

**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:**

**APPLICATION OF WILLIAMS PRODUCTION CO., LLC FOR AN
EXCEPTION TO THE SPECIAL RULES AND REGULATIONS FOR THE
BLANCO-MESAVERDE GAS POOL FOR INCREASED WELL DENSITY IN
THE ROSA UNIT, SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO.**

**CASE NO. 14586
ORDER NO. R-13123-A**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a. m. on January 6, 2011 at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 19th day of April, 2011, 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 of the subject matter.

(2) The applicant, Williams Production Co., LLC ("Williams" or "Applicant"), seeks an exception to the existing gas well density rules within the Rosa Unit, for wells producing from the Blanco-Mesaverde Prorated Gas Pool (72319). Williams seeks authority to simultaneously dedicate production from up to eight Mesaverde gas wells in any 320-acre Gas Spacing and Proration Unit ("GPU") within this Rosa Unit.

(3) Williams is the present operator of the Rosa Unit, which was approved by Commission Order No. 759 (Rosa Unit Agreement Order), in Case No. 133, dated April 22, 1948, encompassing 54,209.49 acres, more or less, of mostly Federal and some State and fee lands in San Juan and Rio Arriba Counties, New Mexico.

(4) Well density and gas spacing unit ("GPU") size within the Blanco-Mesaverde Prorated Gas Pool are governed by Special Rules as adopted in Division

Order No. R-10987-A(1), effective December 2, 2002. These Special Rules provide for 320-acre gas proration units, and allow for up to four (4) wells on each standard GPU.

(5) The Division in Case No. 12069, with Order No. R-10987-A, effective date February 1, 1999, approved an expansion and redefined the vertical limits of the Blanco-Mesaverde Gas Pool. As shown in Exhibit A, Part IV of that order, the vertical limits on lands located northeast of the "Chacra" line are defined as beginning 300 feet above the Huerfanito Bentonite Marker and extending down to 500 feet below the top of the Point Lookout Sandstone. The entire Rosa Unit is located northeast of the Chacra line as it is defined in that order.

(6) The Division in Case No. 14335, with Order No. R-13200, as amended, (first approved December 16, 2009), relaxed the gas well location setback requirements within the Rosa Unit for many producing pools, including the Blanco-Mesaverde Gas Pool. Said order retained the 660 feet gas well location setback requirement, as per Order No. R-10987 (as amended), from the outer boundaries of the Rosa Unit.

(7) The Division, in Case No. 14291, issued Order No. R-13123 on May 11, 2009. Said order defined a **Pilot Project Area [described below]** within the western portion of the Mesaverde Participating Area within the Rosa Unit and allowed Williams to drill one additional Mesaverde producing well within each 320-acre gas spacing unit for purposes of a two-year evaluation of the benefits or effects of infill drilling within that formation.

Township 31 North, Range 6 West, NMPM

Sections 1 through 5: All
Sections 8 through 17: All
Sections 21 through 26: All

Township 32 North, Range 6 West, NMPM

Sections 32 through 36: All

(8) ConocoPhillips appeared at the hearing through legal counsel. Counsel for both ConocoPhillips and Williams reported an agreement between the parties had been reached whereby a ½ mile drilling buffer zone within the Rosa Unit would separate some specific ConocoPhillips operated properties from any future increased Mesaverde well density (more than two wells per quarter section) within the Rosa Unit. Williams presented this signed agreement as Williams Exhibit No. 14 in this case. Both parties asked for inclusion of this STIPULATION in any resulting Division order. The agreed upon buffer zone lands are described below:

Township 32 North, Range 6 West, NMPM

Section 32: N/2, SW/4
Section 33: N/2

Township 31 North, Range 6 West, NMPM

Section 5: W/2
Section 21: S/2
Section 22: S/2
Section 23: SW/4
Section 25: S/2
Section 26: W/2, SE/4

Township 31 North, Range 5 West, NMPM

Section 30: SW/4
Section 31: W/2, SE/4
Section 32: S/2
Section 33: S/2
Section 34: SW/4

(9) No other operator or party appeared in this case or otherwise opposed this application.

(10) Williams presented Land, Geological, and Engineering testimony and exhibits showing the following:

(a) Williams reported it had met with the Division's Aztec geologist and with the United States Bureau of Land Management and United States Forest Service personnel and neither federal agency had an objection to this application.

(b) By signing the STIPULATION agreed upon with ConocoPhillips, Williams does not believe that the proposed increased well density will cause drainage beyond the normal, 660-foot set back distance from the Unit boundary prescribed for Mesaverde gas wells.

