
* KEY ISSUES: Confiscation *
* No regular location *
* Drainage occurring *
* First well on tract *
* FINAL ORDER: R37 EXCEPTION GRANTED *

RULE 37 CASE NO. 0206778

**APPLICATION OF DYNAMIC PRODUCTION, INC. FOR A RULE 37 EXCEPTION TO
DRILL ITS H. B. ZACHRY UNIT WELL NO. 2 IN THE RODRIGUEZ (LOBO 6) AND
WILDCAT FIELDS, WEBB COUNTY, TEXAS**

APPEARANCES:

FOR APPLICANT:

Bill Black, attorney
Gerald H. Graham
Michael Lucente
Jonathan Weiss

APPLICANT:

Dynamic Production, Inc.

FOR PROTESTANT:

Ray Langenberg
James A. Norton
Tracie Stogner

PROTESTANT:

Columbus Energy Corp.

OBSERVERS:

Doug Dashiell, attorney

Tom Coffman

REPRESENTING:

Enron Oil & Gas

Coffman Exploration

PROCEDURAL HISTORY

DATE APPLICATION FILED:

October 3, 1994

DATE OF HEARING:

December 2, 1994

HEARD BY:

Barbara Epstein, Hearings Examiner
Margaret Allen, Technical Examiner

DATE CIRCULATED:

February 10, 1995

STATUS:

Protested

STATEMENT OF THE CASE

This is the application of Dynamic Production, Inc. ("Dynamic") for an exception to Statewide Rule 37 for its H. B. Zachry Unit Well No. 2 to prevent confiscation. The proposed well would be located 300' from the west and southernmost north lease lines; field rules for the Rodriguez (Lobo 6) Field required 467' spacing from lease lines. A spacing exception to Statewide Rule 37 is also required for the Wildcat zone in this application. This application is protested by Columbus Energy Corp. ("Columbus"), who has a lease on the tract to the west of the proposed location.

DISCUSSION OF THE EVIDENCE

Dynamic is requesting a permit to drill its H. B. Zachry Unit Well No. 2 with a bottom-hole location only 300' from the west and southernmost north lease lines of its 80 acre pooled unit. The target field is the Rodriguez (Lobo 6) Field which operates under Statewide Rules. These rules require that wells be located at least 467' from the nearest lease or unit lines. The proposed well will be directionally drilled from a surface location approximately 300' to the south-southeast. The well must be directionally drilled to reach the proposed bottom-hole location because of the surface restrictions imposed in this area by the City of Laredo.

There is a well at a regular location in this corner of the 80 acre pooled unit -- the H. B. Zachry Unit Well No. 1, located 467' from the west line and 566' from the southernmost north line of the unit. This well was targeted for the Rodriguez (Lobo 6) Field but the Lobo 6 was faulted out and Well No. 1 was completed in the Lobo 1.

The December, 1994 proration schedule indicates that six wells are classified in the Rodriguez (Lobo 6) Field, two of which are operated by the protestant, Columbus Energy Corp. According to the maps submitted by both applicant and protestant, only the Columbus Maria LaFon Unit Well No. 1 is completed in the reservoir which is the target of the proposed H. B. Zachry Unit Well No. 2. Neither party indicated where the other wells and reservoir(s) are located which are part of the Rodriguez (Lobo 6) Field.

The Lobo in this area is cut by a series of northeast-trending up-to-the-coast sealing faults. The faults are located by fault cuts (i.e. missing sections) in area wellbores and by dipmeter data. The target reservoir is located between faults which the applicant has labeled A and B. The dipmeter in the Zachry No. 1 indicates that there is southeast dip on both sides Fault B. Fault B has removed the productive Lobo 6 in the Zachry No. 1 and the applicant is seeking to drill updip of this fault in the direction of Columbus's M. LaFon Unit No. 1.

