



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL AND GAS DOCKET NO. 8A-0292884**

---

**THE APPLICATION OF BOAZ ENERGY II OPERATING, LLC TO AMEND FIELD RULES FOR THE KINDOM (CLEARFORK 7500) FIELD, TERRY COUNTY, TEXAS**

---

**HEARD BY:** Brian Fancher, P.G. – Technical Examiner  
Marshall F. Enquist – Legal Examiner

**HEARING DATE:** November 12, 2014  
**RECORD CLOSED:** December 31, 2014  
**SUBMISSION DATE:** December 17, 2014  
**CONFERENCE DATE:** January 27, 2015

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

David Gross  
Dale Miller  
Emily Hood  
Isaac Hayes

Boaz Energy II Operating, LLC

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

The existing special field rules for the Kingdom (Clearfork 7500) Field (the "Field") provide the following:

1. A designated correlative interval that defines the field from 7,300 feet to 7,725 feet, as shown on the log of the Trail Mountain Inc., Helen Lease, Well No. 2 (API No. 42-445-34866), Section 10, Block D-11, SK&K Survey, Terry County, Texas;
2. 467' minimum property, lease, or subdivision line spacing, and 933' minimum between well spacing;

3. 80-acre proration units with a maximum diagonal of 3,250' and 40-acre tolerance, 40-acre optional proration units with 2,100' maximum diagonal, and requisite proration unit plats;
4. Allocation based on 100% acreage.

Dated October 21, 2014, the captioned docket's Notice of Hearing ("NOH") indicates that Boaz Energy II Operating, LLC ("Boaz") seeks to amend the existing special field rules, and proposes the following amendments:

1. A designated correlative interval that defines the Field from 7,300 feet to 7,914 feet, as shown on the log of the Boaz Energy II Operating, LLC, Helen Lease, Well No. 2 (API No. 42-445-34866) (previously operated by Trail Mountain Inc.);
2. 330'-660' well spacing;
3. Amend only the existing optional proration unit density from 40-acres to 20-acres;
4. No change.

At the hearing, however, Boaz requested to change its originally proposed amendments by further expanding the top of the proposed correlative interval from 7,300 feet to 6,491 feet. The purpose of extending the Field's designated correlative interval from 6,461 feet to 7,914 feet is to include the entire Clearfork Formation. As a result of further increasing the total vertical thickness of the Field's designated correlative interval, Boaz also requested to amend the existing allocation formula from 100% acreage to a sum of two factors, 95% acreage and 5% per well, in the event that a two-factor allocation formula is necessary pursuant to Tex. Nat. Res. Code §86.081.

By letter dated November 12, 2014, the Examiners sent a letter to the Oil & Gas Division ("Staff"), which informed Staff of Boaz's requests to expand further the designated correlative interval and to adopt a two-factor allocation formula, and sought feedback from Staff on whether or not a two-factor allocation formula is necessary. The Examiners received no response from Staff in this regard.

The subject application is unopposed. The examiners recommend that the application be approved, as ultimately requested by Boaz.

### **DISCUSSION OF THE EVIDENCE**

Mr. Dale Miller testified as an expert in petroleum engineering on behalf of Boaz in the captioned docket. Mr. Miller was not offered as an expert in the immediate case; however, Mr. Miller testified that he has been accepted as an expert in petroleum engineering at previous Commission-held hearings.

The subject field was discovered in July 1997, and is designated as an oil field. In other words, only oil wells exist in the field. The Field's existing special field rules provide for a 375' designated correlative interval, 467'-933' well spacing, 80-acre proration units, 40-acre optional proration units, and an allocation formula based on 100% acreage.

The November 2014 Oil Proration Schedule indicates that there are two operators in the subject field – Boaz and Cross Timbers Energy, LLC (“CTE”). In addition, Boaz operates 20 wells in the Field, while CTE operates 3 wells. The Field's cumulative production through August 2014 is over 1.9 million barrels of oil and 320 million cubic feet of casing-head gas.

Boaz submitted a reservoir data sheet, which provides answers to several characteristic-based questions that pertain to the Field's reservoir properties. Mr. Miller testified that the reservoir composing the Field includes the Clearfork Formation, and on average exhibits 5.9 percent porosity, 2.6 millidarcies of permeability, 23.9% water saturation, 118.2 feet of net effective oil pay thickness, a gas-to oil ration of 168 standard cubic feet of natural gas for each stock tank barrel. Mr. Miller asserted that the Field's proven developed oil acreage is roughly 1,200-acres, and that the reservoir produces by means of relatively good solution gas drive mechanics.

