

**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. 14247
ORDER NO. R-13095**

**APPLICATION OF XTO ENERGY, INC. FOR AN EXCEPTION TO THE WELL
DENSITY REQUIREMENTS FOR THE BASIN-FRUITLAND COAL GAS
POOL, SAN JUAN COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on December 4, 2008, at Santa Fe, New Mexico, before Examiners David K. Brooks and William V. Jones.

NOW, on this 5th day of March, 2009, the Division Director, having considered the testimony, the record, and the recommendations of the Examiners,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) XTO Energy, Inc. ("applicant"), seeks an exception to the well density provisions of the Special Pool Rules for the Basin-Fruitland Coal Gas Pool (71629) within an existing 314.7-acre Fruitland Coal spacing unit consisting of the W/2 of Section 6, Township 27 North, Range 11 West, NMPM, San Juan County, New Mexico by approval of simultaneous production from the following two gas wells within the (157.36-acre, more or less,) NW/4 of Section 6:

a) Mudge A Well No. 8R (API No. 30-045-30519) located 685 feet from the North line and 1050 feet from the West line, Unit D, of Section 6; and the

b) Mudge A 6 Well No. 12 (API No. 30-045-28830) located 1900 feet from the North line and 1000 feet from the West line, Unit E, of Section 6.

(3) BP America Production Company entered an appearance in this case and was present at the hearing via legal counsel. No affected party expressed interest in opposing this application.

(4) Well density within the Low Productivity Area of the Basin-Fruitland Coal Gas Pool is governed by Special Pool Rules detailed in Commission Order No. R-8768-F dated July 17, 2003. Rule 7(d)(1) limits each 320-acre gas spacing unit to only two (2) wells and restricts the placement of these wells to one per quarter section.

(5) The applicant presented testimony and facts at the hearing as follows:

(a) XTO provided notice of its application in this case to all operators of adjacent spacing units within the Basin-Fruitland Coal Gas Pool. No other notice was provided since XTO Energy, Inc. is the operator and owns 100 percent of the working interest in all other affected spacing units including the (subject) unit consisting of the W/2 of Section 6. The minerals beneath the subject spacing unit are federally owned and administered by the Bureau of Land Management.

(b) The Mudge A 6 Well No. 12 (#12) located in the SW/4 NW/4 of Section 6 was drilled and completed as a Fruitland Coal gas well in 1994. It is still producing gas and currently produces at a daily average gas rate of 65 Mcf. XTO estimates this well has drained 128 acres.

(c) The Mudge Well No. 8R (#8R) located in the NW/4 NW/4 of Section 6 was drilled and completed in November of 2004. The record shows there was some confusion on the part of Dominion Oklahoma Texas Exploration and Production Inc. ("Dominion") – the operator who drilled these wells - as to its intended target. The #8R was intended as a Pictured Cliffs gas well but "mistakenly" completed in the Fruitland Coal and hydraulically fractured with nitrogen and 90,000 lbs of sand.

(d) XTO purchased this acreage and these wells from Dominion effective July 1, 2007, and understood at the time the #12 well was a Fruitland producer and the #8R well was a Pictured Cliffs producer.

(e) After changing the pump on the #12 well and examining a cross-section, XTO realized both wells were completed (perforated) in the Fruitland Coals. XTO ceased production from the #8R well in September of 2008 – last daily gas rate of 45 Mcf. XTO estimates this well has drained 25 acres.

(f) XTO operates a Pictured Cliffs well in the SW/4 of Section 6 that has likely partially drained the coal gas reserves from this area. The reason for this is that the Pictured Cliffs sandstones in this general vicinity are located directly beneath the Fruitland Coals and either of these (sand or coal) completions must be hydraulic fractured to produce.

(g) XTO already has two wells within this W/2 (of Section 6) Basin-Fruitland Coal gas spacing unit and has no intention of drilling an additional well within the SW/4 of Section 6.

(h) XTO presented decline curve analysis, decline comparisons, and coalbed methane volumetric calculations at the hearing and believes both the #8R and #12 coal gas wells should be allowed to simultaneously produce because of the following:

- a. Production from both wells together does not drain the entire 320-acre spacing unit or even the NW/4 of Section 6;
- b. Each of these wells seems to produce unique reserves;
- c. There is no apparent interference between either of these wells;
- d. There is no apparent interference between these two wells and adjacent coal gas wells in other spacing units; and
- e. Operators of adjacent spacing units have been properly noticed and have not objected.

(6) Division records show the #8R well was preceded in the same quarter-quarter by the Mudge Well No. 8 which was drilled in 1952 to a Pictured Cliffs target, stimulated with nitroglycerin, and produced from those sands in the West Kutz-Pictured Cliffs Gas Pool (79680) with very little reported water through 1997. This well was plugged and the #8R well drilled in 2004 as a "replacement". Unlike the well it was intended to replace, Division records show the #8R well has produced gas with water which is more indicative of coalbed methane production.

(7) The Special Pool Rules do not allow more than one Fruitland Coal gas well per quarter section. These lower coals are relatively continuous and closer spaced coalbed methane wells (if optimally completed) are shown by computer models to affect the reservoir by dewatering (de-pressuring) it faster, accelerating reserves, and increasing the recovery factor – but there is a point at which additional wells are not economical. Increased density wells within this basin-wide coalbed methane pool should not be approved routinely without adequate justification - and should be preferably only approved on a Pool wide basis.

(8) In this instance, these two wells for whatever reason have already been drilled at the increased density spacing. In addition, the wells are located in the defined "low productivity area" of the Basin-Fruitland Coal Gas Pool where permeability and gas content is not as high as in the fairway. The low permeability is apparent from the presented production data and the applicant presented testimony as to the relatively low coal gas content.

(9) The applicant's presentation with its supporting decline curve analysis and volumetric drainage numbers convincingly showed that these two wells can produce simultaneously without affecting each other or harming neighboring wells.

(10) The well density violation first occurred prior to XTO acquiring these wells. XTO itself identified this well density violation and brought it to the Division's attention. All affected parties have been properly noticed and have not objected to this application.

(11) If this application is approved, XTO Energy, Inc. will be allowed to resume production from the Mudge A Well No. 8R located in Unit D and increase production within this spacing unit by approximately 45 Mcf gas per day.

(12) Allowing both wells completed within the NW/4 of Section 6 to simultaneously produce will prevent waste by allowing 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.

(13) All spacing and location provisions of the Special Pool Rules of the Basin-Fruitland Coal 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 320-acre spacing unit.

(14) These two Fruitland Coal gas wells, already drilled and completed within the NW/4 of Section 6, are not violating correlative rights or causing waste. Therefore this application should be approved.

IT IS THEREFORE ORDERED THAT:

(1) The application of XTO Energy, Inc. is approved and an exception is hereby granted to the well density provisions of the Special Pool Rules of the Basin-Fruitland Coal Gas Pool (71629) as promulgated by Oil Conservation Commission Order No. R-8768-F. The following two wells are allowed to simultaneously produce within the NW/4 of Section 6 within an existing 314.7-acre, more or less, Fruitland Coal spacing unit consisting of the W/2 of Section 6, Township 27 North, Range 11 West, NMPM, San Juan County, New Mexico:

(a) Mudge A Well No. 8R (API No. 30-045-30519) in Unit D

(b) Mudge A 6 Well No. 12 (API No. 30-045-28830) in Unit E

(2) Except as granted above, all spacing and location provisions of the Special Pool Rules for the Basin-Fruitland Coal Gas Pool shall remain in effect including the provision that no more than two 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 cursive script, reading "Mark E. Fesmire".

MARK E. FESMIRE, P.E.
Director