
* KEY ISSUES: Horizontal well, unusual conditions *
* proving waste. Lease line parallel *
* with fractures. Lease geometry. *
* *
* FINAL ORDER: R37 EXCEPTION GRANTED *

Rule 37 Case No. 0200641

**APPLICATION OF MARATHON OIL COMPANY FOR AN EXCEPTION TO
STATEWIDE RULE 37 TO DRILL ITS NO. 1 WELL, BABB-DRAWE LEASE, GIDDINGS
(AUSTIN CHALK - 3) AND GIDDINGS (AUSTIN CHALK - GAS) FIELDS, FAYETTE
COUNTY, TEXAS**

APPLICANT: Marathon Oil Co.

FOR APPLICANT: Ms. Sandra L. Williams Eichelberger - Geologist
Mr. Raymond L. Taylor - Senior Reservoir Engineer
Ms. Diane N. Wright - Landman
Mr. Dick Marshall - Attorney

PROTESTANTS: County Management, Inc., Showdown Energy Corporation

FOR PROTESTANT COUNTY MANAGEMENT: Mr. William B. Gardner, Jr.,
P.E.- Consulting Petroleum Engineer

PROCEDURAL HISTORY

Application Filed:	October 30, 1993
Notice of Hearing:	December 29, 1993
Hearing Held:	February 5, 1993
PFD Circulated:	April 14, 1993
Heard by:	David Clarkson, Hearings Examiner Thomas H. Richter, P.E., Technical Examiner

STATEMENT OF THE CASE

Applicant, Marathon Oil Company, is the working interest owner of a 274.96 acre tract located in Fayette County, Texas. Applicant is seeking to drill its first well on the unit. Protestant, County Management, Inc. is the working interest owner of the tract of land southeast of the proposed location. The proposed well, the Babb-Drawe Well No. 1, is a horizontal well with a proposed completion in the Giddings (Austin Chalk - 3) and Giddings (Austin Chalk - Gas) Fields. Field rules for both fields require 467'/1200' spacing.

The surface location is 500 feet from southwest line, and 550 feet from northwest line with a penetration point in the Austin Chalk formation at 500 feet from southwest line and 467 feet from northwest line. The proposed terminus location is 110 feet from southeast line and 500 feet from southwest line.

Applicant is seeking an exception to Statewide Rule 37 (16 TEX. ADMIN. CODE §3.37), to prevent confiscation and waste.

DISCUSSION OF THE EVIDENCE

It is uncontested that the Austin Chalk wells in the immediate area produce from natural vertical fractures. Productivity of individual wells is dependent upon the number of fractures penetrated by the wellbore. Applicant presented a structure map showing limited lateral extent for the fractures with a small number of the faults extending 2,000' to 4,000'.

Applicant's structure map was mapped on the base of the Austin Chalk. Fracture and fault orientation was shown to be from the northeast to the southwest. Applicant's geologist stated that the fracture orientation was N 60° E, with an error of plus or minus 10°. This orientation runs 12° off of parallel with the south lease line.

The proposed wellbore is oriented at S 46°19'15" E, or almost a due northwest-southeast orientation. This is approximately perpendicular to the fracture orientation and will allow for the maximum fracture penetration.

Applicant presented a statistical analysis of nine Marathon wells in the immediate area showing an average ultimate recovery of 113,000 BO and 760,000 MCF with an average drainhole length of 3075 feet. This calculates to an average recovery of 37 BO and 247 MCF per foot of horizontal drainhole. This analysis indicates that the last 357 feet (the difference in a standard bottom-hole location and the applied for location with a terminus 110' off of the lease line) of the wellbore would recover an additional 13,000 BO and 18,000 MCF of gas based on an average recovery per foot. This statistical analysis was not contested by protestant.

Protestant contends that the fractures increase in number and quality farther down-dip and to the southeast. This was supported by Applicant's testimony. The formation encountered in the final 357' of the wellbore should be more prolific than the statistical average due to the larger number of fractures encountered. Thus, the minimum additional volume of reserves which would be recovered by a well at the applied for location is 13,000 BO and 18,000 MCF of gas.

Protestant noted that a fracture orientation of N 60° E would be 12° off of parallel with the south lease line. Evidence sponsored by both parties showed that at that angle, a fracture encountered 110' off of the lease line would have to be 528' long to cross the lease line while a fracture encountered 467' off of the lease line would have to be 2246' long to cross the lease line. Because of the approximate parallel orientation of the fractures and the south lease line, any fractures crossing onto Protestants lease, will not be drained by a well at a regular location on Protestant's tract.

