



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 10-0277891

THE APPLICATION OF CHESAPEAKE OPERATING, INC. TO CONSIDER A NEW FIELD DESIGNATION AND TO ADOPT TEMPORARY FIELD RULES FOR THE PROPOSED PAN PETRO (MARMATON) FIELD, LIPSCOMB COUNTY, TEXAS

HEARD BY: Brian K. Fancher, P.G.- Technical Examiner
Laura Miles-Valdez - Legal Examiner

DATE OF HEARING: September 19, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

Bill Spencer
James M. Clark, P.E.

Chesapeake Operating, Inc.

INTERVENOR:

John Camp

EOG Resources, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Chesapeake Operating, Inc. ("Chesapeake") requests that a new field designation be approved for its Flying T-5 Ranch 294 LIP Lease, Well No. 1H. The Notice of Hearing dated August 29, 2012 indicated that Chesapeake seeks the following Temporary Field Rules be adopted for the new field, subject to review in 18 months:

1. Designation of the field as the correlative interval from 8,112 feet to 8,952 feet, as shown on the log of the Donald C Slawson - Good 1-294 (API No. 42-295-31765), Lipscomb County, Texas;
2. 330'-933' well spacing with no minimum spacing requirement between horizontal and vertical wells. Special provisions for horizontal wells that include "take points" non-perforated zones ("NPZs"), a "box" rule based on 33 feet, and "off-lease" penetration points ;

3. 160-acre units with 80-acre tolerance. Allocation of acreage to horizontal wells and the maximum diagonal based on proposed formulas;
4. Allocation based on 95% acres and 5% per well.
5. Stacked lateral wells

At the hearing, representatives on behalf of Chesapeake requested several amendments to its proposed field rules, as seen in the Notice of Hearing dated August 29, 2012. The revised application included well spacing of 467'-933' well spacing, with no minimum spacing requirement between horizontal and vertical wells and a "box" rule based on fifty feet. Representatives of Chesapeake alleged the lease line spacing was increased to 467' as an agreement settled with Mewbourne Oil Company.

By letter dated September 20, 2012, supplemental notice was provided to operators on the service list for the Notice of Hearing dated August 29, 2012.

The application is unopposed and the examiners recommend approval of the new field designation and Temporary Field Rules for the Pan Petro (Marmaton) Field, as requested by Chesapeake.

DISCUSSION OF EVIDENCE

At the hearing, Chesapeake submitted a Commission Form W-2 for its Flying T-5 Ranch 294 LIP Lease, Well No. 1H that indicates the well was completed on July 19, 2012 with perforations in the Marmaton formation from 8,420 feet to 12,664 feet, measured depth. The initial well test performed on September 11, 2012, reports the well produced flowing on at 297 thousand cubic feet of gas per day ("MCFPD") with a bottom-hole pressure of 1,547 psi. In addition, Chesapeake submitted a copy of the Pressure, Volume, and Temperature ("PVT") data for the subject well dated August 28, 2012. The Mol% for the heptanes plus effluent was measured at 0.115, indicating the subject well should be classified as a permanent gas well. Currently, there are multiple operators in the subject field.

Representatives of Chesapeake provided a copy of a Commission Form P-7 (New Field Designation and/or Discovery Allowable Application) dated September 18, 2012 that includes information from the subject well. Chesapeake concluded the nearest production to the subject well is the Horse Creek NW Field, located 2,900 feet east of the subject well's surface location at an interval from 10,866 feet to 10,914 feet below the ground surface. The information presented on the Form P-7 also indicates there is no production from the same stratigraphic member as the subject well's within 2.5 miles.

Chesapeake requests that the entire correlative interval from 8,112 feet to 8,952 feet, as shown on the log of the Donald C Slawson - Good 1-294 (API No. 42-295-31765), Lipscomb County, Texas, be considered a single field known as the Pan Petro (Marmaton) Field.

At the hearing, representatives of Chesapeake requested to amend its application, as noticed. Chesapeake requested to adopt well spacing that provides for 467'-933' with no minimum between well spacing for horizontal and vertical wells. Chesapeake testified it seeks to extend the lease line spacing to 467 feet.

Chesapeake submitted a reservoir data sheet that indicates the Pan Petro (Marmaton) Field provides a gross thickness of 20 feet, a net thickness of 14 feet, 7% porosity, 30% water saturation, 0.5 milli-darcies of permeability, rich gas condensate with gravity at 42.2 degrees API, and gas gravity at 0.748.

As previously mentioned, representatives of Chesapeake testified there is no comparable production to the subject field within 2.5 miles of the subject well. Therefore, in support of its requested density provisions Chesapeake submitted final orders approved by the Commission based upon wells completed in the other Marmaton fields located in Lipscomb and Ochiltree Counties, Texas, the Allen-Parker (Marmaton) and Kiowa Creek (Marmaton) Fields. Oil and Gas Final Orders 10-0262512 and 10-0248911, respectively, provide the same field rules that Chesapeake seeks in the subject application, with the exception of the 330' lease line spacing. Chesapeake testified that the subject field is comparable to the other Marmaton fields in the area and requests field rules that provide special provisions for horizontal wells. These special provisions include horizontal well spacing based on "take points", 100' first and last take points, 160-acre proration units for oil and gas wells, "off lease" penetration points, a 50 foot "box" rule, an exception to Statewide Rule 86, with respect to the allocation of additional acreage, based upon the formula $A = (L \times 0.32821) + 160$ acres, evenly divisible by 40-acres, the maximum diagonal based upon the formula $(475.933 \sqrt{A})$, a two-factor allocation formula based on 95% acreage and 5% per well, and stacked lateral wells.

Chesapeake proposes a tolerance "box rule" for horizontal drainhole wells that would allow drainholes to deviate 50 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the "box" would be considered in compliance with their drilling permits.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Chesapeake requests that Field Rules for the subject field provide for an "off-lease" penetration point. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In this field, a well generally requires approximately 600 feet of horizontal displacement to make the 90 degree turn from vertical to horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 600

feet from the lease line. The proposed rule will allow approximately 200 feet of additional producing drainhole, resulting in the recovery of additional oil and gas reserves. The Commission has adopted similar rules allowing offsite penetration points in other fields, after the operator has given notice to the mineral owners of the off-lease tract on which the penetration point is to be located and received no protest.

At the hearing, the examiners inquired as to the basis for the exception to Statewide Rule 86, with respect to allocation of acreage to horizontal wells. Subsequent to the hearing, Chesapeake submitted evidence that indicates a horizontal well in the Marmaton formation will recover 4.3 times more hydrocarbons than a vertical well, thus indicating the exception to Statewide Rule 86 is appropriate; however, the formula should be changed to $(L \times 0.22) + 160$ acres. Chesapeake did not consider this change adverse to its application.

Lastly, Chesapeake testified it believes its proposed application is appropriate and that it anticipates to drill additional infill wells in the future. Also, a representative on behalf of EOG Resources, Inc. stated EOG is in support of the subject application. Chesapeake requests that its proposed field rules be adopted temporarily for a period of 18 months.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. Chesapeake Operating, Inc. ("Chesapeake") seeks to adopt a new field designation, the Pan Petro (Marmaton) Field, based upon the discovery well the Flying T-5 Ranch 294 LIP Lease, Well No. 1H (API No. 42-295-33819).
3. The Chesapeake Flying T-5 Ranch 294 LIP Lease, Well No. 1H was completed on July 19, 2012 with perforations in the Marmaton formation from 8,420 feet to 12,664 feet, measured depth.
4. The Chesapeake Flying T-5 Ranch 294 LIP Lease, Well No. 1H is entitled to a new field designation. There is no comparable production within a 2.5 mile radius of the discovery well.
5. The correlative interval from 8,112 feet to 8,952 feet,, as shown on the log of the Chesapeake Flying T-5 Ranch 294 LIP Lease, Well No. 1H (API No. 42-295-33819), should be designated as the Pan Petro (Marmaton) Field.
6. Adoption of 467'-933' well spacing and a density of 160 acre oil units with 80 acre tolerance.

7. Adoption of field rules that provide special provisions for horizontal well spacing based on "take points", 100 foot first and last take points, a 50 foot "box rule", allocation of acreage for horizontal wells based on the formula $(L \times 0.22) + 160$ acres, maximum diagonal based on the formula $(475.933 \sqrt{A})$ is appropriate for the field.
8. Allowing an "off-lease" penetration point will result in maximum producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of "off-lease" surface locations.
9. The bottom-hole pressure in the Chesapeake Flying T-5 Ranch 294 LIP Lease, Well No. 1H reported at 1,547 psig.
10. A two-factor allocation formula based on 95% acreage and 5% per well is a reasonable formula which will protect the correlative rights of mineral owners in the field.
11. Chesapeake's proposed Temporary Field Rules for the Pan Petro (Marmaton) Field for a period of 18 months is appropriate.

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. Approval of the requested new field designation and adoption of Temporary Field Rules for the Pan Petro (Marmaton) Field will prevent waste, protect correlative rights and promote the orderly development of the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the new field designation and adopt Temporary Field Rules, subject to review in 18 months, for the proposed Pan Petro (Marmaton) Field as requested by Chesapeake.

Respectfully submitted,


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