

MS 1-25-99 12069

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

MA 1-25-99

AK 1/25/99

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

CASE NO. 12069  
ORDER NO. R-10987-A

**APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY TO  
INCREASE THE VERTICAL LIMITS, PROVIDE NOTICE REQUIREMENTS,  
ESTABLISH ADMINISTRATIVE PROCEDURES, AND ADOPT A NEW RULE 2(c) AND  
3 AND TO AMEND RULE 2(b) FOR THE BLANCO-MESAVERDE POOL, RIO ARRIBA  
AND SAN JUAN COUNTIES, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 29, 1998, at Santa Fe, New Mexico,  
before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of January, 1999 the Division Director, having considered the  
testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the New Mexico Oil Conservation Division  
("Division") has jurisdiction of this case and its subject matter.

(2) Burlington Resources Oil & Gas Company ("Burlington") seeks an order of the  
Division to increase the vertical limits, provide for notice requirements, establish administrative  
procedures and adopt Rule 2(c), Rule 3, Rule 4 and to amend Rule 2(b) of the Special Rules and  
Regulations for the Blanco-Mesaverde Gas Pool for purposes of increasing well density and  
changing well location requirements for Mesaverde wells in this pool such that, under certain  
restrictions, optional drilling of up to four wells can be drilled within a standard 320-acre gas  
proration and spacing unit. This request would increase the well density from the current maximum  
of two (2) wells (160-acre infill) provided in Order R-8170, as amended, to a maximum of four (4)  
wells (80-acre infill) per 320-acre gas proration and spacing unit.

(3) In compliance with Division notice rules, Burlington sent approximately 3,500  
copies of its application including its proposed rules and notice of hearing to operators, individuals  
and companies with mineral interests in the Blanco-Mesaverde Pool. Notice of this case was also

published in the newspaper and on the Division's hearing docket that is mailed to approximately 300 operators in New Mexico.

(4) The following parties of record entered their appearances in this case and participated at the hearing:

(a) Burlington, the applicant, is the operator of approximately 2287 wells currently producing from the Blanco-Mesaverde Gas Pool;

(b) Amoco Production Company ("Amoco") appeared in support of the applicant on all issues except for notification and the necessity of creating "special qualifying areas"; and

(c) The Independent Petroleum Association of New Mexico ("NMIPA"), Cinco General Partnership ("Cinco") and Fred Turner appeared in support of the applicant.

(5) In addition to the parties of record, the hearing was attended by representatives of the United States Bureau of Land Management and the Supervisor of the Aztec District Office of the Division and various royalty, overriding royalty and surface owners.

(6) The Oil & Gas Act specifically provides in Section 70-2-17.B, NMSA (1979) that:

*"The Division may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risk arising from the drilling of an excessive number of wells and the prevention of reduced recovery which might result from the drilling of too few wells."*

(7) By Order No. 799, issued in Case No. 163 and dated February 25, 1949, the New Mexico Oil Conservation Commission ("Commission") created the Blanco-Mesaverde Gas Pool and adopted 320-acre gas proration units ("GPU") for this pool, based upon the assumption that one well would drain and develop 320-acres. The horizontal limits for this pool currently comprise all or portions of the following described area in San Juan and Rio Arriba Counties, New Mexico:

Township 25 North, Ranges 2 through 6 West, NMPM;  
Township 26 North, Ranges 2 through 9 West, NMPM;  
Township 27 North, Ranges 2 through 9 West, NMPM;  
Township 28 North, Ranges 3 through 10 West, NMPM;  
Township 29 North, Ranges 3 through 11 West, NMPM;  
Township 30 North, Ranges 4 through 12 West, NMPM;

Township 31 North, Ranges 5 through 13 West, NMPM;  
and Township 32 North, Ranges 5 through 13 West, NMPM.

(8) By Order No. R-128-C, dated December 16, 1954 and made effective March 1, 1955, gas prorationing was instituted in this pool.

(9) On August 13 and 14, 1974, in Case No. 5264, a hearing before the Commission was held to determine if the well density of one well per 320-acre GPU was adequate for this pool. The Commission issued Order No. R-1670-T on November 14, 1974, in which it concluded that: (i) one well per GPU in this pool was inadequate to drain gas reserves; (ii) to reduce the number of acres in a GPU would impair correlative rights by disturbing the equities in many of the existing GPU's; and (iii) more than one well per 320-acre GPU was necessary in order to increase ultimate gas recovery from this pool. Accordingly, Order No. R-1670-T provided for "optional infill drilling" by permitting in Rule 2 for the drilling of a second well within a 320-acre GPU, provide this one optional "infill well" is be located within the opposite 160-acres from the 160-acres containing the original well ("the initial well") and further provided that the infill well is not closer than 790 feet (but subject to a 200 foot topographical allowance) to the outer boundary of a quarter section nor closer than 130 feet to an interior quarter-quarter section line.

(10) Commission Order No. R-5459 (issued in Case No. 5893 and dated June 14, 1977), as amended by Order No. R-5459-A (issued by the ~~New Mexico Oil Conservation Division~~ ~~Division~~ in Case No. 7335 and dated September 30, 1981), redefined the top vertical limits for this pool in relation to the "Chacra Line" which is orientated northwest to southeast, separating the pool such that approximately 2/3rds of the pool is northeast of this line and 1/3rd is southwest of this line. The vertical limit for the pool is described in relation to the Chacra line and to the Huerfanito Bentonite Marker such that southwest of the Charca line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and Northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker. [Already defined]

(11) On September 20, 1978 the Division issued Order No. R-1670-U amending Rule 2 to permit the initial well on the 320-acre GPU to be drilled on either <sup>of the</sup> 160-acre tracts comprising the unit, so long as the well is no closer than 790 feet to the outer boundary of the quarter section and no closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.

(12) The rules governing gas prorationing in Northwest New Mexico and the Blanco-Mesaverde Pool have gone through various changes and reformatting since the issuance of Order No. R-1670-U (see Commission/Division Orders No. R-8170, R-8170-A through R-8170-N, and R-10987). The current rules and procedures governing the Blanco-Mesaverde Pool are ~~entitled~~ the "Special Rules and Regulations for the Blanco-Mesaverde Gas Pool" ~~and~~ included in "EXHIBIT B" of the "SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS" of Commission Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998, and read in its entirety as follows: and

"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 proceeding paragraph.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or 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 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, NMPM

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 07 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  
Section 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.)”

(13) Burlington, in its original application to the Division on September 23, 1998, referred to certain rule numbers [2(b), 3, and 2(c)] that were applicable to the special pool rules governing the Blanco-Mesaverde Pool under Orders No. 1670-T, R-1670-U, R-8170, R-8170-A through R-1870-N. These rule numbers were abolished when Division Order No. R-10987 was issued on May 7, 1998. These rule numbers were inadvertently included in the advertisement of this case and to avoid any further confusion in this matter these rule numbers will not be referenced in this order.

(14) Burlington seeks an order which amends the “*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*”, ~~as~~ set forth in Exhibit “B” of Commission Order No. R-10987 to:

- (a) allow an initial well and a maximum of three infill wells on each GPU;
- (b) require that the first infill well on a GPU be located in a quarter section of the GPU not containing a Mesaverde well, the second infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one Mesaverde well, and the third infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a

quarter section of the GPU not containing more than one Mesaverde well;

(c) provide that wells drilled in this pool shall be located not closer than 660 feet to the outer of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary;

(d) provide that wells located within federal exploratory units not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of such unit not be closer than 660 feet to the outer boundary of the GPU;

(e) establish Special Qualifying Areas in which special procedures must be followed before third or fourth wells may be drilled on a GPU including notice to adjacent operators, a 20-day objection period and, if objection, hearings; and

(f) ~~X~~ increase the vertical limits of a portion of this pool to include that interval from the top of the Huerfanito Bentonite Marker to 300 feet above this marker.

(15) Since 1995, Burlington has conducted a technical study of the Blanco-Mesaverde Pool to determine if gas reserves are being adequately drained with two wells on each 320-acre GPU. This study included the analysis of pressure data, core samples, well testing, and reservoir simulation within three limited pilot project areas: (i) the San Juan "29-7" Unit project approved by Division Order R-10720, issued in Case No. 11625 and dated January 9, 1997; (ii) the San Juan "27-5" Unit project approved by Division Order R-10936, issued in Case No. 11879 and dated January 8, 1998; and (iii) a project comprising a four section area in Townships 30 and 31 North, Ranges 10 and 11 West, NMPM, San Juan County, New Mexico approved by Division Order R-10949, issued in Case No. 11880 and dated February 3, 1998.

(16) Burlington presented evidence obtained from its study, which establishes that:

(a) the Blanco-Mesaverde Gas Pool is a low permeability reservoir with localized areas of natural fracturing;

(b) while the area drained by individual wells in the pool varies from 40 to 160 acres, most wells in the pool experience low annual pressure declines, produce at low rates, have marginal economics;

*2 and*



(c) only 9% of the pool is being adequately drained with 2 wells on each GPU, and only 44% of the original gas in the reservoir (12.5 TCF) will be recovered under current rules; and

(d) approval of this application ~~is~~ authorization of additional infill wells on GPU's in the pool will result in an increase in ultimate recovery from the pool of between 5% to 10% or 1.5 to 3 trillion cubic feet of new gas reserves.

(17) Burlington proposes that well location ("footage setback") requirements be amended as follows:

(a) wells drilled on a GPU shall be located not closer than 660 feet to the outer boundary of a standard sized GPU or an approved non-standard GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary within the GPU;

(b) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by sub-paragraph (a) above; and

(c) ~~that~~ wells be located as follows:

(i) the FIRST OPTIONAL INFILL WELL drilled on a 320-acre GPU is to be located in the quarter section of the GPU not containing a Mesaverde gas well;

(ii) the SECOND OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iii) the THIRD OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iv) at the discretion of the operator, the Second or Third Optional Infill Well may be drilled or

completed prior to the First Optional Infill Well being drilled or completed; and

(v) any derivation of the above-described well location requirements should be authorized after hearing before a Division Examiner.

(18) Burlington's study further demonstrates that:

(a) the current pool rules which require 790 foot setbacks from a quarter section line and 130 foot quarter-quarter interior setbacks has resulted in the "un~~drained~~" portions of gas reserves being located between the original and first infill Mesaverde gas well within a 320-acre GPU and between GPU's;

(b) in order to increase the opportunity to locate wells in the optimum position to drain those additional reserves it is either necessary to process numerous cases for unorthodox well locations or relax the exterior and interior footage setback requirements; and

(c) relaxing the footage setbacks will not impair correlative rights because in 91% of the pool the drainage areas per well ~~is~~ less than 160 acres, and due to the low~~x~~ permeability of the reservoir, it takes many months before any potential adverse impact will occur to offsetting GPU's during which time those operators will have an opportunity to best ~~chose~~ when and where to locate their own wells.

(19) Amoco and Cinco presented evidence in support of Burlington's proposal to permit three optional infill wells on each GPU in this pool.

(20) Adopting Burlington's proposed well location setback proposal and approval of a maximum of three infill wells on each 320-acre GPU in the Blanco-Mesaverde Gas Pool will result in the additional recovery of natural gas from this reservoir thereby preventing waste, will be in the best interest of conservation, and serves to protect correlative rights.

