

OIL AND GAS DOCKET NO. 09-0256751

APPLICATION OF RANGE PRODUCTION CO. FOR EXCEPTION TO RULE 86 (D)(4) FOR ITS TUCKER-CAMPBELL UNIT, WELL NO. 3H, NEWARK, EAST (BARNETT SHALE) FIELD, DENTON COUNTY, TEXAS

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HEARD BY: Donna Chandler, Technical Examiner

HEARING DATE: May 19, 2008

APPEARANCES:

Clark Jobe
Mary Curliss Patton

REPRESENTING:

Range Production Co.

EXAMINER'S REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Range Production Co. requests an exception to Rule 86(d)(4) for the following wells completed in the Newark, East (Barnett Shale) Field:

Tucker-Campbell Unit, Well No. 3H; and
Tucker-Campbell Unit, Well No. 2H

These wells will be referred to jointly in this Examiners' Report as "the Wells." Exceptions are necessary because the penetration point for each Well, as defined by Rule 86, is not on the pooled unit for the Well. Range further requests that all accrued overproduction for each of the wells be canceled.

These applications were unopposed and the examiners recommend approval of the requested exceptions to Statewide Rule 86.

DISCUSSION OF THE EVIDENCE

Pertinent definitions in Statewide Rule 86 are as follows:

86(a)(2) **Horizontal Drainhole:** that portion of the wellbore drilled in the correlative interval, between the penetration point and the terminus.

86(a)(3) **Horizontal Drainhole Displacement:** the calculated horizontal displacement of the horizontal drainhole from the penetration point to the terminus.

86(a)(5) **Penetration Point:** the point where the drainhole penetrates the top of the correlative interval.

86(a)(6) **Terminus:** the farthest point required to be surveyed along the horizontal drainhole from the penetration point and within the correlative interval.

Additionally, Statewide Rule 86(d)(4) requires that all points on a horizontal drainhole be within the proration and drilling unit.

In Oil and Gas Docket No. 09-0242843, the following rule was adopted for the Newark, East (Barnett Shale) Field:

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

1. Where the horizontal portion of the well is cased and cemented back above the top of the Barnett Shale formation, the distance to any property line, lease line or subdivision line will be calculated based on the distance to the nearest perforation in the well, and not based on the penetration point or terminus;
2. Where an external casing packer is placed in the well and cement is pumped above the external casing packer to a depth above the top of the Barnett Shale formation, the distance to any property line, lease line or subdivision line will be calculated based on the top of the external casing packer or the closest open hole section in the Barnett Shale.

Range was granted a regular drilling permit for the Wells with a surface location off lease. The locations for the penetration point and terminus on Form W-1 were actually the proposed uppermost and lowermost perforations in each of the Wells. Because the Form W-1 requests distances to penetration point and terminus and the Newark East (Barnett Shale) Field rules provide that the distance to lease line will be calculated based on distance to the nearest perforation where the horizontal portion of the well is cased and cemented back above the top of the Barnett Shale formation, Range understood this to be the appropriate information to be provided on the Form W-1.¹ The actual penetration point as defined by Rule 86 was outside the pooled unit for each well.

The as-drilled plat filed with the completion papers for each Well indicated the penetration point for the well was off-lease on the same tract as the surface location. However, both the uppermost and lowermost perforations in each well are at legally permitted locations. Completion papers for the Wells are not being processed and allowables have not been assigned because the penetration points were off-lease, and in violation of Rule 86 because a portion of the horizontal drainhole, as defined by Rule 86, would not be on the Well's pooled unit. As a result, Range requested hearings for exceptions to Rule 86(d)(4).

Each of the Wells is cased and cemented, with top of cement behind the casing above the top of the Barnett Shale formation. The penetration point, as defined by Rule 86, is off the subject lease.

