

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL AND GAS DOCKET
NO. 06-0291054**

**IN THE OAK HILL (COTTON VALLEY)
FIELD, GREGG, HARRISON, PANOLA,
AND RUSK COUNTIES, TEXAS**

**FINAL ORDER
AMENDING FIELD RULES FOR THE
OAK HILL (COTTON VALLEY) FIELD
GREGG, HARRISON, PANOLA, AND RUSK COUNTIES, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on September 15, 2014, the presiding examiner has made and filed a report and recommendation containing findings of fact and conclusions of law, for which service was not required; that the proposed application is in compliance with all statutory requirements; and that this proceeding was duly submitted to the Railroad Commission of Texas at conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the examiner's report and recommendation, the findings of fact and conclusions of law contained therein, hereby adopts as its own the findings of fact and conclusions of law contained therein, and incorporates said findings of fact and conclusions of law as if fully set out and separately stated herein.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that the Field Rules adopted in Final Order No. No. 6-67,176, effective May 31, 1977, as amended, for the Oak Hill (Cotton Valley) Field, Gregg, Harrison, Panola, and Rusk Counties Texas, are hereby amended. The amended Field Rules are set out in their entirety as follows:

RULE 1: The entire correlative interval from 8,670 feet to 10,469 feet, as shown on the type log of the McCormick Oil & Gas Corp., G. W. Bird Estate Lease, Well No. 1 (API No. 42-401-30325), James McLain Survey, Rusk County, Texas, shall be designated as a single reservoir for proration purposes and be designated as the Oak Hill (Cotton Valley) Field.

RULE 2: No well for oil or gas shall hereafter be drilled nearer than **FOUR HUNDRED SIXTY SEVEN (467)** feet to any property line, lease line or subdivision line and no well shall be drilled nearer than **FOUR HUNDRED SIXTY SEVEN (467)** feet to any applied for, permitted or completed well in the same reservoir on the same lease, pooled unit or unitized tract. The aforementioned distances in the above rule are minimum distances to allow an operator flexibility in locating a well, and the above spacing rule and the other rules to follow are for the purpose of permitting only one well to each drilling and proration unit. Provided however, that the Commission will grant exceptions to permit drilling within shorter distances and drilling more wells than herein prescribed whenever the Commission shall have determined that such exceptions are necessary either to prevent

waste or to prevent the confiscation of property. When exception to these rules is desired, application therefore shall be filed and will be acted upon in accordance with the provisions of Commission Statewide Rules 37 and 38, which applicable provisions of said rule are incorporated herein by reference. The standard oil drilling unit shall remain FORTY (40) acres.

In applying this rule the general order of the Commission with relation to the subdivision of property shall be observed.

Provided, however, that for purposes of spacing for horizontal wells, the following shall apply:

- a. A take point in a horizontal drainhole well is any point along a horizontal drainhole where oil and/or gas can be produced into the wellbore from the reservoir/field interval. The first take point may be at a different location than the penetration point and the last take point may be at a location different than the terminus point.
- b. No horizontal drainhole well for oil or gas shall hereafter be drilled such that the first and last take points are nearer than TWO HUNDRED (200) feet to any property line, lease line or subdivision line. For each horizontal drainhole well, the distance perpendicular to such horizontal drainhole from any take point to any point on any property line, lease line or subdivision line shall be a minimum of FOUR HUNDRED SIXTY SEVEN (467) feet. A permit or an amended permit is required for all take points closer to the lease line than the lease line spacing distance, including any perforations added in the vertical portion or the curve of a horizontal drainhole well.
- c. All take points in a horizontal drainhole well shall be a minimum distance of FOUR HUNDRED SIXTY SEVEN (467) feet from take points in any existing, permitted, or applied for horizontal drainhole on the same lease, unit, or unitized tract, with the exception that there shall be no minimum well spacing requirement between vertical and horizontal drainhole wells on the same lease, pooled unit or unitized tract.

For the purpose of assigning additional acreage to a horizontal well pursuant to Statewide Rule 86, the distance from the first take point to the last take point in the horizontal drainhole well shall be used in such determination, in lieu of the distance from penetration point to terminus.

