

**THE APPLICATION OF NFR ENERGY, LLC TO AMEND THE FIELD RULES FOR THE MINDEN (COTTON VALLEY CONS.) FIELD, RUSK COUNTY, TEXAS**

---

**Heard by:** Donna K. Chandler on January 22, 20098

**Appearances:**

Greg Cloud

**Representing:**

NFR Energy, LLC

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Field rules for the Minden (Cotton Valley Cons.) Field were adopted in Order No. 06-0243684, effective September 27, 2005. The rules in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 9,180 feet to 10,697 feet as shown on the log of the Rushton Well No. 1;
2. 467'-933' well spacing;
3. 40 acre density;
4. Allocation based on 5% deliverability and 95% acreage, with AOF status.

NFR requests that the rules be amended to eliminate a minimum well spacing requirement between horizontal and vertical wells and to include a special provision that distances for horizontal wells be based on the closest "take point" in a horizontal well.

The examiner recommends that the field rules for the Minden (Cotton Valley Cons.) Field be amended as proposed by NFR.

**DISCUSSION OF EVIDENCE**

The Minden (Cotton Valley Cons.) Field was formed in 2005 with the consolidation of several fields. The field is a non-associated gas field with 364 wells on the current proration schedule.

Operators are currently developing the field with horizontal wellbores. NFR requests that a field rule be adopted which includes language relevant to measurement of distances to lease lines and other wells on a lease/unit for horizontal drainhole wells. NFR's proposed rule specifies that, for purposes of lease line and between-well spacing, the nearest "take point" in a horizontal well be used. This take point could be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well. Similar rules have been adopted in numerous other tight reservoirs, including Barnett Shale and Cotton Valley fields.

The proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take point is closer than 467 feet to any lease line and no closer than 933 feet to any take point in other horizontal drainhole wells on the same lease/unit. Typically, 500-600 feet of horizontal displacement is necessary to accomplish making the "turn" in a horizontal well. With the proposed rule, horizontal drainhole length on a lease is maximized by allowing the "turn", and therefore the penetration point, to be made closer to the lease line than allowed under Rule 86, resulting in additional recovery of gas.

Additionally, NFR requests that there be no between-well spacing requirement between horizontal drainhole wells and vertical wells on the same lease/unit. This request would provide flexibility in locating new horizontal drainhole wells near existing vertical wells without obtaining Rule 37 exceptions. This language is typically adopted in conjunction with "take point" language.

For purposes of assignment of additional acreage pursuant to Rule 86, it is proposed that the distance between the first and last take point in a horizontal well be used.

#### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Minden (Cotton Valley Cons.) Field was formed in 2005 with the consolidation of several fields. The field is a non-associated gas field with 364 wells on the current proration schedule.
3. The field is actively being developed with horizontal drainhole wells.
3. Field rules for the Minden (Cotton Valley Cons.) Field provide for a designated interval, 467'-933' well spacing and 40 acre density.

4. A spacing rule which utilizes “take points” in a horizontal well for determination of distances to lease lines and other wells on the lease/unit will prevent waste and will not harm correlative rights.
  - a. The Cotton Valley is classified as a tight formation and is not commercially productive unless fracture-stimulated.
  - b. A take point in a horizontal well in this field may be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
  - c. Adoption of the proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take point is closer than 467 feet to any lease line and no take point is closer than 933 feet to any take point in other horizontal drainhole wells on the same lease/unit.
  - d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
5. Elimination of the between-well spacing between vertical and horizontal drainhole wells on the same lease/unit is necessary maximize flexibility in placing horizontal drainhole wells close to existing vertical wells
6. For purposes of assignment of additional acreage pursuant to Rule 86, the distance between the first and last take point in a horizontal well should be used.

#### **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. Amending the field rules for the Minden (Cotton Valley Cons.) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

**RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends that the Commission amend the field rules for the Minden (Cotton Valley Cons.) Field as proposed by NFR Energy, LLC.

Respectfully submitted,

Donna K. Chandler  
Technical Examiner