

**APPLICATION OF PENN VIRGINIA OIL & GAS, LP TO AMEND THE FIELD RULES FOR THE WOODLAWN (COTTON VALLEY) FIELD, HARRISON AND MARION COUNTIES, TEXAS**

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**Heard by:** Andres J. Trevino, P.E. on September 17, 2007

**Appearances:**

Bill Spencer  
Jim Clark

Sandra Buch

**Representing:**

Penn Virginia Oil & Gas LP

BP America Production Company

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

This is the unprotested application of Penn Virginia Oil & Gas LP to amend the field rules as adopted in Order No. 6-0217785, effective December 16, 1997, as amended, for the Woodlawn (Cotton Valley) Field that currently provide for the following:

1. The entire correlative interval from 8,490' to 9,980' as shown on the Dual Induction laterolog of the Amoco Production Company, Slaughter Gas Unit "B" Well No. 2, B.L. Watkins Survey, A-750, Harrison County, Texas should be designated as the Woodlawn (Cotton Valley) Field.
2. Minimum well spacing of 660'/1000' (lease line/between well);
3. 640 acre gas proration units plus 10% tolerance and a maximum diagonal of 10,500'; and optional 80 acre gas proration units with a maximum diagonal of 4500'; and
4. An allocation formula based on 5% deliverability and 95% acreage. The allocation formula was suspended in 1995.

Penn Virginia Oil & Gas LP proposes the following:

1. The entire correlative interval from 8,370' to 9,980' as shown on the Dual Induction laterolog of the Amoco Production Company, Slaughter Gas Unit "B" Well No. 2, B.L. Watkins Survey, A-750, Harrison County, Texas should be designated as the Woodlawn (Cotton Valley) Field.
2. Minimum well spacing of 467'/1000';
3. No change on well density, however request no proration unit plats be required as long as allocation formula is suspended.
4. An allocation formula based on 95% deliverability and 5% per well. The allocation formula remain suspended.

During the hearing, Penn Virginia requested that the current optional 80 acre density remain unchanged to avoid a protest from BP America Production Company.<sup>1</sup>

The examiner recommends approval of the application.

### **DISCUSSION OF THE EVIDENCE**

The Woodlawn (Cotton Valley) Field was discovered in 1965 at approximately 9,592' subsurface depth. Special field rules were adopted in 1977 and were last amended in 1997. The gas field is designated as an associated field with the allocation formula suspended. There are 17 operators and 162 producing wells in the field. The field has produced 143 BCF and 1.2 MMBC. The field currently 26 MMCFG and 250 BC per day or per well average of 162 MCF and 1.5 BC per day.

The Woodlawn (Cotton Valley) Field's correlative interval will be expanded to 8,370' to include an additional 120' of Upper Cotton Valley Formation. The Upper Cotton Valley is approximately 1,200' in thickness and productive sands are lenticular, of poorer reservoir quality and discontinuous from one well to the next. The Lower Cotton Valley is also known as the Taylor Sand and is fairly continuous through out the area. The base of the correlative interval occurs at 9,980' which is the top of the Bossier Shale. Penn Virginia estimates that additional gas will be recovered as a result of the proposed expansion of the designated interval.

Penn Virginia requests that the current leaseline spacing rule be reduced to 467' from the current 660'. The 467' leaseline spacing will be consistent with all other major Harrison County Cotton Valley fields which currently have 467' leaseline spacing. The 467' leaseline spacing will also allow greater flexibility in locating wells to recover hydrocarbon

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<sup>1</sup> The Notice of Hearing listed the density change to 40 acre optional units.

resources from the lenticular sands found in the Upper Cotton Valley.

Because the proposed designated intervals contains multiple sands, a two factor allocation formula is required by statute. Penn Virginia proposes that allocation be based on 95% deliverability and 5% per well. Penn Virginia requests that no proration plats be required to be filed as acreage is not part of the allocation formula. This allocation formula is currently suspended and Penn Virginia requests continuation of this status as there is a market for 100% of the gas produced.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all operators of wells in the Woodlawn (Cotton Valley) Field at least ten days prior to the date of hearing.
2. The Woodlawn (Cotton Valley) Field was discovered in 1965 at a depth of 9,592'.
3. There are 17 operators and 162 producing wells in the field. Cumulative production from the field is about 143 BCF of gas and 1.2 MMBC. Current production rate is about 26 MMCFD.
4. The field is an associated gas field. Rules governing the gas wells provide for 660'-1,000' well spacing, 640/optional 80 acre density and 95% acreage and 5% deliverability allocation.
5. Expansion of the correlative interval for the field to include the additional pay zones found in the Upper Cotton Valley within the Woodlawn (Cotton Valley) formation will maximize ultimate recovery by adding additional potential reserves.
6. The Woodlawn (Cotton Valley) Field should be designated as the correlative interval from 8,370 feet to 9,980 feet as shown on the Dual Induction Laterolog of the Amoco Production Company's Slaughter Gas Unit Well No. 2.
7. The proposed minimum lease line spacing of 467' is consistent with other major Cotton Valley fields in the area and will provide additional flexibility in locating wells in the field.
8. Allocation based on 95% deliverability and 5% per well is a reasonable allocation formula which satisfies statutory requirements. The field is currently AOF status.

**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. Consolidation of the proposed field interval and field rules as proposed by Penn Virginia Oil & Gas LP 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 amended for the Woodlawn (Cotton Valley) Field to expand the correlative interval reduce lease line spacing and amend the allocation formula. It is recommended that the allocation formula for the field remain suspended.

Respectfully submitted,

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