(c) The Mesaverde Participating Area ("PA") is located within the western half of the Rosa Unit. The Pilot Project with the 20 recently drilled Mesaverde wells is located within this PA and on lands within the western two townships of the Rosa Unit.

(d) The current hearing and presentation is intended to satisfy the reporting requirements of the Division for the Pilot Project as stated in Order No. R-13123.

(e) A geologic study of the members of the Mesaverde formation using surface data and available subsurface information shows a preponderance of heterogeneity, specifically lateral discontinuity. The study used modern logs and mudlogs run on the 20 pilot wells, but no core data. The sand lenses seem either grossly not continuous or have apparently continuous lenses with low permeability barriers. The geologic history includes multiple

transgressive/regressive sea cycles. The major land mass was to the southwest, seaward was towards the northeast. The Menefee (middle) member contains both sands and near-shore coals and represents a time of transition between major transgression and regression of the sea.

(f) While drilling the 20 pilot increased density wells, Williams conducted, on as many wells as was feasible, a series of short term pump-in/breakdown/falloff tests ("DFIT") on the lower Point Lookout, the upper Point Lookout, the Menefee, and the Cliff House. In addition to the normal information gained by conducting and analyzing these tests, the tests showed the reservoirs have very variable connectivity.

(g) As a result of these tests, Williams determined a more accurate Original Gas in Place ("OGIP") and confirmed that a large percentage of this OGIP remains to be recovered within the various sands.

(h) Williams also utilized a new, recently published reserves analysis technique, proven within Wyoming's Jonah and Pinedale Anticline fields, which uses the Initial Production ("IP") and production rate behavior of existing wells within equally sized land grids, to predict the gas recovery from increased density gas wells.

(i) The technique also predicts, for infill gas reserves, the ratio of which production will be from acceleration or incremental recovery. This method estimates that, for the Rosa Unit, 75 percent or more of production from the increased density wells will be new reserves while the remainder will be accelerated production.

(j) Williams expects to first drill the areas within the Rosa Unit Mesaverde PA showing by this reserves prediction method, a low "acceleration" component.

(11) The Division finds that the testimony and exhibits presented in this case should satisfy the reporting requirements of Division Order No. R-13123.

(12) The evidence presented indicates the Mesaverde formation within the Rosa Unit Productive Area should be allowed more than the current limit of four wells for each 320-acre gas spacing unit. Simultaneous dedication of up to eight producing gas wells, in gas spacing units selected for drilling by the operator of this Unit, will recover additional gas that otherwise would not be recovered.

(13) The application in this case did not specify where, within each spacing unit, the proposed additional wells would be optionally located. Orderly development dictates that no more than one gas well should produce at any time from each quarter-quarter section and no more than four gas wells should produce from any quarter section.

(14) ConocoPhillips felt it necessary to negotiate an agreement with Williams to reserve an internal buffer zone of one quarter section (worded in this agreement as ½ mile) between its offsetting lands and the Rosa Unit. The buffer zone agreement or STIPULATION as presented in Williams' Exhibit No. 14 in this case should be adopted as part of this order.

(15) To be equitable with any other offsetting owners, the buffer zone definition as agreed upon between ConocoPhillips and Williams Production Company, LLC, should be extended to include all perimeters of the Rosa Unit.

(16) The quarter section (or 1/2 mile) buffer zone around the perimeter of the Rosa Unit should be amended or abolished only after notice and hearing or at such time as offsetting lands are permitted equivalent well density.

(17) With the above restrictions, the proposal by Williams in this case is in the best interests of conservation and should be approved in order to prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Williams Production Company, LLC seeking an exception within the Rosa Unit to the well density provisions of the Special Rules for the Blanco-Mesaverde (Prorated Gas) Pool (72319) [Division Order No. R-10987-A as amended] is hereby approved.

(2) Within the Rosa Unit in any standard sized, 320-acre gas spacing and proration unit ("GPU") of the Blanco-Mesaverde Prorated Gas Pool:

- a. No more than eight wells shall simultaneously produce.
- b. No more than four wells shall simultaneously produce from any quarter section within that GPU.
- c. Only one well shall produce within any quarter-quarter section.

(3) The operator shall submit to the Division in writing on or before December 31, 2013, a report containing an estimate of the performance of [Mesaverde formation] increased density drilling within the Rosa Unit. That report shall be made a part of this case file.

