



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

April 17, 2006

OIL AND GAS DOCKET NO. 06-0246727

APPLICATION OF CHESAPEAKE OPERATING, INC. TO AMEND THE FIELD RULES
FOR THE BETHANY, EAST (COTTON VALLEY) FIELD, PANOLA COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E.
DATE OF HEARING: April 12, 2006
APPEARANCES:

Bill Spencer
Wayman Gore
Judy McKinney
Jeremy McKee

REPRESENTING:
Chesapeake Operating, Inc.

EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

This is the unprotested application of Chesapeake Operating to amend the field rules as adopted in Order No. 6-63,126, effective September 4, 1973, as amended, for the Bethany, East (Cotton Valley) Field that currently provide for the following:

1. The entire combined correlative interval from 8,112' to 9,435' as shown on the log of the Texaco, T.C. Adams Well No. 1, Thomas Cox Survey, Panola County, Texas, should be designated as the Bethany, East (Cotton Valley) Field.
2. Minimum well spacing of 933'/1867' (lease line/between well);
3. 640 acre gas proration units plus 10% tolerance and a maximum diagonal of 9,000' and optional 160 acre proration unit and a maximum diagonal of 4,500'; and
4. An allocation formula based on 75% acreage and 25% deliverability and the allocation formula is currently suspended.

Chesapeake Operating Energy proposes the following:

1. No change in the designated interval.

2. Minimum well spacing of 467'/933';
3. The addition of optional 40 acre proration units and a maximum diagonal of 3,250';
4. An allocation formula based on 5% per well and 95% deliverability and the continued suspension of the allocation formula.

The examiner recommends approval of the application.

DISCUSSION OF THE EVIDENCE

The Bethany, East (Cotton Valley) Field was discovered in 1973 at 8,110' subsurface depth. The field is governed by special field rules as adopted by Order No. 6-63,126, effective September 4, 1973, as amended. The field is designated as Associated-Prorated. This is a multi-operator field with over 170 wells. The April 2006 Commission Gas Proration Schedule indicates 59 wells with acreage designations of 50 acres or less and 14 wells with 320 acres or more assigned. The "oil" Field was discovered in 1996 at 8,802' subsurface depth. The field is governed by Statewide Rules and there is one well in the field. Chesapeake Operating has standing to present the proposed amended field rules as it is in the late stages of completing wells in the field that have not been placed on the Commission's proration schedule and has several drilling permits for proposed wells on recently acquired acreage.

Optional forty (40) acre gas density is necessary to provide for the efficient and effective depletion of the reservoir. Estimated recoveries were made for all the wells that have produced or are still producing in the field. The recoveries range from ≤ 2.5 BCF (183 wells) to > 22.5 BCF (8 wells). In the 1997 hearing (Oil & Gas Docket No. 06-0214920), data was presented showing many drainage areas ranged from 11 to 108 acres and recoveries of up to 2.2 BCF of gas.¹ Well log cross-section analysis shows that the designated correlative interval of the Cotton Valley Section is lenticular and discontinuous from well to well in the upper sections of the sand/shale sequences of the formation. The prominent "Taylor" Sand section is continuous across the lower interval of the Cotton Valley section. Volumetric and production decline analysis was used to determine the drainage areas of 7 wells in the field. The estimated ultimate recoveries ranged from 1.5 BCF to 4.4 BCF. The calculated drainage areas ranged from 12 acres to 206 acres (4 of the wells drained less than 40 acres).

The proposed minimum well spacing, 467'/933' (leaseline/between well) is the minimum well spacing to allow flexibility in locating a well on 40 acre unit. The proposed change in the allocation formula is warranted as acreage does not accurately portray the reserves that a well will recover. The lenticular nature of the sand/shale sequence is pronounced and the recovery is primarily based on encountering numerous lenses of limited areal extent. Because the field has combined multiple productive zones, a two-factor allocation formula is necessary for the protection of correlative rights

¹ One of the purposes of the hearing was for optional 160 acre gas proration unit density.

pursuant to State Statutes. The proposed two-factor allocation formula based on 95% deliverability and 5% per well satisfies this requirement.

The proposed amended field rules will not change the 100% market for all the gas that can be produced from the subject field and therefore the allocation formula should remain suspended.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
2. There was no protest at the call of the hearing.
3. The Bethany, East (Cotton Valley) Field was discovered in 1973 at 8,110' subsurface depth.
 - a. The field is governed by special field rules as adopted by Order No. 6-63,126, effective September 4, 1973, as amended.
 - b. The field is designated as Associated-Prorated and is a multi-operator field with over 170 wells.
4. Optional forty (40) acre gas density is necessary to provide for the efficient and effective depletion of the reservoir.
 - a. Ultimate recoveries range from ≤ 2.5 BCF (183 wells) to > 22.5 BCF (8 wells).
 - b. Well log cross-section analysis shows that the designated correlative interval of the Cotton Valley Section is lenticular and discontinuous from well to well in the upper sections of the sand/shale sequences of the formation.
 - c. Volumetric and production decline analysis was used to determine the drainage areas of 7 wells in the field. The estimated ultimate recoveries ranged from 1.5 BCF to 4.4 BCF.
 - d. The calculated drainage areas ranged from 12 acres to 206 acres (4 of the wells drained less than 40 acres).
5. The proposed minimum well spacing, 467'/933' (leaseline/between well) is the minimum well spacing to allow flexibility in locating a well on 40 acre unit.
6. Because the field has combined multiple productive zones, a two-factor allocation formula is necessary for the protection of correlative rights pursuant to State Statutes.

- a. The proposed two-factor allocation formula based on 95% deliverability and 5% per well satisfies this requirement.
 - b. The proposed change in the allocation formula is warranted as acreage does not accurately portray the reserves that a well will recover. The lenticular nature of the sand/shale sequence is pronounced and the recovery is primarily based on encountering numerous lenses of limited areal extent.
7. The proposed amended field rules will not change the 100% market for all the gas that can be produced from the subject field and therefore the allocation formula should remain suspended.

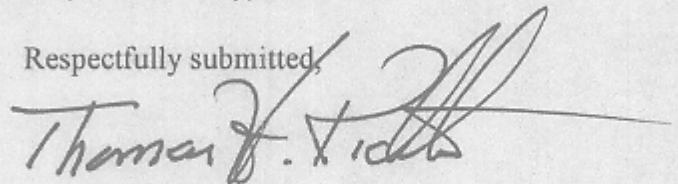
CONCLUSIONS OF LAW

1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
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.
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 rules for the Bethany, East (Cotton Valley) Field.

Respectfully submitted,



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