

OIL AND GAS DOCKET NO. 06-0242157

THE APPLICATION OF XTO ENERGY, INC. TO CONSOLIDATE THE EASTON, N. (COTTON VALLEY) FIELD INTO THE OAK HILL (COTTON VALLEY) FIELD, AND TO AMEND THE FIELD RULES FOR THE OAK HILL (COTTON VALLEY) FIELD, GREGG, HARRISON, RUSK AND PANOLA COUNTIES, TEXAS

Heard by: Donna K. Chandler, Technical Examiner
James M. Doherty, Hearings Examiner

Procedural history:

Application received:	March 9, 2005
Hearing held:	April 18, 2005
Transcript Issued:	May 6, 2005
Re-opened hearing:	June 1, 2005
PFD Issued:	July 27, 2005

Appearances:

Representing:

David Gross Rick Johnston	XTO Energy, Inc.
Ana Maria Marsland-Griffith Troy Johnson Jason Perkins	Anadarko E & P Company, LP
George Neale Jack Trice	Craton Energy Corp.
Bill G. Spencer	Verado Energy, Inc.
George Neale Daniel Johnson	EXCO Resources, Inc.
Dale Miller	Newfield Exploration Company

Joe Holsen	The Houston Exploration Company
George Neale Steve Biancadi Gary Griffith Cary McGregor	El Paso Production Company
Sandra Buch	BP America Production
Kerry Pollard David Alford Andy Mills John Hays	Mustang Drilling, Ltd.

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

XTO Energy, Inc. ("XTO") originally requested that the Easton, N. (Cotton Valley) Field be consolidated into the Oak Hill (Cotton Valley) Field. Additionally, XTO requested that the field rules for the Oak Hill (Cotton Valley) Field be amended to provide for minimum lease line spacing of 467 feet and minimum between well spacing of 933 feet (467'-933'), with the addition of a provision for optional 40 acre density. The rules currently in effect for the field provide for 660'-1,000', 160 acre gas units with optional 80 acre units, and allocation based on 95% acreage and 5% deliverability, and a correlative interval which includes both the Upper Cotton Valley and the Taylor.

Subsequent to the issuance of the Notice of Hearing, Anadarko E & P Company, LP ("Anadarko") requested that the call of the hearing be expanded to also consider separation of the Oak Hill (Cotton Valley) Field into two fields: the (proposed) Oak Hill, NE (Cotton Valley) Field and the (proposed) Oak Hill, SW (Cotton Valley) Field. Anadarko further requested that the existing rules applicable to the Oak Hill (Cotton Valley) Field (160/optional 80 acres) remain in effect for the Oak Hill, SW (Cotton Valley) Field and that the rules proposed by XTO (160/optional 40 acre density) be applied to the Oak Hill, NE (Cotton Valley) Field. BP America Production ("BP") supported Anadarko's position for the creation of two separate fields with corresponding separate rules. BP submitted its proposed dividing line after the hearing.

Based on evidence received at the hearing, the examiners re-opened the hearing to consider the consolidation of numerous other Cotton Valley fields into either the Oak Hill (Cotton Valley) Field, or one of the two new fields proposed by Anadarko. There was no objection by any party to inclusion of the Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley) and Oak Hill, S. (Cotton Valley) Fields into the Oak Hill (Cotton Valley) Field, or into one of the two new fields proposed by Anadarko.

The only contested issue in the hearing is whether the Oak Hill (Cotton Valley) Field should be divided into the Oak Hill, NE (Cotton Valley) and Oak Hill, SW (Cotton Valley) Fields. Craton Energy Corp. ("Craton") opposes the field split unless its acreage is placed in the Oak Hill, NE (Cotton Valley) Field, which would operate under rules allowing optional 40 acre density. Craton Energy Corp. ("Craton") submitted an alternative dividing line for the field, if the Commission rules that a field division is appropriate.

DISCUSSION OF THE EVIDENCE

XTO Evidence

The Oak Hill (Cotton Valley) Field was discovered in 1977 and cumulative production from the field is 1,317 BCF of gas and 4.1 million BC. There are currently approximately 1,100 gas wells in the field which produce a total of 5-6 BCF per month. The allocation formula in the field has been suspended since 1996.

The first field rules for the field were adopted in 1977 and provided for 640 acre density. The rules have been amended over time and since 1995, the rules have provided for 160 acre gas units with optional 80 acre units. The current spacing rule is 660'-1,000'.