Based on Volumetric and Decline Analyses taken from Boaz's 20 existing wells in the subject field, Mr. Miller concluded that the average drainage area per well is 20.41-acres. However, the range of drainage areas spans between 4.6-acres and 50-acres. Because the average drainage area is approximately 20-acres, Boaz seeks to amend the existing optional well density from 40-acres to 20-acres. Moreover, because some wells in the subject field are capable of draining more than 40-acres, but less than 80-acres, Boaz seeks to retain the existing “base proration unit” of 80-acres.

The existing designated correlative interval for the subject field is comprised of only the lower Clearfork Formation. Boaz seeks to expand the correlative interval to include the upper and lower Clearfork Formation (*i.e.*, the entire Clearfork Formation). Boaz submitted a type log<sup>1</sup> to delineate its proposed designated correlative interval of 6,461 feet – 7,914 feet. Mr. Miller testified that notice of the subject application was provided to all operators in the field, and that all operators with interests that exist within Boaz's prospective designated correlative interval (*i.e.* 6461' – 7,914') have received notice of the subject application<sup>2</sup>.

Lastly, Mr. Miller stated that in the event a two-factor allocation formula is necessary, as a result of its proposed designated correlative interval, Boaz requests that allocation be based on 95% acreage and 5% per well. By letter dated November 12, 2014, the Examiners issued a letter to Staff, with regard to whether or not Staff had an opinion on Boaz's inquiry for the necessity of a two-factor allocation formula. No response was received from Staff by the Examiners. As a result, the Examiners are inclined to keep the existing allocation formula of 100% acreage in effect until it becomes transparent that a two-factor allocation formula is necessary.

---

<sup>1</sup> See Boaz Exh. No. 9 – Truncated copy of the Platform Express Density Log for Trail Mountain Incorporated's Helen Lease, Well No. 2.

<sup>2</sup> See Audio Recording at 3:00 and 35:45.

In conclusion, Mr. Miller believes that Boaz's proposed field rules will provide for orderly drilling, completion, and operation of wells in the subject field while preventing waste and protecting correlative rights<sup>3</sup>.

### **FINDINGS OF FACT**

1. Boaz Energy II Operating, LLC ("Boaz") seeks to amend the existing special field rules for the Kingdom (Clearfork 7500) Field (the "Field"), Terry County, Texas ("the subject application").
2. All operators in the Field were provided the subject application's Notice of Hearing dated October 21, 2014.
3. The current special field rules that govern the Field provide:
  - a. A designated correlative interval that defines the field from 7,300 feet to 7,725 feet, as shown on the log of the Trail Mountain Inc., Helen Lease, Well No. 2 (API No. 42-445-34866), Section 10, Block D-11, SK&K Survey, Terry County, Texas;
  - b. 467' minimum property, lease, or subdivision line spacing, and 933' minimum between well spacing;
  - c. 80-acre proration units with a maximum diagonal of 3,250' and 40-acre tolerance, 40-acre optional proration units with 2,100' maximum diagonal, and requisite proration unit plats;
  - d. Allocation based on 100% acreage.
4. Boaz requests that the existing special field rules for the Field be amended to include:
  - a. A designated correlative interval that defines the Field from 6,461 feet to 7,914 feet, as shown on the log of the Boaz Energy II Operating, LLC, Helen Lease, Well No. 2 (API No. 42-445-34866) (previously operated by Trail Mountain Inc.);
  - b. 330'- 660' well spacing;
  - c. Amend only the existing optional proration unit density from 40-acres to 20-acres;
  - d. No change.

---

<sup>3</sup> See Boaz Exh. No. 7.

5. The subject field was discovered in July 1997, and is designated as an oil field.
6. Boaz operates about 20 wells in the Field.
7. The reservoir composing the Field is made of the Clearfork Formation, and on average exhibits 5.9 percent porosity, 2.6 millidarcies of permeability, 23.9% water saturation, 118.2 feet of net effective oil pay thickness, a gas-to oil ration of 168 standard cubic feet of natural gas for each stock tank barrel.
8. The range of drainage areas encountered from the existing 20 wells in the Field span from 4.6-acres and 50-acres. The average drainage area per well in the Field is 20.41-acres.
9. Amending the existing special field rules in the manner ultimately proposed by Boaz is appropriate, and will provide for orderly development of the Field.

#### CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas – Tex. Nat. Res. Code §81.051.
2. Legally sufficient notice has been provided to all affected persons.
3. Amending the special field rules for the Kingdom (Clearfork 7500) Field, as proposed by Boaz Energy II Operating, LLC, will prevent waste and protect correlative rights.

#### EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the special field rules for the Kingdom (Clearfork 7500) Field be amended, as ultimately proposed by Boaz Energy II Operating, LLC.

Respectfully submitted,



Brian Fancher, P.G.  
Technical Examiner



Marshall F. Enquist  
Legal Examiner