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*HEARINGS SECTION*

# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

**OIL AND GAS DOCKET NO. 7B-0274235**

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**THE APPLICATION OF STAR PRODUCTION, INC. TO AMEND FIELD RULES FOR THE BURKETT, SW. (DUFFER) FIELD, COLEMAN COUNTY, TEXAS**

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**Heard by:** Andres J. Trevino, P.E., Technical Examiner  
Michael Crnich, Hearings Examiner

**Hearing Date:** February 3, 2012

**Appearances:**

Dale E. Miller  
Steve Harrell

Ragon Richey

**Representing:**

Star Production, Inc.

Rimfire Resources, LLC

### EXAMINER'S REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

This is the unopposed application of Star Production, Inc. to amend the field rules first adopted in Order No. 7B-69,830, issued effective October 10, 1978, as amended, for the Burkett, SW. (Duffer) Field that currently provide for the following:

1. 467'-1200' well spacing;
2. 80 acre oil and gas units;
3. Allocation based on 100% per well, Net casinghead gas limit of 350 MCF/well per day 100% AOF;

Star Production, Inc. requests that field rules be amended as follows:

1. The entire correlative interval from 3,292 feet to 3,338 feet as shown on the Platform Express, Array Induction Tool, Gamma Ray, SP log of the Star Production, Inc.- W.C. Henderson "A" Well No. 1;
2. 330'-467' well spacing, 0' between wells spacing between vertical and horizontal wells;
3. 80 acre oil and gas units with optional 20 acre units, no plats;
4. Allocation based on 100% acreage.

This application was unopposed and the examiner recommends that the field rules for the Burkett, SW. (Duffer) Field be amended as requested.

#### **DISCUSSION OF EVIDENCE**

The Burkett, SW. (Duffer) Field was discovered in 1978 at a depth of approximately 3,240 feet. Cumulative production from the field is approximately 14.93 BCF of gas and 104,207 BO/C. As of February 2012, there are 29 gas wells and 4 oil wells in the field which in total produce about 429 MCF/D and 4.8 BOPD. Star Production has farmed-out Whiting Oil and Gas' acreage and has committed to drill one well every 90 days.

Star Production is redeveloping the field by drilling additional infill vertical wells between existing wells. Star Production believes current wells drilled with current density rules are not adequately draining existing reserves. The Burkett, SW. (Duffer) Field produces from the Duffer formation, identified as the entire correlative interval between 3,292 feet to 3,338 feet as shown on the log of the Star Production, Inc. - W.C. Henderson "A" Well No. 1. The Duffer is a tripolitic chert which has a high micro porosity of 25% but low permeability.

Drainage area calculations performed for oil and gas wells demonstrate the need for smaller units. Using reservoir parameters of 25% porosity, water saturation of 35%, a net pay thickness of 17 feet and recovery factors of 17% for oil wells and 80% for gas wells, drainage area calculations were performed for both oil and gas wells. Drainage calculations performed show gas wells will drain between 0.3 acres and 71 acres, with a third of the wells draining 20 acres or less justifying the optional 20 acre density. Drainage calculations performed show oil wells will drain between 0.2 acres and 13 acres justifying the optional 20 acre density.

Star Production requests 330'-467' and 0' between vertical and horizontal well spacing for the Burkett, SW. (Duffer) Field so that it can place new vertical wells in optimum locations between numerous existing wells without the need for Rule 37

exceptions. Additionally, Star may decide to drill horizontal wells if results justify the costs. Currently oil wells are allowed to produce up to 350 MCF/D per well and gas wells are 100% AOF. Star Production wishes to maintain the current status.

### FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. Field rules for the Burkett, SW. (Duffer) Field provide for 467'-1200' well spacing, 80 acre oil and gas units and allocation based on 100% per well, 350 MCF/day casinghead gas limit.
3. The Burkett, SW. (Duffer) Field was discovered in 1978 and cumulative production from the field is approximately 14.93 BCF of gas and 104,207 BO/C.
4. Current production from the 29 gas wells and 4 oil wells in the field is approximately 429 MCF/D and 4.8 BOPD.
5. The Burkett, SW. (Duffer) Field produces from the Duffer Chert, a tripolitic chert that has high micro porosity and low permeability.
6. The Burkett, SW. (Duffer) Field should be designated as: the entire correlative interval between 3,292 feet to 3,338 feet as shown on the Platform Express, Array Induction Tool, Gamma Ray, SP log of the Star Production, Inc.- W.C. Henderson "A" Well No. 1.
7. Wells in the field have drainage areas which vary significantly. Development with 80 acre density with optional 20 acre units is necessary to maximize recovery from the field.
  - a. Using reservoir parameters of 25% porosity, water saturation of 35%, a net pay thickness of 17 feet and recovery factors of 17% for oil wells and 80% for gas wells, drainage area calculations were performed for both oil and gas wells.
  - b. Drainage calculations performed show gas wells will drain between 0.3 acres and 71 acres, with a third of the wells draining 20 acres or less.
  - c. Drainage calculations performed show oil wells will drain between 0.2 acres and 13 acres.

8. The proposed 330'-467' and 0' between vertical and horizontal well spacing will accommodate development on optional 20 acre units and placing new vertical and horizontal wells between numerous existing wells.
9. Star Production requests that oil wells are allowed to continue to produce up to 350 MCF/D per well and gas wells remain 100% AOF.

**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 field rules for the Burkett, SW. (Duffer) Field is necessary to prevent waste and protect correlative rights.

**RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends that field rules for the Burkett, SW. (Duffer) Field be amended to provide for 80 acre units with optional 20 acre density and 330'-467' well spacing.



Andres J. Trevino, P.E.  
Technical Examiner

Respectfully submitted,



Michael Crnich  
Legal Examiner