#### THE APPLICATION OF PRIMEXX OPERATING CORPORATION TO AMEND FIELD RULES FOR THE PEG'S DRAW (MISSISSIPPIAN) FIELD, BORDEN COUNTY, TEXAS

Heard by: Andres J. Trevino, P.E. on February 18, 2011

Appearances:

**Representing:** 

Dale Miller Eric Nelson Edwin Gregory Primexx Operating Corporation

### EXAMINER'S REPORT AND RECOMMENDATION

### STATEMENT OF THE CASE

This is the unprotested application of Primexx Operating Corporation to amend temporary field rules adopted in Order No. 8A-0261257, effective June 18, 2009 for the Peg's Draw (Mississippian) Field that currently provide for the following:

- 1. Designation of the field as the correlative interval from 8,550 feet to 8,830 feet as shown on the log of the Peg's Draw "A" Well No. 2;
- 2. 467' 1,200' well spacing;
- 3. 80 acre oil units with 40 acre tolerance and a maximum diagonal of 3,250 feet;
- 4. Allocation based on 100% acreage.

Primexx Operating Corporation proposes that horizontal well rules be added to include take point provisions, off lease penetration, a horizontal box rule, filing Form P-15 and eliminate filing of plats. During the hearing the examiner recommended 0' between well spacing between vertical and horizontal wells in the field. Primexx obtained a waiver from SM Energy, the only other operator in the field, stating they are not opposed to 0' between well spacing between vertical and horizontal wells in the field.

The examiner recommends that field rules for the Peg's Draw (Mississippian) Field be amended as proposed by Primexx Operating Corporation.

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### DISCUSSION OF THE EVIDENCE

The Peg's Draw (Mississippian) Field was discovered in May 2006 upon completion of the Peg's Draw "A" Well No. 2 by Primexx Operating, LP. On initial test, the well flowed at a rate of 42 BOPD, 50 MCFD and no water. The field is found at approximately 8,570' subsurface depth. The field is governed by Special Rules allowing 80 acre density. There are two operators and five oil wells in the field. Additional oil wells have been drilled but have not been placed on the proration schedule. The field has produced 137,064 BO.

Primexx requests no change in the Peg's Draw (Mississippian) Field's correlative interval which is identified from 8,550 feet to 8,830 feet as shown on the log of the Peg's Draw "A" Well No. 2. The pay zone is generally found within 30 feet of the top of the Mississippian Limestone.

Primexx requests no change in the 467'/1,200' well spacing. Primexx amended their original request to include 0' between well spacing between vertical and horizontal wells. The spacing rule will be consistent with the spacing rules of other fields being developed with horizontal wells. The 0' between well spacing between vertical and horizontal wells will allow the drilling of horizontal wells in between existing vertical wells. Primexx received a waiver from SM Energy, the only other operator in the field, that it was not opposed to no between well spacing requirements between vertical and horizontal wells.

Primexx is amending the existing field rules in the Peg's Draw (Mississippian) Field to adopt horizontal rules to allow efficient and orderly development of the Peg's Draw (Mississippian) Field with horizontal wells. Horizontal development is anticipated where there are tighter areas of the field where vertical wells will not produce economic quantities of oil. Additionally, the field terrain is rugged and drilling one horizontal well may be more favorable than drilling multiple vertical wells. The proposed horizontal rules are similar to horizontal rules found in other fields being developed with horizontal wells.

Primexx requests several standard horizontal well provisions commonly adopted when horizontal well development is anticipated. The provisions include take point language to allow flexible drilling of the laterals and off-lease penetration to allow the additional recovery of reserves by allowing the lateral to be horizontal at a legal lease line location. An additional stage frac will be placed on each lateral if off lease penetration is allowed.

Primexx provided drainage calculations for three wells in the field which will drain greater than 40 acres. These calculations are based on net pay of 57 feet, 6.4% porosity, 44% water saturation and a recovery factor of 13%. Estimated ultimate recoveries range from 96 MBO for the CR "G" Tract 2 Well No. 1402 and 241.8 MBO for the Roy Well Nos. 2402 & 1802. The estimated drainage area for the CR "G" Tract 2 Well No. 1402 is 69 acres and for the Roy Well Nos. 2402 & 1802 is 87 acres each.

Primexx proposes a 50 foot "box rule" for horizontal drainhole wells that would allow

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drainholes to deviate 50 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. Primexx requests that the allocation formula for wells in the field remain based on 100% acres.

# FINDINGS OF FACT

- 1. Notice of this hearing was given to all operators of wells in the Peg's Draw (Mississippian) Field at least ten days prior to the date of hearing.
- 2. The Peg's Draw (Mississippian) Field was discovered in May 2006 at a depth of 8,570'.
- 3. There are two operators and 5 oil wells in the field. Cumulative production from the field is 137,064 BO.
- 4. The Peg's Draw (Mississippian) Field is an oil field governed by temporary field rules adopted in Order No. 8A-0261257, effective June 18, 2009.
- The Peg's Draw (Mississippian) Field should be defined as the correlative interval from 8,550 feet to 8,830 feet as shown on the log of the Peg's Draw "A" Well No. 2. This interval includes the entire Mississippian Limestone formation.
- 6. Adopting field rules that provide for 467'/1,200' well spacing and eliminating between well spacing between vertical and horizontal wells will allow the flexible placement of horizontal wells between existing vertical wells.
- 7. Adoption of a density rule providing for 80 acre units is appropriate for this field.
  - a. For the three wells in the field studied by Primexx that exceeded 40 acre drainage, net pay was estimated at 57 feet, porosity at 6.4 % water saturation of 44% and a recovery factor of 13%.
  - b. The CR "G" Tract 2 Well No. 1402 will produce 96,261 BO and drain 69 acres.
  - c. The Roy Well Nos. 2402 & 1802. will produce 241,801 BO total and drain 87 acres each.
- 8. The proposed 50 foot "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.

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- 9. Field rules that eliminate between well spacing for vertical and horizontal wells in the field, take point language, off lease penetration and a "box rule" for horizontal wells will provide consistency with other fields under going horizontal drilling.
- 10. Allowing off-lease penetration will allow an additional stage frac to be placed on each lateral causing the recovery of additional reserves that would otherwise be left in the ground.
- 11. Allocation based on 100% acreage is a reasonable method of allocation which will protect the correlative rights of mineral owners in the field.

# 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 Primexx Operating Corporation is necessary to prevent waste and protect correlative rights.

## EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that field rules be adopted for the Peg's Draw (Mississippian) Field to eliminate between well spacing between vertical and horizontal wells, 80 acre units, add take points, allow off lease penetration and a 50 foot "box" rule.

Respectfully submitted,

Andres J. Trevino, P.E. Technical Hearings Examiner