

CASE NO. 0255395

THE APPLICATION OF CONOCOPHILLIPS COMPANY TO DETERMINE UNDER STATEWIDE RULE 11(C)(1)(A) THAT THE COMPLETION LOCATION OF THE VILLARREAL LEASE, WELL NO. 3, EXSUN (LOBO CONS.) FIELD, ZAPATA COUNTY, TEXAS IS REASONABLE AS DRILLED UNDER ITS EXISTING PERMIT (PERMIT NO. 612163).

Heard by: Andres J. Trevino, P.E. Technical Examiner, on July 27, 2009
Marshall F. Enquist, Legal Examiner

APPEARANCES:

Jamie Nielson
Greg Cloud
Amanda Baxter
John Ostergren
Boersma Ibrahim

REPRESENTING:

ConocoPhillips Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

ConocoPhillips Company seeks a determination pursuant to Statewide Rule 11(c)(1)(A) that the as drilled wellbore location for its Villarreal Lease, Well No. 3, Exsun (Lobo Cons.) Field, Zapata County is reasonable under the well's existing drilling permit. The minimum lease line spacing requirement is 467 feet. The subject well was permitted at a regular location 470 feet from the northeast line and 470 feet from the southeast line of ConocoPhillips' Villarreal Lease to a depth of 12,000 feet under permit No. 612163 issued on January 17, 2006.

DISCUSSION OF EVIDENCE

The Villarreal Lease, Well No. 3 was drilled as a vertical well with no intentional deviation of the well to a depth of 11,410 feet. The well was plugged-back to a depth of 11,305 feet. On March 20, 2006 a directional survey was run to a depth of 11,363 feet. The well was cased and completed on March 23, 2006 into the Exsun (Lobo Cons.) Field.

The directional survey was submitted to the Commission that showed the

bottomhole location at 11,363 feet for the well was approximately 270 feet from the southeast lease line. The directional survey showed inclination angles between 1.0 to 2.0 degrees down thru 9,000 feet. At a depth of 9,200 feet the angle increased from 3.14 to as high as 15.76 degrees at 11,000 feet.

ConocoPhillips received a letter dated October 24, 2007, from the Commission requesting them to file an exception to Statewide Rule 37 as the directional survey shows the bottom-hole location is 270 feet from the nearest lease line. ConocoPhillips filed an as drilled permit and was seeking a Rule 37 exception when they received a protest from Chesapeake Operating, Inc. dated February 21, 2008. ConocoPhillips requested to seek a determination pursuant to Statewide Rule 11(c)(1)(A) that the as drilled wellbore location is reasonable and substantially compliant with their original permit rather than file an exception to Rule 37. Chesapeake Operating did not appear in protest at the call of the hearing.

ConocoPhillips determined from the inclination survey that the well was approaching the 467 foot lease boundary, ConocoPhillips took corrective measures to correct the drift. The measures included low weight on the bit, drilling with a high RPM and using a pendulum bottomhole assembly. The directional survey shows that at 9,633 feet, the bottom of the Exsun (Lobo Cons.) Field (the pay zone) the bottomhole location is calculated to be 433 feet from the southeast lease line and 690 feet from the northeast lease line. With a 176 foot displacement, at this depth the well is only 1.03 degrees from vertical. At 11,363 feet, the bottom of the well, the bottom hole location was 266 feet from the southeast lease line. With 486 feet total displacement at a measured depth of 11,363 feet, it is calculated that the well is deviated from vertical 2.42 degrees. Seismic data reveals the existence of a fault crossing the wellbore of the Villarreal No.3 at a depth of 9,100 feet. The higher dipping beds caused the bit to "walk" to the south and deviated the well. The sharp deviation at 9,100 feet was unusual and unexpected. The seismic data also shows the fault separates the productive Lobo 2 Sand along the ConocoPhillips and Chesapeake lease boundary. It is less likely any reserves will be drained from Chesapeake's lease. The well's completion bottom hole location is 1.03 degrees from the vertical and the well's bottom hole location is within 2.42 degrees from vertical in the Villarreal Lease, Well No. 3. As there is no true vertical well it is an accepted standard that a well drilled with 3 to 5 degrees of maximum deviation is considered a vertical well.

