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OIL & GAS SECTION

RAILROAD COMMISSION OF TEXAS LEGAL DIVISION

RULE 37 DOCKET NO. 0208536

APPLICATION OF OXY USA INC. FOR AN EXCEPTION TO STATEWIDE RULES 37 AND 38 TO DRILL ITS WELL NO. 2, PIRKLE (029994) LEASE, IN THE CARTHAGE (PETITT, LOWER GAS) FIELD, PANOLA COUNTY, TEXAS

APPEARANCES:

REPRESENTING:

FOR APPLICANT:

Ray Langenberg (Attorney)
Martin Wirth
Kirk Sparkman
Alex McCoy
Gregg Hardin
Frank Davis
Christopher Whitten

Oxy USA, Incorporated

FOR PROTESTANT:

Tim George (Attorney)
Stacey Weltmer
Herman Acuna

Exxon Corporation
Exxon USA

PROCEDURAL HISTORY

DATE APPLICATION FILED:	April 11, 1995
NOTICE OF HEARING:	May 9, 1995
HEARING DATE:	June 1, 1995
TRANSCRIPT RECEIVED:	June 28, 1995
PFD CIRCULATION DATE:	September 15, 1995
HEARD BY:	Jeffrey T. Pender, Hearings Examiner Doug Johnson, Technical Examiner

STATEMENT OF THE CASE

Oxy USA, Incorporated ("Oxy" or "applicant") seeks an exception to Statewide Rules 37 and 38 for its Well No. 2, a horizontal well, on the 640 acre Pirkle (029994) Lease (see attached plat) in the Carthage (Pettit, Lower Gas) Field, Panola County, Texas ("subject lease and well"). Oxy is seeking the exceptions to prevent waste and confiscation. Exxon USA, an offset operator, is protesting the application.

Special field rules for the Carthage (Pettit, Lower Gas) Field ("Lower Pettit") require 1,320' lease-line and 3,960' between-well spacing on a 640 acre well density. The proposed horizontal well would be the second well on the 640 acre Pirkle lease thereby requiring an exception to Rule 38. The drainhole comes to within 2,424' of Well No. 1 and would terminate only 408' from the north line of the lease thereby requiring an exception to Rule 37. The subject lease is regular in size but there are no regular locations available. There is, however, an area near the center of the lease that is lease-line regular.

APPLICANT'S EVIDENCE AND POSITION

The Carthage (Pettit, Lower) Field was discovered in 1942. It currently produces at low pressure (200 psi) and is in the last stages of primary production. The Lower Pettit is a Commission designated field (field ID# 16032650) which Oxy has subdivided for mapping purposes, into the Frost "A", Frost "B" and Pirkle A-2 zones. The Lower Pettit is commingled with the Upper Pettit, a separate Commission designated field, in the Pirkle No. 1 wellbore. The Pirkle No. 1 is the only well producing on the subject lease from the Lower Pettit. The proposed Pirkle No. 2 is slated for completion in the Lower Pettit, only.

Existing vertical wells in the field are normally abandoned at about 110 psi. Oxy's proposed horizontal well will produce to an abandonment pressure of only 57 psi. Because of the lower abandonment pressure, Oxy believes it will recover significant reserves that would not be recovered by the vertical wells in the field. In the Frost "A" zone, alone, Oxy expects to recover almost 400 million cubic feet of gas more than a comparable vertical well.

OXY'S WASTE CASE

Oxy's position, plainly stated, is that because the proposed well will have a lower abandonment pressure than any existing well in the field, it will recover gas that can not be recovered by any well at a regular location. Oxy also contends that if it is required to shut in the Pirkle No. 1 in order to be able to produce the proposed well, gas from the Carthage (Pettit, Upper) will be wasted.

Alex McCoy, an engineer for Oxy, presented testimony and exhibits illustrating how the proposed horizontal well will achieve a lower abandonment pressure than a comparable

vertical well. Assuming an economic limit of 75 MCFD, Mr. McCoy estimates that being able to produce the Pirkle No. 2 down to 57 psi will enable Oxy to produce an additional 372 MMCF over and above what a similarly located vertical well would ultimately recover.