(21) The Division's Aztec District Office as well as the Division's Santa Fe Office has approved applications for a third infill well on certain GPU's in this pool. All permitted wells should be approved by the order resulting from this hearing.

(22) By Order R-5459, the Division redefined the top vertical limit for this pool in relation to the Chacra line and to the Huerfanito Bentonite Marker such that southwest of the Charca line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker. As a result of this definition, in the area northeast of the Charca line, there is an interval of not less than 400 feet in thickness, including the Lewis Shale, which is below the current base of the

Pictured Cliffs formation and yet above the current top of the Blanco-Mesaverde Pool.

(23) In response to a request by the Division's Aztec District office, Burlington presented evidence to demonstrate that the top vertical limits of this pool can be increased approximate 300 feet without interference with the overlying Pictured Cliffs formation and the numerous Pictured Cliffs gas pools.

(24) Amoco and Cinco support the expansion of the vertical limits of the Blanco-Mesaverde Pool as recommended by Burlington to 300 feet above the Huerfanito Bentonite Marker.

(25) Adopting Burlington's proposal to increase the vertical limits of the pool will be in the best interest of conservation, the prevention of waste and the protection of correlative rights. Expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker will avoid confusion and should be **approved**.

(26) Burlington proposed the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators, a twenty-day objection period and, if an objection is received, a hearing to determine if the well will cause waste or impair correlative rights.

(27) Burlington provided a description of these eight Special Qualifying Areas and presented its interpretation of the various drainage areas within the pool. This evidence showed that there are areas within the Special Qualifying Areas where wells drain less than 40-acres as well as areas where wells drain more than 160-acres. The evidence also showed there were numerous areas outside these Special Qualifying Areas where wells drain 160-acres or more.

(28) While Burlington has proposed limiting additional notice, objection and hearing procedures for increased density well applications to only limited areas of the pool, Amoco has proposed expanding those notice/objection/hearing procedures to the entire pool regardless of the amount of acreage being drained.

(29) Although Amoco supports changing the pool rules to allow for four gas wells per GPU, it has proposed the adoption of a requirement that the applicant for optional second and third infill wells ~~to~~ notify all offset operators and in the event of an objection, ~~for any reason, then~~ the matter ~~would~~ be set for ~~an Examiner's~~ hearing.

(30) Burlington, NMIPA, and Cinco opposed Amoco's request on the grounds that such a notice procedure would defeat the adoption of the increased density rule for 91% of the pool, ~~would~~ require unnecessary notice and potential hearings ~~in~~ areas of the pool where only limited drainage was occurring and no correlative rights would be impaired.

(31) The sizing of well spacing and proration units is not exact in all situations as to drainage area and there are various defined gas pools where geologic anomalies result in greater

drainage areas than the spacing rules contemplate. Burlington's technical evidence and support data on this issue demonstrates that within the proposed Special Qualifying Areas its own studies indicate adequate drainage is not achieved by two wells, some of which embrace several sections, but are not within the proposed Special Qualifying Areas. <sup>ing</sup>

(32) It is unnecessary and probably administratively unworkable to ~~differentiate~~ <sup>have</sup> eight such areas within the pool ~~to be~~ developed differently than the rest of the pool. Individual operators are capable of evaluating whether the specific geology of a particular 320-acre GPU justifies the drilling of additional wells. Including such a requirement proposed by either Burlington or Amoco would be unduly burdensome for both industry and the Division, would create confusion, result in two sets of rules for the development of the pool, will be difficult to administer, and ~~is~~ <sup>is</sup> not supported by Burlington's own drainage area evidence. <sup>as</sup>

(33) Burlington's request for the creation of the eight proposed Special Qualifying Areas within the Blanco-Mesaverde Gas Pool where the approval procedures for obtaining authority to drill or complete optional second and third infill wells would differ outside of these areas and Amoco's request for poolwide notification for optional second and third infill wells should be **denied**.

(34) At the hearing, the applicant expressed an opinion that other than this pool's special rule that establishes spacing unit size, all other rules for this pool involve operational aspects dealt with by the operators of existing GPU's for this pool. Burlington then proposed that the Division adopt a procedure whereby future changes in the rules and regulations for the pool, excluding amending the 320-acre rule, may be made based upon notice to operators and not to all interest owners in the pool. <sup>only</sup>

(35) Such a request ~~is~~ <sup>only</sup> ~~(i) unfounded and is in direct conflict with prudent operational practices; (ii) does not promote conservation; and (iii) violates~~ <sup>may</sup> ~~correlative rights; and should therefore be denied.~~ <sup>and</sup>

(36) The ~~amendments of the~~ <sup>special</sup> ~~"Special Rules and Regulations for the Blanco-Mesaverde Pool"~~ set forth in Exhibit "A" of this order will serve to prevent the economic loss caused by the drilling of unnecessary wells, will avoid the risks associated with the drilling of an excessive number of wells, will increase the opportunity to produce new reserves and improve recovery of gas from this pool, will provide a workable, fair and efficient regulation of well locations and spacing units while preventing waste of valuable hydrocarbons and the protection of the correlative rights of the owners of that production. As requested by the applicant, these amended rules should be made effective on the first day of the month following the issuance of this order.

(37) The <sup>special</sup> rules for the Blanco-Mesaverde Pool as shown in Exhibit "A" should supersede those found in Division Order No. R-10987.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Burlington Resources Oil & Gas Corporation ("Burlington"), and effective on the first day of the month following the issuance of this order, the special pool rules for the Blanco-Mesaverde Pool are hereby ~~amended to conform to the rule changes set forth in Exhibit "A", attached hereto and made part of this order.~~

*the attached application*  
(2) Burlington's ~~proposal~~ for the expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfano Bentonite Marker, further described in Exhibit "A", is hereby **approved**.

(3) The application for the creation of eight Special Qualifying Areas within this pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators is hereby **denied**.

(4) Burlington's ~~request~~ for the creation of ~~the~~ eight proposed Special Qualifying Areas within the Blanco-Mesaverde Gas Pool where the approval procedures for obtaining authority to drill or complete optional second and third infill wells would differ outside of these areas and Amoco's request for poolwide notification for optional second and third infill wells are hereby **denied**.

*special pool rule*  
(5) Burlington's ~~request~~ to adopt future changes ~~in the rules and regulations for the pool,~~ excluding amending the 320-acre rule, based on limited notice to operators only is hereby **denied**.

*special pool*  
(6) The ~~rules~~ for the Blanco-Mesaverde Pool shown in Exhibit "A" shall supersede the special pool rules for the Blanco-Mesaverde Gas Pool in Division Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998. All other provisions of Order No. R-10987 shall remain in full force and affect until further notice.

(7) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director

S E A L

**EXHIBIT "A"**  
**Case No. 12069**  
**Order No. R-10987-A**

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

**I. ACREAGE AND WELL LOCATION REQUIREMENTS**

**A. Standard GPU (Gas Proration Unit)** <sup>1A standard GPU</sup> in the Blanco-Mesaverde Pool shall be 320 acres.

**B. Well density and locations:**

(1) Well Locations:

a) wells drilled on a GPU shall be located not closer than 660 feet to the South and North lines nor closer than 660 feet to the East and West lines of a GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.

b) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by subparagraph I.B.(1)(i) above.

(2) Well Density:

a) the FIRST OPTIONAL INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well;

b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;

*Normally:  
I. Number  
A. Letter  
1. Number  
a) Letter  
i) Number  
etc.*

- c (iii) the THIRD OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;
- d (iv) At the discretion of the operator, the Second or Third Optional Infill Well can be drilled prior to the drilling of the First Optional Infill Well;
- e (v) All exceptions for second and third infill wells on standard GPU's in the Blanco-Mesaverde Pool which have been approved by the District Supervisor ~~of the Aztec District Office~~ or the Division's Santa Fe Office are hereby approved; ~~and~~
- f (vi) No more than two wells shall be located within either 160-acre tract of a GPU; ~~any~~ derivation of the above-described well location requirements shall be authorized only after hearing before a Division Examiner.
- g (vii) (3) The plats (~~NMOCD~~ Form C-102) accompanying the "Application for Permit to Drill" (~~NMOCD~~ Form C-101 or federal equivalent) for subsequent wells on a GPU shall have outlined ~~thereon~~ the boundaries of the GPU and shall show the location (well name, footage location, API number) of all existing Mesaverde wells on the GPU plus the proposed new well.

## II. ADMINISTRATIVE EXCEPTIONS:

The Division Director, in accordance with ~~the applicable provisions of~~ Division Rule 104, may administratively grant an exception to the well location requirements of ~~subparagraphs I.B.(1)(i) and (ii) above~~ <sup>upon</sup> when an application ~~has been submitted~~ to the Division, including notification by certified mail-return receipt to ~~the~~ affected parties. <sup>which</sup>

## III. ALLOCATION AND GRANTING ALLOWABLES:

A. **Non-Marginal GPU Allowable:** The pool allowable remaining each month after dedicating 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:

- (1) 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(s), the deliverability of the wells shall be added in calculating the AD Factor and

the allowable may be produced from all wells.

- (2) 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.

B. **Minimum Allowable:** A minimum allowable of 250 MCF per month per GPU ~~is~~ will be assigned to prevent the premature abandonment of wells.

C. A GPU in the Blanco-Mesaverde Pool shall be classified as marginal unless reclassified by the Director pursuant to Division Rule 605.F.(2). Any operator in the Blanco-Mesaverde Pool may request a reclassification of a GPU in that pool.

#### IV. VERTICAL LIMITS OF THE BLANCO-MESAVERDE POOL.

The vertical limits for the Blanco-Mesaverde Pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker ~~such that southwest of the Chacra line the pool limits shall be defined as follows: the top of the pool shall be a point 750 feet below the Huerfanito Bentonite Marker down to the base of the pool which shall be a point 500 feet below the top of the Point Lookout Sandstone, and Northeast of the line the top of the pool shall be defined as a point 300 feet above the Huerfanito Bentonite Marker down to the base of the pool which shall be a point 500 feet below the top of the Point Lookout Sandstone.~~ *is southwest of the Chacra line*

~~The following description depicts~~ The northwest southeast trending Chacra Line (originally established by Order R-5459, as amended) ~~that~~ divides the Blanco-Mesaverde pool for defining the vertical limits of the pool. This line traverses the south side or west side of the sections listed below: *and* *Chacra* *is* *purpose of*

##### TOWNSHIP 24 NORTH, RANGE 1 EAST, NMPM

Section 31:	West
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##### TOWNSHIP 24 NORTH, RANGE 1 WEST, NMPM

Section 3:	West
Section 10:	West and South
Section 14:	West and South
Section 24:	West
Section 25:	West and South

##### TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Section 7:	West
Section 18:	West and South
Section 20:	West and South
Section 28:	West
Section 33:	West and South

##### TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM

Section 1:	West and South
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TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM

Sections 7 and 8:	South
Section 16:	West and South
Section 22:	West and South
Section 26:	West
Section 35:	West and South

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

Sections 2 and 3:	South
Section 4:	West and South
Section 12:	West and South

TOWNSHIP 27 NORTH, RANGE 3 WEST, NMPM

Section 31 and 32:	South
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TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM

Sections 31 through 36:	South
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TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

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

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 6:	West
Section 7:	West and South
Sections 8 and 9:	South
Section 14:	South
Section 15:	West and South
Section 24:	West
Section 25:	West and South

TOWNSHIP 28 NORTH, RANGE 6 WEST, NMPM

Section 7:	West
Sections 18 and 19:	West
Sections 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 8 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 9 WEST, NMPM

Section 3:	South
Section 4:	West and South
Section 11:	West and South

Section 12: South

TOWNSHIP 30 NORTH, RANGE 9 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

Section 26: West and South

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM

Section 6: West and South

Section 8: West and South

Sections 9 through 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 7 and 8: 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.