By allowing the penetration point to be off lease, additional Barnett Shale reserves can be produced from a legal section of each drainhole. This additional distance is 1,229 feet in the 2H and 543 feet in the 3H. This additional lateral length is needed to reach the target from an off-site surface location and make a portion of the "turn" of the wellbore from the top of the Barnett Shale until the drainhole is horizontal. Operators typically do not elect to perforate in the Barnett Shale until the well is horizontal. This additional lateral length equates to an additional 1.5 MMCF of gas between the two wells which would not be recovered if the penetration point were required to be on-lease. By allowing an exception to Rule 86(d)(4), waste of these resources will be prevented.

Range requests that the requested exceptions be granted to allow the wells to produce. The perforations are legally permitted distances to lease lines

¹ When filling out Form W-1, some operators have recited uppermost and lowermost perforations of a wellbore in the section of the Form which requests penetration point and terminus. E-mail communications between Commission staff and another operator verify this practice as acceptable. Apparently, numerous drilling permits in this field have been approved with off-lease penetration points. A hearing is pending to consider amendments to the field rules for the Newark, East (Barnett Shale) Field to clarify discrepancies between Rule 86 and the existing field rules for the field.

pursuant to the special field rules for the Newark, East (Barnett Shale) Field. Range requests that the horizontal drainhole displacement for the subject well be determined based on the distance between the perforations and not on the distance from penetration point to terminus. Under Rule 86, Range would be able to assign additional acreage to the well for proration purposes.

The Wells are drilled on a pooled unit which includes acreage owned by the Denton Independent School District. A school is located on the Denton ISD tract. The lease obtained from the Denton ISD prohibits the use of the surface for drilling activities. The surface use of the other tract in the unit is a housing subdivision, making that tract unsuitable as a drilling location. By locating the surface location off-lease, Range is able to develop the minerals under the unit while accommodating the development of the surface for its highest and best use. And by locating the wellheads for the Wells on the same surface tract, Range is able to minimize the impact on land use of developing the minerals through multiple wellbores. Range is the lessee of a surface lease and subsurface easement from the surface owner of the tract on which the surface locations for the Wells are located. Range is the lessee of a subsurface easement from the mineral lessee of the tract on which the penetration point for each well is located. Accordingly, it does not appear that Range is attempting to circumvent Commission rules regarding spacing and assignment of acreage in the requested exception.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing.
2. Statewide Rule 86(d)(4) requires that all points on a horizontal drainhole be within the proration and drilling unit for a well.
3. Field rules for the Newark, East (Barnett Shale) Field provide that, for purposes of the lease line spacing requirement for horizontal wells which are cased and cemented back above the top of the Barnett Shale formation, the distance to any property line, lease line or subdivision line will be calculated based on the distance to the nearest perforation in the well, and not based on the penetration point or terminus.
4. Range was granted a regular drilling permit for the Tucker-Campbell Unit Well No. 2H on March 26, 2007, with a surface location off-lease.

- a. The locations for the penetration point and terminus indicated on the Form W-1 were actually the proposed uppermost and lowermost perforations in the well.
 - b. The actual penetration point of the well, as defined by Rule 86, is outside the Tucker-Campbell Unit.
 - c. Commission staff had previously accepted Form W-1 applications for wells in this field with the well's perforations indicated as penetration point and terminus.
 - d. The uppermost and lowermost perforations in the well are at legal distances at least 330 feet from any lease line.
5. Range was granted an amended permit for a regular location on October 16, 2007 to show the as-drilled location for the wellbore.
 6. The Tucker-Campbell Unit Well No. 2H is drilled to a total depth of 12,078 feet (MD) and is cased and cemented, with top of cement behind the casing at 7,390 feet (MD). The penetration point of the Barnett Shale is 8,243 feet (MD). The perforations are from 9,472 feet to 11,990 feet (MD).
 7. Allowing the penetration point for the Tucker-Campbell Unit Well No. 2H to be off lease will result in the recover of approximately 1.1 MMCF of gas which would otherwise not be recovered.
 8. The horizontal drainhole displacement for the Tucker-Campbell Unit Well No. 2H shall be the distance between the perforations, which is 2,518 feet.
 9. Completion papers for the Tucker-Campbell Unit Well No. 2H have not been processed and an allowable has not been assigned because the penetration point was off-lease, and in violation of Rule 86 because a portion of the horizontal drainhole, as defined by Rule 86, would not be on the well's pooled unit.
 10. Range is the lessee of a surface lease and subsurface easement from the surface owner of the tract on which the surface location of the Tucker-Campbell Unit Well No. 2H is located. Range is also the lessee of a subsurface easement from the mineral lessee of the tract which the penetration point of the Tucker-Campbell Unit Well No. 2H is located.