Mr. Kirk Sparkman, a geologist for Oxy, presented testimony and exhibits supporting Oxy's contention that it must drill the Pirkle No. 2 at the proposed location. Mr. Sparkman presented a Frost "A" Net Pay Map (Oxy Exh. 5) that shows a 50' "thick" trending north-northwest, south-southeast along the western end of the Pirkle Unit. The thick centers on the Seagull Williamson No. 1 (see attached plat) which penetrated, but was not completed in, 58' of Lower Pettit. The logs from the Williamson No. 1 indicate that the Frost "A", at this location, is thick with good, uniform porosity and no significant tight zones. Mr. Sparkman testified that Oxy needs to drill the well close to an area of relatively thick reservoir to assure that the drainhole penetrates only productive lower Pettit and does not stray into overlying or underlying shale during drilling. Thicker cleaner reservoir, according to Mr. Sparkman, will yield a better well.

OXY'S CORRELATIVE RIGHTS CASE

Mr. Martin Wirth, a landman with Oxy, testified that the proposed location was necessary because south and east of the proposed location there were low, wet areas, poultry operations and residences. Mr. Wirth did not indicate how these features precluded another drill site and presented no other evidence of these surface impediments.

Mr. McCoy estimates that there are 1031 MMCF recoverable from under the subject lease in the Lower Pettit using vertical well technology (see Oxy Exhibits 10, 13 and 14). If the estimated 372 MMCF additional recoverable reserves using horizontal well technology are considered, the total recoverable reserves in the Lower Pettit are 1,403 MMCF (1031 MMCF + 372 MMCF). Based on decline curve analysis, the Pirkle No. 1 (which produces from both the Upper and Lower Pettit) will produce another 1,053 MMCF before abandonment at 111 psi. It is not known, however, how much of that 1,053 MMCF would be produced from the Lower Pettit, only. Therefore, if one considers remaining reserves recoverable with vertical well technology, only, Oxy will have recovered its fair share from the Lower Pettit by the time the Pirkle No. 1 is abandoned (1,031 MMCF remaining share versus 1,053 MMCF at Pirkle No. 1 abandonment).

Assuming the proposed well will be drilled as a horizontal well, there will be 350 MMCF remaining recoverable reserves in the Lower Pettit when the Pirkle No. 1 is abandoned (1,403 MMCF assuming 57 psi abandonment versus 1,053 MMCF remaining in the Pirkle No. 1).

EXXON'S EVIDENCE AND POSITION

Exxon's position is basically twofold:

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1. The Frost "A" thick which Oxy claims it must drill into to obtain a successful completion in the Lower Pettit does not exist.
2. It is feasible to drill a lateral into the Lower Pettit Pirkle "A-2" zone thereby permitting Oxy to shut-in its Pirkle "A-2" zone in the Pirkle No. 1 well.

Stacey Weltner, a geologist for Exxon, showed that there is probably no significant barrier to gas flow between the Frost "A" and Frost "B" zones. Her log correlations strongly suggest that there are no significant barriers to flow between the Frost "A" and "B" zones. She also showed several logs where Oxy had perforated across the two zones suggesting that even Oxy does not believe that the two zones are hydraulically separate.

Exxon reasons that, in the absence of any real Frost "A" thick, there is no reason Oxy could not drill its Pirkle No. 2 within that area of the lease that would be lease-line regular. Oxy contends that drilling the well, as Exxon would have it oriented, would bring it too close to the Pirkle Unit No. 3 (see attached plat) well which logged several tight zones in the Lower Pettit. As discussed earlier, Oxy believes it must drill the Pirkle No. 2 in the thickest and cleanest Lower Pettit section possible.

Exxon's drilling engineer, Mr. Robert Mefford, presented evidence that showed Oxy's chance of mechanical success for the proposed drainhole was 75%. He also testified that Oxy could drill, for an additional \$100,000, a sidetrack to the Pirkle "A-2" with a 90% chance of mechanical success. Mr. Herman Acuna, engineer, testified that the sidetrack would be economical. The development costs would increase only from 0.31 \$/MCF to 0.40 \$/MCF.

EXAMINER'S OPINION

The examiners believe that Oxy is entitled to an exception to Rule 38, based on confiscation, and that it should be permitted to drill the Pirkle No. 2 anywhere on the subject lease that is lease-line regular.

It was undisputed that Oxy will not be able to recover 350 MMCF if it is not permitted to drill a horizontal well on the lease. Therefore, an exception to Rule 38 is necessary. However, Oxy does not need a well at the requested location to recover its fair share.

The examiners do not believe that the Frost "A" and "B" zones are hydraulically separate as Oxy contends. The electric logs and completion data from wells in the area simply do not support that contention. Accordingly, there is no Frost "A" thick for Oxy to target in drilling the horizontal well.