2<sup>nd</sup> Draft MAS 1-26-99

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

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

CASE NO. 12069  
ORDER NO. R-10987-A

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY TO  
INCREASE THE VERTICAL LIMITS, PROVIDE NOTICE REQUIREMENTS,  
ESTABLISH ADMINISTRATIVE PROCEDURES, ~~AND~~ ADOPT A NEW RULE 2(c) AND  
3 AND ~~TO~~ AMEND RULE 2(b) FOR THE BLANCO-MESAVERDE POOL, RIO ARRIBA  
AND SAN JUAN COUNTIES, NEW MEXICO

Rule 4  
2.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 29, 1998, at Santa Fe, New Mexico,  
before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of January, 1999 the Division Director, having considered the  
testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the New Mexico Oil Conservation Division  
("Division") has jurisdiction of this case and its subject matter.

(2) Burlington Resources Oil & Gas Company ("Burlington") seeks an order of the  
Division to increase the vertical limits, provide for notice requirements, establish administrative  
procedures, ~~and~~ adopt Rule 2(c), Rule 3, Rule 4 and ~~to~~ amend Rule 2(b) of the Special Rules and  
Regulations for the Blanco-Mesaverde Gas Pool for purposes of increasing well density and  
changing well location requirements for Mesaverde wells in this pool ~~such that~~ to allow under certain  
restrictions, optional drilling of up to four wells ~~can be drilled~~ within a standard 320-acre gas  
proration and spacing unit. This request would increase the well density from the current maximum  
of two (2) wells (160-acre infill) provided in Order R-8170, as amended, to a maximum of four (4)  
wells (80-acre infill) per 320-acre gas proration and spacing unit.

(3) In compliance with Division notice rules, Burlington sent approximately 3,500  
copies of its application including its proposed rules and notice of hearing to operators, individuals  
and companies with mineral interests in the Blanco-Mesaverde Pool. Notice of this case was also

published in the newspaper and on the Division's hearing docket that is mailed to approximately 300 operators in New Mexico.

(4) The following parties of record entered their appearances in this case and participated at the hearing:

(a) Burlington, the applicant, is the operator of approximately 2287 wells currently producing from the Blanco-Mesaverde Gas Pool;

(b) Amoco Production Company ("Amoco") appeared in support of the applicant on all issues except for notification and the necessity of creating "special qualifying areas"; and

7 "IPANM" (c) ~~the~~ Independent Petroleum Association of New Mexico ("~~NMPA~~"), Cinco General Partnership ("Cinco") and Fred Turner appeared in support of the applicant.

(5) In addition to the parties of record, the hearing was attended by representatives of the United States Bureau of Land Management ~~and~~ the Supervisor of the Division's Aztec District Office and various royalty, overriding royalty and surface owners.

(6) The Oil & Gas Act specifically provides in Section 70-2-17.B, NMSA (1979) that:

*"The Division may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risk arising from the drilling of an excessive number of wells and the prevention of reduced recovery which might result from the drilling of too few wells."*

(7) By Order No. 799, issued in Case No. 163 and dated February 25, 1949, the New Mexico Oil Conservation Commission ("Commission") created the Blanco-Mesaverde Gas Pool and adopted 320-acre gas proration units ("GPU") for this pool, based upon the assumption that one well would drain and develop 320-acres. The horizontal limits for this pool currently comprise all or portions of the following described area in San Juan and Rio Arriba Counties, New Mexico:

Township 25 North, Ranges 2 through 6 West, NMPM;  
Township 26 North, Ranges 2 through 9 West, NMPM;  
Township 27 North, Ranges 2 through 9 West, NMPM;  
Township 28 North, Ranges 3 through 10 West, NMPM;  
Township 29 North, Ranges 3 through 11 West, NMPM;  
Township 30 North, Ranges 4 through 12 West, NMPM;

Township 31 North, Ranges 5 through 13 West, NMPM;  
and Township 32 North, Ranges 5 through 13 West, NMPM.

(8) By Order No. R-128-C, dated December 16, 1954 and made effective March 1, 1955, gas prorationing was instituted in this pool.

(9) On August 13 and 14, 1974, in Case No. 5264, a hearing before the Commission was held to determine if the well density of one well per 320-acre GPU was adequate for this pool. The Commission issued Order No. R-1670-T on November 14, 1974, in which it concluded that: (i) one well per GPU in this pool was inadequate to drain gas reserves; (ii) to reduce the number of acres in a GPU would impair correlative rights by disturbing the equities in many of the existing GPU's; and (iii) more than one well per 320-acre GPU was necessary in order to increase ultimate gas recovery from this pool. Accordingly, Order No. R-1670-T provided for "optional infill drilling" by ~~permitting~~ <sup>allowing</sup> in Rule 2 for the drilling of a second well within a 320-acre GPU, provide this one optional "infill well" is ~~to be~~ located within the opposite 160-acres from the 160-acres containing the original well ("the initial well") and further provided that the infill well is not closer than 790 feet ~~but~~ <sup>and</sup> subject to a 200-foot topographical allowance) to the outer boundary of a quarter section nor closer than 130 feet to an interior quarter-quarter section line.

(10) Commission Order No. R-5459 (issued in Case No. 5893 and dated June 14, 1977), as amended by Order No. R-5459-A (issued by the Division in Case No. 7335 and dated September 30, 1981), redefined the top vertical limits for this pool in relation to the "Chacra Line" which is oriented northwest to southeast, ~~separating~~ <sup>and divides</sup> the pool such that approximately 2/3rds of the pool is northeast of this line and 1/3rd is southwest of this line. The vertical limit for the pool is described in relation to the Chacra line and to the Huerfanito Bentonite Marker, ~~such that southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker, and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker.~~

(11) On September 20, 1978 the Division issued Order No. R-1670-U amending Rule 2 to ~~allow~~ <sup>allowing</sup> the initial well on the 320-acre GPU to be drilled on either of the 160-acre tracts comprising the unit, so long as the well is no closer than 790 feet to the outer boundary of the quarter section and no closer than 130 feet to any interior quarter-quarter section line or subdivision inner boundary.

(12) The rules governing gas prorationing in Northwest New Mexico and the Blanco-Mesaverde Pool have gone through various changes and reformatting since the issuance of Order No. R-1670-U (see Commission/Division Orders No. R-8170, R-8170-A through R-8170-N, and R-10987). The current rules and procedures governing the Blanco-Mesaverde Pool are titled the "*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*" and included in "EXHIBIT B" of the "**SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS**" of Commission Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998, and ready in ~~its~~ <sup>their</sup> entirety as follows:

"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 proceeding paragraph.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or 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 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, NMPM

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 07 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  
Section 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

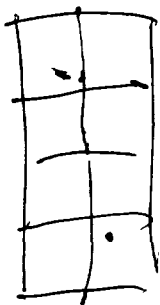
(General Pool Rules also apply unless in conflict with these Special Pool Rules.)"

(13) Burlington, in its original application to the Division on September 23, 1998, referred to certain rule numbers [2(b), 3, and 2(c)] that were applicable to the special pool rules governing the Blanco-Mesaverde Pool under Orders No. 1670-T, R-1670-U, R-8170, R-8170-A through R-1870-N. These rule numbers were abolished when Division Order No. R-10987 was issued on May 7, 1998. These rule numbers were inadvertently included in the advertisement of this case and to avoid any further confusion in this matter these rule numbers will not be referenced in this order.

(14) Burlington seeks an order which amends the "*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*" set forth in Exhibit "B" of Commission Order No. R-10987 to:

(a) allow an initial well and a maximum of three infill wells on each GPU;

(b) require that the first infill well on a GPU be located in a quarter section of the GPU not containing a Mesaverde well, the second infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one Mesaverde well, and the third infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a



quarter section of the GPU not containing more than one Mesaverde well;

(c) provide that wells drilled in this pool shall be located not closer than 660 feet to the outer <sup>boundary</sup> of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary;

(d) provide that wells located within federal exploratory units not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of such unit not be closer than 660 feet to the outer boundary of the GPU;

(e) establish Special Qualifying Areas in which special procedures must be followed before third or fourth wells may be drilled on a GPU including notice to adjacent operators, a 20-day objection period and, <sup>with</sup> objection, hearings; and

(f) increase the vertical limits of a portion of this pool to include that interval from the top of the Huerfanito Bentonite Marker to 300 feet above this marker.

(15) Since 1995, Burlington has conducted a technical study of the Blanco-Mesaverde Pool to determine if gas reserves are being adequately drained with two wells on each 320-acre GPU. This study included the analysis of pressure data, core samples, well testing, and reservoir simulation within three limited pilot project areas: (i) the San Juan "29-7" Unit project approved by Division Order R-10720, issued in Case No. 11625 and dated January 9, 1997; (ii) the San Juan "27-5" Unit project approved by Division Order R-10936, issued in Case No. 11879 and dated January 8, 1998; and (iii) a project comprising a four section area in Townships 30 and 31 North, Ranges 10 and 11 West, NMPM, San Juan County, New Mexico approved by Division Order R-10949, issued in Case No. 11880 and dated February 3, 1998.

(16) Burlington presented evidence obtained from its study, which establishes that:

(a) the Blanco-Mesaverde Gas Pool is a low permeability reservoir with localized areas of natural fracturing;

(b) while the area drained by individual wells in the pool varies from 40 to 160 acres, most wells in the pool experience low annual pressure declines, produce at low rates and have marginal economics;

(c) only 9% of the pool is being adequately drained with 2 wells on each GPU, and only 44% of the original gas in the reservoir (12.5 TCF) will be recovered under current rules; and

(d) approval of this application authorizing additional infill wells on GPU's in the pool will result in an increase in ultimate recovery from the pool of between 5% to 10% or 1.5 to 3 trillion cubic feet of new gas reserves.

(17) Burlington proposes that well location ("footage setback") requirements be amended as follows:

(a) wells drilled on a GPU shall be located not closer than 660 feet to the outer boundary of a standard-size GPU or an approved non-standard GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary within the GPU;

(b) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by sub-paragraph (a) above; and

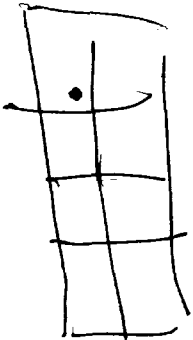
(c) <sup>shall</sup> wells be located as follows:

(i) the FIRST OPTIONAL INFILL WELL drilled on a 320-acre GPU is to be located in the quarter section of the GPU not containing a Mesaverde gas well;

(ii) the SECOND OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iii) the THIRD OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iv) at the discretion of the operator, the Second or Third Optional Infill Well may be drilled or



completed prior to the First Optional Infill Well  
being drilled or completed; and

*deviation from*  
(v) any ~~deviation~~ *only* of the above-described well  
~~location~~ requirements should be authorized after  
hearing before a Division Examiner.