In addition to the penetration point and the terminus of the wellbore required to be identified on the drilling permit application (Form W-1H) and plat, the first and last take points must also be identified on the drilling permit application (Remarks Section) and plat. Operators shall file an as-drilled plat showing the path, penetration point, terminus and the first and last take points of all drainholes in horizontal wells, regardless of allocation formula.

If the applicant has represented in the drilling application that there will be one or more no perf zones or "NPZ's" (portions of the wellbore within the field interval without take points), then the as-drilled plat filed after completion of the well shall be certified by a person with knowledge of the facts pertinent to the application that the plat is accurately drawn to scale and correctly reflects all pertinent and required data. In addition to the standard required data, the certified plat shall include the as-drilled track of the wellbore, the location of each take point on the wellbore, the boundaries of any wholly or partially unleased tracts within a Rule 37 distance of the wellbore, and notations of the shortest distance from each wholly or partially unleased tract within a Rule 37 distance of the wellbore to the nearest take point on the wellbore.

For any well permitted in this field, the penetration point need not be located on the same lease, pooled unit or unitized tract on which the well is permitted and may be located on an Offsite Tract. When the penetration point is located on such Offsite Tract, the applicant for such a drilling permit must give 21 days notice by certified mail, return receipt requested to the mineral owners of the Offsite Tract. For the purposes of this rule, the mineral owners of the Offsite Tract are (1) the designated operator; (2) all lessees of record for the Offsite Tract where there is no designated operator; and (3) all owners of unleased mineral interests where there is no designated operator or lessee. In providing such notice, applicant must provide the mineral owners of the Offsite Tract with a plat clearly depicting the projected path of the entire wellbore. In the event the applicant is unable, after due diligence, to locate the whereabouts of any person to whom notice is required by this rule, the applicant must publish notice of this application pursuant to the Commission's Rules of Practice and Procedure. If any mineral owner of the Offsite Tract objects to the location of the penetration point, the applicant may request a hearing to demonstrate the necessity of the location of the penetration point of the well to prevent waste or to protect correlative rights. Notice of Offsite Tract penetration is not required if (a) written waivers of objection are received from all mineral owners of the Offsite Tract; or, (b) the applicant is the only mineral owner of the Offsite Tract. To mitigate the potential for well collisions, applicant shall promptly provide copies of any directional surveys to the parties entitled to notice under this section, upon request.

RULE 3: The acreage assigned to an individual gas well for the purpose of allocating allowable gas production thereto shall be known as a proration unit. The standard drilling and proration units are established hereby to be ONE HUNDRED SIXTY (160) acres. No proration unit shall consist of more than ONE HUNDRED SIXTY (160) acres; provided that, tolerance acreage of ten (10) percent shall be allowed for each standard proration unit so that an amount not to exceed a maximum of ONE HUNDRED SEVENTY SIX (176) acres may be assigned. The two farthestmost points in any proration unit shall not be in excess of FIVE THOUSAND FIVE HUNDRED (5,500) feet removed from each other. Each proration unit containing less than ONE HUNDRED SIXTY (160) acres shall be a fractional proration unit. All proration units shall consist of continuous and contiguous acreage which can reasonably be considered to be productive of gas. No double assignment of acreage will be accepted.

An operator, at his option, shall be permitted to form optional drilling units of FORTY (40) acres. A proportional acreage allowable credit will be given for a well on a fractional proration unit. The two farthestmost points of a FORTY (40) acre fractional proration unit shall not be greater than TWO THOUSAND ONE HUNDRED (2,100) feet removed from each other.

For the determination of acreage credit in this field, operators shall file for each well in this field a Form P-15 Statement of Productivity of Acreage Assigned to Proration Units. On that form or an attachment thereto, the operator shall list the number of acres that are being assigned to each well on the lease or unit for proration purposes. When the allocation formula in this field is suspended, operators in this field shall not be required to file plats with the Form P-15. When the allocation formula is in effect in this field, operators shall be required to file, along with the Form P-15, individual proration unit plats showing the acreage assigned to each well. Provided further, that if the acreage assigned to any well has been pooled, the operator shall furnish the Commission with such proof as it may require as evidence that interests in and under such proration unit have been so pooled.

