RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 01-0276981

THE APPLICATION OF VIRTEX OPERATING COMPANY FOR PERMANENT FIELD RULES FOR THE JOURDANTON (BUDA) FIELD, ATASCOSA COUNTY, TEXAS

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

DATE OF HEARING: July 20, 2012

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Dale Miller	Virtex Operating Company

EXAMINERS' REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

The Jourdanton (Buda) Field is currently governed by statewide rules. VirTex Operating Company, Inc. ("VirTex") seeks to adopt field rules for the subject field and is proposing the following rules:

1. Designated correlative interval from 6,839' to 6,944', as shown on the log of the VirTex Petroleum Company, Inc. S.P.J. S.T Lodge Well No. 7, J.P. Gorman Survey, A-282, Atascosa County;

2. 467'-1200' well spacing;

3 80 acre proration units for oil and gas wells with 40-acre tolerance for oil wells, 10% tolerance for gas wells, and 3250' maximum diagonal; 40 acre optional units with 2100' maximum diagonal. Additionally, the following formula shall be utilized to determine allocation of additional acreage to horizontal wells:

   A = (L x 0.11488) + 80 acres, where A = acreage assignable, if available, to a horizontal drainhole for proration purposes rounded upward to the next whole number evenly divisible by 40 acres; and L is the length of the horizontal displacement in feet;

Additionally, the maximum diagonal for a horizontal drainhole shall be determined by the following formula:

Maximum diagonal = 475.933 x √A;

4. Allocation based on 100% acreage with 100% AOF status.

At the hearing, the examiners were of the opinion that adoption of the proposed formula for the allocation of acreage to horizontal wells, also an exception to Statewide Rule 86, is inappropriate at the time due to the lack of supporting data. Instead, the examiners opined that wells in the subject field conform to Statewide Rule 86. VirTex did not consider the examiners' opinion adverse to its application.

DISCUSSION OF THE EVIDENCE

The Jourdanton (Buda) Gas Field is an associated field that was discovered in 1967 and 1969, respectively. The initial gas well in the subject field was discovered at an average depth of 7400 feet while the initial oil well was discovered an average depth of 7020 feet. The current oil and gas proration schedules show there are currently three operators in the field that have five gas wells (all inactive) and four oil wells (one inactive). Cumulative production from the field is estimated at 0.87 billion cubic feet of casing-head gas ("BCF") and 152.9 thousand barrels of oil ("MBO") from designated oil wells; and 2.21 BCF and 20.4 thousand barrels of condensate from the gas wells. VirTex testified it is planning to drill new horizontal wells in this reservoir.

The field extends northeast-southwest and includes the entire Buda formation. In the proposed type log, Virtex seeks to identify the subject field as the correlative interval seen from 6,839' to 6,944', as shown on the log of the VirTex Petroleum Company, Inc. S.P.J. S.T Lodge Well No. 7, J.P. Gorman Survey, A-282, Atascosa County. The average porosity is 6% and water saturation is 40%. The net effective pay is 15' and original reservoir pressure was 3588 psia. Virtex testified the recovery factor is 15% for oil wells and 75% for gas wells. Volumetric calculations establish that there are 33,972 barrels of recoverable oil underneath 80 acres for an oil well, and 319,500 MCF of gas recoverable underneath 80 acres for a gas well in the Buda.

Gas field decline analysis shows that most of the vertical gas wells will drain over 40 acres, and three of the seven wells studied will drain over 80 acres. Three of the seven gas wells will drain 40 acres or less. The average drainage area of gas wells is 73 acres. Oil field decline analysis shows that three of the eleven oil wells studied have drainage areas of 71, 76 and 61 acres respectively; while the rest of these studied wells will drain less than 40 acres.

VirTex is planning to drill horizontal wells in this field. Virtex testified it seeks an exception to Statewide Rule 86 for the allocation of additional acreage to horizontal wells. Virtex testified it seeks to include a formula in the field rules for the subject field so that the maximum number of acres assignable to a horizontal well shall be based on a formula where:

A = (L x 0.11488) + 80 acres, where A = acreage assignable, if available, to a horizontal drainhole for proration purposes rounded upward to the next whole number evenly divisible by 40 acres; and L is the length of the horizontal displacement in feet.

At the hearing, VirTex testified there are currently no horizontal wells completed in the subject field. The examiners opined it inappropriate to adopt an exception to Statewide Rule 86, with respect to acreage allocation to horizontal wells, for wells in the subject field and that the field rules for the subject field reflect allocation to horizontal wells be based on Statewide Rule 86. VirTex did not consider the examiners' opinion adverse to its application.

Also, VirTex seeks to include a formula for the maximum diagonal, in which a proration unit for a horizontal well may be allowed in the subject field. As proposed, VirTex seeks the following formula:

Maximum diagonal = 475.933 x $\sqrt{A}$

VirTex testified there are numerous fields in Texas that have adopted the above maximum diagonal formula, and that it is better suited for field rules that govern horizontal wells.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Jourdanton (Buda) Field on June 29, 2012.

2. The Jourdanton (Buda) Gas Field was discovered in 1967 and the Oil Field was discovered in 1969.

3. The proration schedule shows three operators in the field have five gas wells (all inactive) and four oil wells (one inactive).

4. Cumulative production from the twenty-two wells ever completed in the field is 875,322 thousand cubic feet of gas ("MCF") and 152,959 thousand barrels of oil ("BO") from designated oil wells; and 2,212,513 MCF and 20,454 barrels of condensate from designated gas wells.

5. VirTex Operating Company, Inc. ("VirTex") is planning to drill new horizontal wells in this reservoir.

6. Volumetric calculations establish that there are 33,972 barrels of recoverable oil underneath 80 acres and 319,500 MCF recoverable underneath 80 acres for a gas well in the Buda.

7. Gas field decline analysis shows that 80 acre gas units are appropriate as most of the vertical gas wells will drain over 40 acres, and three of the seven wells studied will drain over 80 acres. The average drainage area of gas wells is 73 acres.

8. Oil field decline analysis shows that 80 acre oil units are appropriate as at least three of the eleven oil wells studied have drainage areas well over 40 acres.

9. Optional 40 acre units are appropriate for both oil and gas field rules as many of the oil and gas wells will drain 40 acre or less.

10. VirTex seeks to define the Jourdanton (Buda) Field as the correlative interval from 6,839' to 6,944', as shown on the log of the VirTex Petroleum Company, Inc. S.P.J. S.T Lodge Well No. 7, J.P. Gorman Survey, A-282, Atascosa County.

11. Allocation based on acreage will protect correlative rights.

12. Well spacing of 467-1200' is standard for 40-acre optional units.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.

2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.

3. Adopting the proposed rules will promote conservation, protect correlative rights and prevent waste.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the field rules proposed for the Jourdanton (Buda) Field be adopted, as requested by Virtex and modified by the examiners.

Respectfully submitted,

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Technical Examiner

Michael Crnich
Legal Examiner