



## RAILROAD COMMISSION OF TEXAS

### HEARINGS DIVISION

OIL AND GAS DOCKET NO. 06-0289824

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THE APPLICATION OF BROOKS PETROLEUM COMPANY TO AMEND FIELD RULES  
FOR THE LAKE FERRELL (PETTIT, UPPER) FIELD, MARION COUNTY, TEXAS

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**HEARD BY:** Brian Fancher, P.G. - Technical Examiner  
Michael Crnich - Legal Examiner

**REVIEWED BY:** Laura Miles-Valdez - Legal Examiner

**HEARING DATE:** July 22, 2014 & September 4, 2014

**APPEARANCES:**  
**APPLICANT:**

**REPRESENTING:**

Greg Cloud

Brooks Petroleum Company

#### EXAMINERS' REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Brooks Petroleum Company ("Brooks") seeks to amend the special field rules for the Lake Ferrell (Pettit, Upper) Field ("the Field"), as adopted per Commission Final Order 6-38,725, as amended.

The current special field rules for the Field:

1. Minimum distance of 660' to any property, lease, or subdivision line well-spacing; minimum distance of 1,650 feet between well-spacing.
2. Minimum acreage of 160-acres per well; maximum diagonal 3,900 feet; proration unit plats.
3. Daily allowable based on a sum of 75% acreage and 25% per well.
4. Surface casing rule.
5. Calendar well-test rule.

Dated June 30, 2014, the subject application's Notice of Hearing ("NOH") indicates that Brooks requests the following field rule amendments:

1. Designated correlative interval.
2. Elimination of the minimum well-spacing requirement.
3. Elimination of the minimum acreage requirement.
4. Elimination of the allocation formula.
5. Take-points of 0' from lease lines for horizontal wells.
6. Provision for off-lease penetration points for horizontal wells.
7. Elimination of the proration unit plat requirement.
8. Elimination of the allowable restrictions for oil and casing-head gas production.

On July 22, 2014, the captioned docket was heard by the examiners. At the hearing, Brooks' representative requested to amend the field rules as mentioned in the June 30<sup>th</sup> NOH. After the hearing, by letter dated July 23, 2014, Brooks withdrew its originally proposed field rules, and proposed a revised set of field rule amendments that include:

1. Designated correlative interval.
2. Minimum distance of 467' to any property, lease, or subdivision line well-spacing; minimum distance of zero feet between well-spacing; 467' take-points for horizontal wells.
3. Minimum acreage of 160-acres per well; optional minimum acreage of 40-acres per well; Form P-15s in lieu of proration unit plats; elimination of the maximum diagonal.
4. Allocation of 75% acreage and 25% per well (no change).

On September 4, 2014, the record was re-opened to provide Brooks an opportunity to submit evidence in support of its revised field rule amendments. At the re-opened hearing, the examiners held that adoption of 40-acre proration units was inappropriate due to lack of supporting data. Brooks did not consider the examiners' ruling as adverse. The examiners recommend that field rules for the Field be amended, as ultimately proposed by Brooks and modified by the examiners.

### DISCUSSION OF THE EVIDENCE

Mr. Greg Cloud, a consulting petroleum engineer, testified on behalf of Brooks. The Lake Ferrell (Pettit, Upper) Field (“the Field”) was discovered on August 9, 1957, at an average depth of 7,333 feet within the Field’s boundaries, and is designated as an oil field. Special field rules were adopted in Special Order No. 6-38,725, effective June 30, 1958, as amended. The Commission’s July 2014 Oil Proration Schedule indicates that Brooks is the only operator in the Field with three producing wells and four shut-in wells on its Lake Ferrell Unit (“LFU”). As of July 2014, the reported cumulative production from the Field is over 3.17 million barrels of oil and over 63 million cubic feet of casing-head gas.

Brooks’ LFU is the only producing lease/unit within the Field’s geographical limits. On April 6, 1964, Amerada Petroleum Corporation (“Amerada”) received a grant from the Commission to conduct gas and water injection pressure maintenance operations on the LFU in the Field<sup>1</sup>. Also, on April 6, 1964, the Commission approved Amerada’s unitization agreement for the LFU, effectively unitizing the Field within the LFU for secondary recovery purposes<sup>2</sup>.

The Field’s productive area lies completely within the unitized area of the LFU. The secondary recovery operations have ceased, and the reservoir pressure in the Field is approximately 2,133 pounds per square inch (“psi”). The original reservoir pressure was roughly 3,000 psi. The vertical well production in the Field is about four barrels of oil per day. However, significant reserves are yet to be recovered, and the proposed field rules offer maximum flexibility for the remaining development of the Field.