11. Range was granted a regular drilling permit for the Tucker-Campbell Unit Well No. 3H on March 26, 2007, with a surface location off-lease.
 - a. The locations for the penetration point and terminus indicated on the Form W-1 were actually the proposed uppermost and lowermost perforations in the well.
 - b. The actual penetration point of the well, as defined by Rule 86, is outside the Tucker-Campbell Unit.
 - c. Commission staff had previously accepted Form W-1 applications for wells in this field with the well's perforations indicated as penetration point and terminus.
 - d. The uppermost and lowermost perforations in the well are at legal distances at least 330 feet from any lease line.
12. Range was granted an amended permit for a regular location on October 8, 2007 to show the as-drilled location for the wellbore.
13. The Tucker-Campbell Unit Well No. 3H is drilled to a total depth of 11,932 feet (MD) and is cased and cemented, with top of cement behind the casing at 6,650 feet (MD). The penetration point of the Barnett Shale is 8,268 feet (MD). The perforations are from 8,811 feet to 11,826 feet (MD).
14. Allowing the penetration point for the Tucker-Campbell Unit Well No. 3H to be off lease will result in the recover of approximately 0.4 MMCF of gas which would otherwise not be recovered.
15. The horizontal drainhole displacement for the Tucker-Campbell Unit Well No. 3H shall be the distance between the perforations, which is 3,015 feet.
16. Completion papers for the Tucker-Campbell Unit Well No. 3H have not been processed and an allowable has not been assigned because the penetration point was off-lease, and in violation of Rule 86 because a portion of the horizontal drainhole, as defined by Rule 86, would not be on the well's pooled unit.
17. Range is the lessee of a surface lease and subsurface easement from the surface owner of the tract on which the surface location of the Tucker-Campbell Unit Well No. 3H is located. Range is also the

lessee of a subsurface easement from the mineral lessee of the tract which the penetration point of the Tucker-Campbell Unit Well No. 2H is located.

18. The surface use of Tract No. 1 in the Tucker-Campbell Unit is a housing subdivision. The surface use of Tract No. 2 in the Tucker-Campbell Unit is a public school. The lease from the Denton Independent School District for Tract No. 2 permits the pooling of the tract for mineral development, but it prohibits the use of the surface for a drilling location. An off-lease drilling location is necessary to develop the minerals under the Unit.

CONCLUSIONS OF LAW

1. Proper notice was timely given to all parties entitled to notice pursuant to applicable statutes and rules.
2. All things have occurred and have been accomplished to give the Commission jurisdiction in this case.
3. The requested exceptions are not intended to circumvent Commission rules regarding spacing and assignment of acreage.
4. Approval of the requested exceptions to Rule 86(d)(4) will prevent waste and will not harm correlative rights.

EXAMINERS' RECOMMENDATION

The examiner recommends that the requested exceptions to Rule 86(d)(4) be approved for the following wells to allow the penetration point, as defined by Rule 86, to be off-lease for the Tucker-Campbell Unit Well No. 2H and the Tucker-Campbell Unit Well No. 3H.

Respectfully submitted:

Donna Chandler
Technical Examiner