(18) Burlington's study further demonstrates that:

(a) the current pool rules which require 790 foot setbacks from a quarter section line and 130 foot quarter-quarter interior setbacks has resulted in ~~the~~ "undrained" portions of gas reserves being located between the original and first infill Mesaverde gas well within a 320-acre GPU and between GPU's;

(b) in order to increase the opportunity to locate wells in the optimum position to drain those additional reserves it is either necessary to process numerous cases for unorthodox well locations or relax the exterior and interior footage setback requirements; and

(c) relaxing the footage setbacks will not impair correlative rights because in 91% of the pool the drainage areas per well are less than 160 acres, and due to the low permeability of the reservoir, it takes many months before any potential adverse impact will occur to offsetting GPU's during which time *best* those operators will have an opportunity to ~~best~~ choose when and where to locate their own wells.

(19) Amoco and Cinco presented evidence in support of Burlington's proposal to permit three optional infill wells on each GPU in this pool.

(20) Adopting Burlington's proposed well location setback proposal and approval of a maximum of three infill wells on each 320-acre GPU in the Blanco-Mesaverde Gas Pool will result in the additional recovery of natural gas from this reservoir thereby preventing waste, will be in the best interest of conservation, and serves to protect correlative rights.

*BA* (21) The Division's Aztec District Office as well as the Division's Santa Fe Office has approved applications for a third infill well on certain GPU's in this pool. All permitted wells should be approved by the order resulting from this hearing.

(22) By Order R-5459, the Division redefined the top vertical limit for this pool in relation to the Chacra line and to the Huerfanito Bentonite Marker such that southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker. As a result of this definition, in the area northeast of the Chacra line, there is an interval of not less than 400 feet in thickness, including the Lewis Shale, *that* which is below the current base of the

Pictured Cliffs formation and yet above the current top of the Blanco-Mesaverde Pool.

(23) In response to a request by the Division's Aztec District office, Burlington presented evidence to demonstrate that the top vertical limits of this pool can be increased approximate 200 feet without interference with the overlying Pictured Cliffs formation and the numerous Pictured Cliffs gas pools.

(24) Amoco and Cinco support the expansion of the vertical limits of the Blanco-Mesaverde Pool as recommended by Burlington to 300 feet above the Huerfanito Bentonite Marker.


(25) Adopting Burlington's proposal to increase the vertical limits of the pool will be in the best interest of conservation, the prevention of waste and the protection of correlative rights. Expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker will avoid confusion and should be **approved**.


(26) Burlington proposed the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators, a twenty-day objection period and, if an objection is received, a hearing to determine if the well will cause waste or impair correlative rights.

(27) Burlington provided a description of these eight Special Qualifying Areas and presented its interpretation of the various drainage areas within the pool. This evidence showed that there are areas within the Special Qualifying Areas where wells drain less than 40-acres as well as areas where wells drain more than 160-acres. The evidence also showed there were numerous areas outside these Special Qualifying Areas where wells drain 160-acres or more.

(28) While Burlington has proposed limiting additional notice, objection and hearing procedures for increased density well applications to eight limited areas of the pool, Amoco has proposed expanding those notice/objection/hearing procedures to the entire pool regardless of the amount of acreage being drained.

(29) Although Amoco supports changing the pool rules to allow for four gas wells per GPU, it has proposed the adoption of a requirement that the applicant for optional second and third infill wells notify all offset operators and in the event of an objection, the matter be set for hearing.

 (30) Burlington, <sup>NM</sup>~~NE~~MIPA, and Cinco opposed Amoco's request on the grounds that such a notice procedure would defeat the purpose of the adoption of an increased density rule for 91% of the pool and would require unnecessary notice and potential hearings in areas of the pool where only limited drainage was occurring and no correlative rights would be impaired.

 (31) The sizing of well spacing and proration units is not exact in all situations as to drainage area and there are various defined gas pools where geologic anomalies result in greater drainage areas than the spacing rules contemplate. Burlington's technical evidence and supporting

data on this issue demonstrates that within the proposed Special Qualifying Areas its own studies indicate adequate drainage is not achieved by two wells ~~are~~ are not within the proposed Special Qualifying Areas *and that there are areas, some of which embrace several sections, that can be drained by two wells.*

(32) It is unnecessary and probably administratively unworkable to have eight such areas within the pool developed differently than the rest of the pool. Individual operators are capable of evaluating whether the specific geology of a particular 320-acre GPU justifies the drilling of additional wells. Including such a requirement as proposed by either Burlington or Amoco would be unduly burdensome for both industry and the Division, would create confusion, <sup>would</sup> result in two sets of rules for the development of the pool, ~~and~~ <sup>would</sup> be difficult to administer, and is not supported by Burlington's own drainage area evidence.

(33) Burlington's request for the creation of the eight proposed Special Qualifying Areas within the Blanco-Mesaverde Gas Pool ~~where the approval procedures for obtaining authority to drill or complete optional second and third infill wells would differ outside of these areas~~ *with separate special* and Amoco's request for poolwide notification for optional second and third infill wells should be **denied**.

(34) At the hearing, the applicant expressed an opinion that other than this pool's special rule that establishes spacing unit size, all other rules for this pool involve operational aspects dealt with only by the operators of existing GPU's for this pool. Burlington then proposed that the Division adopt a procedure whereby future changes in the rules and regulations for the pool, excluding amending the 320-acre rule, may be made based upon notice only to operators and not to all interest owners in the pool.

(35) Such a request ~~does~~ does not promote conservation and ~~may~~ may violate correlative rights, and should therefore be **denied**.

(36) The "Special Rules for the Blanco-Mesaverde Pool" set forth in Exhibit "A" of this order will serve to prevent the economic loss caused by the drilling of unnecessary wells, will avoid the risks associated with the drilling of an excessive number of wells, will increase the opportunity to produce new reserves and improve recovery of gas from this pool, and will provide a workable, fair and efficient regulation of well locations and spacing units while preventing waste of valuable hydrocarbons and the protection of the correlative rights of the owners of that production. As requested by the applicant, these amended rules should be made effective ~~on the first day of the month following the issuance of this order~~ *February 1, 1999.*

(37) The special rules for the Blanco-Mesaverde Pool as shown in Exhibit "A" should supersede those found in Division Order No. R-10987.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Burlington Resources Oil & Gas Corporation ("Burlington"), and effective ~~on the first day of the month following the issuance of this order~~ *February 1, 1999*

special pool rules for the Blanco-Mesaverde Pool are hereby set forth in the attached Exhibit "A".

(2) Burlington's application for the expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker, further described in Exhibit "A", is hereby **approved**.

~~(3) The application for the creation of eight Special Qualifying Areas within this pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators is hereby **denied**.~~

(3) ~~(4)~~ Burlington's application for the creation of eight ~~proposed~~ Special Qualifying Areas within the Blanco-Mesaverde Gas Pool <sup>with special</sup> ~~where the approval~~ procedures for obtaining authority to drill or complete optional second and third infill wells ~~would differ outside of these areas~~ and Amoco's request for poolwide notification for optional second and third infill wells are hereby **denied**.

(5) Burlington's application to adopt future special pool rule changes, excluding amending the 320-acre rule, based on limited notice to operators only is hereby **denied**.

(6) The special pool rules for the Blanco-Mesaverde Pool shown in Exhibit "A" shall supersede the special pool rules for the Blanco-Mesaverde Gas Pool in Division Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998. All other provisions of Order No. R-10987 shall remain in full force and affect until further notice.

(7) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director

SEAL

**EXHIBIT "A"**  
**Case No. 12069**  
**Order No. R-10987-A**

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**SPECIAL RULES FOR THE  
BLANCO-MESAVERDE POOL**

**I. ACREAGE AND WELL LOCATION REQUIREMENTS**

**A. Standard GPU (Gas Proration Unit):** A standard GPU in the Blanco-Mesaverde Pool shall be 320 acres.

**B. Well density and locations:**

(1) Well Locations:

(a) ~~Wells~~ *except as provided in ~~the~~ sub paragraph I. B. (1)(3) below,* wells drilled on a GPU shall be located not closer than 660 feet to the South and North lines nor closer than 660 feet to the East and West lines of a GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.

(b) ~~Wells~~ located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary *except* that wells located within one-half mile of the outer boundary of any such unit shall not be closer than permitted by subparagraph I.B.(1)(3) above.

(2) Well Density:

(a) ~~the~~ *T* FIRST OPTIONAL INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well;

(b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;

(c) the THIRD OPTIONAL INFILL WELL drilled on a GPU shall be



located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;

- (d) *at* At the discretion of the operator, the Second or Third Optional Infill Well ~~can~~ *may* be drilled prior to the drilling of the First Optional Infill Well;
- (e) *at* All exceptions for second and third infill wells on standard GPU's in the Blanco-Mesaverde Pool which have been approved by the Aztec District Office Supervisor or the Division's Santa Fe Office are hereby approved; —
- (f) *n* No more than two wells shall be located within either 160-acre tract of a GPU; and
- (g) *at* Any ~~deviation~~ *deviation from ? density ?* of the above-described well ~~location~~ requirements shall be authorized only after hearing ~~before a Division Examiner~~.

- (3) The plats (Form C-102) accompanying the "Application for Permit to Drill" (Form C-101 or federal equivalent) for subsequent wells on a GPU shall have outlined the boundaries of the GPU and shall show the location (well name, footage location, API number) of all existing Mesaverde wells on the GPU plus the proposed new well.

## II. ADMINISTRATIVE EXCEPTIONS:

The Division Director, in accordance with Division Rule 104, may administratively grant an exception to the well location requirements of I.B.(1) above upon application to the Division which includes notification by certified mail-return receipt to affected parties.

## III. ALLOCATION AND GRANTING ALLOWABLES:

*deducting* A. **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:

- (1) 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(s)~~ *one or more infill wells*, the deliverability of the wells shall be added in calculating the AD Factor and the allowable may be produced from all wells.

- (2) 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.

**B. Minimum Allowable:** A minimum allowable of 250 MCF per month per GPU is assigned to prevent the premature abandonment of wells.

**C. A GPU in the Blanco-Mesaverde Pool** shall be classified as marginal unless reclassified by the Director pursuant to Division Rule 605.F.(2). Any operator in the Blanco-Mesaverde Pool may request a reclassification of a GPU in that pool.

#### **IV. VERTICAL LIMITS OF THE BLANCO-MESAVERDE POOL:**

The vertical limits for the Blanco-Mesaverde Pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker as follows: (i) Southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone; and (ii) Northeast of the Chacra line the top of the pool is a point 300 feet above the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone.