Currently, there is no defined correlative interval to distinguish the Field in the subsurface. Brooks seeks to designate the Field as the correlative interval from 7,324 feet to 7,402 feet, as shown on the log of the Lake Ferrel Unit, Well No. 56 (API No. 42-315-30856) in the B. Figures Survey (A-146) in Marion County.

Mr. Cloud testified that from an aerial perspective, the Field is largely confined beneath the Lake O’The Pines (“the Lake”). Brooks completed a horizontal well in the Field (LFU, Well No. 4302H), and anticipates drilling future horizontal wells in the Field. Well No. 4302H is chiefly located beneath the Lake, and that future horizontal drilling will be drilled in a similar fashion. Brooks requests a minimum well-spacing of 467’ lease line and 0’ between well-spacing for all wells in the Field. In addition, Brooks proposes to adopt take-points for horizontal wells in the Field, where each take-point must be a minimum distance of 467’ from any property, lease, or subdivision line. Brooks seeks to place future horizontal wells within roughly 200 feet from existing vertical wells. Due to the near placement of horizontal wells between existing vertical wells, coupled with surface location limitations resulting from the nearby Lake, Brooks requests zero between-well spacing to allow flexibility in drilling horizontal wells in the Field.

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<sup>1</sup> Exh. 6 - Copy of Special Order No. 6-53,893.

<sup>2</sup> Exh. 5 - Copy of Special Order No. 6-53,892.

At the reopened hearing, Brooks requested 40-acre optional proration units. However, no data was available to substantiate adoption of optional 40-acre proration units. As a result, the examiners concluded it inappropriate to recommend adoption of 40-acre options without supporting data. Brooks did not consider the examiners' conclusion as adverse to the subject application.

Brooks requested to eliminate the maximum diagonal for the Field's 160-acre minimum density requirement (*i.e.*, 3,900 feet). The existing horizontal well in the Field spans approximately 5,500 feet, and future horizontal wells are planned to be drilled similarly. Therefore, the current maximum diagonal is not necessary for horizontal well development on 160-acre proration units.

Finally, Brooks requests to substitute filing proration unit plats for each future well completed in the field with Form P-15s. The Form P-15 simply reports the amount of acreage assigned to the well once its completed, as opposed to a proration unit plat filed for the sole purpose of indicating the aerial acreage on the lease/unit assigned to the respective well. Each completed well in the Field still requires an as-drilled plat.

**FINDINGS OF FACT**

1. Brooks Petroleum Company ("Brooks") seeks to amend the existing special field rules that govern the Lake Ferrell (Pettit, Upper) Field ("the Field") in Marion County, Texas.
2. The Field was discovered on August 9, 1957, at an average depth of 7,333 feet within the Field's boundaries, and is designated as an oil field.
3. The July 2014 Oil Proration Schedule indicates that Brooks is the only operator in the Field.
4. Brooks only operates in the Field on its Lake Ferrell Unit ("LFU").
5. The LFU was unitized for secondary recovery purposes on April 6, 1964. The original reservoir pressure was roughly 3,000 pounds per square inch ("psi").
6. The secondary recovery operations have ceased, and the reservoir pressure in the Field is approximately 2,133 psi.
7. Defining the Field as the correlative interval from 7,324 feet to 7,402 feet, as shown on the log of the Lake Ferrel Unit, Well No. 56 (API No. 42-315-30856) in the B. Figures Survey (A-146) in Marion County, is appropriate.
8. Amending the minimum well-spacing in the Field to 467 feet lease, property, and/or subdivision line spacing and zero between well spacing is appropriate.
9. Current production from vertical wells in the Field is near four barrels of oil per day.

10. Brooks has drilled a horizontal well in the Field and plans to drill future horizontal wells to develop the remaining reserves in the Field.
11. Brooks' proposed field rules will increase recovery of hydrocarbons from the Field, and promote development of the Field's remaining recoverable reserves.

**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 field rules as proposed by Brooks Petroleum Company, and modified by the examiners, is necessary to promote development of the Lake Ferrell (Pettit, Upper) Field in Marion County, Texas.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that field rules be amended for the Lake Ferrell (Pettit, Upper) Field , as proposed by Brooks Petroleum Company and modified by the examiners.

Respectfully submitted,



Brian Fancher, P.G.  
Technical Examiner



Laura Miles-Valdez  
Legal Examiner