

APPLICATION OF NFR ENERGY LLC TO AMEND THE FIELD RULES FOR THE WOODLAWN (COTTON VALLEY) FIELD, HARRISON AND MARION COUNTIES, TEXAS

Heard by: Andres J. Trevino, P.E. on January 14, 2010

Appearances:

Flip Whitworth
Dale E. Miller

Representing:

NFR Energy, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

This is the unprotested application of NFR Energy, LLC to amend the field rules as adopted in Order No. 6-0258677, effective October 7, 2008, as amended, for the Woodlawn (Cotton Valley) Field that currently provide for 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'/600', 0' between vertical and horizontal wells, take point provisions;
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 95% deliverability and 5% per well with AOF Status.

NFR Energy, LLC proposes that Field Rule No. 3 be amended to decrease the optional units from 80 acres to 40 acres.

The examiner recommends that Field Rule No. 3 for the Woodlawn (Cotton Valley) Field be amended as proposed by NFR Energy, LLC.

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 October 2008. The gas field is designated as an associated field with the allocation formula suspended. There are 18 operators and 258 gas wells and one oil well in the field. The field has produced 174.2 BCF and 1.6 MMBC.

NFR Energy believes that there is still unrecovered gas in the reservoir. Gas proration units of optional 40 acres should provide for the effective and efficient depletion of the reservoir. NFR Energy performed drainage analysis on an "average" well, the BP America's Woods, Milton (Deep) Gas Unit 4. Average reservoir parameters are: porosity of 8.3%, water saturation of 60%; net pay of 46'. The estimated ultimate recovery and calculated drainage area for the Woods, Milton (Deep) Gas Unit 4 is 676.7 MMCF and 50 acres.

NFR Energy collected cumulative gas production data for all wells in the field and estimated an ultimate economic recovery for each well in the field. NFR Energy assumed a 20% exponential decline from each well's current production rate and assumed a 20 MCFPD economic limit. NFR Energy then calculated the drainage area for each well (258 wells) completed in the Woodlawn (Cotton Valley) Field. The drainage area study of the wells showed wells drained between less than 1 acre to over 392 acres with an average of 64 acres. The EURs ranged from 18 MMCF to 5.3 BCF with an average EUR of 862 MMCF. The study also showed that 101 wells of the total 258 wells in the field had a calculated drainage area of 40 acres or less. NFR Energy plans to drill additional vertical and horizontal wells in this field.

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 18 operators and 217 gas wells and one oil well in the field. Cumulative production from the field is about 174.2 BCF and 1.6 MMBC.
4. The Woodlawn (Cotton Valley) Field is an associated gas field with one oil well. Rules governing the gas wells provide for 467'-600' well spacing, 640/optional 80 acre density and 100% deliverability allocation. The allocation formula was suspended in 1993.
5. Average reservoir parameters for the Woodlawn (Cotton Valley) Field are: porosity of 8.3%, water saturation of 60%; net pay of 46'.

6. Gas proration units of optional 40 acres should provide for the effective and efficient depletion of the reservoir.
 - a. The estimated ultimate recovery and calculated drainage area for the Woods, Milton (Deep) Gas Unit 4 is 676.7 MMCF and 50 acres.
 - b. A drainage area study of all the wells in the field showed wells drained between less than 1 acre to over 392 acres with an average of 64 acres.
 - c. The study also showed that 101 wells of the total 258 wells in the field had a calculated drainage area of 40 acres or less.

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 NFR Energy, LLC is necessary to prevent waste and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that Field Rule No. 3 be amended for the Woodlawn (Cotton Valley) Field to reduce optional acreage from 80 acres to 40 acres.

Respectfully submitted,

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