The northwest southeast trending Chacra Line (originally established by Order R-5459, as amended) divides the Blanco-Mesaverde pool for purposes of defining the vertical limits of the pool. This line traverses the south side or west side of the sections listed below:

##### TOWNSHIP 24 NORTH, RANGE 1 EAST, NMPM

Section 31: West

##### TOWNSHIP 24 NORTH, RANGE 1 WEST, NMPM

Section 3: West

Section 10: West and South

Section 14: West and South

Section 24: West

Section 25: West and South

##### TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Section 7: West

Section 18: West and South

Section 20: West and South

Section 28: West

Section 33: West and South

##### TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM

Section 1: West and South

##### TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM

Sections 7 and 8: South

Section 16: West and South

Section 22:	West and South
Section 26:	West
Section 35:	West and South

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

Sections 2 and 3:	South
Section 4:	West and South
Section 12:	West and South

TOWNSHIP 27 NORTH, RANGE 3 WEST, NMPM

Section 31 and 32:	South
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TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM

Sections 31 through 36:	South
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TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

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

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 6:	West
Section 7:	West and South
Sections 8 and 9:	South
Section 14:	South
Section 15:	West and South
Section 24:	West
Section 25:	West and South

TOWNSHIP 28 NORTH, RANGE 6 WEST, NMPM

Section 7:	West
Sections 18 and 19:	West
Sections 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 8 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 9 WEST, NMPM

Section 3:	South
Section 4:	West and South
Section 11:	West and South
Section 12:	South

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM

Section 31:	West and South
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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  
Section 26: West and South

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM

Section 6: West and South  
Section 8: West and South  
Sections 9 through 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 7 and 8: 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.

Case File

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

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

CASE NO. 12069  
ORDER NO. R-10987-A

**APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY TO  
INCREASE THE VERTICAL LIMITS, PROVIDE NOTICE REQUIREMENTS,  
ESTABLISH ADMINISTRATIVE PROCEDURES, ADOPT NEW RULES 2(c), 3, AND 4,  
AND ~~3(b)~~ AMEND RULE 2(b) OF THE BLANCO-MESAVERDE POOL, RIO ARRIBA  
AND SAN JUAN COUNTIES, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 29, 1998, at Santa Fe, New Mexico,  
before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of February, 1999 the Division Director, having considered the  
testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the New Mexico Oil Conservation Division  
("Division") has jurisdiction of this case and its subject matter.

(2) Burlington Resources Oil & Gas Company ("Burlington") seeks an order of the  
Division to increase the vertical limits, provide for notice requirements, establish administrative  
procedures, adopt Rule 2(c), Rule 3, and Rule 4, and amend Rule 2(b) of the Special Rules and  
Regulations for the Blanco-Mesaverde Gas Pool for purposes of increasing well density and  
changing well location requirements for wells in this pool to allow, under certain restrictions,  
optional drilling of up to four wells within a standard 320-acre gas proration and spacing unit. This  
request would increase the well density from the current maximum of two (2) wells (160-acre infill)  
provided in Order R-8170, as amended, to a maximum of four (4) wells (80-acre infill) per 320-acre  
gas proration and spacing unit.

(3) In compliance with Division notice rules, Burlington sent approximately 3,500  
copies of its application including its proposed rules and notice of hearing to operators, individuals  
and companies with mineral interests in the Blanco-Mesaverde Pool. Notice of this case was also

published in the newspaper and on the Division's hearing docket that is mailed to approximately 300 operators in New Mexico.

(4) The following parties of record entered their appearances in this case and participated at the hearing:

(a) Burlington, the applicant, is the operator of approximately 2287 wells currently producing from the Blanco-Mesaverde Gas Pool;

(b) Amoco Production Company ("Amoco") appeared in support of the applicant on all issues except for notification and the necessity of creating "special qualifying areas"; and

(c) Independent Petroleum Association of New Mexico ("IPANM"), Cinco General Partnership ("Cinco") and Fred Turner appeared in support of the applicant.

(5) In addition to the parties of record, the hearing was attended by representatives of the United States Bureau of Land Management, the Supervisor of the Division's Aztec District Office, and various royalty, overriding royalty and surface owners.

(6) The Oil & Gas Act specifically provides in Section 70-2-17.B, NMSA (1979) that:

*"The Division may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risk arising from the drilling of an excessive number of wells and the prevention of reduced recovery which might result from the drilling of too few wells."*

(7) By Order No. 799, issued in Case No. 163 and dated February 25, 1949, the New Mexico Oil Conservation Commission ("Commission") created the Blanco-Mesaverde Gas Pool and adopted 320-acre gas proration units ("GPU") for this pool, based upon the assumption that one well would drain and develop 320-acres. The horizontal limits for this pool currently comprise all or portions of the following described area in San Juan and Rio Arriba Counties, New Mexico:

Township 25 North, Ranges 2 through 6 West, NMPM;  
Township 26 North, Ranges 2 through 9 West, NMPM;  
Township 27 North, Ranges 2 through 9 West, NMPM;  
Township 28 North, Ranges 3 through 10 West, NMPM;  
Township 29 North, Ranges 3 through 11 West, NMPM;  
Township 30 North, Ranges 4 through 12 West, NMPM;

Township 31 North, Ranges 5 through 13 West, NMPM;  
and Township 32 North, Ranges 5 through 13 West, NMPM.

(8) By Order No. R-128-C, dated December 16, 1954 and made effective March 1, 1955, gas prorationing was instituted in this pool.

(9) On August 13 and 14, 1974, in Case No. 5264, a hearing before the Commission was held to determine if the well density of one well per 320-acre GPU was adequate for this pool. The Commission issued Order No. R-1670-T on November 14, 1974, in which it concluded that: (i) one well per GPU in this pool was inadequate to drain gas reserves; (ii) to reduce the number of acres in a GPU would impair correlative rights by disturbing the equities in many of the existing GPU's; and (iii) more than one well per 320-acre GPU was necessary in order to increase ultimate gas recovery from this pool. Accordingly, Order No. R-1670-T provided for "optional infill drilling" by allowing in Rule 2 for the drilling of a second well within a 320-acre GPU, provide this one optional "infill well" is located within the opposite 160-acres from the 160-acres containing the original well ("the initial well") and further provided that the infill well is not closer than 790 feet (subject to a 200-foot topographical allowance) to the outer boundary of a quarter section nor closer than 130 feet to an interior quarter-quarter section line.

(10) Commission Order No. R-5459 (issued in Case No. 5893 and dated June 14, 1977), as amended by Order No. R-5459-A (issued by the Division in Case No. 7335 and dated September 30, 1981), redefined the top vertical limits for this pool in relation to the "Chacra Line," which is oriented northwest to southeast and divides the pool such that approximately 2/3rds of the pool is northeast of this line and 1/3rd is southwest of this line. The vertical limits for the pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker. Southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker, and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker.

(11) On September 20, 1978 the Division issued Order No. R-1670-U amending Rule 2 to allow the initial well on the 320-acre GPU to be drilled on either of the 160-acre tracts comprising the unit, so long as the well is no closer than 790 feet to the outer boundary of the quarter section and no closer than 130 feet to any interior quarter-quarter section line or subdivision inner boundary.

(12) The rules governing gas prorationing in Northwest New Mexico and the Blanco-Mesaverde Pool have gone through various changes and reformatting since the issuance of Order No. R-1670-U (see Commission/Division Orders No. R-8170, R-8170-A through R-8170-N, and R-10987). The current rules and procedures governing the Blanco-Mesaverde Pool are titled the "*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*" and included in "**EXHIBIT 'B'**" of the "***SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS***" of Commission Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998, and read in their entirety as follows:

"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 proceeding paragraph.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or 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 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, NMPM

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 07 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  
Section 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.)”

(13) Burlington, in its original application to the Division on September 23, 1998, referred to certain rule numbers [2(b), 3, and 2(c)] that were applicable to the special pool rules governing the Blanco-Mesaverde Pool under Orders No. 1670-T, R-1670-U, R-8170, R-8170-A through R-1870-N. These rule numbers were abolished when Division Order No. R-10987 was issued on May 7, 1998. These rule numbers were inadvertently included in the advertisement of this case and to avoid any further confusion in this matter these rule numbers will not be referenced in this order.

(14) Burlington seeks an order which amends the “*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*,” set forth in Exhibit “B” of Commission Order No. R-10987 to:

- (a) allow an initial well and a maximum of three infill wells on each GPU;
- (b) require that the first infill well on a GPU be located in a quarter section of the GPU not containing a Mesaverde well, the second infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one Mesaverde well, and the third infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a

quarter section of the GPU not containing more than one Mesaverde well;

(c) provide that wells drilled in this pool shall be located not closer than 660 feet to the outer boundary of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary;

(d) provide that wells located within federal exploratory units not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of such unit not be closer than 660 feet to the outer boundary of the GPU;

(e) establish Special Qualifying Areas in which special procedures must be followed before third or fourth wells may be drilled on a GPU including notice to adjacent operators, a 20-day objection period and, upon objection, hearings; and

(f) increase the vertical limits of a portion of this pool to include that interval from the top of the Huerfanito Bentonite Marker to 300 feet above this marker.

(15) Since 1995, Burlington has conducted a technical study of the Blanco-Mesaverde Pool to determine if gas reserves are being adequately drained with two wells on each 320-acre GPU. This study included the analysis of pressure data, core samples, well tests, and reservoir simulations within three limited pilot project areas: (i) the San Juan "29-7" Unit project approved by Division Order R-10720, issued in Case No. 11625 and dated January 9, 1997; (ii) the San Juan "27-5" Unit project approved by Division Order R-10936, issued in Case No. 11879 and dated January 8, 1998; and (iii) a project comprising a four section area in Townships 30 and 31 North, Ranges 10 and 11 West, NMPM, San Juan County, New Mexico approved by Division Order R-10949, issued in Case No. 11880 and dated February 3, 1998.

(16) Burlington presented evidence obtained from its study, which establishes that:

(a) the Blanco-Mesaverde Gas Pool is a low permeability reservoir with localized areas of natural fracturing;

(b) while the area drained by individual wells in the pool varies from 40 to 160 acres, most wells in the pool experience low annual pressure declines, produce at low rates and have marginal economics;

(c) only 9% of the pool is being adequately drained with 2 wells on each GPU, and only 44% of the original gas in the reservoir (12.5 TCF) will be recovered under current rules; and

(d) approval of this application authorizing additional infill wells on GPU's in the pool will result in an increase in ultimate recovery from the pool of between 5% to 10% or 1.5 to 3 trillion cubic feet of new gas reserves.

(17) Burlington proposes that well location ("footage setback") requirements be amended as follows:

(a) wells drilled on a GPU shall be located not closer than 660 feet to the outer boundary of a standard-sized GPU or an approved non-standard GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary within the GPU;

(b) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by sub-paragraph (a) above; and

(c) wells are to be located as follows:

(i) the FIRST OPTIONAL INFILL WELL drilled on a 320-acre GPU is to be located in the quarter section of the GPU not containing a Mesaverde gas well;

(ii) the SECOND OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iii) the THIRD OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iv) at the discretion of the operator, the ~~Second~~ or ~~Third~~ ~~Optional Infill~~ Well may be drilled or

*all*

completed prior to the ~~First~~ ~~Optional~~ ~~Infill~~ Well being drilled or completed; and

*Call*

(v) any deviation from the above-described well density requirements should be authorized only after hearing.

