#### OIL AND GAS DOCKET NO. 8A-0247421

THE APPLICATION OF GUNN OIL COMPANY TO AMEND THE FIELD RULES FOR THE BROKEN BONE (CONGL.) FIELD AND TO TRANSFER WELLS INTO THE BROKEN BONE (CONGL.) FIELD, COTTLE COUNTY, TEXAS

**Heard by:** Donna K. Chandler on June 13, 2006

Appearances: Representing:

Greg Cloug Gunn Oil Company

# EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

Field rules adopted in Final Order No. 8A-95,063, effective September 24, 1990, as amended, for the Broken Bone (Congl.) Field are summarized as follows:

- 1. Designated interval from 7,660 feet to 13,460 feet;
- 2. 933'-1,867' well spacing;
- 3. 640 acre gas units with optional 320 acre units;
- 4. Allocation based on 25% deliverability and 75% acreage.

Gunn Oil Company requests that the rules be amended as follows:

- 1. No change;
- 2. 330'-660' well spacing;
- 40 acre gas units;
- 4. No change.

Gunn also requests that the allocation formula for the field remain suspended.

In addition, Gunn requests that the following wells be transferred from the Rhombochasm (Bend Congl.) Field to the Broken Bone (Congl.) Field, without the requirement to file Form W-1 for each well:

Brothers No. 4	162597
Russell No. 2	163690
Brothers No. 6	203845
Russell No. 4	206264
Brothers No. 7	211569
Russell No. 5	211905
Brothers No. 9	213975
Brothers "A" No. 8	213978

This application was unprotested and the examiner recommends approval of the amendments to the field rules for the Broken Bone (Congl.) Field and transfer of the eight wells, as requested by Gunn Oil Company.

# **DISCUSSION OF THE EVIDENCE**

The Broken Bone (Congl.) Field was discovered in 1990 upon completion of the Brothers No. 1 by Gunn Oil Company. There are now four producing gas wells in the field, all operated by Gunn. The Rhombochasm (Bend Congl.) Field was discovered in 1994 and is an associated field with one producing oil well and 39 gas wells. The Rhombochasm (Bend Congl.) Field operates under rules providing for 330'-660' well spacing, 40 acre density and allocation based on 90% deliverability and 10% acreage. Both fields are AOF status.

Gunn calculated drainage areas for the four wells in the Broken Bone (Congl.) Field. For each well, porosity, water saturation and net pay were determined from log analysis. Average porosity ranges from 7.4% to 11.5% and average water saturation ranged from 19% to 35%. Net pay ranges from 13 feet in the Brothers No. 3-T to 151 feet in the Brothers No. 1. Estimated ultimate recoveries for the four wells were determined from decline curve analysis. The EUR's range greatly from 216 MMCF for the Brothers No. 3-T to 2,315 MMCF for the Brothers No. 1. The resulting drainage areas for the four wells are all less than 40 acres. These calculations are based on 80% recovery. In prior hearings in 1990 and 1993, the drainage calculations assumed only 20% recovery, resulting in much larger calculated drainage areas.

The two fields have "grown together" with development. Two separate areas covering all of the Rhombochasm (Bend Congl.) Field have been designated as tight pursuant to Statewide Rule 101. The area including the Broken Bone (Congl.) Field has also been designated as tight. However, the eight wells proposed to be transferred from the Rhombochasm (Bend Congl.) Field to the Broken Bone (Congl.) Field do not qualify for

tight gas designation because of the wells' field designation. The area in which the wells are located has been designated as tight, but only for the Broken Bone (Congl.) Field. There is no geologic difference or separation between the two fields.

## FINDINGS OF FACT

- 1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
- 2. The Broken Bone (Congl.) Field was discovered in 1990 and there are four producing gas wells carried in the field. The field operates under special rules providing for 933'-1,867' well spacing, 640/optional 320 acre density, and allocation based on 25% deliverability and 75% acreage.
- 3. The Rhombochasm (Bend Conglomerate) Field was discovered in 1994. This field has 40 producing wells and operates under rules providing for 330'-660' well spacing, 40 acre density and allocation based on 90% deliverability and 10% acreage.
- 4. The allocation formulas in both the Broken Bone (Congl.) And Rhombochasm (Bend Conglomerate) Fields are suspended.
- 5. The two fields have grown together over time and field designations for the wells in both fields are overlapping.
- 6. Drainage calculations for the four wells in the Broken Bone (Congl.) Field indicate that the wells will each drain 40 acres or less.
  - a. Net pay ranges from 13 feet in the Brothers No. 3-T to 151 feet in the Brothers No. 1.
  - Estimated ultimate recoveries for the four wells range greatly from 216
     MMCF for the Brothers No. 3-T to 2,315 MMCF for the Brothers No.
     1.
- 7. Well spacing a minimum of 330 feet from lease lines and 660 feet between wells is standard for 40 acre density.
- 8. Transferring the eight subject wells from the Rhombochasm (Bend Conglomerate) Field to the Broken Bone (Congl.) Field is necessary for the wells to qualify for tight gas certification. Areas covering the entirety of both fields have been designated as tight, but the areas are field-specific.

## **CONCLUSIONS OF LAW**

- 1. Proper notice of this hearing was given to all persons legally entitled to notice.
- 2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
- 3. Amending the field rules for the Broken Bone (Congl.) Field and transferring wells as proposed by Gunn Oil Company is necessary to prevent waste, protect correlative rights, and promote orderly development of the field.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the field rules for the Broken Bone (Congl.) Field be amended to provide for 330'-660' well spacing and 40 acre density. It is also recommended that the eight wells be transferred into the Broken Bone (Congl.) Field as proposed by Gunn Oil Co.

Respectfully submitted,

Donna K. Chandler Technical Hearings Examiner