The Easton, N. (Cotton Valley) Field has 42 producing wells and operates under Statewide Rules. Geographically, the wells carried in the Easton, N. (Cotton Valley) Field are adjacent to wells in the northern part of the Oak Hill (Cotton Valley) Field, with some overlap. Similarly, wells designated in the Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley) and Oak Hill, S. (Cotton Valley) Fields are adjacent to and/or overlap wells in the Oak Hill (Cotton Valley) Field. The Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley) and Tatum, North (Cotton Valley) Fields operate under Statewide Rules and there are about 165 wells in these fields. The Oak Hill, S. (Cotton Valley) Field operates under rules providing for 160/optional 80 acre density with 467'-1,320' well spacing. About 110 wells are carried in this field. All of these fields have "grown together" with development and wells in the fields produce from the same correlative interval comprising the Upper Cotton Valley and the Taylor. There was no objection from any party to consolidation of these fields.

XTO presented drainage area calculations for 10 wells in the Oak Hill (Cotton Valley) Field. Seven of the ten wells are in the area of the field proposed by Anadarko to be the Oak Hill, NE (Cotton Valley) Field. For these wells, ultimate recoveries range from less than 500 MMCF to over 7,000 MMCF and the wells are perforated in both the Upper Cotton Valley and Taylor. The calculated drainage areas for these wells range from 13 acres to almost 100 acres. The other three wells are in the area of the field proposed to be the Oak Hill, SW (Cotton Valley) Field. These three wells are perforated only in the Taylor and have drainage areas between 86 and 288 acres.

Anadarko Evidence

Anadarko presented evidence to support its contention that the Oak Hill (Cotton Valley) Field should be divided into two separate fields. Cross-sections across the area demonstrate that generally wells to the southwest of the proposed dividing line are perforated only in the Taylor interval of the Lower Cotton Valley. To the northeast of the proposed dividing line, wells are generally completed in both the Upper Cotton Valley and the Taylor.

Anadarko believes that the depositional environment of the Cotton Valley is such that the Upper Cotton Valley is more compartmentalized, with both lateral and vertical discontinuities. The Taylor is more continuous, being a barrier island type deposit.

As a further basis for field separation, Anadarko also relies on the results of a study of the Upper Cotton Valley in the Oak Hill area published in SPE Paper No. 38606 in 1997. This study concludes that the Upper Cotton Valley in the northern area of Oak Hill has a significant amount of natural fractures, with the most fracturing in the uppermost portion of the Upper Cotton Valley. The presence of more fractures in the Upper Cotton Valley increases productive capability of the sands.

The top of the Cotton Valley is structurally lower to the northwest and the southwest. Off-structure to the southwest, there are no gas shows indicated in the Upper Cotton Valley on the log of the V. Pool No. 3. In contrast, the log of the Jones Alford Gas Unit No. 10 indicates gas shows throughout the Upper Cotton Valley and the Taylor. The No. 10 well is higher on structure and in the far northeastern part of the field. Anadarko has completed both the Upper Cotton Valley and the Taylor in wells in the northeastern portion of the field. Anadarko has not successfully completed the Upper Cotton Valley in its wells in the southwestern portion of the field. This is consistent with the interpretation that the Cotton Valley was uplifted after deposition, resulting in fracturing of the Upper Cotton Valley to the northeast, higher on structure.

Anadarko believes that field separation is justified based on the difference in geology between the northeastern and southwestern areas of the field. Anadarko believes that additional drilling is necessary where the Upper Cotton Valley is productive in the northeastern area and that additional drilling is not necessary to the southwest where the Upper Cotton Valley is not as prolific, and the Taylor is more continuous and wells will drain larger areas.

Anadarko calculated drainage areas for nine wells in the southwestern portion of the field. These wells are completed only in the Taylor and have net pay ranging from 76 feet to 153 feet. The calculated drainage areas for the nine wells range from 42 acres to 177 acres. The average for the nine wells is 88 acres. Based on these calculations, Anadarko believes that retaining the 80 acre density in southwestern portion of the field is appropriate in order to prevent the drilling of unnecessary wells.

Craton Evidence

Craton does not object to the formation of two separate fields as proposed by Anadarko. However, the line proposed by Anadarko cuts through numerous lease and/or unit lines. Craton proposed an alternate line which follows lease boundaries and places all of Craton's acreage to the northeast of the line. Craton objects to any line of separation which places its acreage in the southwestern field proposed by Anadarko.

