

**OIL AND GAS DOCKET NO. 01-0266452**

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**THE APPLICATION OF ANADARKO E&P COMPANY LP TO AMEND THE TEMPORARY  
FIELD RULES FOR THE BRISCOE RANCH (EAGLEFORD) FIELD, DIMMIT,  
MAVERICK, WEBB AND ZAVALA COUNTIES, TEXAS**

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner  
Marshall F. Enquist - Legal Examiner

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Ana Maria Marsland-Griffith  
David Christian

Anadarko E&P Company LP

**PROTESTANTS:**

John McFarland  
Patrick Thompson

Gates Mineral Company, et al

**INTERESTED PARTIES:**

Tim George  
Walter S. Light, Jr.

Lightning Oil Company

Michael McElroy

Petro Hunt LLC

**OBSERVERS:**

Glenn Johnson  
Bill G. Spencer  
Jim Clark

Chesapeake Operating, Inc.

David Gross  
William Dudley

Newfield Exploration Company

Clark Jobe  
Kelli Kenney  
Mari Lynn Gobran

Murphy Exploration & Production Co.  
Pioneer Natural Resources USA, Inc.

James Bostic

Self

**PROCEDURAL HISTORY**

Application Filed:	June 30, 2010
Notice of Hearing:	July 9, 2010
Hearing Held:	August 5, 2010
Transcript Received:	August 20, 2010
Proposal for Decision Issued:	August 31, 2010

**EXAMINERS' REPORT AND PROPOSAL FOR DECISION****STATEMENT OF THE CASE**

Temporary Field Rules for the Briscoe Ranch (Eagleford) Field were adopted in Final Order No. 01-0263787, effective March 9, 2010. The Temporary Field Rules in effect for the field are summarized as follows:

1. Designation of the field as the entire correlative interval from 7,160 feet to 7,535 feet as shown on the log of the TXCO Resources Inc. - Briscoe Catarina West Lease, Well No. 1 (API No. 42 127 33421);
2. 467' lease line spacing for the perpendicular distance along a horizontal drainhole, 100' lease line spacing for the first and last take points and no between well spacing with special provisions for "take points" for a horizontal drainhole well;
3. 40 acre oil units and 80 acre gas units;
4. Allocation based on 100% acreage.

Anadarko E&P Company LP ("Anadarko") requests that the Temporary Field Rules be amended as follows:

2. 467' lease line spacing for the perpendicular distance along a horizontal drainhole, 100' lease line spacing for the first and last take points and no between well spacing with special provisions for "take points", off-lease penetration point and a "box rule" for a horizontal drainhole well;
3. 40 acre oil units and 80 acre gas units with no filing of individual well proration unit plats;
4. Allocation based on 100% acres, field classified as associated-prorated and no casinghead gas limitation for oil wells.

The application was protested by leased and unleased mineral owners who were opposed to the proposed off-lease penetration point. At the hearing, Newfield Exploration

Company requested that the docket be left open so they could enter evidence to support additional field rule changes. After the hearing, Newfield withdrew their request and the docket was closed.

The examiners recommend approval of the amended Temporary Field Rules, as proposed by Anadarko.

## **DISCUSSION OF THE EVIDENCE**

### **Applicant's Evidence**

The Briscoe Ranch (Eagleford) Field was discovered in November 2007 at a depth of approximately 7,700 feet. The field is classified as associate prorated and there are 14 producing gas wells and 3 producing oil wells carried on the proration schedules. Several wells were completed as oil wells, but have now been reclassified as gas wells. Anadarko operates most of the wells in the field, but there are three other operators carried on the proration schedules. Cumulative production from the field through July 2010 is 6.5 BCFG and 870.1 MBO.

