



# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

November 9, 2006

OIL AND GAS DOCKET NO. 06-0249292

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APPLICATION OF SOUTHWESTERN ENERGY PRODUCTION COMPANY TO AMEND THE FIELD RULES FOR THE OVERTON (COTTON VALLEY SAND) FIELD, SMITH, RUSK AND CHEROKEE COUNTIES, TEXAS

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HEARD BY: Thomas H. Richter, P.E., Technical Examiner

DATE OF HEARING: November 8, 2006

APPEARANCES:

Philip Whitworth, attorney  
Terry Darilek  
E. Blanche Ramsey  
Russell J. Kneedler  
Daniel Johnson

REPRESENTING:

Southwestern Energy Production Co.  
  
Exco Resources

**EXAMINERS' REPORT AND RECOMMENDATION**  
**STATEMENT OF THE CASE**

This is the unopposed application of Southwestern Energy Production Co. ("SWEPCO") to amend the field rules as adopted in Order No. 6-68,850, effective May 30, 1978, as amended, for the Overton (Cotton Valley Sand) Field that currently provide for the following:

1. The entire correlative interval from 10,575' to 11,815' as shown on the type log of the Petrofina (now SWEPCO), J.F. Ware Well No. 1, in the Benjamin Lafferty Survey, A-13, Smith County, Texas is designated as the Overton (Cotton Valley Sand) Field.
2. Minimum well spacing of 467'/933' (lease line/between well);
3. 640 acre gas proration units plus 10% tolerance and a maximum diagonal of 10,500' and optional 40 acre density with a maximum diagonal of 2,100';
4. An allocation formula based on 100% acreage. The allocation formula has been suspended since 1994.

SWEPCO proposes amending Rule No. 2 to provide for 600' minimum between well spacing. The examiner recommends approval of the application.

### DISCUSSION OF THE EVIDENCE

The Overton (Cotton Valley Sand) Field was discovered in 1977 at 11,269' subsurface depth. The field is governed by special field rules as adopted by Order No. 6-68,850, effective May 30, 1978. The field rules have been amended four times since the initial adoption.<sup>1</sup> The field is classified as an Associated-Prorated Field.<sup>2</sup> This is a multi-operator multi-well field (over 475 wells). Cumulative production from the field is 180.2 BCF of gas and 1.4 million barrels of condensate. SWEPCO has produced 127.4 BCF of the total gas production from the field.

Minimum between well spacing of 600' is necessary for the orderly development of the field and to cause the efficient and effective depletion of the Cotton Valley reservoirs. The Cotton Valley Sand is a relatively thick formation that is continuous across the area. The type log of the Petrofina (now SWEPCO), J.F. Ware Well No. 1 shows the Cotton Valley Formation between 10,575' to 11,815'. The stratigraphic nature of the sands indicates continuity but the individual sand packets are extremely variable. Generally, the Cotton Valley Formation is divided into 4 layers.

SWEPCO operates 286 wells in the field. Through its research in completing, fracture stimulations and production and reservoir engineering testing and analysis, it has been determined that the drainage area of the wells is not radial but is elliptical with a 4.5:1 ratio with an axis orientation of N70°E. This results in a shingle pattern of drainage areas. The research included the use of geophones in adjacent wells during fracture stimulations. This has confirmed the 4 layers of the formation. Eight wells have been or will be drilled with Rule 37 between well exceptions in 2006. The distances to the nearest wells ranged from 624' to 867'. SWEPCO asserts that it has at least 8 more wells to be drilled in 2007 which will require between well exceptions. Numerous other locations are being researched.

### FINDINGS OF FACT

1. Notice of this hearing was sent to all persons entitled to notice in the subject field at least ten (10) days prior to the subject hearing.
2. The Overton (Cotton Valley Sand) Field was discovered in 1977 at 11,269' subsurface depth. The field is governed by special field rules as adopted by Order No. 6-68,850, effective May 30, 1978. The field rules have been amended four times since the initial adoption.

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<sup>1</sup> O&G Docket No. 06-0229611, effective November 20, 2001, reduced the minimum well spacing from 1320/2640' (lease/betweenwell) to 467/933' and providing for optional 160 acre density. O&G Docket No. 06-0233576, effective March 11, 2003, adopted optional 80 acre density. O&G Docket No. 06-0239090, effective April 12, 2004, adopted optional 40 acre density. O&G Docket No. 06-0240706, effective January 12, 2005, consolidated the G.A.S (Cotton Valley Sd.) Field into the Overton (Cotton Valley Sand) Field.

<sup>2</sup> There is one well classified as oil according to the October 2006 Commission Proration Schedule.

- a. Current field rules provide for minimum well spacing of 467'/933' (lease line/between well); 640 acre gas proration units and optional 40 acre density; and an allocation formula based on 100% acreage. The allocation formula has been suspended since 1994.
- b. This is a multi-operator multi-well field (over 475 wells).
3. Minimum between well spacing of 600' is necessary for the orderly development of the field and to cause the efficient and effective depletion of the Cotton Valley reservoirs.
  - a. Research in completing, fracture stimulations and production and reservoir engineering testing and analysis has been determined that the drainage area of the wells are not radial but are elliptical with a 4.5:1 ratio with an axis orientation of N70°E.
  - b. The results are a shingle pattern of drainage areas.
  - c. Eight wells have been or will be drilled with Rule 37 between well exceptions in 2006 and there are at least 8 more wells to be drilled in 2007 which will require between well exceptions and numerous other locations are being researched.
4. Continuation of suspension of the allocation formula is appropriate as there is a market for 100% of the produced gas from the wells in the field.

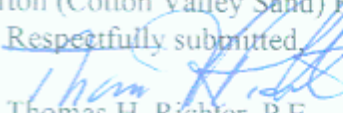
#### CONCLUSIONS OF LAW

1. Proper notice was given to all parties entitled to notice under applicable law.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Consideration for field rules, a determination of their effectiveness and appropriate actions are a matter within the Commission jurisdiction in order to promote conservation and prevent waste of oil and gas.
4. Adoption of the proposed amended field rules will prevent waste, foster conservation and protect correlative rights.

#### EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed amended Field Rule No. 2 for the Overton (Cotton Valley Sand) Field be adopted.

Respectfully submitted,

  
Thomas H. Richter, P.E.  
Technical Examiner  
Office of General Counsel