The Columbus LaFon No. 1 was completed in 1992, has produced about 2.7 BCF, and is currently producing about 3.6 to 3.8 MMCF/D. According to the applicant, the ultimate recovery of the Lafon No. 1 is conservatively estimated from decline curve analysis to be 5.1 BCF, assuming

an abandonment pressure of 1000 psi. A volumetric calculation was made using 19.8% porosity, 38.5% water saturation and a 90-foot pay interval. From the estimated ultimate recovery and the volumetric calculation, the drainage area of the LaFon No. 1 is 65 acres. The applicant's maps indicate that, at most, about 10.5 acres of the Zachry pooled unit are between Faults A and B and within the drainage area of the Lafon No. 1. If the Zachry No 2 is completed as the applicant projects, the No. 2 will drain more than 10.5 acres, according to the applicant, since only about half of the recoverable gas in this reservoir has been recovered to date. The applicant made no estimate of the amount of recoverable gas underneath its tract, either before the LaFon No. 1 began producing or at present.

The protestant, Columbus, does not dispute that Fault B crosses the Zachry pooled unit or that its Lafon No. 1 will drain a portion of the Zachry pooled unit if the Zachry No. 2 is not drilled. Columbus believes that the applicant can drill a less irregular location more than 300' from its Lafon lease to recover Dynamic's fair share of the reserves in this reservoir.

The alternate location is about 140' to the east of the applicant's proposed location, and is 400' from the west lease line (the protestant's lease line) and 350' from the north lease line. According to the protestant's interpretation, the Zachry No. 1 is located in the middle of a 200' fault cut on Fault B. Therefore, the Zachry No. 2 would have to be located at least 100' updip from the Zachry No. 1 to encounter the edge of the productive Lobo 6. The protestant has mapped the Lobo 6 to be about 100' thick. Therefore, in order for the Zachry No. 2 to encounter the full 100' thickness of the Lobo 6 the alternate location is 200' updip from the Zachry No. 1. On the applicant's map, this alternate location is only about 75' from the edge of the productive Lobo 6 and would not encounter the full 100' thickness.

The applicant has mapped an 80' fault at -6111' and a 250' fault cut at -6161' in the Zachry No. 1. The protestant has mapped only a single fault cut. The total vertical throw on Fault B (including the 80' splinter fault) is 330' according to the applicant while the total vertical throw on Fault B is only 190' according to the protestant. The applicant testified that the dipmeter of the Zachry No. 1 indicates two different faults, but since the log of the Zachry No. 1 was not entered into evidence (due to a discovery non-disclosure agreement between the parties) it is not possible to determine which interpretation is correct.

The applicant also testified that the bottom-hole location of the Zachry No. 1 is between 45' and 128' updip from the surface location. If the bottom hole location, and therefore, the fault cuts indicated on the log of the Zachry No. 1 are 45 to 128' farther to the northwest than the applicant's map indicates, the location of the edge of the Lobo 6 is also farther to the northwest by the same amount. This would greatly increase the risk of not encountering a full Lobo 6 section at the alternate location. The protestant pointed out, however, that the applicant does not have a deviation survey which was run from the ground to the depth of the Lobo 6 and therefore it is not possible to state where the bottom-hole location of this well really is.

EXAMINERS' RECOMMENDATION

It is the examiners' opinion that this application for an exception to Statewide Rule 37 should be granted to allow Dynamic a reasonable opportunity to recover its share of hydrocarbons underlying its tract, thereby preventing confiscation.

The Zachry Well No. 1 has demonstrated that a well at a regular location cannot recover the reserves between Faults A and B from the Lobo 6. The alternate location proposed by the protestant is only 75' from the location of the splinter fault which the applicant has mapped and only about 140' updip from the location of the main Fault B. This location barely accommodates the 100' thickness of the Lobo 6 even if the protestant is correct and there is no 80' splinter fault.