(18) Burlington's study further demonstrates that:

(a) the current pool rules which require 790 foot setbacks from a quarter section line and 130 foot quarter-quarter interior setbacks has resulted in "undrained" portions of gas reserves being located between the original and first infill Mesaverde gas well within a 320-acre GPU and between GPU's;

(b) in order to increase the opportunity to locate wells in the optimum position to drain those additional reserves it is either necessary to process numerous cases for unorthodox well locations or relax the exterior and interior footage setback requirements; and

(c) relaxing the footage setbacks will not impair correlative rights because in 91% of the pool the drainage areas per well are less than 160 acres, and due to the low permeability of the reservoir, it takes many months before any potential adverse impact will occur to offsetting GPU's during which time those operators will have an opportunity to choose when and where best to locate their own wells.

(19) Amoco and Cinco presented evidence in support of Burlington's proposal to permit three optional infill wells on each GPU in this pool.

(20) Adopting Burlington's proposed well location setback proposal and approval of a maximum of three infill wells on each 320-acre GPU in the Blanco-Mesaverde Gas Pool will result in the additional recovery of natural gas from this reservoir thereby preventing waste, will be in the best interest of conservation, and serves to protect correlative rights.

(21) The Division's Aztec District Office as well as the Division's Santa Fe Office has approved applications for a third infill well on certain GPU's in this pool. All permitted wells should be approved by the order resulting from this hearing.

(22) By Order R-5459, the Division redefined the top vertical limit for this pool in relation to the Chacra line and to the Huerfanito Bentonite Marker such that southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker. As a result of this definition, in the area northeast of the Chacra line, there is an interval of not less than 400 feet in thickness, including the Lewis Shale, that is below the current base of the Pictured

Cliffs formation and yet above the current top of the Blanco-Mesaverde Pool.

(23) In response to a request by the Division's Aztec District office, Burlington presented evidence to demonstrate that the top vertical limits of this pool can be increased approximately 300 feet without interference with the overlying Pictured Cliffs formation and the numerous Pictured Cliffs gas pools.

(24) Amoco and Cinco support the expansion of the vertical limits of the Blanco-Mesaverde Pool as recommended by Burlington to 300 feet above the Huerfanito Bentonite Marker.

(25) Adopting Burlington's proposal to increase the vertical limits of the pool will be in the best interest of conservation, the prevention of waste and the protection of correlative rights. Expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker will avoid confusion and should be **approved**.

(26) Burlington proposed the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators, a twenty-day objection period and, if an objection is received, a hearing to determine if the well will cause waste or impair correlative rights.

(27) Burlington provided a description of these eight Special Qualifying Areas and presented its interpretation of the various drainage areas within the pool. This evidence showed that there are areas within the Special Qualifying Areas where wells drain less than 40-acres as well as areas where wells drain more than 160-acres. The evidence also showed there were numerous areas outside these Special Qualifying Areas where wells drain 160-acres or more.

(28) While Burlington has proposed limiting additional notice, objection and hearing procedures for increased density well applications to eight limited areas of the pool, Amoco has proposed expanding those notice/objection/hearing procedures to the entire pool regardless of the amount of acreage being drained.

(29) Although Amoco supports changing the pool rules to allow for four gas wells per GPU, it has proposed the adoption of a requirement that the applicant for optional second and third infill wells notify all offset operators and in the event of an objection, the matter be set for hearing.

(30) Burlington, IPANM, and Cinco opposed Amoco's request on the grounds that such a notice procedure would defeat the purpose of the adoption of an increased density rule for 91% of the pool and would require unnecessary notice and potential hearings in areas of the pool where only limited drainage was occurring and no correlative rights would be impaired.

(31) The sizing of well spacing and proration units is not exact in all situations as to drainage area and there are various defined gas pools where geologic anomalies result in greater drainage areas than the spacing rules contemplate. Burlington's technical evidence and supporting

data on this issue demonstrates that within the proposed Special Qualifying Areas its own studies indicate adequate drainage is not achieved by two wells and that there are areas, some of which embrace several sections, that are not within the proposed Special Qualifying Areas that can be drained by two wells.

(32) It is unnecessary and probably administratively unworkable to have eight such areas within the pool developed differently than the rest of the pool. Individual operators are capable of evaluating whether the specific geology of a particular 320-acre GPU justifies the drilling of additional wells. Including such a requirement as proposed by either Burlington or Amoco would be unduly burdensome for both industry and the Division, would create confusion, would result in two sets of rules for the development of the pool, would be difficult to administer, and is not supported by Burlington's own drainage area evidence.

(33) Burlington's request for the creation of the eight proposed Special Qualifying Areas within the Blanco-Mesaverde Gas Pool with special procedures for obtaining authority to drill or complete optional second and third infill wells and Amoco's request for poolwide notification for optional second and third infill wells should be **denied**.

(34) At the hearing, the applicant expressed an opinion that other than this pool's special rule that establishes spacing unit size, all other rules for this pool involve operational aspects dealt with only by the operators of existing GPU's for this pool. Burlington then proposed that the Division adopt a procedure whereby future changes in the rules and regulations for the pool, excluding amending the 320-acre rule, may be made based upon notice only to operators and not to all interest owners in the pool.

(35) Such a request does not promote conservation and may violate correlative rights, and should therefore be **denied**.

(36) The "*Special Rules for the Blanco-Mesaverde Pool*" set forth in Exhibit "A" of this order will serve to prevent the economic loss caused by the drilling of unnecessary wells, will avoid the risks associated with the drilling of an excessive number of wells, will increase the opportunity to produce new reserves and improve recovery of gas from this pool, and will provide a workable, fair and efficient regulation of well locations and spacing units while preventing waste of valuable hydrocarbons and the protection of the correlative rights of the owners of that production. ~~As requested by the applicant,~~ these amended rules should be made effective February 1, 1999.

(37) The special rules for the Blanco-Mesaverde Pool as shown in Exhibit "A" should supersede those found in Division Order No. R-10987.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Burlington Resources Oil & Gas Corporation ("Burlington"), and effective February 1, 1999, the special pool rules for the Blanco-Mesaverde Pool are hereby set forth in the attached Exhibit "A".



(2) Burlington's application for the expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker, further described in Exhibit "A", is hereby **approved**.

(3) Burlington's application for the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Gas Pool with special procedures for obtaining authority to drill or complete optional second and third infill wells and Amoco's request for poolwide notification for optional second and third infill wells are hereby **denied**.

(4) Burlington's application to adopt future special pool rule changes, excluding amending the 320-acre rule, based on limited notice to operators only is hereby **denied**.

(5) The special pool rules for the Blanco-Mesaverde Pool shown in Exhibit "A" shall supersede the special pool rules for the Blanco-Mesaverde Gas Pool in Division Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998. All other provisions of Order No. R-10987 shall remain in full force and affect until further notice.

(6) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director

S E A L

**EXHIBIT "A"**  
**Case No. 12069**  
**Order No. R-10987-A**

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**SPECIAL RULES FOR THE  
BLANCO-MESAVERDE POOL**

**I. ACREAGE AND WELL LOCATION REQUIREMENTS**

**A. Standard GPU (Gas Proration Unit):** A standard GPU in the Blanco-Mesaverde Pool shall be 320 acres.

**B. Well density and locations:**

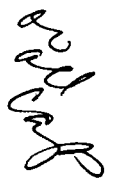
(1) Well Locations:

- (a) Except as provided in subparagraph I.B.(1)(b) below, wells drilled on a GPU shall be located not closer than 660 feet to the South and North lines nor closer than 660 feet to the East and West lines of a GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.
- (b) Wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary, except that wells located within one-half mile of the outer boundary of any such unitized area shall not be closer than permitted by subparagraph I.B.(1)(a) above.

(2) Well Density:

- (a) The FIRST OPTIONAL INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well;
- (b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;

- (c) the THIRD OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;
  - (d) at the discretion of the operator, the ~~Second or Third Optional Infill Well~~ may be drilled prior to the drilling of the ~~First Optional Infill Well~~;
  - (e) all exceptions for second and third infill wells on standard GPU's in the Blanco-Mesaverde Pool which have been approved by the Aztec District Office Supervisor or the Division's Santa Fe Office are hereby approved;
  - (f) no more than two wells shall be located within either 160-acre tract of a GPU; and
  - (g) any deviation from the above-described well density requirements shall be authorized only after hearing.
- (3) The plats (Form C-102) accompanying the "*Application for Permit to Drill*" (Form C-101 or federal equivalent) for subsequent wells on a GPU shall have outlined the boundaries of the GPU and shall show the location (well name, footage location, API number) of all existing Mesaverde wells on the GPU plus the proposed new well.



## II. ADMINISTRATIVE EXCEPTIONS:

The Division Director, in accordance with Division Rule 104, may administratively grant an exception to the well location requirements of I.B.(1) above upon application to the Division which includes notification by certified mail-return receipt to affected parties.

## III. ALLOCATION AND GRANTING ALLOWABLES:

**A. 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:

- (1) 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 one or more infill wells, the deliverability of the wells shall be added in calculating the AD

Factor and the allowable may be produced from all wells.

- (2) 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.

**B. Minimum Allowable:** A minimum allowable of 250 MCF per month per GPU is assigned to prevent the premature abandonment of wells.

**C. A GPU in the Blanco-Mesaverde Pool** shall be classified as marginal unless reclassified by the Director pursuant to Division Rule 605.F.(2). Any operator in the Blanco-Mesaverde Pool may request a reclassification of a GPU in that pool.

#### **IV. VERTICAL LIMITS OF THE BLANCO-MESAVERDE POOL:**

The vertical limits for the Blanco-Mesaverde Pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker as follows: (i) Southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone; and (ii) Northeast of the Chacra line the top of the pool is a point 300 feet above the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone.

The northwest southeast trending Chacra Line (originally established by Order R-5459, as amended) divides the Blanco-Mesaverde pool for purposes of defining the vertical limits of the pool. This line traverses the south side or west side of the sections listed below:

##### TOWNSHIP 24 NORTH, RANGE 1 EAST, NMPM

Section 31:	West
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##### TOWNSHIP 24 NORTH, RANGE 1 WEST, NMPM

Section 3:	West
Section 10:	West and South
Section 14:	West and South
Section 24:	West
Section 25:	West and South

##### TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Section 7:	West
Section 18:	West and South
Section 20:	West and South
Section 28:	West
Section 33:	West and South

##### TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM

Section 1:	West and South
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TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM

Sections 7 and 8:	South
Section 16:	West and South
Section 22:	West and South
Section 26:	West
Section 35:	West and South

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

Sections 2 and 3:	South
Section 4:	West and South
Section 12:	West and South

TOWNSHIP 27 NORTH, RANGE 3 WEST, NMPM

Section 31 and 32:	South
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TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM

Sections 31 through 36:	South
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TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

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

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 6:	West
Section 7:	West and South
Sections 8 and 9:	South
Section 14:	South
Section 15:	West and South
Section 24:	West
Section 25:	West and South

TOWNSHIP 28 NORTH, RANGE 6 WEST, NMPM

Section 7:	West
Sections 18 and 19:	West
Sections 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 8 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 9 WEST, NMPM

Section 3:	South
Section 4:	West and South
Section 11:	West and South
Section 12:	South

TOWNSHIP 30 NORTH, RANGE 9 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
Section 26:	West and South

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM

Section 6:	West and South
Section 8:	West and South
Sections 9 through 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 7 and 8:	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.
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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 12069  
ORDER NO. R-10987-A

**APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY TO  
INCREASE THE VERTICAL LIMITS, PROVIDE NOTICE REQUIREMENTS,  
ESTABLISH ADMINISTRATIVE PROCEDURES, ADOPT NEW RULES 2(c), 3, AND 4,  
AND AMEND RULE 2(b) OF THE BLANCO-MESAVERDE POOL, RIO ARriba AND  
SAN JUAN COUNTIES, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 29, 1998, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of February, 1999 the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the New Mexico Oil Conservation Division ("Division") has jurisdiction of this case and its subject matter.

