

**OIL AND GAS DOCKET NO. 10-0223259**

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**THE COMMISSION CALLED HEARING TO DETERMINE EFFECTIVENESS OF THE  
TEMPORARY FIELD RULES, AS ISSUED IN DOCKET NO. 10-0219513, FOR THE  
GRUVER, NORTH (ST. LOUIS) FIELD, HANSFORD COUNTY, TEXAS**

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**Heard by:** Margaret Allen, Technical Hearings Examiner

**Procedural history**

Notice of Commission review issued: November 23, 1999

Hearing requested: January 18, 2000

Hearing held: February 17, 2000

**Appearances**

Dick Marshall

Brad Dewey

Robert Bird

Representing

Crest Resources, Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Crest Resources is requesting that the temporary field rules for the Gruver, North (St. Louis) Field, as adopted in Final Order No. 10-0219513, effective July 28, 1998, be made permanent. The temporary field rules are summarized as follows:

1. Designated interval from 6816 feet as shown in the log of the Crest Resources Hart Well No. 1017 to 7930 feet as shown on the log of the Alpar Hart Lease Well No. 1017;
2. 1867-3735 foot well spacing;
3. 640 acre proration units with 10% tolerance and a maximum diagonal of 8500 feet; and
3. Allocation based 5% on acreage and 95% on deliverability.

**DISCUSSION OF THE EVIDENCE**

The Gruver, North (St. Louis) Field was discovered in 1998, with the completion of the only well in the field, the Crest Hart Well No. 1017. This well was recompleted to the Gruver North (Mississippian) Field in December of 1998. In June of 1999, the well received an exception to

Statewide Rule 10 and production from both fields was downhole commingled. All production is now assigned to the Gruver North (Mississippian) Field and there are no wells on the proration schedule for the Gruver, North (St. Louis) Field.

The initial deliverability of the Hart No. 1017 was 3500 MCF per day. At the time of the temporary field rule hearing in July of 1998, Crest believed that the Hart No. 1017 could produce up to 1.2 BCF, and thereby drain as much as 500 acres. However, by the time the well was recompleted to the Mississippian, the St. Louis had produced only 67 MMCF and 712 BC. The final producing rate for the St. Louis was 200 MCF/D. When the well was downhole commingled in June of 1999, the commingled producing rate was 819 MCF/D, but has since declined to 180 MCF/D. The operator believes that the Hart No. 1017 will recover much less than 1.2 BCF from the St. Louis and ultimately drain much less than 500 acres.

The Gruver North (Mississippian) Field rules are permanent and specify 640-acre density. The north half and south half of Section 17 are separate tracts owned by different royalty interests. Royalties on the commingled production from the Hart Well No. 1017 have been paid based on a 640-acre pooled unit for both fields. The well is located on the north half of the section and if the temporary rules for the Gruver, North (St. Louis) Field are rescinded, Crest's leases prevent the mineral interest owners on the south half from receiving royalties on the St. Louis production.

Differences in royalty interest ownership between the two commingled fields, would require separate accounting of production from the two fields and therefor that the completions be separated. In that case, the operator would attempt to produce the St. Louis up tubing on a packer and the Mississippian up the tubing/casing annulus.

Based on calculations, the critical velocity for the well to unload liquids from the Mississippian, inside the tubing/casing annulus, is 600 MCF/D. If the Mississippian ceases producing, the remaining 132 MMCF of reserves from it would not be produced. Without production from the Mississippian, St. Louis production would be subject to a higher economic limit, resulting in the loss of 451 MMCF from the St. Louis.

Standard spacing rules for fields on 640 acre density require wells to be 1867 feet from lease lines and 3735 feet from another well. The allocation formula for the Gruver, North (St. Louis) Field is based 5% on acreage and 95% on deliverability but will have no effect as there are no wells on the schedule for this field. There is no reason to change the designated interval for St. Louis, though no other wells are planned for this field.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to Crest Resources, the only operator in the Gruver, North (St. Louis) Field, on January 28, 2000.
2. The field was discovered in 1998, with the completion of the Crest Resources Hart No. 1017, the only well producing from the St. Louis in this area.

3. The discovery well produced 67 MMCF by December, 1998, but its producing rate had declined to 200 MCF/D when it was recompleted to the Gruver North (Mississippian) Field.
4. The Gruver, North (St. Louis) and Gruver North (Mississippian) Fields were downhole commingled in the Hart No. 1017, in June of 1999, and total production from the well assigned to the Gruver North (Mississippian) Field.
5. The permanent field rules for the Gruver North (Mississippian) Field specify 640 acre proration units, the same sized units as in the temporary field rules for the Gruver, North (St. Louis) Field.
6. Initial production after the well was downhole commingled was 819 MCF/D, but the current production is only 180 MCF/D.
7. The well's cumulative production from both fields is 159 MMCF and 1617 BC.
8. At the time of the temporary field rule hearing the Hart No. 1017 was predicted to produce 1.2 BCF and drain 500 acres, but the actual drainage area will be much less.
9. The current 640 acre unit includes multiple leases with different ownership and rescinding the temporary field rules will cause the two fields to have different ownership.
10. Accounting separately for production from each field will require the St. Louis and Mississippian completions to be separated.
11. The producing rate of the Mississippian is insufficient to allow gas to reach the surface through the tubing/casing annulus, resulting in the loss of the remaining 132 MMCF in the Mississippian.
12. Without the contribution of gas from the Mississippian, the economic limit for the St. Louis would be raised causing the loss of 451 MMCF from the St. Louis.
13. Retaining the existing rules for the Gruver, North (St. Louis) Field, that govern the designated interval, well spacing and allocation formula, will have little effect but will allow the rules for this field to conform to typical field rules.

### 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. Making the temporary field rules permanent will prevent waste and protect correlative rights in the field.

**EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the temporary field rules for the Gruver, North (St. Louis) Field be adopted on a permanent basis.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner

Date of Commission Action: March 10, 2000

Exhibits

1. Justification for making temporary rules permanent
2. Wellbore schematic
3. Graph of rate vs. time
4. Well history