EXAMINERS' OPINION

The evidence shows that the drilling of a well at the proposed location will prevent the ultimate loss of at least 13,000 BO and 18 MMCF of gas. This is a substantial amount of hydrocarbons. The fracture orientation and its relation to the lease lines constitutes an "unusual conditions peculiar to the area where the well is sought to be drilled." Railroad Commission vs. Shell Oil Co., 139 Tex. 66,161 S.W.2d 1022 (1942). Because of this orientation, no well at a regular location, either on or off the subject lease will recover these additional reserves. There is no evidence that the leases were initially formed as a subterfuge to bolster a Rule 37 exception. Thus an exception to Statewide Rule 37 should be granted to prevent waste.

Protestant presented only a limited direct case. It sponsored only one exhibit, the same exhibit as Applicant's Exhibit No. 4 showing the relationship of the angle of the fractures and the south lease line. This exhibit illustrated that the fractures will cross the lease line but will not be drained by a well at a regular location on either tract.

Applicant presented this application as a confiscation and waste case. Applicant presented evidence of per well recoverable reserves. No final determination of recoverable reserves under Applicant's tract was offered, therefore, no accurate estimate of Applicant's fair share can be made. Applicant did not meet its burden of proof to prove confiscation.

FINDINGS OF FACT

1. Notice of hearing was sent at least ten days prior to the hearing on February 5, 1993, to all designated operators, lessees of record for tracts that have no designated operator, and owners of record of unleased mineral interests for each adjacent tract and each tract nearer to the well than the prescribed minimum lease-line spacing distance.
2. Applicant Marathon Oil Company, the working interest owner of the 274.96 acre Babb-

Drawe Unit, has applied on Form W-1 for a permit to drill Well No. 1 on the Babb-Drawe Unit. Applicant proposes to drill its well at a surface location 500 feet from the southwest line and 550 feet from the northwest line of the unit, and 550 feet from the southwest line and 8,205 feet from the southeast line of the survey. The proposed bottom-hole location is 110 feet from the southeast line and 500 feet from the southwest line of the unit and 500 feet from the southwest line and 5,720 feet from the southeast line of the survey. Applicant has applied for completion of its proposed well in the Giddings (Austin Chalk - 3) and Giddings (Austin Chalk - Gas) Fields, each having spacing rules of 467 feet from lease lines and 1200 feet between wells.

3. Applicant's Babb-Drawe Unit is a tract of regular size and shape, containing 274.96 acres.
4. A well drilled at a regular location will not recover an additional minimum of 13,000 BO and 18,000 mcf of gas which will be recovered by a well at the applied for location.
 - a. Natural vertical fractures run at approximately N 60°E throughout the lease.
 - b. The proposed wellbore orientation is S 46°E which approximately perpendicular to the fracture orientation.
 - c. The fracture orientation is 12° east of parallel with the south lease line of the subject lease.
 - d. The Babb-Drawe lease is approximately 3000 feet wide in the southerly portion of the lease.
 - e. The geometry of the lease and the fracture orientation are such that some of the fractures in the final 357 feet of the applied-for exception will cross onto Protestant's land.
5. No other well drilled at a regular location, either on or off the subject lease will recover the additional reserves noted in Finding of Fact No. 4.
 - a. An exception to the lease line spacing rules for the applied for fields is necessary to recover the hydrocarbons underlying the Applicant's lease in the section of the proposed wellbore from 467' to 110' north of the south lease line.
 - b. A well completed at the applied-for bottom-hole location will drain the reserves which would be left in place.
6. The fracture orientation and lease geometry constitutes an unusual condition peculiar to the area where the well is sought to be drilled.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely given to all persons legally entitled to notice.
2. The application on Form W-1 was properly filed.
3. All things have occurred and have been done to give the Commission jurisdiction to decide this matter.
4. An exception to the lease line spacing requirements is necessary to permit drilling the applied for well.
5. Approval of a permit to drill a well at the proposed location is necessary to prevent waste of a substantial amount of hydrocarbons that would remain unrecovered by a well at a regular location.

RECOMMENDATION

The examiners recommend that the subject application be approved in accordance with the attached final order.

Respectfully submitted,

Thomas H. Richter, P.E.
Technical Examiner

David Clarkson
Hearings Examiner

DLC