# 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. 13672 ORDER NO. R-12586** 

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY, LP FOR AN EXCEPTION TO THE WELL DENSITY REQUIREMENTS OF THE BLANCO-MESAVERDE GAS POOL AND THE BASIN-DAKOTA 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 6<sup>th</sup> day of July, 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 268.99-acre, more or less, Mesaverde gas spacing and proration unit ("GPU") consisting of the W/2 equivalent of irregular Section 31, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico by approval of simultaneous production from the following two gas wells within the NE/4 SW/4:
  - (a) San Juan 28-6 Unit Well No. 210 (API No. 30-039-20841) located 1850 feet from the South line and 1190 feet from the West line, Unit K of Section 31; and the

Case No. 13672 Order No. R-12586 Page 2 of 6

- (b) San Juan 28-6 Unit Well No. 210P (API No. 30-039-29458) located 1845 feet from the South line and 2015 feet from the West line, Unit K of Section 31.
- (3) In addition, the applicant seeks an exception to the well density provisions of the Special Rules for the Basin-Dakota (Prorated Gas) Pool (71599) within an existing 334.79-acre, more or less, Dakota gas spacing and proration unit consisting of the W/2 equivalent of irregular Section 31 and the S/2 SW/4 equivalent of Section 30, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico by approval of simultaneous production from the same two gas wells within the NE/4 SW/4 of Section 31.
- (4) The applicant also seeks an exception to the well density requirements of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool in order to simultaneously produce more than four wells within the existing 268.99-acre, more or less, Mesaverde spacing and proration unit consisting of the W/2 of irregular Section 31, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
- (5) No other party entered an appearance in this case or otherwise opposed this application.
- (6) Within both the Blanco-Mesaverde Gas Pool and the Basin-Dakota Gas Pool, well density within a standard 320-acre gas spacing and proration unit (half section) is limited to four wells, well density within each quarter section is limited to two wells, and well density within each quarter-quarter section is limited to one well.
- (7) 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.
- (8) Spacing and location of wells within the Basin-Dakota (Prorated Gas) Pool are governed by the Special Rules for the Basin-Dakota Gas Pool as detailed in Division Order No. R-10987-B(2) effective January 29, 2002.

# (9) 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 was 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

Case No. 13672 Order No. R-12586 Page 3 of 6

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.
- (10) The applicant presented exhibits and expert testimony at the hearing. The following facts were presented:
  - (a) The San Juan 28-6 Well No. 210P was completed during October of 2005 and downhole commingled in the Dakota and the Mesaverde formations; approved under administrative order DHC-1864az in May of 2005.
  - (b) Burlington completed the San Juan 28-6 Unit Well No. 210 in the Dakota formation in 1979. In November of 2005, Burlington re-completed this well to the Mesaverde formation and downhole commingled the Dakota and the Mesaverde formations; approved under administrative order DHC-1975az.
  - (c) The No. 210 well was shut-in both in the Dakota formation and in the Mesaverde formation, during January of 2006 after Burlington discovered the two wells were located on the same quarter-quarter section.
  - (d) Currently, the Mesaverde GPU contains five completions in the Mesaverde formation, all at standard locations. The NW/4 has two producers and the SW/4 has three producers.
  - (e) The San Juan 28-6 Well No. 17 is the third Mesaverde producer in the SW/4 of Section 31. This well produces approximately 40 Mcf gas per day and only from the Lewis shale.
  - (f) The Dakota GPU contains four completions in the Dakota formation, all at standard locations. The N/2 of the GPU has two producers and the S/2 of the GPU has two producers.

