-in pressure of the respective individual wells. Such percentage shall be determined and announced periodically by the Division based on the relationship of the average static wellhead working pressures (P_w) divided by the average seven-day shut-in pressure (P_c) of the pool. [5-30-98]

(22) The deliverability of gas at the deliverability pressure of any well under test shall be calculated from the test data derived from the tests above required by use of the following deliverability formula:

$$D = Q \left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^n$$

Where:

D = Deliverability Mcf/d at the deliverability pressure, (P_d), (at Standard Conditions of 15.025 psia, 60°F. and 0.60 sp. gr.).

Q = Daily flow rate in Mcf/d, at wellhead pressure (P_w)

P_c = Seven-day shut-in wellhead pressure, psia.

P_d = Deliverability pressure, psia, as defined above.

P_w = Average static wellhead working pressure, as determined from seven-day or eight-day flow period, psia, and calculated from tables in the Manual entitled "Pressure Loss Due to Friction Tables for Northwest New Mexico".

n = Average pool slope of back pressure curves as follows:

For Pictured Cliffs and shallower formations, 0.85

For formations deeper than Pictured Cliffs, 0.75

(Note: Special rules for any specific pool or formation may supersede the above values. Check special rules if in doubt.)

[5-30-98]

(23) The value of the multiplier in the above formula (ratio factor after the application of the pool slope) by which Q is multiplied shall not exceed a limiting value to be determined and announced periodically by the Division. Such determination shall be made after a study of the test data of the pool obtained during the previous testing season. [5-30-98]

(24) Downhole commingled wells are to be tested in the test year for the pool of the lowermost prorated completion of the well and shall use pool slope (n), and deliverability pressure of the lowermost pool. The total flow rate from the downhole commingled well will be used to calculate a value of deliverability. For each prorated gas zone of a downhole commingled well, a Form C-122A is required to be filed. Also, in the Summary portion of that form all zones will indicate the same data for line h , P_c , Q , P_w , and P_d . The value shown for Deliverability (D) will be that percentage of the total deliverability of the well that is applicable to this zone. A note shall be placed in the remarks column that indicates the percentage of deliverability to be allocated to this zone of the well. [5-30-98]

(25) Any test prescribed herein will be considered acceptable if the average flow rate for the final seven-day or eight-day deliverability test is not more than ten percent in excess of any consecutive seven-day or eight-day average of the preceding two weeks. A deliverability test not meeting this requirement may be declared invalid, requiring the well to be re-tested. [5-30-98]

(26) All charts relative to deliverability tests or copies thereof shall be made available to the Division upon its request. [5-30-98]

(27) Operators shall use only testing agencies, whether individuals, companies, pipeline companies, or operators, that maintain a log of all tests accomplished by them including all field test data. The operator shall maintain the above data for a period of not less than two years plus the current test year. [5-30-98]

(28) All forms heretofore mentioned are hereby adopted for use in the northwest New Mexico area in open form subject to such modification as experience may indicate desirable or necessary. [5-30-98]

(29) Deliverability tests for gas wells in all formations shall be conducted and reported in accordance with these Rules. Provided, however, these Rules shall be subject to any specific modification or change contained in Special Pool Rules adopted for any pool after notice and hearing. [5-30-98]

606.C. INFORMATIONAL TESTS

(1) One-Point Back Pressure Test: A one-point back pressure test may be taken on newly completed wells before their connection or reconnection to a gas transportation facility. This test shall not be a required official test, but may be taken for informational purposes at the option of the operator. When taken, this test must be taken and reported as prescribed below. [5-30-98]

(2) Test Procedure

- (a) This test shall be accomplished after a minimum shut-in of seven days. The shut-in pressure shall be measured with a deadweight gauge or other method approved by the Division. [5-30-98]
- (b) The flow rate shall be that rate in Mcf/d measured at the end of a three hour test flow period. The flow from the well shall be for three hours through a positive choke, which has a 3/4 inch orifice. [5-30-98]
- (c) A 2-inch nipple which provides a mechanical means of accurately measuring the pressure and temperature of the flowing gas shall be installed immediately upstream from the positive choke. [5-30-98]
- (d) The absolute open flow shall be calculated using the conventional back pressure formula as shown in the Manual or the Division's "Back Pressure Test Manual." [5-30-98]

- (e) The observed data and flow calculations shall be reported in duplicate on Form C-122, "Multi-Point Back Pressure Test for Gas Wells." [5-30-98]
 - (f) Non-critical flow shall be considered to exist when the choke pressure is 13 psig or less. When this condition exists the flow rate shall be measured with a pitot tube and nipple as specified in the Manual or in the Division's Manual of "Tables and Procedure for Pitot Tests." The pitot test nipple shall be installed immediately downstream from the 3/4-inch positive choke. [5-30-98]
 - (g) Any well completed with 2-inch nominal size tubing (1.995-inch ID) or larger shall be tested through the tubing. [5-30-98]
- (3) Other tests for informational purposes may be conducted prior to obtaining a pipeline connection for a newly completed well upon receiving specific approval therefore from the Aztec District Office. Approval of these tests shall be based primarily upon the volume of gas to be vented. [5-30-98]