In addition, the alternate location become even less reasonable if possible updip movement of the bottom-hole location of the Zachry No. 1 is considered. If the Zachry No. 1 bottom-hole location is really 128' to the northwest of the mapped location then the fault trace would have to be moved 128' to the northwest. It is not possible to know exactly how much the bottom-hole location is updip from the surface location but common engineering principles indicate that wellbores tend to deviate updip. If the bottom-hole location is even 60' updip, the alternate location will not encounter the full thickness of the Lobo 6.

The applicant has already drilled a dry hole in the Lobo 6 at a regular location. Fault B is quite well defined by the fault-cuts in the Zachry No. 1 wellbore but the bottom-hole location of this well is not. The applicant's proposed location is more reasonable than the protestant's alternate location and the examiners see no merit in imposing a riskier alternative location after a regular location has been condemned.

Based on the evidence introduced into the record and the testimony presented at the hearing, the examiners make the following findings of fact and conclusions of law.

FINDINGS OF FACT

1. At least ten (10) days' notice of this hearing was given to the designated operator of the tract, lessees of record of tracts with no designated operator, and owners of record of unleased mineral interests of each adjacent tract and each tract nearer to the well than the prescribed minimum lease-line spacing distance.
2. An exception to Statewide Rule 37 is required for the Zachry Unit Well No. 2 because the proposed well will be located 300' from the west and southernmost north lease lines of its 80 acre pooled unit.

3. Field rules for the Rodriguez (Lobo 6) Field require 467' spacing from lease lines. A spacing exception to Statewide Rule 37 is also required for the Wildcat zone in this application, which requires 467' spacing from lease lines.
4. This application is protested by Columbus Energy Corp.
5. The proposed well, which will be directionally drilled from a surface location approximately 300' from the bottom-hole location, must be directionally drilled to reach the proposed bottom-hole location because of the surface restrictions imposed in this area by the City of Laredo.
6. The Zachry Well No. 1 was drilled at a regular location 467' from the west line and 566' from the southernmost north line of the unit. Although the well was intended to be completed in the Rodriguez (Lobo 6) Field, the interval was faulted out of Well No. 1, and the well was completed in the Lobo 1 interval.
7. Protestant, Columbus Energy Corp., operates two of the six wells in the Rodriguez (Lobo 6) Field listed on the Railroad Commission proration schedule. One of Columbus' wells, the Lafon No. 1, is draining hydrocarbons from the applicant's tract.
 - a. The Columbus Energy Corp. Lafon No. 1 was completed in 1992 and has produced approximately 2.7 BCF. The Lafon No. 1 produces 3.6 to 3.8 MMCF/D.
 - b. The Columbus Energy Corp. Lafon No. 1 will ultimately recover at least 5.1 BCF. Using a 90-foot pay interval, the drainage area of the Lafon No. 1 is 65 acres.
 - c. Dynamic's maps indicate that approximately 10.5 acres of the Zachry pooled unit are within the drainage area of the Lafon No. 1.
8. A regularly located well cannot be completed in the proposed Rodriguez (Lobo 6) target zone.
9. An alternate location proposed by the protestant is a riskier location than the proposed well because it is less likely to encounter the estimated 100' thickness of the targeted Lobo 6 interval at the proposed location and it is located only 140' from the already drilled dry hole.
10. The proposed well will be the applicant's first well drilled in the Rodriguez (Lobo 6) Field on the subject tract.
11. The applicant would not drill another well just to test the Wildcat zone.

CONCLUSIONS OF LAW

1. Proper notice was given to all persons legally entitled to notice of this hearing.
2. All things have been done or have occurred to give the Railroad Commission jurisdiction to decide this matter.
3. The location of the proposed well is necessary and reasonable because it will afford the applicant an opportunity to recover its share of hydrocarbons underlying its tract, thereby preventing confiscation.

RECOMMENDATION

The examiners recommend that the above findings and conclusions be adopted and this exception to Statewide Rule 37 be **GRANTED**.

Respectfully submitted,

Barbara Epstein
Hearings Examiner

Margaret Allen
Technical Examiner

BAE/MA/ds