



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 09-0277359

THE APPLICATION OF HOLMES EXPLORATION, LLC TO CONSIDER A NEW FIELD DESIGNATION AND TO ADOPT TEMPORARY FIELD RULES FOR THE PROPOSED SHORT GRASS PRAIRIE (CONG) FIELD, HARDEMAN COUNTY, TEXAS

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

DATE OF HEARING: August 24, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

Michael E. McElroy
John McBeath

Holmes Exploration, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Holmes Exploration, LLC ("Holmes") requests that a new field designation called the Short Grass Prairie (Cong) Field (ID No. 83413 500) be approved for its Spanky 2 Lease, Well No. 2H. Holmes proposes that the following Temporary Field Rules be adopted for the new field, subject to review in 24 months:

1. Designation of the field as the correlative interval from 7,298 feet to 7,530 feet as shown on the log of the Sidwell Oil & Gas, Inc. - Wilson Trust Lease, Well No. 1 (API No. 42-197-30341);
2. 467'-660' well spacing, 100' lease line spacing for the first and last take point in horizontal drainhole wells, no minimum between well spacing limitation between vertical and horizontal drainhole wells or horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells;

3. 160 acre oil units with a special provision for an additional acreage assignment to horizontal drainhole wells based on the formula $A = (L \times 0.15) + 160$;
4. Allocation based on 100% acres with a Top Oil Allowable based on the 1965 Yardstick Allowable of 353 barrels of oil per day.

There were no protests to this application and the examiners recommend approval of the new field designation and Temporary Field Rules for the Short Grass Prairie (Cong) Field, as requested by Holmes.

DISCUSSION OF EVIDENCE

Holmes completed its Spanky 2 Lease, Well No. 2H, in April 2012 with perforations in the Bend Conglomerate formation between 7,950 feet (MD) and 10,832 feet (MD). On initial test, the well produced flowing at a maximum rate of 305 BOPD, 375 MCFGPD and 720 BWPD with a gas-oil ratio of 1,230 cubic feet per barrel. Currently, Holmes is the only operator in the new field. Cumulative production from the field through July 2012 is 18.8 MBO and 22.6 MMCFG.

A new field designation should be approved for the Spanky 2 Lease, Well No. 2H, as there is no comparable production within a 2.5 mile radius of the discovery well. Although there are several Bend Conglomerate dry holes located in the 2.5 mile radius, many wells produce from shallower formations and never penetrated the Bend Conglomerate formation. Holmes requests that the correlative interval from 7,298 feet to 7,530 feet as shown on the log of the Sidwell Oil & Gas, Inc. - Wilson Trust Lease, Well No. 1 (API No. 42-197-30341), Section 2, HE&WT RR Co. Survey, A-1513, Hardeman County, Texas, be designated as the Short Grass Prairie (Cong) Field. The interval includes the entire Bend Conglomerate formation.

From log analysis, Holmes estimated an average porosity of 15%, an average saltwater saturation of 46%, an average net pay thickness of 26 feet and a recovery factor of 15%. Holmes calculated the drainage areas for two vertical wells that were located in two different nearby Conglomerate fields. The drainage area in the BBB (Congl) Field was 109 acres and the drainage area in the Kadane Cato (Congl) Field was 124 acres. Based on this analysis, Holmes requests 467'-660' well spacing and 160 acre oil units with a special provision for an additional acreage assignment to horizontal drainhole wells based on the formula $A = (L \times 0.15) + 160$.

Holmes is proposing to develop the field with horizontal wells and requests Field Rules to promote the efficient and effective development of the remaining hydrocarbons. Holmes proposes a 100' lease line spacing for the first and last take point, no minimum between well spacing limitation between vertical and horizontal drainhole wells or

horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 foot "box" rule and "off-lease" penetration point.

Holmes requests that a field rule be adopted which includes language relevant to the measurement of distances to lease lines for horizontal drainhole wells. Holmes'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. 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.

Holmes 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. Holmes 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.

