



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0279816

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THE APPLICATION OF DEVON ENERGY PRODUCTION CO, LP TO RENUMBER AND AMEND FIELD RULES FOR THE C-BAR (TUBB) FIELD, CRANE COUNTY, TEXAS

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HEARD BY: Brian Fancher - Technical Examiner  
Terry Johnson - Legal Examiner

EXAMINERS' REPORT PREPARED BY: Richard D. Atkins, P.E. - Technical Examiner

DATE OF HEARING: February 6, 2013

APPEARANCES: REPRESENTING:

**APPLICANT:**

John Soule  
Stephanie Currie

Devon Energy Production Co, LP

### EXAMINERS' REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Field Rules for the C-Bar (Tubb) Field were adopted in Final Order No. 8-55,326, effective September 7, 1965. The Field Rules are summarized as follows:

1. 467'-933' well spacing;
2. 40 acre oil units;
3. Allocation based on 100% acres with a top oil allowable based on the 1947 Yardstick Allowable of 102 barrels of oil per day;
4. Surface casing provisions.

Devon Energy Production Co, LP ("Devon") requests that the Field Rules for the C-Bar (Tubb) Field be renumbered and amended as shown below:



1. Designated correlative interval from 5,204 feet to 5,698 feet as shown on the log of the Devon Energy Production Co, LP - Hattie Connell et al Lease, Well No. 24E (API No. 42-103-33779);
2. 467'-0' well spacing with no minimum between well spacing between horizontal drainhole wells and horizontal drainhole or vertical wells and special provisions for "take points", 200' leaseline spacing for the first and last take points, a 50' "box rule" and "off-lease" penetration point in horizontal drainhole wells;
3. 40 acre oil units;
4. Allocation based on 100% acres with a top oil allowable based on the 1947 Yardstick Allowable of 102 barrels of oil per day;
5. Administrative exception to the provision of Statewide Rule 13(b)(5)(A) requiring flowing oil wells to be produced through tubing;
6. Administrative exception to the provision of Statewide Rule 51(a) requiring the filing of a potential test within ten days after an oil well is completed or recompleted.

Devon also requests that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well with no maximum diagonal limitation.

The examiners recommended no between well spacing for all wells and that Field Rule Nos. 5 and 6 be deleted, since there was no demonstration of a need for these exceptions in this field at this time. Devon did not consider these recommendations to be adverse.

The application is unopposed and the examiners recommend that the Field Rules for the C-Bar (Tubb) Field be renumbered and amended, as proposed by Devon with the examiners proposed changes.

### **DISCUSSION OF THE EVIDENCE**

The C-Bar (Tubb) Field was discovered in May 1957 at an average depth of 5,300 feet. There are 10 producing oil wells carried on the proration schedule and Devon is the only operator in the field. The field operates under Field Rules that provide for 467'-933' well spacing, 40 acre oil units and allocation based on 100% acres. Cumulative production from the field through February 2013 is 2.9 MMBO and 4.0 BCFG.

There is currently no defined correlative interval for the field. Devon requests that the field be defined as the correlative interval from 5,204 feet to 5,698 feet as shown on the log of the Devon Energy Production Co, LP - Hattie Connell et al Lease, Well No. 24E (API No. 42-103-33779), Section 26, Block B22, PSL Survey, Crane County, Texas. The correlative interval includes the entire Tubb formation.

Devon is developing the C-Bar (Tubb) Field by drilling infill horizontal drainhole wells and requests Field Rules that will promote the efficient and effective development of the remaining hydrocarbons. Devon requests 467'-0' well spacing with special provisions for "take points", 200' leaseline spacing for the first and last take points, a 50' "box rule" and "off-lease" penetration point in horizontal drainhole wells. Devon argues that the proposed 0' between well spacing is necessary to allow the drilling of horizontal drainhole wells, which may have to be placed very near vertical wells in some cases. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.

Devon requests that a Field Rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Devon's proposed rule specifies that, for purposes of lease line spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well. For purposes of the assignment of additional acreage pursuant to Statewide Rule 86, it is proposed that the distance between the first and last take-point in a horizontal drainhole well be used.

By allowing a 200' leaseline spacing for the first and last take points, an additional 300 feet of the reservoir is exposed to the horizontal lateral and drained. These reserves would go unrecovered if the 200' leaseline spacing for the first and last take points is not approved. Devon also proposes a 50' "box rule" for horizontal drainhole wells that would allow drainholes to deviate 50 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the "box" would be considered in compliance with their drilling permits.

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. Devon 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 600 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 600 feet from the lease line. The proposed rule will allow approximately 300 feet of additional producing drainhole, which will result in the recovery of additional reserves. The Commission has adopted similar rules allowing offsite penetration points in other fields, after the operator has given notice to the mineral owners of the off-lease tract on which the penetration point is to be located and received no protest.

Devon proposes that the field remain on 40 acre density and allocation based on 100% acres with a top oil allowable based on the 1947 Yardstick Allowable of 102 barrels of oil per day. Devon also requests that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well with no maximum diagonal limitation.

#### **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 C-Bar (Tubb) Field was discovered in May 1957 at an average depth of 5,300 feet.
  - a. There are 10 producing oil wells carried on the proration schedule and Devon is the only operator in the field.
  - b. The field operates under Field Rules that provide for 467'-933' well spacing, 40 acre oil units and allocation based on 100% acres.
3. The C-Bar (Tubb) Field should be defined as the correlative interval from 5,204 feet to 5,698 feet as shown on the log of the Devon Energy Production Co, LP - Hattie Connell et al Lease, Well No. 24E (API No. 42-103-33779), Section 26, Block B22, PSL Survey, Crane County, Texas. The correlative interval includes the entire Tubb formation.
4. A spacing rule which utilizes "take-points" in a horizontal well for determination of distances to lease lines will prevent waste and will not harm correlative rights.
  - a. A take-point in a horizontal well in this field may be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
  - b. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
  - c. 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.

5. A Field Rule providing for 467'-0' well spacing with a special provision for 200' leaseline spacing for the first and last take points is appropriate for the C-Bar (Tubb) Field.
  - a. The proposed 0' between well spacing is necessary to allow the drilling of horizontal wells, which may have to be placed very near vertical wells in some cases.
  - b. By allowing a 200' leaseline spacing for the first and last take points, an additional 300 feet of the reservoir is exposed to the horizontal lateral and drained. These reserves would go unrecovered if the 200' leaseline spacing for the first and last take points is not approved.
6. The proposed 50' "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
7. Allowing an "off-lease" penetration point will result in maximum producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of "off-lease" surface locations.
8. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.
9. Allocation based on 100% acres with a top oil allowable based on the 1947 Yardstick Allowable of 102 barrels of oil per day is appropriate for the C-Bar (Tubb) Field.
10. The filing of Form P-15 to designate the number of acres to be assigned to each well for proration purposes with no proration plats will eliminate 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. Renumbering and amending Field Rules for the C-Bar (Tubb) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

**RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission adopt Field Rules for the C-Bar (Tubb) Field, as requested by Devon Energy Production Co, LP with the examiners proposed changes.

Respectfully submitted,



Richard D. Atkins, P.E.  
Technical Examiner



Terry Johnson  
Legal Examiner