Statewide Rule 11(c)(1)(A) provides:

"....When such directional survey shows the well to be bottomed within the confines of the lease, but nearer to a well or lease line or pooled unit boundary than allowed by applicable rules, or by the permit for the well if the well has been granted an exception to §§3.37 of this title (relating to Statewide Spacing Rule), a new permit will be required if it is established that the bottom hole location or completion location is not a reasonable location.

The examiners are of the opinion that the Villarreal Lease, Well No. 3 as-drilled completion and bottom hole location is reasonable and the well is in substantial compliance with the original permit. The deviation of the wellbore is normal up to a depth of 9,100 feet, then the deviation was unexpected and unusual below 9,100 feet and is within limits of a vertical well.

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. The Exsun (Lobo Cons.) Field is subject to lease line spacing requirements of 467 feet and between well spacing requirements of 1,200 feet.
3. The Villarreal Lease, Well No. 3 was permitted as a vertical well at a regular location 470 feet from the northeast line and 470 feet from the southeast line of the lease to a depth of 12,000 feet in the Exsun (Lobo Cons.) Field.
4. The well was drilled as a vertical well with no intentional deviation of the well to a depth of 11,410 feet. The well was plugged-back to a depth of 11,305 feet. The well was cased and completed on March 23, 2006 into the Exsun (Lobo Cons.) Field.
5. On March 20, 2006 a directional survey was run to a depth of 11,363 feet.
6. A directional survey was submitted to the Commission that showed the bottomhole location at 11,363 feet for the well was 270 feet from the southeast lease line. The directional survey showed inclination angles between 1.0 to 2.0 degrees down thru 9,000 feet. At a depth of 9,200 feet the angle increased from 3.14 to as high as 15.76 degrees at 11,000 feet.
7. ConocoPhillips received a letter dated October 24, 2007, from the Commission requesting them to file an exception to Statewide Rule 37 as the directional survey shows the bottom-hole location is 270 feet from the north lease line. ConocoPhillips decided to seek a determination pursuant to Statewide Rule 11(c)(1)(A) that the as drilled wellbore location is reasonable and substantially compliant with their original permit rather than file an exception to Rule 37.
8. An inclination report showed the well was nearing the 467 foot lease line limits.
 - a. ConocoPhillips took corrective measures to reduce drift.
 - b. The measures included low weight on the bit, drilling with a high RPM and using a pendulum bottomhole assembly.

9. The directional survey shows a sharp deviation beginning at 9,100 feet.
 - a. At 9,633 feet, the bottom of the pay zone, the bottomhole location is calculated at 433 feet from the southeast lease line and 690 feet from the northeast lease line. At this depth the well is only 1.03 degrees from vertical.
 - b. At 11,363 feet, the bottom of the well, the bottom hole location was 266 feet from the southeast lease line. At this depth the well is 2.42 degrees from vertical.
10. Seismic data shows a fault caused the well to deviate to the south.
 - a. The fault intersects the Villarreal Lease, Well No. 3 at a depth of 9,100 feet.
 - b. The seismic data also shows the fault separates the productive Lobo 2 Sand along the ConocoPhillips and Chesapeake lease boundary. It is unlikely any reserves will be drained from Chesapeake's lease.
 - c. The sharp deviation at 9,100 feet was unusual and unexpected.
11. With 486 feet total displacement at a measured depth of 11,363 feet, it is calculated that the well is deviated from vertical 2.42 degrees. As there is no true vertical well it is an accepted standard that a well drilled with 3 to 5 degrees of maximum deviation is considered a vertical well.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely issued by the Railroad Commission to appropriate persons legally entitled to notice.
2. All things necessary to the Commission attaining jurisdiction over the subject matter and the parties in this hearing have been performed.
3. ConocoPhillips Company, drilled the Villarreal Lease, Well No. 3, Exsun (Lobo Cons.) Field, Zapata County, Texas, as nearly vertical as possible by normal, prudent, practical drilling operations within the meaning of Statewide Rule 11(a) [Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE §3.11(a)]
4. The completion interval and bottom hole location of the Villarreal Lease, Well No. 3 are reasonable within the meaning of Statewide Rule 11(c)(1)(A) [Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE §3.11(c)(1)(A)] and a new permit for the well is not required.
5. The Villarreal Lease, Well No. 3 is entitled to an allowable.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that a Final Order be entered by the Commission finding that the as-drilled location of the Villarreal Lease, Well No. 3 is reasonable and in compliance with Statewide Rule 11.

Respectfully submitted,

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Technical Examiner

Marshall F. Enquist
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