Borehole Image Interpretation logs analyzed from three recently drilled vertical wells in the trend area suggest that the induced fracture strike direction is located within a narrow corridor running generally east-west centered on the wellbore. The orientation of hydraulically induced transverse fractures in this low permeability formation within the Short Grass Prairie (Cong) Field will be generally east-west. The orientation of the maximum stress appears to be uniform across the field and horizontal wells in the field will be drilled generally north-south to more effectively stimulate the rock with transverse fractures and therefore maximize recovery. The very low permeability of the formation limits the effective drainage in the north-south direction of individual stages. Consequently, the drainage in a north-south direction from the first and last take points will be minimal. The 100' leaseline spacing for the first and last take points will result in an additional recovery of reserves.

Holmes also requests allocation be based on 100% acres with a Top Oil Allowable based on the 1965 Yardstick Allowable of 353 barrels of oil per day.

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. Holmes Exploration, LLC ("Holmes") completed its Spanky 2 Lease, Well No. 2H, in April 2012 with perforations in the Bend Conglomerate formation between 7,950 feet (MD) and 10,832 feet (MD).
 - a. On initial test, the well produced flowing at a maximum rate of 305 BOPD, 375 MCFGPD and 720 BWPD with a gas-oil ratio of 1,230 cubic feet per barrel.
 - b. Currently, Holmes is the only operator in the new field.
3. The Spanky 2 Lease, Well No. 2H, is entitled to a new field designation, as there is no comparable production within a 2.5 mile radius of the discovery well.
4. The correlative interval from 7,298 feet to 7,530 feet as shown on the log of the Sidwell Oil & Gas, Inc. - Wilson Trust Lease, Well No. 1 (API No. 42-197-30341), Section 2, HE&WT RR Co. Survey, A-1513, Hardeman County, Texas, should be designated as the Short Grass Prairie (Cong) Field. The interval includes the entire Bend Conglomerate formation.
5. The Short Grass Prairie (Cong) Field is actively being developed with horizontal drainhole wells.
6. Field Rules providing for 467'-660' well spacing, 100' lease line spacing for the first and last take point in horizontal drainhole wells, no minimum between well spacing limitation between vertical and horizontal drainhole wells or horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 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.
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. 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 the special formula, the distance between the first and last take-point in a horizontal well should be used.
8. The proposed 50' "box" rule is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
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. A 100' leaseline spacing for the first and last take points will result in an additional recovery of reserves.
 - a. Borehole Image Interpretation logs analyzed from three recently drilled vertical wells in the trend area suggest that the induced fracture strike direction is located within a narrow corridor running generally east-west centered on the wellbore.
 - b. The orientation of hydraulically induced transverse fractures in this low permeability formation within the Short Grass Prairie (Cong) Field is generally east-west.
 - c. The orientation of the maximum stress appears to be uniform across the field and horizontal wells in the field will be drilled generally north-south to more effectively stimulate the rock with transverse fractures and therefore maximize recovery.
 - d. The very low permeability of the formations limits the effective drainage in the north-south direction of individual stages.
11. Adoption of 160 acre oil units is appropriate for the field.

- a. From log analysis, Holmes estimated an average porosity of 15%, an average saltwater saturation of 46%, an average net pay thickness of 26 feet and a recovery factor of 15%.
 - b. The calculated drainage area in the BBB (Congl) Field was 109 acres and the drainage area in the Kadane Cato (Congl) Field was 124 acres.
12. Similar Field Rules have been adopted in other tight reservoirs, including the Eagle Ford, Cotton Valley and Barnett Shale formations.
 13. Allocation based on 100% acres with a Top Oil Allowable based on the 1965 Yardstick Allowable of 353 barrels of oil per day is a reasonable formula which will protect correlative rights and meet statutory requirements.

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 Short Grass Prairie (Cong) 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 24 months, for the proposed Short Grass Prairie (Cong) Field, as requested by Holmes Exploration, LLC.

Respectfully submitted,



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Technical Examiner



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