

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 03-0276809

THE APPLICATION OF HILCORP ENERGY COMPANY TO ADOPT FIELD RULES FOR THE COOLEY (WILCOX, UPPER) FIELD, FORT BEND COUNTY, TEXAS

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

HEARING DATE: July 19, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

Dale E. Miller

Hilcorp Energy Company

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Hilcorp Energy Company ("Hilcorp") requests that Field Rules for the Cooley (Wilcox, Upper) Field be adopted. Hilcorp requests the following Field Rules:

1. Designation of the field as the correlative interval from 11,850 feet to 12,810 feet as seen on the log of the Hilcorp Energy Company - Aylor "A" Lease, Well No. 2 (API No. 42-157-31715);
2. 330'-660' well spacing, no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points", a 33 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells;
3. 40 acre units with optional 20 acre density;
4. Allocation based on 95% deliverability and 5% acres with AOF status.

Hilcorp 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.

The application is unopposed and the examiners recommend that Field Rules for the Cooley (Wilcox, Upper) Field be adopted, as proposed by Hilcorp.

DISCUSSION OF THE EVIDENCE

The Cooley (Wilcox, Upper) Field was discovered in June 1988 at an average depth of 12,300 feet. The field is classified as associated-100% AOF and operates under Statewide Rules. There are five producing gas wells, one producing oil well and two operators carried on the proration schedules. Cumulative production from the field through March 2012 is 44.7 BCFG and 662.4 MBO.

There is currently no defined correlative interval for the field. Hilcorp requests that the field be defined as the correlative interval from 11,850 feet to 12,810 feet as seen on the log of the Hilcorp Energy Company - Aylor "A" Lease, Well No. 2 (API No. 42-157-31715), G. Borden JR Survey, A-12, Fort Bend County, Texas. The correlative interval includes the entire Upper Wilcox formation.

Hilcorp is proposing to drill vertical and horizontal infill wells and requests Field Rules to promote the efficient and effective development of the remaining hydrocarbons. Hilcorp requests 330'-660' well spacing, no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points", a 33 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells.

Hilcorp requests that a field rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Hilcorp's proposed rule specifies that, for purposes of lease line spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation in a horizontal well that 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 Eagle Ford, Cotton Valley and Barnett Shale formations.

Hilcorp proposes a tolerance "box rule" 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. Hilcorp 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 300 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. For purposes of the assignment of additional acreage pursuant to Statewide Rule 86, it is proposed that the distance between the first and last take-point in a horizontal drainhole well be used.

Hilcorp provided drainage area calculations for the seven wells currently completed in the field. The drainage areas range from 6 acres up to a maximum of 103 acres. The average drainage area was calculated to be approximately 40 acres, but three of the wells had drainage areas of 20 acres or less. Based on the drainage area calculations, Hilcorp proposes 40 acre units with optional 20 acre density.

Hilcorp requests that allocation be based on 95% deliverability and 5% per well and that the allocation formula remain suspended, as there is a 100% market demand for all of the gas produced from the field. Hilcorp 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.

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 Cooley (Wilcox, Upper) Field was discovered in June 1988 at an average depth of 12,300 feet.
 - a. The field is classified as associated-100% AOF and operates under Statewide Rules.
 - b. There are five producing gas wells, one producing oil well and two operators carried on the proration schedules.
3. The Cooley (Wilcox, Upper) Field should be defined as the correlative interval from 11,850 feet to 12,810 feet as seen on the log of the Hilcorp Energy Company - Aylor "A" Lease, Well No. 2 (API No. 42-157-31715), G. Borden JR Survey, A-12, Fort Bend County, Texas. The correlative interval includes the entire Upper Wilcox formation.
4. The Cooley (Wilcox, Upper) Field is actively being developed with vertical and horizontal drainhole wells.

5. Field Rules providing for 330'-660' well spacing, no minimum between well spacing limitation between vertical and horizontal drainhole wells and special provisions for "take points", a 33 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells will provide consistency in developing the field and will allow greater flexibility in selecting future drilling locations.
6. 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. A take-point in a horizontal well in this field may be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
 - b. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
 - c. For purposes of assignment of additional acreage pursuant to Statewide Rule 86, the distance between the first and last take-point in a horizontal well should be used.
7. The proposed 33 foot "box" rule is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
8. Field Rules providing for 40 acre units with optional 20 acre density is appropriate for the Cooley (Wilcox, Upper) Field.
 - a. Drainage area calculations for the seven wells currently completed in the field range from 6 acres up to a maximum of 103 acres.
 - b. The average drainage area was calculated to be approximately 40 acres, but three of the wells had drainage areas of 20 acres or less.
9. 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.
10. Similar rules have been adopted in other tight reservoirs, including the Eagle Ford, Cotton Valley and Barnett Shale formations.

11. Allocation based on 100% acres and a top allowable based on the 1965 Yardstick Allowable of 310 barrels of oil per day is a reasonable formula which will protect correlative rights and meet statutory requirements.
12. Continued suspension of the allocation formula is appropriate, as there is a 100% market demand for all the gas produced from the field.
13. 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.

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. Adopting Field Rules for the Cooley (Wilcox, Upper) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission adopt Field Rules for the Cooley (Wilcox, Upper) Field, as requested by Hilcorp Energy Company.

Respectfully submitted,

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Technical Examiner

Terry Johnson
Legal Examiner