(2) Burlington Resources Oil & Gas Company ("Burlington") seeks an order of the Division to increase the vertical limits, provide for notice requirements, establish administrative procedures, adopt Rule 2(c), Rule 3, and Rule 4, and amend Rule 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool for purposes of increasing well density and changing well location requirements for wells in this pool to allow, under certain restrictions, optional drilling of up to four wells within a standard 320-acre gas proration and spacing unit. This request would increase the well density from the current maximum of two (2) wells (160-acre infill) provided in Order R-8170, as amended, to a maximum of four (4) wells (80-acre infill) per 320-acre gas proration and spacing unit.

(3) In compliance with Division notice rules, Burlington sent approximately 3,500 copies of its application including its proposed rules and notice of hearing to operators, individuals and companies with mineral interests in the Blanco-Mesaverde Pool. Notice of this case was also

published in the newspaper and on the Division's hearing docket that is mailed to approximately 300 operators in New Mexico.

(4) The following parties of record entered their appearances in this case and participated at the hearing:

(a) Burlington, the applicant, is the operator of approximately 2287 wells currently producing from the Blanco-Mesaverde Gas Pool;

(b) Amoco Production Company ("Amoco") appeared in support of the applicant on all issues except for notification and the necessity of creating "special qualifying areas"; and

(c) Independent Petroleum Association of New Mexico ("IPANM"), Cinco General Partnership ("Cinco") and Fred Turner appeared in support of the applicant.

(5) In addition to the parties of record, the hearing was attended by representatives of the United States Bureau of Land Management, the Supervisor of the Division's Aztec District Office, and various royalty, overriding royalty and surface owners.

(6) The Oil & Gas Act specifically provides in Section 70-2-17.B, NMSA (1979) that:

*"The Division may establish a proration unit for each pool, such being the area that can be efficiently and economically drained and developed by one well, and in so doing the Division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, including those of royalty owners, the prevention of waste, the avoidance of the augmentation of risk arising from the drilling of an excessive number of wells and the prevention of reduced recovery which might result from the drilling of too few wells."*

(7) By Order No. 799, issued in Case No. 163 and dated February 25, 1949, the New Mexico Oil Conservation Commission ("Commission") created the Blanco-Mesaverde Gas Pool and adopted 320-acre gas proration units ("GPU") for this pool, based upon the assumption that one well would drain and develop 320-acres. The horizontal limits for this pool currently comprise all or portions of the following described area in San Juan and Rio Arriba Counties, New Mexico:

Township 25 North, Ranges 2 through 6 West, NMPM;  
Township 26 North, Ranges 2 through 9 West, NMPM;  
Township 27 North, Ranges 2 through 9 West, NMPM;  
Township 28 North, Ranges 3 through 10 West, NMPM;  
Township 29 North, Ranges 3 through 11 West, NMPM;  
Township 30 North, Ranges 4 through 12 West, NMPM;



Township 31 North, Ranges 5 through 13 West, NMPM;  
and Township 32 North, Ranges 5 through 13 West, NMPM.

(8) By Order No. R-128-C, dated December 16, 1954 and made effective March 1, 1955, gas prorationing was instituted in this pool.

(9) On August 13 and 14, 1974, in Case No. 5264, a hearing before the Commission was held to determine if the well density of one well per 320-acre GPU was adequate for this pool. The Commission issued Order No. R-1670-T on November 14, 1974, in which it concluded that: (i) one well per GPU in this pool was inadequate to drain gas reserves; (ii) to reduce the number of acres in a GPU would impair correlative rights by disturbing the equities in many of the existing GPU's; and (iii) more than one well per 320-acre GPU was necessary in order to increase ultimate gas recovery from this pool. Accordingly, Order No. R-1670-T provided for "optional infill drilling" by allowing in Rule 2 for the drilling of a second well within a 320-acre GPU, provide this one optional "infill well" is located within the opposite 160-acres from the 160-acres containing the original well ("the initial well") and further provided that the infill well is not closer than 790 feet (subject to a 200-foot topographical allowance) to the outer boundary of a quarter section nor closer than 130 feet to an interior quarter-quarter section line.

(10) Commission Order No. R-5459 (issued in Case No. 5893 and dated June 14, 1977), as amended by Order No. R-5459-A (issued by the Division in Case No. 7335 and dated September 30, 1981), redefined the top vertical limits for this pool in relation to the "Chacra Line," which is oriented northwest to southeast and divides the pool such that approximately 2/3rds of the pool is northeast of this line and 1/3rd is southwest of this line. The vertical limits for the pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker. Southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker, and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker.

(11) On September 20, 1978 the Division issued Order No. R-1670-U amending Rule 2 to allow the initial well on the 320-acre GPU to be drilled on either of the 160-acre tracts comprising the unit, so long as the well is no closer than 790 feet to the outer boundary of the quarter section and no closer than 130 feet to any interior quarter-quarter section line or subdivision inner boundary.

(12) The rules governing gas prorationing in Northwest New Mexico and the Blanco-Mesaverde Pool have gone through various changes and reformatting since the issuance of Order No. R-1670-U (see Commission/Division Orders No. R-8170, R-8170-A through R-8170-N, and R-10987). The current rules and procedures governing the Blanco-Mesaverde Pool are titled the "*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*" and included in "**EXHIBIT B**" of the "***SPECIAL RULES FOR INDIVIDUAL PRORATED GAS POOLS***" of Commission Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998, and read in their entirety as follows:

"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 proceeding paragraph.

The plat (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or 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 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, NMPM

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 07 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  
Section 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.)”

(13) Burlington, in its original application to the Division on September 23, 1998, referred to certain rule numbers [2(b), 3, and 2(c)] that were applicable to the special pool rules governing the Blanco-Mesaverde Pool under Orders No. 1670-T, R-1670-U, R-8170, R-8170-A through R-1870-N. These rule numbers were abolished when Division Order No. R-10987 was issued on May 7, 1998. These rule numbers were inadvertently included in the advertisement of this case and to avoid any further confusion in this matter these rule numbers will not be referenced in this order.

(14) Burlington seeks an order which amends the “*Special Rules and Regulations for the Blanco-Mesaverde Gas Pool*,” set forth in Exhibit “B” of Commission Order No. R-10987 to:

- (a) allow an initial well and a maximum of three infill wells on each GPU;
- (b) require that the first infill well on a GPU be located in a quarter section of the GPU not containing a Mesaverde well, the second infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one Mesaverde well, and the third infill well on a GPU be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a

quarter section of the GPU not containing more than one Mesaverde well;

(c) provide that wells drilled in this pool shall be located not closer than 660 feet to the outer boundary of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary;

(d) provide that wells located within federal exploratory units not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of such unit not be closer than 660 feet to the outer boundary of the GPU;

(e) establish Special Qualifying Areas in which special procedures must be followed before third or fourth wells may be drilled on a GPU including notice to adjacent operators, a 20-day objection period and, upon objection, hearings; and

(f) increase the vertical limits of a portion of this pool to include that interval from the top of the Huerfanito Bentonite Marker to 300 feet above this marker.

(15) Since 1995, Burlington has conducted a technical study of the Blanco-Mesaverde Pool to determine if gas reserves are being adequately drained with two wells on each 320-acre GPU. This study included the analysis of pressure data, core samples, well tests, and reservoir simulations within three limited pilot project areas: (i) the San Juan "29-7" Unit project approved by Division Order R-10720, issued in Case No. 11625 and dated January 9, 1997; (ii) the San Juan "27-5" Unit project approved by Division Order R-10936, issued in Case No. 11879 and dated January 8, 1998; and (iii) a project comprising a four section area in Townships 30 and 31 North, Ranges 10 and 11 West, NMPM, San Juan County, New Mexico approved by Division Order R-10949, issued in Case No. 11880 and dated February 3, 1998.

(16) Burlington presented evidence obtained from its study, which establishes that:

(a) the Blanco-Mesaverde Gas Pool is a low permeability reservoir with localized areas of natural fracturing;

(b) while the area drained by individual wells in the pool varies from 40 to 160 acres, most wells in the pool experience low annual pressure declines, produce at low rates and have marginal economics;

(c) only 9% of the pool is being adequately drained with 2 wells on each GPU, and only 44% of the original gas in the reservoir (12.5 TCF) will be recovered under current rules; and

(d) approval of this application authorizing additional infill wells on GPU's in the pool will result in an increase in ultimate recovery from the pool of between 5% to 10% or 1.5 to 3 trillion cubic feet of new gas reserves.

(17) Burlington proposes that well location ("footage setback") requirements be amended as follows:

(a) wells drilled on a GPU shall be located not closer than 660 feet to the outer boundary of a standard-sized GPU or an approved non-standard GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary within the GPU;

(b) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by sub-paragraph (a) above; and

(c) wells are to be located as follows:

(i) the FIRST OPTIONAL INFILL WELL drilled on a 320-acre GPU is to be located in the quarter section of the GPU not containing a Mesaverde gas well;

(ii) the SECOND OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iii) the THIRD OPTIONAL INFILL WELL drilled on a GPU is to be located in a quarter-quarter section of the GPU not containing a Mesaverde gas well and within a quarter section of the GPU not containing more than one Mesaverde gas well;

(iv) at the discretion of the operator, the second or third optional infill well may be drilled or completed

prior to the first optional infill well being drilled or completed; and

(v) any deviation from the above-described well density requirements should be authorized only after hearing.

(18) Burlington's study further demonstrates that:

(a) the current pool rules which require 790 foot setbacks from a quarter section line and 130 foot quarter-quarter interior setbacks has resulted in "undrained" portions of gas reserves being located between the original and first infill Mesaverde gas well within a 320-acre GPU and between GPU's;

(b) in order to increase the opportunity to locate wells in the optimum position to drain those additional reserves it is either necessary to process numerous cases for unorthodox well locations or relax the exterior and interior footage setback requirements; and

(c) relaxing the footage setbacks will not impair correlative rights because in 91% of the pool the drainage areas per well are less than 160 acres, and due to the low permeability of the reservoir, it takes many months before any potential adverse impact will occur to offsetting GPU's during which time those operators will have an opportunity to choose when and where best to locate their own wells.