It was undisputed that there will be significant drainage from off-lease if Oxy succeeds in producing the proposed well down to an abandonment pressure of 57 psi. Oxy did not produce any evidence suggesting that the proposed location was the only location at which it could get the remainder of its fair share other than the evidence of a Frost "A" thick. In fact, Exxon demonstrated that a lease-line regular location would be feasible and would allow Oxy to recover its share of hydrocarbons from the Lower Pettit.

Considering the potential for draining adjacent leases and that the proposed location is not the only location at which Oxy could recover the remainder of its fair share in the Lower Pettit, the proposed location is not reasonable. If permitted to drill a horizontal well on the lease, Oxy should be restricted to locations on the lease that are lease-line regular as shown on the hatched area on Exxon Exhibit No. 2 and the attached plat. In this manner, Oxy will be permitted to recover its fair share and drainage of adjacent leases will be minimized.

Oxy argues that unless the proposed location is granted, there will be waste. This argument is flawed. Waste only occurs if, due to some unusual surface or subsurface condition, there are no other regular locations from which the gas may be recovered. Adjacent operators could just as easily drill horizontal wells at regular locations and recover the gas that Oxy plans on recovering with its horizontal well. Moreover, neither the Frost "A" thick nor the abandonment pressure of 57 psi constitute unusual conditions not found elsewhere in the reservoir.

FINDINGS OF FACT

1. Notice of hearing was given on May 9, 1995, to all designated operators, lessees of record of 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. Oxy USA, Inc. ("applicant") has applied on Form W-1 for a permit to drill Well No. 2 on the 640 acre Pirkle (029994) Lease ("subject lease" and "subject well"). Applicant proposes to drill its well at a location 408' from the nearest lease line and 2424' from the nearest well. Applicant has applied for completion of its proposed well in the Carthage (Pettit, Lower Gas) Field ("Lower Pettit"), having spacing rules of 1320' lease-line and 3960' between-well spacing on 640 acres. The Pirkle No. 1 is the only existing well in the applied-for field on the subject lease and is commingled with the Carthage (Pettit, Upper) Field ("Upper Pettit").
3. There are 1,031 MMCF remaining reserves recoverable from under the lease in the Lower Pettit using vertical well technology, only. The Pirkle No. 1, a vertical well which produces from both the Lower Pettit and a separate Commission designated field, the Upper Pettit, will recover 1,053 MMCF before it is abandoned at 111 psi. It is not known how much of the remaining 1,053 MMCF in the Pirkle No. 1 will

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be produced from the Lower Pettit and how much will come from the Upper Pettit. If the Pirkle No. 2 is drilled as a horizontal well, the subject lease will yield, from the Lower Pettit, 1,403 MMCF before the Pirkle No. 2 is abandoned at 57 psi.

4. The applicant will be prevented from recovering at least 350 MMCF of its share of hydrocarbons in the Lower Pettit unless it is permitted to drill a horizontal well on the subject lease.
5. There are no unique surface or subsurface conditions on or under the lease that would require the Pirkle No. 2 to be drilled only where proposed.
 - a. The Frost "A" and the Frost "B" zones of the Lower Pettit are not hydraulically separate.
 - b. An abandonment pressure of 57 psi could be achieved at any lease line regular location on the lease.
6. The applicant's proposed location is not reasonable. Any lease-line regular location on the subject lease is reasonable.
 - a. Where proposed, the Pirkle No. 2 will cause substantial drainage of surrounding leases.
 - b. There is no credible evidence that surface impediments would preclude the drilling of a well in that area of the subject lease that is regular with respect to adjacent lease lines.
 - c. Lease-line regular locations on the subject lease afford the applicant a reasonable opportunity to recover its fair share.

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. Exceptions to Statewide Rules 37 and 38 are necessary to prevent confiscation.
4. Exceptions to Statewide Rules 37 and 38 are not necessary to prevent waste.

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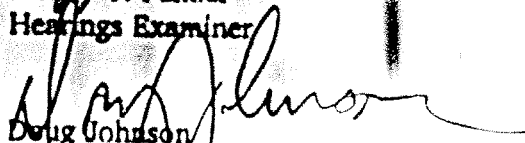
RECOMMENDATION

The examiner's recommend that the above findings and conclusions be adopted and that the applicant, Oxy USA, Inc., be permitted to drill a horizontal well at any location on the lease that is regular with respect to adjacent lease lines.

Respectfully submitted,



Jeffrey T. Pender
Hearings Examiner


Doug Johnson
Technical Examiner

JTP/bjw