Notwithstanding the above, operators shall be required to file an as-drilled plat showing the path, penetration point and terminus of all drainholes in horizontal wells.

RULE 4a: The gas field shall be classified as associated-prorated. The daily allowable production of gas from individual wells completed in the subject field shall be determined by allocating the allowable production, after deductions have been made for wells which are incapable of producing their gas allowables, among the individual wells in the following manner:

- a. NINETY-FIVE percent (95%) of the total field allowable shall be allocated among the individual wells in the proportion that the acreage assigned such well for allowable purposes bears to the summation of the acreage with respect to all proratable wells producing from this field.
- b. FIVE percent (5%) of the field's total allowable shall be allocated among the individual wells in the proportion that the deliverability of such well, as evidenced by the most recent G-10 test filed with the Railroad Commission bears to the summation of the deliverability of all proratable wells producing from the field.

RULE 4b: The maximum daily oil allowable for each well in the subject field shall be the 1965 Yardstick Allowable of 172 barrels of oil per day and the actual allowable for an individual well shall be determined by the sum total of the two following values:

- a. Each well shall be assigned an allowable equal to the top allowable established for a well having a proration unit containing the maximum acreage authorized exclusive of tolerance acreage multiplied by NINETY FIVE percent (95%) and by then multiplying this value by a fraction, the

numerator of which is the acreage assigned to the well and the denominator of which is the maximum acreage authorized for a proration unit exclusive of tolerance acreage.

- b. Each well shall be assigned an allowable equal to its potential based on the most recent well test filed with the Commission multiplied by FIVE percent (5%), provided that this value shall not exceed the 1965 Yardstick Allowable of 172 barrels of oil per day multiplied by FIVE (5%).

RULE 5: For oil and gas wells, Stacked Lateral Wells within the correlative interval for the field that are drilled from different wellbores may be considered a single well for regulatory purposes, as provided below:

1. A horizontal drainhole well qualifies as a Stacked Lateral Well under the following conditions:
 - a) There are two or more horizontal drainhole wells on the same lease or pooled unit within the correlative interval for the field;
 - b) Horizontal drainholes are drilled from different surface locations;
 - c) Each point of a Stacked Lateral Well's horizontal drainhole shall be no more than 300 feet in a horizontal direction from any point along the record well of that same Stacked Lateral Well. This distance is measured perpendicular to the orientation of the horizontal drainhole and can be illustrated by the projection of each horizontal drainhole in the Stacked Lateral Well into a common horizontal plane as seen on a location plat. Where one drainhole of a Stacked Lateral is longer than that of the record well, the 300 feet maximum shall be measured between the longer lateral and an axial projection of the record well lateral along its same path; and
 - d) There shall be no maximum or minimum distance limitations between horizontal drainholes of a Stacked Lateral Well in a vertical direction.
2. A Stacked Lateral Well, including all surface locations and horizontal drainholes comprising such Stacked Lateral Well, shall be considered as a single well for density and allowable purposes.
 - a) All points between the first Take Point and the Last Take Point on all drainholes of a Stacked Lateral Well, including all Take Points on any horizontal drainhole that is longer than the Record Well, must fall within a box with a surface area equal to the number of acres to be assigned to the Stacked Lateral Well for allowable purposes. Two sides of the box will be formed by the two horizontal laterals that are

the farthest apart in a horizontal direction, which shall be no greater than the 300 foot requirement in Item 1 above.

