

**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. 13667  
ORDER NO. R-12562**

**APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY, LP  
FOR AN EXCEPTION TO THE WELL DENSITY REQUIREMENTS OF THE  
BLANCO-MESAVERDE GAS POOL, RIO ARRIBA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on March 16, 2006, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 31<sup>st</sup> day of May, 2006, 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 Division has jurisdiction of this case and its subject matter.

(2) The applicant, Burlington Resources Oil & Gas Company, LP ("Burlington" or "applicant"), seeks an exception to the well density provisions of the Special Rules and Regulations of the Blanco-Mesaverde (Prorated Gas) Pool (72319) within an existing standard 320-acre Mesaverde spacing and proration unit ("GPU") consisting of the E/2 of Section 16, Township 30 North, Range 7 West, NMPM, Rio Arriba County, New Mexico by approval of simultaneous production from the following two gas wells within the SE/4 NE/4:

(a) State Com Well No. 1 (API No. 30-039-07847) located 2040 feet from the North line and 1090 feet from the East line, Unit H of Section 16; and the

(b) State Com Well No. 1R (API No. 30-039-25262) located 2515 feet from the North line and 640 feet from the East line, Unit H of Section 16.

(3) No other party entered an appearance in this case or otherwise opposed this application.

(4) Spacing and location of wells within the Blanco-Mesaverde (Prorated Gas) Pool, are governed by the Special Rules and Regulations as detailed in Division Order No. R-10987-A(1) effective December 2, 2002, which read in part as follows:

***I. ACREAGE AND WELL LOCATION REQUIREMENTS***

***A. Standard GPU (Gas Proration Unit):*** *A standard GPU in the Blanco-Mesaverde Pool shall be 320 acres, more or less, comprising any two contiguous quarter sections of a single section that is a legal subdivision of the U. S. Public Land Surveys.*

***B. Well density:***

*(1) Up to four (4) wells may be drilled on a standard GPU, as follows:*

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

*(b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section not containing a Mesaverde well and within a quarter section 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 not containing a Mesaverde well and within a quarter section 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) no more than two wells shall be located within either quarter section in a GPU; and*

*(f) any deviation from the above-described well density requirements shall be authorized only after hearing.*

(5) The applicant presented the following background:

(a) Within the past year, Burlington has gone through a process of examining its Mesaverde wells for regulatory compliance. Out of 1150 completions, Burlington found eight spacing and proration units which are out of compliance by way of having more than two gas wells located within the same quarter-quarter section. The circumstances leading to each situation were not the same. Therefore, Burlington examined internal processes and now requires a latitude and longitude to be input into a database for any well candidate prior to workover or drilling. This examination process is continuing, especially for compliance with other pools and will be aided in the future by utilizing GIS technology with a new detailed aerial survey.

(b) Since discovering the problems, Burlington has shut-in one of the wells on each of the eight out-of-compliance spacing units, self-reported the situation to the Division, and is now asking for relief from the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool by way of resuming production from the shut-in wells.

(c) Burlington has determined proposed criteria to evaluate each of these situations including an examination of the production rate versus time plots for each well to look for interference and a no-flow boundary calculation to see if gas flow is predominantly migrating from offsetting GPUs. The no-flow boundary calculation is made with the assumption of uniform geologic and reservoir properties.

(6) The applicant presented exhibits and expert testimony at the hearing. The following facts were presented:

(a) Burlington completed the State Com Well No. 1R in September of 1993 on the same SE/4 NE/4 quarter-quarter section as the State Com Well No. 1. The No. 1 well was shut-in until early 1999 then put back on line until early 2005 when it was again shut-in.

(b) The State Com Well No. 1R was to be located near Navajo Lake, but was moved to a non-standard location and this location was approved by Division permit NSL-3244. The State Com Well No. 1 is located at a standard location within this GPU.

(c) Currently, this GPU contains three wells, two wells are located in Unit H and one well is located in Unit P. Burlington has no intention to drill more than four wells within this GPU.

