

December 1, 1999

OIL AND GAS DOCKET NO. 05-0223104

**THE APPLICATION OF MILLER ENERGY, INC., TO AMEND FIELD RULES IN THE
KERVIN, NE. (COTTON VALLEY) FIELD, FREESTONE COUNTY, TEXAS**

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: October 28, 1999

Hearing held: November 30, 1999

Appearances

Dale Miller

Representing

Miller Energy, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Current rules for the Kirven, NE. (Cotton Valley) Field, adopted administratively under Docket No. 5-71,382, effective February 20, 1979, are summarized as follows:

1. 1867-3735' well spacing;
2. 640-acre proration units with maximum diagonal of 8500'; and
3. Allocation based on acreage.

Miller Energy is seeking to amend the field rules as follows:

1. Designated interval from 10,464 to 10,950 feet as shown on the log of the Harris R. Fender (now Miller Energy) D.E. Gerred Lease Well No. 1.
2. 467-1320 foot well spacing;
3. 160-acre proration units with 10% tolerance and a maximum diagonal of 4500 feet: and
4. allocation based on acreage.

DISCUSSION OF THE EVIDENCE

The Kirven, NE. (Cotton Valley) Field was discovered in 1976, and field rules were adopted without evidence as was common in 1979. There have been only two wells ever drilled in the field, and the applicant plans to drill additional wells. The discovery well, Miller Energy's D.E. Gerred Well No. 1 was perforated from 10,472 to 10,486 feet and had an initial producing rate of 751 MCF/D. Cumulative production from this well is 762 MMCF and 1631 BC. The second well was drilled by Jack L. Phillips Co. in 1992, and has cumulative production of 650 MMCF and 2637 BC. Both wells now produce less than 100 MCF/D.

The field's average porosity is 8%, water saturation is 24%, and the average net pay is estimated to be 7 feet. The initial reservoir pressure was 5776 psi. A volumetric calculation indicates that there are 710 MMCF of recoverable gas underneath 160 acres, assuming 90% recovery. Material balance analysis indicates that the D.E. Gerred No. 1 will ultimately recover 764 MMCF and the second well will recover 712 MMCF before the reservoir pressure declines to the abandonment pressure of 400 psi. Based on volumetric analyses, the D.E. Gerred No. 1 will ultimately drain 172 acres, while the second field well will drain 161 acres.

The interval extending from 10,464 to 10,950 feet as shown on the log of the Harris R. Fender (now Miller Energy) D.E. Gerred Lease Well No. 1, encompasses the productive Cotton Valley interval in the subject field. The applicant has requested 467-foot lease line spacing for this field which is significantly smaller than standard. This reservoir is located within a small porosity pod that has been faulted. Allowing infill wells to be drilled in the thickest part of the section while avoiding the faults will maximize recovery. Allocation based on acreage tends to protect correlative rights.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Kirvin, NE. (Cotton Valley) Field on November 4, 1999.
2. The Kirvin, NE. (Cotton Valley) Field was discovered in 1976, with the completion of the Harris R. Fender (now Miller Energy) Well No. 1.
3. The discovery well was perforated from 10,472 to 10,486 feet and produced at an initial rate of 750 MCF/D.
4. Amending the density rule from 640-acre units to 160-acre units is appropriate.
 - a. Cumulative production from the first and second wells in the field is 762 MMCF and 650 MMCF respectively.
 - b. Volumetric analysis indicates that there are 710 MMCF recoverable under 160 acres, assuming 90% recovery.
 - c. The expected ultimate drainage areas of the two wells in the field are 172 and 161 acres, respectively.

5. Both wells presently are capable of less than 100 MCF/D and infill drilling will be necessary to recover the remaining reserves from this reservoir.
6. The proposed well spacing of 467 feet from lease lines and 1320 feet from other wells is less than standard for wells on 160-acre units.
 - a. The field is located in a small porosity pod that has been cut by faults.
 - b. Operators need flexibility to locate infill wells in the thickest reservoir section while avoiding faults.
7. The proposed allocation formula, based on acreage, will protect correlative rights, if new capable wells are drilled in this field.
8. The interval from 10,464 to 10,950 feet, as shown on the logs of the discovery well, is the entire productive Cotton Valley section.

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. The requested field rules will prevent waste, protect correlative rights within the field, and promote orderly development of the reservoir.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends the requested field rule amendments for the Kirvin, NE. (Cotton Valley) be approved, as per the attached order.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: December 21, 1999

Exhibits

1. Map of field
2. Proration schedule
3. Completion data
4. Production tabulation
5. Graph of production
6. Summary of G-10 tests
7. Log of type well
8. Volumetric calculations
9. Graph of material balance
10. Drainage area calculations
11. Reservoir data sheet
12. Rule is other fields (though the reason for this is unclear)
13. Original field rule order
14. Isopach map