

OIL AND GAS DOCKET NO. 09-0265569

THE APPLICATION OF JETTA OPERATING CO., INC. TO AMEND THE FIELD RULES FOR THE BIG MINERAL CREEK (VIOLA) FIELD, GRAYSON COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner

HEARING DATE: May 25, 2010

APPEARANCES:

REPRESENTING:

APPLICANT:

Mickey Olmstead
Michael Richardson
Michael S. McKee

Jetta Operating Co., Inc.

OBSERVER:

Richard P. Marshall, Jr.

Blackwell BMC, LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The Big Mineral Creek (Viola) Field currently operates under Field Rules adopted by Final Order No. 09-0223691, effective February 24, 2000. The Field Rules currently in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 8,430 feet and 9,774 feet (MD) as shown on the log of the Venoco, Inc. - Green Lease, Well No. 45;
2. 330'-933' well spacing;
3. 40 acre oil units with additional acreage assigned to horizontal drainhole wells in accordance with Statewide Rule 86;
4. Allocation based on 100% acres with a maximum yardstick allowable that wells are exempt from for the first six months;
5. Maximum gas-oil ratio of 10,000 cubic feet of gas per barrel of oil per day per well.

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Jetta Operating Co., Inc. ("Jetta") requests that the Field Rules be amended as shown below:

2. 330' lease line spacing, no minimum between well spacing and a special provision for "take points" in a horizontal drainhole well;
3. 320 acre oil and gas units with optional 40 acre density and a special provision for an additional acreage assignment for horizontal drainhole wells based on a table;

Jetta also requested that the field be classified as associated-prorated and the gas allocation formula be suspended, as there is a 100% market demand for all of the gas produced.

This application was unopposed and the examiner recommends that the Field Rules for the Big Mineral Creek (Viola) Field be adopted as proposed by Jetta.

DISCUSSION OF EVIDENCE

The Big Mineral Creek (Viola) Field was discovered in October 1997 at an average depth of 8,400 feet. The field is classified as associated-exempt and there are 6 producing oil wells and 2 producing gas wells carried on the current proration schedules. Jetta has recently completed a horizontal well and there are four other operators in the field. Current Field Rules provide for 330'-933' well spacing, 40 acre units, allocation based on 100% acres and a maximum casinghead gas-oil ratio of 10,000 cubic feet per barrel. Cumulative production through March 2010 is 788.7 MBO and 7.2 BCFG.

The designated interval includes the entire Viola Formation, which is an Ordovician age limestone. Jetta submitted a structural cross section that indicated that the limestone had been eroded off and varied in gross thickness from 400 feet to 1,000 feet. The original bottomhole pressure is 3,800 psig with an original bottomhole temperature of 165 degree F. The interval has an average matrix porosity of 5%, an average water saturation of 24%, an average net pay of 53 feet and a calculated recovery factor of 12%. There is an extensive natural fracturing system that occurs throughout the field. Declining fluid rates and low water cuts indicate solution gas drive as the primary drive mechanism for the reservoir.

Jetta provided drainage area calculations for four producing vertical wells in the field. On the wells studied, the estimated ultimate recoveries ranged from 226,000 BO up to 571,000 BO. The drainage areas ranged from 153 acres up to a maximum of 385 acres. The average drainage area was calculated to be approximately 220 acres.

Jetta is proposing to drill additional horizontal wells and requests horizontal rules

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in order to promote the efficient and effective development of the remaining hydrocarbons. The proposed 330' lease line spacing, no minimum between well spacing and 320 acre oil units with optional 40 acre density will allow for future development in the Big Mineral Creek (Viola) Field. Jetta also requests that a field rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Jetta'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 many 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 330 feet to a lease line, as long as no take-point is closer than 330 feet to any lease line. Horizontal drainhole length on a lease is then maximized, resulting in the additional recovery of oil. For purposes of the assignment of additional acreage, it is proposed that the distance between the first and last take-point in a horizontal well be used and that acreage be assigned using the following table.

Horizontal Drainhole Length, feet	Maximum Proration Unit Size, acres
0' - 1,500'	320
1,501' - 3,000'	480
3,001' - 4,500'	640
Etc...1,500' increments	Etc...160 acre increments

The yardstick allowable for wells on 320 acre oil units was determined to be 540 BOPD. To account for the high initial production rates of over 1,000 BOPD, the existing Field Rules allow a six month allowable exemption and Jetta requests that the exemption remain in effect. Jetta also requests that the gas allocation formula be suspended, as there is a 100% market demand for all of the gas produced.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Big Mineral Creek (Viola) Field was discovered in October 1997 at an average depth of 8,400 feet.
3. The field is classified as associated-exempt and there are 6 producing oil

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wells and 2 producing gas wells carried on the current proration schedules. Jetta has recently completed a horizontal well and there are four other operators in the field.

4. Current Field Rules provide for 330'-933' well spacing, 40 acre units, allocation based on 100% acres and a maximum casinghead gas-oil ratio of 10,000 cubic feet per barrel.
5. Jetta is redeveloping the Big Mineral Creek (Viola) Field by drilling additional horizontal wells. The proposed 330' lease line spacing and no minimum between well spacing will allow for future development in the Big Mineral Creek (Viola) Field.
6. Adoption of 320 acre oil units with optional 40 acre density and horizontal rules for the subject field are appropriate.
 - a. Development of the Viola Formation with horizontal wellbores is relatively new in this area.
 - b. There is an extensive natural fracturing system that occurs throughout the field. Declining fluid rates and low water cuts indicate solution gas drive as the primary drive mechanism for the reservoir.
 - c. On the vertical wells studied, the estimated ultimate recoveries ranged from 226,000 BO up to 571,000 BO.
 - d. The drainage areas ranged from 153 acres up to a maximum of 385 acres. The average drainage area was calculated to be approximately 220 acres.
7. 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 Viola Formation 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 330 feet to a lease line, as long as no take-point is closer

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than 330 feet to any lease line.

- d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
8. For purposes of assignment of additional acreage pursuant to the table shown in the Final Order, the distance between the first and last take-points in a horizontal well should be used.
9. A six month allowable exemption will not cause waste.
10. Suspension of the allocation formula in the field is appropriate because there is a 100% market demand for any gas produced from the field.

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 the Field Rules for the Big Mineral Creek (Viola) Field 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 the Commission amend the Field Rules for the Big Mineral Creek (Viola) Field, as requested by Jetta.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner