



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 01-0279566

THE APPLICATION OF PETROHAWK OPERATING COMPANY TO AMEND AND MAKE PERMANENT THE FIELD RULES FOR THE HAWKVILLE (EAGLEFORD SHALE) FIELD, DIMMIT, LA SALLE, MCMULLEN AND WEBB COUNTIES, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Laura Miles-Valdez - Legal Examiner

DATE OF HEARING: February 13, 2013

APPEARANCES: REPRESENTING:

APPLICANT:

John G. Soule
Tim Smith
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Petrohawk Operating Company

OBSERVERS:

Sandra Buch
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Pioneer Natural Resources USA, Inc.
Lewis Petro Properties, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Temporary Field Rules for the Hawkville (Eagleford Shale) Field were adopted in Final Order No. 01-0263175, effective November 24, 2009. The current Field Rules are summarized as follows:

1. Designation of the field as the correlative interval from 11,050 feet and 11,290 feet as shown on the log of the Petrohawk Operating Company - STS Lease, Well No. 1 (API No. 42-283-32144);



2. 330'-660' well spacing with no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points" and 100' lease line spacing for the first and last take points for horizontal drainhole wells;
3. 320 acre gas units with a formula for the assignment of additional acreage to horizontal drainhole wells and a permanent gas well classification for a gas-oil ratio of 3,000 cubic feet per barrel and above;
4. Allocation based on 90% deliverability and 10% per well with AOF status.

Petrohawk Operating Company ("Petrohawk") requests that the Field Rules be amended and made permanent to provide for 330'-0' well spacing with special provisions for a 33' "box rule" and "off-lease" penetration point for horizontal drainhole wells. Petrohawk also requests that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well with no maximum diagonal limitation and no filing of G-10 tests when the allocation formula is suspended.

The application is unopposed and the examiners recommend approval of the amended and made permanent Field Rules for the Hawkville (Eagleford Shale) Field, as requested by Petrohawk.

DISCUSSION OF THE EVIDENCE

The Hawkville (Eagleford Shale) Field was discovered in October 2008 at an average depth of 11,100 feet. There are 205 producing gas wells and 15 operators carried on the proration schedule. The field operates under Field Rules that provide for 330'-660' well spacing with no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points" and 100' lease line spacing for the first and last take points for horizontal drainhole wells, 320 acre gas units with a formula for the assignment of additional acreage to horizontal drainhole wells and a permanent gas well classification for a gas-oil ratio of 3,000 cubic feet per barrel and above and allocation based on 90% deliverability and 10% per well with AOF status. Cumulative production from the field through October 2012 is 267.9 BCFG and 5.9 MMBO.

Petrohawk is actively developing the field with horizontal drainhole wells and requests to amend the Field Rules to promote the efficient and effective development of the remaining hydrocarbons. Petrohawk proposes similar horizontal drainhole well Field Rules for the Hawkville (Eagleford Shale) Field that have been approved for other horizontal plays. Petrohawk requests that the Field Rules be amended and made permanent to provide for 330'-0' well spacing with special provisions for a 33' "box rule" and "off-lease" penetration point for horizontal drainhole wells. Petrohawk argues that the

proposed 0' between well spacing is necessary to allow the drilling of horizontal drainhole wells, which may have to be placed very near other horizontal drainhole wells in some cases. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.

Petrohawk proposes a "tolerance box" for horizontal drainhole wells that would allow drainholes to deviate 33 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. Petrohawk 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 leaseline. The proposed rule will allow approximately 500 feet of additional producing drainhole, which will result in the recovery of additional 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.

Petrohawk also requests that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well with no maximum diagonal limitation and no filing of G-10 tests when the allocation formula is suspended. The Eagle Ford formation is a tight formation and G-10 testing of wells in such a reservoir does not provide meaningful information, due to the short pressure drawdown seen in a 24 hour period. Further, shutting-in wells for testing can result in difficulties in returning the wells to production and testing wells twice yearly when the allocation formula is suspended is not necessary for proration purposes.

FINDINGS OF FACT

1. Notice of this application and hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. The Hawkville (Eagleford Shale) Field was discovered in October 2008 at an average depth of 11,100 feet.
 - a. There are 205 producing gas wells and 15 operators carried on the proration schedule.

- b. The field operates under Field Rules that provide for 330'-660' well spacing with no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points" and 100' lease line spacing for the first and last take points for horizontal drainhole wells, 320 acre gas units with a formula for the assignment of additional acreage to horizontal drainhole wells and a permanent gas well classification for a gas-oil ratio of 3,000 cubic feet per barrel and above and allocation based on 90% deliverability and 10% per well with AOF status.
 - c. Petrohawk is actively developing the field with horizontal drainhole wells.
3. The proposed 0' between well spacing is necessary to allow the drilling of horizontal drainhole wells, which may have to be placed very near other horizontal drainhole wells in some cases.
4. The proposed 33' "box rule" is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
5. 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.
6. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Wolfcamp, Bone Springs, Cotton Valley and Barnett Shale formations.
7. The filing of Form P-15 to designate the number of acres to be assigned to each well for proration purposes with no proration plats will eliminate unnecessary paperwork.
8. Semi-annual G-10 testing of wells is not necessary to allocate an allowable to wells in the field when the allocation formula is suspended.

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 and making permanent the Field Rules for the Hawkville (Eagleford Shale) 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 examiners recommend that the Commission amend and make permanent the Field Rules for the Hawkville (Eagleford Shale) Field, as requested by Petrohawk Operating Company.

Respectfully submitted,



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Technical Examiner



Laura Miles-Valdez
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