Case No. 13672 Order No. R-12586 Page 4 of 6

- (g) These GPUs are located within the San Juan 28-6 Unit except as bounded on the west by the San Juan 28-7 Unit. Notice was supplied to all working interest owners in the San Juan 28-6 Unit and to the operator of the San Juan 28-7 Unit. No protests were received.
- (11) Concerning allowing more than four wells within the Mesaverde GPU, the examiner concludes the following:
  - (a) Burlington's case was presented without an analysis from a geologist. The Mesaverde formation consists of at least three distinct members and no facts were presented as to all completion depths or all producing members in the subject wells or in possibly affected offset wells.
  - (b) The San Juan 28-6 Unit Well No. 17 is reported to be only producing from the Lewis member of the Mesaverde formation. A spot check of Division maintained well files indicates that at least one other nearby well is also completed in the Lewis member.
  - (c) Sufficient justification was not presented in this case to allow more than four wells within the Mesaverde GPU. That portion of the applicant's request should be denied.
- (12) Concerning allowing more than two wells within the same quarter-quarter section within both the Mesaverde and Dakota GPUs, the examiner concludes the following:
  - (a) Additional developed reserves were likely added by drilling the second well within this quarter-quarter section. The month in which both wells were producing before the 210 well was shut-in indicates that overall production did increase.
  - (b) Due to the irregular shape and size of Section 31, it is more acceptable to place these two wells within the same quarter-quarter section to achieve optimum drainage. A relatively small, narrow Lot lies to the west of the quarter-quarter section consisting of Unit K.
  - (c) Correlative rights of owners in offsetting spacing units are protected. The most affected offset GPU is the E/2 of Section 31, which is located in the same San Juan 28-6 Unit with the same ownership.
  - (d) Allowing both downhole commingled wells completed within Unit K of Section 31 to simultaneously produce will allow prompt recovery of natural gas that may otherwise not be produced and will allow the use of a drilling investment that has already been made.

Case No. 13672 Order No. R-12586 Page 5 of 6

- (e) If this application were approved, Burlington would be allowed to resume production from the San Juan 28-6 Unit Well No. 210 located in Unit K and increase production within this spacing unit.
- (f) The portion of this application approving two Mesaverde wells and two Dakota wells within the same quarter-quarter section should be approved in order to prevent waste and protect correlative rights.
- (13) All spacing and location provisions of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool and of the Special Rules for the Basin-Dakota Gas Pool should 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.

# IT IS THEREFORE ORDERED THAT:

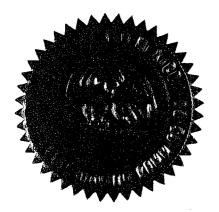
- (1) The portion of the application of Burlington Resources Oil & Gas Company, LP ("Burlington) seeking an exception to the well density requirements of the Special Rules and Regulations of the Blanco-Mesaverde (Prorated Gas) Pool (72319) as promulgated by Division Order No. R-10987-A(1) in order to simultaneously produce the following two wells within the NE/4 SW/4 of irregular Section 31 within an existing 268.99-acre, more or less, Mesaverde spacing and proration unit consisting of the W/2 of irregular Section 31, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico, is approved:
  - (a) San Juan 28-6 Unit Well No. 210 (API No. 30-039-20841) in Unit K; and
  - (b) San Juan 28-6 Unit Well No. 210P (API No. 30-039-29458) in Unit K.
- (2) The portion of the application of Burlington seeking an exception to the well density requirements of the Special Rules for the Basin-Dakota (Prorated Gas) Pool (71599) as promulgated by Division Order No. R-10987-B(2) in order to simultaneously produce those same two wells within the NE/4 SW/4 of irregular Section 31 within an existing 334.79-acre, more or less, Dakota gas spacing and proration unit consisting of the W/2 equivalent of irregular Section 31 and the S/2 SW/4 equivalent of Section 30, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico, is approved.
- (3) The portion of the application of Burlington seeking an exception to the well density requirements of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool in order to simultaneously produce more than four wells within the existing 268.99-acre, more or less, Mesaverde spacing and proration unit consisting of the W/2 of

Case No. 13672 Order No. R-12586 Page 6 of 6

irregular Section 31, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico, is denied.

- (4) Except as granted above, all spacing and location provisions of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool and the Special Rules for the Basin-Dakota 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.
- (5) 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.



SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.

Director