

**THE APPLICATION OF BOLLINGER DRILLING CO. TO AMEND AND RENUMBER THE FIELD RULES FOR THE WINDMILL CREEK (ESCONDIDO) FIELD, ZAVALA COUNTY, TEXAS**

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner  
Michael Crnich - Legal Examiner

**DATE OF HEARING:** June 22, 2012

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Gene Day

Bollinger Drilling Co.

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Field Rules for the Windmill Creek (Escondido) Field were adopted in Final Order No. 1-82,663, effective June 11, 1984. The Field Rules are summarized as follows:

1. 233'-465' well spacing;
2. 10 acre oil units;
3. Allocation based on 100% acres.

Bollinger Drilling Co. ("Bollinger") requests that the Field Rules be amended and renumbered to provide for a correlative interval, 50'-100' well spacing and 1/2 acre oil units.

Based on the drainage area calculations submitted as late filed Exhibit No. 11, the examiners recommended 2 acre oil units with 1/2 acre optional density. Bollinger did not consider this recommendation to be adverse. The application is unopposed and the examiners recommend that Field Rules for the Windmill Creek (Escondido) Field be amended and renumbered, as proposed by Bollinger.

### **DISCUSSION OF EVIDENCE**

The Windmill Creek (Escondido) Field was discovered in December 1983 at an average depth of 700 feet. There are five producing oil wells carried on the proration schedule. Bollinger is the only operator in the field. The field operates under Field Rules that provide for 233'-467' well spacing, 10 acre oil units and allocation based on 100% acres. Cumulative production from the field through March 2012 is 38.6 MBO.

There is currently no defined correlative interval for the field. Bollinger requests that the field be defined as the correlative interval from 730 feet to 744 feet as shown on the log of the Bollinger Drilling Co. - Chester Kiefer -A- Lease, Well No. 36 (API No. 42-507-32854), Section 7, Block 1, I&GN RR Co. Survey, A-210, Zavala County, Texas. This interval includes the entire Escondido Sand formation. The field produces a heavy high viscosity crude oil with a 17° API gravity. The primary drive mechanisms for the reservoir are depletion drive and gravity drainage.

Bollinger will be actively developing the Windmill Creek (Escondido) Field by drilling infill wells. Bollinger requests that the Field Rules be amended to provide for 50'-100' well spacing and 2 acre oil units with optional 1/2 acre density. Bollinger is requesting similar spacing and density rules that have been adopted in a comparable field, the Monksfield (350 Sand) Field in Bexar County. Bollinger submitted a tabulation of four other Escondido Sand fields in RRC District 1 that had similar spacing and density Field Rules.

From available log data, Bollinger estimated an average porosity of 28%, an average water saturation of 40%, an average net pay of 12 feet and a 25% recovery factor. Bollinger calculated an average drainage area of 2.1 acres for the three best wells in the field. However, the poorest wells would drain a much smaller area of only approximately 1/2 acre. To date, only 40% of the estimated recoverable reserves of 89 MBO has been produced by the original five wells in 28 years.

Based on the Top Allowables in the four other Escondido Sand fields analyzed, Bollinger requests a field Top Oil Allowable of 18 barrels of oil per day.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Windmill Creek (Escondido) Field was discovered in December 1983 at an average depth of 700 feet.
  - a. There are five producing oil wells carried on the proration schedule.
  - b. The field operates under Field Rules that provide for 233'-467' well

spacing, 10 acre oil units and allocation based on 100% acres.

- c. Bollinger Drilling Co. is the only operator in the field.
3. The correlative interval from 730 feet to 744 feet as shown on the log of the Bollinger Drilling Co. - Chester Kiefer -A- Lease, Well No. 36 (API No. 42-507-32854), Section 7, Block 1, I&GN RR Co. Survey, A-210, Zavala County, Texas, should be designated as a single reservoir for proration purposes and be designated as the Windmill Creek (Escondido) Field. This interval includes the entire Escondido Sand formation.
  4. Field Rules that provide for 50'-100' well spacing and 2 acre oil units with optional 1/2 acre density are appropriate for the Windmill Creek (Escondido) Field.
    - a. Similar spacing and density rules have been adopted in a comparable field, the Monksfield (350 Sand) Field in Bexar County.
    - b. Four other Escondido Sand fields in RRC District 1 have similar spacing and density Field Rules.
    - c. The three best wells in the field have an average drainage area of 2.1 acres.
    - d. The poorest wells will drain a much smaller area of only approximately 1/2 acre.
    - e. To date, only 40% of the estimated recoverable reserves of 89 MBO has been produced by the original five wells in 28 years.
  5. A field Top Oil Allowable of 18 barrels of oil per day is appropriate for the field.

#### **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 and renumbering Field Rules for the Windmill Creek (Escondido) 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 amend and renumber the Field Rules for the Windmill Creek (Escondido) Field, as proposed by Bollinger Drilling Co.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Examiner

Michael Crnich  
Legal Examiner