- b) For the purpose of assigning additional acreage to the Stacked Lateral Well pursuant to Rule 86, the horizontal drainhole displacement shall be calculated based on the distance from the first take point to the last take point in the horizontal drainhole for the Record Well, regardless of the horizontal drainhole displacement of other horizontal drainholes of the Stacked Lateral Well.
3. Each surface location of a Stacked Lateral Well must be permitted separately and assigned an API number. In permitting a Stacked Lateral Well, the operator shall describe the well as a Stacked Lateral Well in the "Remarks" of the Form W-1 drilling permit application. The operator shall also identify on the plat any other existing, or applied for, horizontal drainholes comprising the Stacked Lateral Well being permitted.
4. To be a regular location, each horizontal drainhole of a Stacked Lateral Well must comply with (i) the field's minimum spacing distance as to any lease, pooled unit or property line, and (ii) the field's minimum between well spacing distance as to any different well, including all horizontal drainholes of any other Stacked Lateral Well, on the same lease or pooled unit in the field. Operators may seek exceptions to Rules 37 and 38 for Stacked Lateral Wells in accordance with the Commission's rules, or any applicable rule for this field.
5. Operators shall file separate completion forms for each surface location of the Stacked Lateral Well. Operators shall also file a certified as-drilled location plat for each surface location of a Stacked Lateral Well showing each horizontal drainhole from that surface location, confirming the well's qualification as a Stacked Lateral Well and showing the maximum distances in a horizontal direction between each horizontal drainhole of the Stacked Lateral Well.
6. In addition to the Record Well, each surface location of a Stacked Lateral Well will be listed on the proration schedule, but no allowable shall be assigned for an individual surface location. Each surface location of a Stacked Lateral Well shall be required to have a separate G-10 or W-10 test and the sum of all horizontal drainhole test rates shall be reported as the test rate for the Record Well.
7. Operators shall report all production from horizontal drainholes included as a Stacked Lateral Well on Form PR to the Record Well. Production reported for a Record Well is the total production from the horizontal drainholes comprising the Stacked Lateral Well. Operators shall measure the

production from each surface location of a Stacked Lateral Well. Operators may measure full well stream with the measurement adjusted for the allocation of condensate based on the gas to liquid ratio established by the most recent G-10 well test rate for that surface location. The gas and condensate production will be identified by individual API number and recorded and reported on the "Supplementary Attachment to Form PR."

8. If the field's 100% AOF status should be removed, the Commission's Proration Department shall assign a single gas allowable to each Record Well classified as a gas well. The Commission's Proration Department shall also assign a single oil allowable to each Record Well classified as an oil well. The assigned allowable may be produced from any one or all of the horizontal drainholes comprising the Stacked Lateral Well.
9. Operators shall file an individual Form W-3A Notice of Intention to Plug and Abandon and Form W-3 Well Plugging Report for each horizontal drainhole comprising the Stacked Lateral Well as required by Commission rules.
10. An operator may not file Form P-4 to transfer an individual surface location of a Stacked Lateral Well to another operator. P-4's filed to change the operator will only be accepted for the Record Well if accompanied by a separate P-4 for each surface location of the Stacked Lateral Well.

It is further **ORDERED** that the allocation formula in the Oak Hill (Cotton Valley) Field shall remain suspended. The allocation formula may be reinstated administratively, in accordance with the Commission's rules, if the market demand for gas in the Oak Hill (Cotton Valley) Field drops below 100% of deliverability.

Done this 13th day of November, 2014.

RAILROAD COMMISSION OF TEXAS

**(Order approved and signatures affixed by
Hearings Division Unprotested Master Order
dated November 13, 2014)**



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 06-0289579

THE APPLICATION OF BP AMERICA PRODUCTION COMPANY, TO AMEND FIELD RULES FOR THE WOODLAWN, SW. (COTTON VALLEY) FIELD, HARRISON COUNTY, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
Laura Miles-Valdez – Hearings Examiner

HEARING DATE: July 14, 2014

APPEARANCES: **REPRESENTING:**

APPLICANT:

William Hayenga
Keith Masters

BP America Production Company

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

This is the application of BP America Production Company (BP), to amend field rules for the Woodlawn, SW. (Cotton Valley) Field in Harrison County, Texas. BP seeks to amend the take point spacing provisions for horizontal wells in Field Rule No. 2. Specifically, BP is requesting dual lease line spacing provisions of 100 feet from first and last take points and 330 feet perpendicular to the drainhole.

At the time of the hearing, BP was not an operator of a well in the field, but it does own mineral rights to acreage in the field. BP has applied to the Commission for a drilling permit (status no. 791224, filed July 8, 2014) to drill its Fisher Gas Unit well no. 1H. The drilling permit was issued on October 2, 2014, documenting BP's standing to amend the field rules.