(19) Amoco and Cinco presented evidence in support of Burlington's proposal to permit three optional infill wells on each GPU in this pool.

(20) Adopting Burlington's proposed well location setback proposal and approval of a maximum of three infill wells on each 320-acre GPU in the Blanco-Mesaverde Gas Pool will result in the additional recovery of natural gas from this reservoir thereby preventing waste, will be in the best interest of conservation, and serves to protect correlative rights.

(21) The Division's Aztec District Office as well as the Division's Santa Fe Office has approved applications for a third infill well on certain GPU's in this pool. All permitted wells should be approved by the order resulting from this hearing.

(22) By Order R-5459, the Division redefined the top vertical limit for this pool in relation to the Chacra line and to the Huerfanito Bentonite Marker such that southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and northeast of the line the top of the pool is a point contiguous with the Huerfanito Bentonite Marker. As a result of this definition, in the area northeast of the Chacra line, there is an interval of not less than 400 feet in thickness, including the Lewis Shale, that is below the current base of the Pictured



Cliffs formation and yet above the current top of the Blanco-Mesaverde Pool.

(23) In response to a request by the Division's Aztec District office, Burlington presented evidence to demonstrate that the top vertical limits of this pool can be increased approximately 300 feet without interference with the overlying Pictured Cliffs formation and the numerous Pictured Cliffs gas pools.

(24) Amoco and Cinco support the expansion of the vertical limits of the Blanco-Mesaverde Pool as recommended by Burlington to 300 feet above the Huerfanito Bentonite Marker.

(25) Adopting Burlington's proposal to increase the vertical limits of the pool will be in the best interest of conservation, the prevention of waste and the protection of correlative rights. Expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker will avoid confusion and should be **approved**.

(26) Burlington proposed the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Pool where optional second and third infill wells could be drilled on a standard 320-acre GPU only after notice to adjacent operators, a twenty-day objection period and, if an objection is received, a hearing to determine if the well will cause waste or impair correlative rights.

(27) Burlington provided a description of these eight Special Qualifying Areas and presented its interpretation of the various drainage areas within the pool. This evidence showed that there are areas within the Special Qualifying Areas where wells drain less than 40-acres as well as areas where wells drain more than 160-acres. The evidence also showed there were numerous areas outside these Special Qualifying Areas where wells drain 160-acres or more.

(28) While Burlington has proposed limiting additional notice, objection and hearing procedures for increased density well applications to eight limited areas of the pool, Amoco has proposed expanding those notice/objection/hearing procedures to the entire pool regardless of the amount of acreage being drained.

(29) Although Amoco supports changing the pool rules to allow for four gas wells per GPU, it has proposed the adoption of a requirement that the applicant for optional second and third infill wells notify all offset operators and in the event of an objection, the matter be set for hearing.

(30) Burlington, IPANM, and Cinco opposed Amoco's request on the grounds that such a notice procedure would defeat the purpose of the adoption of an increased density rule for 91% of the pool and would require unnecessary notice and potential hearings in areas of the pool where only limited drainage was occurring and no correlative rights would be impaired.

(31) The sizing of well spacing and proration units is not exact in all situations as to drainage area and there are various defined gas pools where geologic anomalies result in greater drainage areas than the spacing rules contemplate. Burlington's technical evidence and supporting

data on this issue demonstrates that within the proposed Special Qualifying Areas its own studies indicate adequate drainage is not achieved by two wells and that there are areas, some of which embrace several sections, that are not within the proposed Special Qualifying Areas that can be drained by two wells.

(32) It is unnecessary and probably administratively unworkable to have eight such areas within the pool developed differently than the rest of the pool. Individual operators are capable of evaluating whether the specific geology of a particular 320-acre GPU justifies the drilling of additional wells. Including such a requirement as proposed by either Burlington or Amoco would be unduly burdensome for both industry and the Division, would create confusion, would result in two sets of rules for the development of the pool, would be difficult to administer, and is not supported by Burlington's own drainage area evidence.

(33) Burlington's request for the creation of the eight proposed Special Qualifying Areas within the Blanco-Mesaverde Gas Pool with special procedures for obtaining authority to drill or complete optional second and third infill wells and Amoco's request for poolwide notification for optional second and third infill wells should be **denied**.

(34) At the hearing, the applicant expressed an opinion that other than this pool's special rule that establishes spacing unit size, all other rules for this pool involve operational aspects dealt with only by the operators of existing GPU's for this pool. Burlington then proposed that the Division adopt a procedure whereby future changes in the rules and regulations for the pool, excluding amending the 320-acre rule, may be made based upon notice only to operators and not to all interest owners in the pool.

(35) Such a request does not promote conservation and may violate correlative rights, and should therefore be **denied**.

(36) The "*Special Rules for the Blanco-Mesaverde Pool*" set forth in Exhibit "A" of this order will serve to prevent the economic loss caused by the drilling of unnecessary wells, will avoid the risks associated with the drilling of an excessive number of wells, will increase the opportunity to produce new reserves and improve recovery of gas from this pool, and will provide a workable, fair and efficient regulation of well locations and spacing units while preventing waste of valuable hydrocarbons and the protection of the correlative rights of the owners of that production. These amended rules should be made effective February 1, 1999.

(37) The special rules for the Blanco-Mesaverde Pool as shown in Exhibit "A" should supersede those found in Division Order No. R-10987.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Burlington Resources Oil & Gas Corporation ("Burlington"), and effective February 1, 1999, the special pool rules for the Blanco-Mesaverde Pool are hereby set forth in the attached Exhibit "A".

(2) Burlington's application for the expansion of the vertical limits of the Blanco-Mesaverde Gas Pool to 300 feet above the Huerfanito Bentonite Marker, further described in Exhibit "A", is hereby **approved**.

(3) Burlington's application for the creation of eight Special Qualifying Areas within the Blanco-Mesaverde Gas Pool with special procedures for obtaining authority to drill or complete optional second and third infill wells and Amoco's request for poolwide notification for optional second and third infill wells are hereby **denied**.

(4) Burlington's application to adopt future special pool rule changes, excluding amending the 320-acre rule, based on limited notice to operators only is hereby **denied**.

(5) The special pool rules for the Blanco-Mesaverde Pool shown in Exhibit "A" shall supersede the special pool rules for the Blanco-Mesaverde Gas Pool in Division Order No. R-10987, issued in Case No. 11705 and dated May 7, 1998. All other provisions of Order No. R-10987 shall remain in full force and affect until further notice.

(6) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director

S E A L

**EXHIBIT "A"**  
**Case No. 12069**  
**Order No. R-10987-A**

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**SPECIAL RULES FOR THE  
BLANCO-MESAVERDE POOL**

**I. ACREAGE AND WELL LOCATION REQUIREMENTS**

**A. Standard GPU (Gas Proration Unit):** A standard GPU in the Blanco-Mesaverde Pool shall be 320 acres.

**B. Well density and locations:**

(1) Well Locations:

- (a) Except as provided in subparagraph I.B.(1)(b) below, wells drilled on a GPU shall be located not closer than 660 feet to the South and North lines nor closer than 660 feet to the East and West lines of a GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.
- (b) Wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary, except that wells located within one-half mile of the outer boundary of any such unitized area shall not be closer than permitted by subparagraph I.B.(1)(a) above.

(2) Well Density:

- (a) The FIRST OPTIONAL INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well;
- (b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;

- (c) the THIRD OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;
  - (d) at the discretion of the operator, the second or third optional infill well may be drilled prior to the drilling of the first optional infill well;
  - (e) all exceptions for second and third infill wells on standard GPU's in the Blanco-Mesaverde Pool which have been approved by the Aztec District Office Supervisor or the Division's Santa Fe Office are hereby approved;
  - (f) no more than two wells shall be located within either 160-acre tract of a GPU; and
  - (g) any deviation from the above-described well density requirements shall be authorized only after hearing.
- (3) The plats (Form C-102) accompanying the "*Application for Permit to Drill*" (Form C-101 or federal equivalent) for subsequent wells on a GPU shall have outlined the boundaries of the GPU and shall show the location (well name, footage location, API number) of all existing Mesaverde wells on the GPU plus the proposed new well.

## II. ADMINISTRATIVE EXCEPTIONS:

The Division Director, in accordance with Division Rule 104, may administratively grant an exception to the well location requirements of I.B.(1) above upon application to the Division which includes notification by certified mail-return receipt to affected parties.

## III. ALLOCATION AND GRANTING ALLOWABLES:

**A. 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:

- (1) 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 one or more infill wells, the deliverability of the wells shall be added in calculating the AD

Factor and the allowable may be produced from all wells.

- (2) 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.

**B. Minimum Allowable:** A minimum allowable of 250 MCF per month per GPU is assigned to prevent the premature abandonment of wells.

**C. A GPU in the Blanco-Mesaverde Pool** shall be classified as marginal unless reclassified by the Director pursuant to Division Rule 605.F.(2). Any operator in the Blanco-Mesaverde Pool may request a reclassification of a GPU in that pool.

#### **IV. VERTICAL LIMITS OF THE BLANCO-MESAVERDE POOL:**

The vertical limits for the Blanco-Mesaverde Pool are described in relation to the Chacra line and to the Huerfanito Bentonite Marker as follows: (i) Southwest of the Chacra line the top of the pool is a point 750 feet below the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone; and (ii) Northeast of the Chacra line the top of the pool is a point 300 feet above the Huerfanito Bentonite Marker and the base of the pool is a point 500 feet below the top of the Point Lookout Sandstone.

The northwest southeast trending Chacra Line (originally established by Order R-5459, as amended) divides the Blanco-Mesaverde pool for purposes of defining the vertical limits of the pool. This line traverses the south side or west side of the sections listed below:

##### TOWNSHIP 24 NORTH, RANGE 1 EAST, NMPM

Section 31: West

##### TOWNSHIP 24 NORTH, RANGE 1 WEST, NMPM

Section 3: West

Section 10: West and South

Section 14: West and South

Section 24: West

Section 25: West and South

##### TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Section 7: West

Section 18: West and South

Section 20: West and South

Section 28: West

Section 33: West and South

##### TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM

Section 1: West and South

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM

Sections 7 and 8:	South
Section 16:	West and South
Section 22:	West and South
Section 26:	West
Section 35:	West and South

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

Sections 2 and 3:	South
Section 4:	West and South
Section 12:	West and South

TOWNSHIP 27 NORTH, RANGE 3 WEST, NMPM

Section 31 and 32:	South
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TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM

Sections 31 through 36:	South
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TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

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

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 6:	West
Section 7:	West and South
Sections 8 and 9:	South
Section 14:	South
Section 15:	West and South
Section 24:	West
Section 25:	West and South

TOWNSHIP 28 NORTH, RANGE 6 WEST, NMPM

Section 7:	West
Sections 18 and 19:	West
Sections 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 8 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 9 WEST, NMPM

Section 3:	South
Section 4:	West and South
Section 11:	West and South
Section 12:	South

TOWNSHIP 30 NORTH, RANGE 9 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
Section 26:	West and South

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM

Section 6:	West and South
Section 8:	West and South
Sections 9 through 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 7 and 8:	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.
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