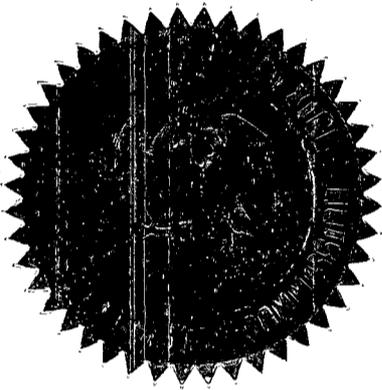
(4) The buffer zone agreement or STIPULATION as presented in Williams' Exhibit No. 14 in this case is hereby adopted and made a part of this order. This agreement shall be amended or abolished only after notice and hearing or after agreement between parties, in which case, the operator of the Rosa Unit shall inform the Division in writing.

(5) Notwithstanding this agreement or STIPULATION, the operator of the Rosa Unit shall maintain a ½ mile buffer zone along the entire inside perimeter of the Rosa Unit boundary. Within this buffer zone no more than two wells shall simultaneously produce gas within any quarter section from the Blanco-Mesaverde Gas Pool or as allowed by the Special Rules of that Pool as they may be hereafter modified.

(6) The testimony and exhibits presented in this case are sufficient to meet the Pilot Project Reporting requirements of Division Order No. R-13123.

(7) Jurisdiction of this case is 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

A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY
Director

**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. 14586

**APPLICATION OF WILLIAMS PRODUCTION CO., LLC
FOR AN EXCEPTION TO THE SPECIAL RULES AND
REGULATIONS FOR THE BLANCO-MESAVERDE GAS POOL
TO ALLOW INCREASED WELL DENSITY IN THE ROSA UNIT
SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO**

STIPULATION

Comes now Williams Production Company, LLC ("Williams"), the applicant in this case, by its attorney, Ocean Munds-Dry, and ConocoPhillips Company ("ConocoPhillips"), by their attorney, W. Thomas Kellahin, an affected offsetting operator, and stipulate as follows:

- (1) Williams is the applicant before the New Mexico Oil Conservation Division in the referenced case and seeks approval to increase the well density in the Rosa Unit for wellbores completed in the Mesaverde formation from the current four wellbores per 320-acre gas spacing unit to not more than eight wellbores.
- (2) ConocoPhillips, an offsetting operator to the Rosa Unit, seeks a one-half mile "buffer zone" so that any increased Mesaverde density wells within the Rosa Unit will not be drilled closer than one-half mile to the outer boundary of this unit for the ConocoPhillips operated properties described in paragraph (4) below and illustrated on the plat marked Exhibit "A" to this stipulation.
- (3) ConocoPhillips is neither for or against the requested increased density for the Rosa Unit provided that the Division adopts this "buffer zone."
- (4) By signing this Stipulation, ConocoPhillips will obtain an agreed buffer zone that addresses its concerns about its correlative rights, and possible unnecessary wells but still allow Williams to move forward with its application.

*EXHIBIT
No. 14
CASE No. 14586*

- (5) By signing this Stipulation, Williams does not believe that its application to increase the well density of Mesaverde wells will cause drainage beyond the setbacks provided in the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool (i.e 660 feet from spacing unit boundaries).
- (6) Williams and ConocoPhillips understand that the New Mexico Oil Conservation Division's approved buffer can be amended or deleted by the Division after notice and hearing or by mutual agreement of Williams and ConocoPhillips.
- (7) Williams and ConocoPhillips stipulate that there shall be a one-half mile buffer zone within or for the Rosa Unit (a) within this buffer, no more than two completions will be allowed per quarter section (consistent with the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool; (b) if a third completion already exists in a quarter ("1/4") section, no corrective action is necessary; (c) the agreed buffer zone area includes the following:

Township 32 North, Range 6 West

Section 33: N/2
Section 32: N/2
Section 32: SW/4

Township 31 North, Range 6 West

Section 5: W/2
Section 23: SW/4
Section 22: S/2
Section 21: S/2
Section 26: W/2, SE/4
Section 25: S/2

Township 31 North, Range 5 West

Section 30: SW/4
Section 31: W/2, SE/4
Section 32: S/2
Section 33: S/2
Section 34: SW/4

- (8) The parties shall inform the Division's Examiner of this stipulation and shall jointly request that the Division adopt this buffer zone.
- (9) The individual signing this Stipulation hereby warrants and represents to the other party and to the Division that the individual has been duly authorized by his client company to sign this stipulation and to bind said company to all the terms and conditions of this stipulation.

(10) This stipulation shall be made a part of the record in the Examiner's hearing of Case 14586 heard on January 6th, 2011.

This stipulation is executed this 5th day of January 2011 by the respective attorneys of record for the parties indicated on behalf of said parties.

By: 
Ocean Munds-Dry, Esq.
For Williams Production Co., LLC
BY: 
W. Thomas Kellahin
For ConocoPhillips Company