BP Evidence

Subsequent to the re-opened hearing, BP submitted a map depicting a dividing line for the proposed two separate fields. BP believes that its dividing line better honors formation characteristics. BP circulated its proposal to all parties represented at the hearing and no objection was received. BP opposes adoption of a 40 acre optional field rule for the entire Oak Hill (Cotton Valley) Field.

EXAMINERS' OPINION

The examiners recommend that the Easton, North (Cotton Valley), Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley) and Oak Hill, S. (Cotton Valley) Fields be consolidated into the Oak Hill (Cotton Valley) Field and that the field rules for the Oak Hill (Cotton Valley) Field be amended to provide for 467'-933' well spacing and 160/optional 40 acre density. The examiners further recommend that Anadarko's application to divide the Oak Hill (Cotton Valley) Field into separate fields be denied.

It is uncontested that the five fields listed above should be consolidated. The fields have overlapped as development has occurred over the years.

The examiners believe that 40 acre optional density is appropriate for the entire Oak Hill (Cotton Valley) Field. Though there does appear to be some variation in the productivity of the Upper Cotton Valley in the southwestern area of the field, there is no distinct structural or stratigraphic separation on which to base a dividing line for two separate fields. Anadarko does not dispute that there is no specific geologic barrier to create separation. There are wells in the southwestern area which are completed in both the Upper Cotton Valley and the Taylor. Likewise, many wells in the northeastern area are completed only in the Taylor.

Anadarko's own drainage calculations show that four of the nine wells analyzed in the southwestern area have drainage areas of less than 80 acres. The adoption of a 40 acre optional density rule provides only an option to drill on 40 acres if an operator elects to. Operators would not be required to develop on 40 acres.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing.
2. The Oak Hill (Cotton Valley) Field was discovered in 1977 and cumulative production from the field is 1,317 BCF of gas and 4.1 million BC. There are currently approximately 1,100 gas wells in the field which produce a total of 5-6 BCF per month.
3. The allocation formula in the field has been suspended since 1996.
4. Field rules currently in effect for the Oak Hill (Cotton Valley) Field provide for 160 acre gas units with optional 80 acre units with 660'-1,000' well spacing.
5. Wells in the Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley), Oak Hill, S. (Cotton Valley) and Easton, N. (Cotton Valley) Fields are adjacent to wells in the Oak Hill (Cotton Valley) Field, with overlap in many areas. Wells in these fields produce from the same correlative interval comprising the Upper Cotton Valley and the Taylor.
6. There is no distinct structural or stratigraphic basis on which to divide the Oak Hill (Cotton Valley) Field into two separate fields.
7. There are wells throughout the Oak Hill (Cotton Valley) Field which will drain less than 80 acres.
 - a. The calculated drainage areas for 10 wells analyzed by XTO range from 13 acres to 288 acres.
 - b. For nine wells in the southwestern area of the field, Anadarko calculated drainage areas which range from 42 acres to 177 acres, with four wells draining less than 80 acres.
8. Amending the spacing rule for the Oak Hill (Cotton Valley) Field to provide for a minimum of 467 feet from lease lines and 933 feet between wells will accommodate development on 40 acre density.

CONCLUSIONS OF LAW

1. Proper notice was given to all parties entitled to notice as required by all applicable rules and applicable statutory and regulatory provisions.

2. All things necessary to give the Commission jurisdiction to decide this matter have been performed or have occurred.
3. Consolidation of the Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley), Oak Hill, S. (Cotton Valley) and Easton, N. (Cotton Valley) Fields into the Oak Hill (Cotton Valley) Field will prevent waste and protect correlative rights.
4. Separation of the Oak Hill (Cotton Valley) Field into two separate fields is not necessary to prevent waste or protect correlative rights.
5. Amending the field rules for the Oak Hill (Cotton Valley) Field to include 40 acre optional units and 467'-933' well spacing is necessary to prevent waste.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the Hallsville (Cotton Valley), Tatum, N.W. (Cotton Valley), Tatum, North (Cotton Valley), Oak Hill, S. (Cotton Valley) and Easton, N. (Cotton Valley) Fields be consolidated into the Oak Hill (Cotton Valley) Field and that the rules for the Oak Hill (Cotton Valley) Field be amended to provide for 467'-933' well spacing and optional 40 acre density.

Respectfully submitted,

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