The subject field is west of the Hawkville (Eagleford Shale) Field which is also undergoing significant horizontal development. Anadarko proposes a 46 foot "box rule" for horizontal drainhole wells that would allow drainholes to deviate 46 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. The preferred horizontal lateral orientation is northwest to southeast, or approximately 10-20° to the west of north. Anadarko is planning on drilling five horizontal wells per section which results in an estimated drainage area of approximately 120 acres per well.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Anadarko requests that field rules for the subject field provide for an off-lease penetration point. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In this field, a well generally requires approximately 800 feet of horizontal displacement to make the 90 degree turn from vertical to horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 800 feet from the lease line. Since there is 100' lease line spacing for the first and last take points, the proposed rule will allow approximately 700 feet of additional producing drainhole, resulting in the recovery of additional oil and gas reserves. Similar rules allowing offsite penetration points have been adopted in other fields, after notice to the mineral owners of the off-lease tract on which the penetration point is to be located and if no protest is received.

The Eagle Ford formation is unique in that it contains an oil zone on top of a gas zone. Anadarko submitted core data from the Briscoe Catarina Ranch Lease, Well No. 1. The data showed an average porosity of 8.9% and an average permeability of 0.76 microdarcies. Since the permeability is less than a microdarcy, Anadarko believes that

there is no migration of fluids in the reservoir and wells only produce fluids that are contacted by the fracture treatment. As a result, the recovery factor is the same for both oil and gas wells and the field should be classified as associated-prorated with no casinghead gas limitation for oil wells. Anadarko also submitted decline curves from nine wells that showed that the wells were not rate sensitive. All of the wells exhibited constant GORs that ranged between 5,000 and 8,000 standard cubic feet per barrel.

Anadarko also requests that the allocation formula for the field remain suspended, there be no filing of individual well proration unit plats and the daily casinghead gas limitation for oil wells be eliminated.

### **Protestants' Evidence**

The mineral owner protestants were opposed to the proposed off-lease penetration point. They felt that the notice provisions of the proposed off-lease penetration point rule should be the same as that required under Statewide Rule 86 and 38, which requires notice to all adjacent operators and unleased mineral owners. The proposed rule follows the provisions of Statewide Rule 37.

### **EXAMINERS' OPINION**

The examiners recommend approval of the amended Temporary Field Rules, as proposed by Anadarko. The only protested item was the off-lease penetration point which the Commission has already approved for other similar fields with horizontal wells. An off-lease penetration point will allow approximately 700 feet of additional producing drainhole, resulting in the recovery of additional oil and gas reserves.

### **FINDINGS OF FACT**

1. Notice of this application and hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. The Briscoe Ranch (Eagleford) Field was discovered in November 2007 at a depth of approximately 7,700 feet. The field is classified as associated-prorated and there are 14 producing gas wells and 3 producing oil wells carried on the proration schedules.
3. The Eagle Ford formation is unique in that it contains an oil zone on top of a gas zone. Since the permeability is less than a microdarcy, there is no migration of fluids in the reservoir and wells only produce fluids that are contacted by the fracture treatment. As a result, the recovery factor is the same for both oil and gas wells and the field should be classified as associate-prorated with no casinghead gas limitation for oil wells.

4. Field Rules that provide for 467' lease line spacing for the perpendicular distance along a horizontal drainhole, 100' lease line spacing for the first and last take points and no between well spacing with special provisions for "take points", an off-lease penetration point and a "box rule" for horizontal wells will provide consistency in developing the field and will allow greater flexibility in selecting future drilling locations.
5. The proposed 46 foot "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
6. Allowing an off-lease penetration point will result in maximum producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells. The proposed rule will allow approximately an additional 700 feet of producing drainhole. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of offsite surface locations.
7. For purposes of assignment of additional acreage pursuant to Statewide Rule 86, the distance between the first and last take-point in a horizontal well should be used.
8. Continued suspension of the allocation formula is appropriate, as there is a 100% market for all the gas produced. Elimination of the requirement to file individual well proration unit plats will reduce unnecessary paperwork.

#### **CONCLUSIONS OF LAW**

1. Proper notice of this hearing was issued.
2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
3. Approval of the amended temporary Field Rules for the Briscoe Ranch (Eagleford) Field will prevent waste, protect correlative rights and promote the orderly development of the field.

**RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the amended Temporary Field Rules, as requested by Anadarko E&P Company LP.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Examiner

Marshall F. Enquist  
Legal Examiner