(d) Notice was supplied to all working interests in the San Juan 30-6 Unit (offset in an easterly direction) and to the operator of the Northeast Blanco Unit (offsets in the north, south, and west directions). No protests were received.

(e) The nearest and most affected GPU is located to the east. This offsetting GPU to the east only contains two producing Mesaverde wells.

(f) An analysis indicates that little discernable interference occurred during production of both wells in the same quarter-quarter section and incremental gas will be recovered if both wells are allowed to produce.

(g) The no-flow boundary in this case did extend over into the GPU to the east, but likely did so because the two wells in Unit H of Section 16 are located near the GPU in Section 15 and the fact that the adjacent GPU only had two wells.

(h) While both wells were last producing on the same quarter-quarter section, these two wells each produced approximately 110 Mcf gas per day.

(7) After reviewing the facts presented in this case the examiner concluded the following:

(a) Burlington's case was presented without an analysis from a geologist. In particular as Burlington pointed out, the accuracy of using a simple production rate based no-flow boundary calculation even if aided with a single model simulator depends on uniform geologic rock and reservoir properties.

(b) The Mesaverde formation consists of at least three distinct members and no facts were presented as to the completion depths or producing members in the subject wells or in possibly affected offset wells.

(c) In order to look for actual interference or damage to affected offset wells, production rate versus time data from offsetting wells in other spacing units nearest to the subject quarter-quarter section was not compared to production rate versus time data from wells within the subject quarter-quarter section.

(d) When examining simultaneous production plots of the two wells within the same quarter section, Burlington assumed that any apparent interference was caused by changing line pressure and was too early to be reservoir interference effects. Burlington did not attempt to use other relationships such as Inflow Performance Relationship (IPR) analysis to back out the effects of the increased line pressure to truly determine if interference was happening.

(e) No estimate was made of the magnitude of increased reserves or the timing of its recovery or the economics involved with drilling or workovers of increased Mesaverde density. However, determining the magnitude of the increased reserves and the economics of drilling increased density wells are beyond the scope of this application.

(8) Notwithstanding these concerns, the examiner recommends this application be granted due to the following pertinent facts:

(a) It appears that real additional developed reserves have been added by drilling the second well within this quarter-quarter section.

(b) Correlative rights of owners in offsetting spacing units are protected. Presented production and line pressure information indicate that the original well in this quarter-quarter section has not been noticeably affected by completing the second well. Therefore, the likelihood that wells further away in offsetting spacing units being adversely affected is very small.

(c) Thorough notice was provided and no protests were received.

(d) Allowing both wells completed within Unit H of Section 16 to simultaneously produce will allow the recovery of natural gas that may otherwise not be produced and will allow the use of a drilling investment that has already been made.

(e) If this application were approved, Burlington would be allowed to resume production from the State Com Well No. 1 located in Unit H and increase production within this spacing unit by approximately 110 Mcf gas per day.

(f) If this application is approved, then all spacing and location provisions of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool shall remain in effect except as exempted in this order including the provisions that no more than two wells shall simultaneously produce in any quarter section and no more than four wells shall simultaneously produce in any spacing unit.

(g) This application should be approved in order to prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Burlington Resources Oil & Gas Company, LP ("Burlington") is approved and Burlington is hereby granted an exception to the well density provisions of the Special Rules and Regulations of the Blanco-Mesaverde (Prorated Gas) Pool (72319) as promulgated by Division Order No. R-10987-A(1) and allowed to simultaneously produce the following two wells within the SE/4 NE/4 of Section 16 within an existing standard 320-acre, more or less, Mesaverde spacing and proration unit consisting of the E/2 of Section 16, Township 30 North, Range 7 West, NMPM, Rio Arriba County, New Mexico:

(a) State Com Well No. 1 (API No. 30-039-07847) in Unit H

(b) State Com Well No. 1A (API No. 30-039-25262) in Unit H

(2) Except as granted above, all spacing and location provisions of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool shall remain in effect including the provisions that no more than two wells shall simultaneously produce in any quarter section and no more than four wells shall simultaneously produce in any spacing unit.

(3) 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.



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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in dark ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E.  
Director