BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 24, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc. for two non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 120-acre non-standard gas proration units in the Eumont Gas Pool, Lea County, New Mexico, the first to comprise the E/2 SE/4 of Section 30 and the NE/4 NE/4 of Section 31, Township 31 South, Range 36 East, to be dedicated to its J. K. Rector Well No. 2, located in Unit P of said Section 30. The second unit would comprise the W/2 SE/4 of Section 30 and the NW/4 NE/4 of Section 31, Township 21 South, Range 36 East, and would be dedicated to its J. K. Rector Well No. 3 located in Unit J of said Section 30. CASE 2674

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2674.

MR. DURRETT: Application of Texaco Inc. for two non-standard gas proration units, Lea County, New Mexico.

MR. KELLY: Booker Kelly, Gilbert, White and Gilbert for Texaco. Mr. Black has already been sworn.

MR. DURRETT: You are under oath, Mr. Black.

(Whereupon, Applicant's Exhibits 1, 2 & 3 marked for identification.)

C. R. BLACK

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q For the record, would you state your name, employer, and position?

A I am employed by Texaco Inc., as Division Proration Engineer, and C. R. Black out of Midland, Texas.

Q Would you explain to the Commission what Texaco seeks in this application?

A This is the application for two non-standard 120-acre proration units in the Eumont Gas Field to be dedicated to the Texaco J. K. Rector Well No. 2 and J. K. Rector Well No. 3.

Q Refer to Exhibit 1 and explain that to the Commission.

A Exhibit No. 1 is an ownership map showing the area immediately surrounding the Texaco J. K. Rector lease. The subject lease is bordered in yellow and Well No. 4 is circled in red. This is a well currently completing or producing from the Eumont Gas reservoir. However, Texaco proposes to abandon this well and re-assign its acreage to the other two Eumont gas wells on the lease. I would like to correct myself there. I say currently producing from the Eumont Gas reservoir. This well is logged off with water and it is necessary to continually swab this water off in order to maintain production from this well.

Q In this area, the standard unit is 640 acres?

A That is correct. The standard unit for the Eumont Gas Field is 640 acres.

Q Could you explain to the Commission how there happened to be three gas wells on this location?

A These wells were originally completed as Eumont oil wells in the Queen or Penrose formation, and they were later plugged back into the Yates and Seven Rivers as gas wells in the Eumont Field. One well on the lease is currently, and is still completed as a Eumont oil well. This is the Rector Well No. 5.

Q Now going to Exhibit No. 2, explain that to the Commission.

A Exhibit No. 2 is a cross section through the Texaco Rector Well No. 5, Well No. 2 --

MR. UTZ: Just a moment until we get a copy of that down here.

A Excuse me. The trend of this cross section is shown on the map inserted on the right side of the cross section. It goes through the Texaco Rector Well No. 5, Well No. 2, Well No. 4, and on up into the Continental Lockhart "A" Well No. 5 and 6. This cross section shows three correlation points, the first of which is called the top of the Yates or a correlation point. There is some difference of opinion within our own geological department as to the actual top of the Yates, so therefore we refer to this as the top of the Yates correlation point. The

next correlation point is the top of the Seven Rivers, and the lower one is the top of the Queen formation.

Starting with the Continental well, Lockhart A-30 Well No. 6, it can be seen that this well was originally completed as an oil completion and that that completion was abandoned in December of 1953. The Yates and Seven Rivers formations were perforated at various perforated intervals and it is currently producing as a Eumont gas well; during 1961 it produced approximately 10,000,000 cubic feet of gas -- excuse me, 100,000,000 cubic feet of gas; and the cumulative production is approximately one billion cubic feet.

The Lockhart A-30 Well No. 5 was originally completed as a Eumont oil well. It was abandoned in April of 1951 and the Yates formation was perforated and it is producing as a Eumont gas well at this time; and during 1961 it produced approximately a hundred million cubic feet of gas.

The Texaco J. K. Rector Well No. 4 --

MR. UTZ: No. 5 is a gas well now instead of an oil well?

A The Continental No. 5 is a gas well. The Texaco Rector No. 5 is an oil well. The Texaco J. K. Rector Well No. 4 was originally completed in 1937 as an oil well in the Eumont Oil Pool. It was produced until 1952 and as of that date it had accumulated 178,000 barrels of oil. It was then re-completed as a gas well and gas sales commenced on January 7th of 1952; and

as of January 1st, 1962, it had produced 942,000,000 cubic feet of gas.

Well No. 4, in November of 1961, did cease producing gas, or we did shut it in. We noticed during an eighteen-month period prior to shutting this well in that we were obtaining an increase in water production and it got to the point that we had to continually swab this well to maintain its production. It is still capable of producing gas from the Eumont reservoir, but it must be continually swabbed. It would be capable of producing its allowable if we would move this water out of the well bore and allow the gas to enter.

The purpose of this cross section is to show that this well is not structurally low, there is no reason that we believe that water has encroached into this well and that the Eumont Gas reservoir has been watered out. We feel that the water is coming either from up the hole or down the hole on the outside of the casing. We have set a packer between the plug which was set at approximately, just above the casing shoe as is shown on the cross section. We set a packer between that plug and the perforations, and swabbed both above and below the packer and found that the plug was not leaking and that the water was apparently entering through the casing perforations.

As I say, the well is capable of producing gas if you continually swab it, but it's not economically feasible to move this water out because the cost of removing the water is more than

the revenue derived from the gas sale.