DISCUSSION OF THE EVIDENCE

The Woodlawn, SW. (Cotton Valley) Field was discovered on October 20, 1977, at a depth of 10,090 feet in Harrison County, Texas. Field rules were adopted by the Railroad Commission in Special Order No. 6-73,042, effective July 16, 1979. The field rules have been amended several times, most recently on November 2, 2010 in Docket No. 06-0267029. The current field rules specify 330-foot lease line spacing with no (zero feet) between well spacing limitation. The field rules include take point provisions with 330-foot spacing restrictions; the current field rules do not provide for dual lease line take point provisions.

The current field rules provide for 330 feet spacing between any property line, lease line or subdivision line. BP is requesting to amend this provision of Field Rule No. 2 to allow for dual lease line spacing provisions. Such provisions are commonly adopted to facilitate efficient horizontal well development. BP identified four other Cotton Valley fields that have adopted a 100- or 200-foot spacing provision between the first and last take points of a horizontal well bore and the nearest lease line, and a 330- or 467-foot perpendicular spacing provision between the horizontal drainhole and the nearest lease line. In this matter, BP is seeking 100-foot spacing between lease lines and the first and last take points, and 330-foot perpendicular spacing from the horizontal drainhole to the lease line.

The standard proration unit is 640 acres, and 20-acre optional units are allowed. BP presented data from field rule hearings in 2005 and 2007 (Docket Nos. 06-0241430 and 06-0252924, respectively) that were used to justify reducing the optional unit size first to 40 acres and then to 20 acres. Based on five of the better-producing wells in the Woodlawn, SW. (Cotton Valley) Field, BP expects most wells in the field to drain about 20 acres. Cotton Valley wells require fracture stimulation for production. The average fracture stimulation stage length of horizontal wells in the nearby Woodlawn (Cotton Valley) Field is about 350 feet.

Based on the demonstrated average fracture stimulation stage length of 350 feet, BP estimates that one-half of this value, or 175 feet, would be a reasonable estimate of the drainage radius perpendicular to the fracture axis. Therefore, BP is requesting a first and last take point spacing provision of 100 feet, which would ensure adequate coverage from the first and last take point to the nearest lease line, eliminating the potential for waste between the first or last take point and the adjacent lease line.

BP is also requesting the Woodlawn, SW (Cotton Valley) Field Rules be made permanent.

FINDINGS OF FACT

1. Proper notice of this hearing was issued.

2. The Woodlawn, SW. (Cotton Valley) Field was discovered on October 20, 1977, at a depth of 10,090 feet in Harrison County, Texas.
3. Field rules were adopted by the Railroad Commission in Special Order No. 6-73,042, effective July 16, 1979. The field rules have been amended several times, most recently on November 2, 2010 in Docket No. 06-0267029.
4. The current field rules specify 330-foot lease line spacing with no (zero feet) between well spacing limitation. The field rules include take point provisions with 330-foot spacing restrictions; the current field rules do not provide for dual lease line take point provisions.
5. The average fracture stimulation stage length of horizontal wells in the nearby Woodlawn (Cotton Valley) Field is about 350 feet.
6. Based on the demonstrated average fracture stimulation stage length of 350 feet, one-half of this value, or 175 feet, would be a reasonable estimate of the drainage radius perpendicular to the fracture axis.
7. A first and last take point to lease line spacing provision of 100 feet would ensure adequate coverage from the first and last take point to the nearest lease line, eliminating the potential for waste between the first or last take point and the adjacent lease line.

CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051
2. All notice requirements have been satisfied. 16 Tex. Admin. Code §1.45
3. Amending Field Rules for the Woodlawn, SW. (Cotton Valley) Field will prevent waste, protect correlative rights and promote development of the field.

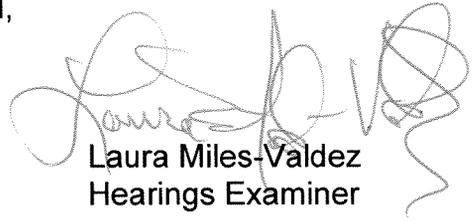
EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission amend the field rules for the Woodlawn, SW (Cotton Valley) Field, as requested by BP America Production Company.

Respectfully submitted,



Paul Dubois
Technical Examiner



Laura Miles-Valdez
Hearings Examiner