### THE APPLICATION OF COMSTOCK OIL & GAS, LP TO AMEND FIELD RULE NOS. 2 AND 3 FOR THE BLOCKER (COTTON VALLEY) FIELD, HARRISON AND RUSK COUNTIES, TEXAS

Heard by: Richard D. Atkins, P.E. - Technical Examiner

Date of Hearing: November 12, 2008

Appearances:

**Representing:** 

David Gross Thomas H. Richter Comstock Oil & Gas, LP

### EXAMINER'S REPORT AND RECOMMENDATION

#### **STATEMENT OF THE CASE**

Field Rules for the Blocker (Cotton Valley) Field were adopted in Final Order No. 6-69,388, effective July 31, 1978, as amended. The rules in effect for the field are summarized as follows:

- 1. Designation of the field as the correlative interval from 8,580 feet to 10,060 feet as shown on the log of the Amoco Mary Roden Gas Unit No. 1, J. Paterson Survey, A-17, Harrison County, Texas;
- 2. 660' 1,000' well spacing;
- 3. 640 acre drilling units with 80 acre optional units;
- 4. Allocation based on 95% acreage and 5% deliverability.

Comstock Oil & Gas, LP requests that the rules be amended to provide for 467'-933' well spacing, no minimum spacing between vertical and horizontal wells, special provisions for "take points" and optional 40 acre density. Comstock also requests that the filing of P-15's and plats not be required as long as the field is 100% AOF and the allocation formula in the field remain suspended.

This application was unprotested and the examiner recommends that the field rules be amended as proposed by Comstock and that the allocation formula in the field remain suspended.

#### OIL AND GAS DOCKET NO. 06-0259436

#### **DISCUSSION OF EVIDENCE**

The Blocker (Cotton Valley) Field was discovered in January 1978. There are 325 gas wells carried on the gas proration schedule. The field is classified as a non-associated gas field and the allocation formula is currently suspended. Cumulative production for the field through September 2008 is 259.2 BCFG and 1.5 MMBO.

The reservoir in the Blocker (Cotton Valley) Field is tight and the primary drive mechanism is a gas expansion drive. The average net pay thickness ranges between 58 feet and 200 feet. The Lower Cotton Valley Taylor Sand is universal and homogenous throughout the field. However, the Upper Cotton Valley sands are heterogenous and are composed of discontinuous lenticular sand porosity developments.

The proposed 467'/933' well spacing with no minimum spacing between horizontal and vertical wells and 40 acre optional gas units will allow for future development in the Blocker (Cotton Valley) Field. Comstock is proposing to drill horizontal wells on 40 acre density to recover additional hydrocarbons within the Cotton Valley formation and requests that a field rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Comstock's proposed rule specifies that, for purposes of lease line and between-well spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well. Similar rules have been adopted in other tight reservoirs, including the Barnett Shale and other Cotton Valley Sand fields.

The proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take-point is closer than 467 feet to any lease line. Horizontal drainhole length on a lease is then maximized, resulting in the additional recovery of gas. For purposes of the assignment of additional acreage pursuant to Rule 86, it is proposed that the distance between the first and last take-point in a horizontal well be used.

Comstock submitted an incremental reserve calculation based on decline curve analysis for three leases located across the Blocker (Cotton Valley) Field. Two of the leases were developed on 80 acre density and one lease had four wells with Rule 38 exceptions that were drilled on 40 acre density. All three leases showed incremental reserves of approximately 1.0 BCFG per well on 80 acre density. The one lease with wells drilled on 40 acre density showed incremental reserves of approximately 850 MMCFG per well.

Over 26 Cotton Valley fields in District 6 already have 40 acre or optional 40 acre density. These fields include the Carthage (Cotton Valley), Henderson (Cotton Valley) and Oak Hill (Cotton Valley) Fields. No minimum well spacing between horizontal and vertical wells will provide operators in the field the additional flexibility needed to drill horizontal

### OIL AND GAS DOCKET NO. 06-0259436

wells at optimum locations without requiring Rule 37 Exceptions as a result of the vertical well locations.

Comstock also requests that the filing of P-15's and plats not be required as long as the field has 100% AOF. As the allocation formula is suspended, this request will eliminate unnecessary paperwork. An exception will be the filing of an as-drilled plat showing the path, penetration point, terminus and all take points of all drainholes in horizontal wells.

# FINDINGS OF FACT

- 1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
- 2. The Blocker (Cotton Valley) Field was discovered in January 1978.
- 3. The Blocker (Cotton Valley) Field is classified as a non-associated gas field and the allocation formula is currently suspended. There are 325 gas wells completed in the field.
- 4. A spacing rule which utilizes "take-points" in a horizontal well for determination of distances to lease lines will prevent waste and will not harm correlative rights.
  - a. The Cotton Valley is a tight formation and is not commercially productive unless fracture-stimulated.
  - b. A take-point in a horizontal well in this field may be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
  - c. Adoption of the proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take-point is closer than 467 feet to any lease line.
  - d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
- 5. For purposes of assignment of additional acreage pursuant to Rule 86, the distance between the first and last take-point in a horizontal well should be used.
- 6. Over 26 Cotton Valley fields in District 6 already have 40 acre or optional 40

### OIL AND GAS DOCKET NO. 06-0259436

acre density. These fields include the Carthage (Cotton Valley), Henderson (Cotton Valley) and Oak Hill (Cotton Valley) Fields.

- 7. An incremental reserve calculation based on decline curve analysis on one lease with four wells drilled on 40 acre density showed incremental reserves of approximately 850 MMCFG per well.
- 8. No minimum well spacing between horizontal and vertical wells will provide operators in the field the additional flexibility needed to drill horizontal wells at optimum locations without requiring Rule 37 Exceptions as a result of the vertical well locations.

# CONCLUSIONS OF LAW

- 1. Proper notice of this hearing was issued.
- 2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
- 3. Amending Field Rule Nos. 2 and 3 for the Blocker (Cotton Valley) Field as proposed by Comstock Oil & Gas, LP is necessary to prevent waste, protect correlative rights and promote development of the field.

# RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends that Field Rule Nos. 2 and 3 for the Blocker (Cotton Valley) Field be amended as proposed by Comstock Oil & Gas, LP and that the allocation formula in the field remain suspended.

Respectfully submitted,

Richard D. Atkins, P.E. Technical Examiner