The Texaco J. K. Rector Well No. 2, next on the cross section was completed in 1934. It flowed initially 1200 barrels of oil per day. The oil completion was abandoned on April 18, 1948, and it was re-completed at that time as a gas well. The cumulative oil production from that well was 222,179 barrels of oil. Gas sales commenced on January 4th, 1952, and the cumulative gas production from this well was 533,000,000 cubic feet as of January 1st, 1962.

The J. K. Rector Well No. 5 was completed as a Eumont oil well and is still completed as a Eumont oil well. It is a marginal oil well; however, we have experienced no water production from it.

Q (By Mr. Kelly) Now, in your opinion, if this application was granted, could the allowable on Texaco Well No. 4 be produced through either 2 or 3?

A Yes, sir. The allowable that is now attributed to Well No. 4 could be produced through Wells No. 2 and 3.

Q In that regard, would you go on to Exhibit 3 and explain that exhibit?

A Exhibit No. 3 is a tabulation of the allowables and production for the three gas wells on the Texaco J. K. Rector lease. This is for the twelve-month period from September, 1961 through August of 1962. Starting with Well No. 1, you will note that September of 1961 was the only month during this twelve-month

period in which this well produced gas. As of October the 1st of 1961, this well was 20,184,000 cubic feet of gas over-produced. Therefore it has been shut in, and as of the October schedule, it is now 3,262,000 cubic feet over-produced.

MR. UTZ: How were the wells dedicated; that was on 40 acres?

A Well No. 2 only has 40 acres dedicated to it. We feel this is evidence that Well No. 2 is capable of producing in excess of its allowable and will be capable of producing the allowable for a 120-acre unit.

Well No. 3 has production for ten months during this twelve-month period, and it shows that during July and August it was shut in. On the October schedule, this well was over-produced some 11,000,000 cubic feet, so it has been shut in until the over-production is removed. It currently has 80 acres dedicated to it.

We believe that this over-production and the production capabilities of this well indicate that it will certainly produce an allowable assigned to 120 acres.

Well No. 4 only produced during September during this twelve-month period, and it has been shut in since September due to this water production.

Q (By Mr. Kelly) Now this application that Texaco is seeking would never have been necessary if there had been only say Well No. 2 or Well No. 3 drilled as a gas well on the 240

acres?

A That is correct. They were oil wells and re-completed as gas wells.

Q Were Exhibits 1, 2, and 3 prepared by you or under your direction?

A They were.

MR. KELLY: We move the introduction of Exhibits 1, 2, and 3.

MR. UTZ: Without objection, Exhibits 1, 2, and 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1, 2, and 3 admitted in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q What is the status of Well No. 1?

A Well No. 1 has been plugged and abandoned.

Q It's plugged and abandoned. What was it plugged and abandoned from?

A It was producing as a Eumont oil well and it was plugged and abandoned after these other wells were converted to gas wells and therefore it was not converted to a gas well.

Q Do you have any evidence that that well would be capable of producing gas?

A We actually had no test in the gas section of the Eumont to substantiate the fact that it was capable of producing gas. However, the acreage that is assigned or on which that well is

located has been assigned to Well No. 3 and it's offset three ways by gas producers. We certainly feel it is reasonable to assume --

Q What are the gas producers it is offset by?

A The Continental "A" No. 1 immediately to the north, the Texaco Rector No. 3 to the west, the Texaco Rector No. 2 to the south, and the Humble State "B" No. 1 to the northeast.

Q How about the Rector and the Late Oil Company wells south of these two units? Are they producing from the Eumont Gas?

A The Late Oil Company No. 1 located in the Southwest Quarter of that quarter section is completed in the Eumont Gas Pool.

Q In regards to your No. 4 which produces water, did I understand you to say that you think the water is coming into the perforations vertically behind the casing?

A Yes, sir. Certainly there are two possibilities, it's either entering as a casing leak or entering behind the casing into the perforations. The reason we do not feel it is a casing leak, we feel that if it was, we would have noticed a very sharp increase and no water production, and in the next month you would have water production; because we have experienced casing leaks in this general area somewhat to the north of this, and normally they occur opposite a prolific water producing zone, therefore you get an immediate water supply into the well bore. We did

experience a gradual increase in water production. We have one theory, whether it's actual fact or not, we feel that -- this well was completed in '37, we feel probably regular cement was used in completing this well, not a sulphate resistant cement. There is sulphur water present in the area, and possibly the cement has deteriorated to the extent it would allow communication behind the pipe. A remedial work study has been completed on this well, and we find it would cost an estimated seven to ten thousand dollars at the minimum to go in and return the well to top allowable.

First of all, we would have to run a tracer survey to determine where the water is coming from. Therefore, in order to avoid what we would term an unnecessary expenditure, we applied for the subject application.

Q Do you intend to plug and abandon the well?

A Yes, sir, if the application is approved we will plug and abandon the well in accordance with the Commission rules and regulations.

Q Pull the casing?

A I'm not sure whether the casing will be pulled. If it is plugged and the casing is pulled, it will certainly be plugged in such a manner that it will comply with the Commission rules and protect --

Q When you plug it, you believe that you will stop your vertical communication of the water that might exist behind the

casing?

A Yes, sir. We would certainly cover the producing formation with cement.

MR. UTZ: Any other questions of the witness? The witness may be excused.

(Witness excused.)

MR. UTZ: Any other statements in this case? The case will be taken under advisement.

* * * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in stenotype, and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 19th day of November, 1962, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2674, heard by me on Oct. 24, 1962.

....., Examiner
New Mexico Oil Conservation Commission