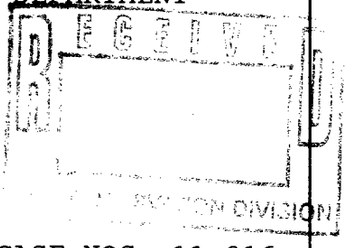
STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	
IN THE MATTER OF CASE NO. 11,016 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-5353-P, WHICH ORDER CREATED THE NORTH TEAGUE-TUBB ASSOCIATED POOL, LEA COUNTY, NEW MEXICO, AND PROMULGATED TEMPORARY SPECIAL POOL RULES	CASE NOS. 11,016
IN THE MATTER OF CASE NO. 11,017 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-5353-Q, WHICH ORDER RECLASSIFIED THE NORTH TEAGUE LOWER PADDOCK-BLINEBRY GAS POOL, LEA COUNTY, NEW MEXICO, AND PROMULGATED TEMPORARY SPECIAL POOL RULES	11,017
IN THE MATTER OF CASE NO. 11,018 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-10,199, WHICH ORDER CREATED THE NORTH TEAGUE DRINKARD-ABO POOL, LEA COUNTY, NEW MEXICO, AND PROMULGATED TEMPORARY SPECIAL POOL RULES	and 11,~~108~~ 018 (Consolidated)

REPORTER'S TRANSCRIPT OF PROCEEDINGS
EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

May 16th, 1996
Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, May 16th, 1996, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

May 16th, 1996
Examiner Hearing
CASE NOS. 11,106, 11,017 and 11,018 (Consolidated)

* * *

E X H I B I T S

Applicant's	Identified	Admitted
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* * *

A P P E A R A N C E S

FOR TEXACO PRODUCTION AND EXPLORATION, INC.:

CAMPBELL, CARR, BERGE and SHERIDAN, P.A.
Suite 1 - 110 N. Guadalupe
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 10:00 a.m.:

EXAMINER CATANACH: At this time I'll call Case Number 11,016, which is in the matter of Case 11,016 being reopened pursuant to the provisions of Division Order Number R-5353-P, which order created the North Teague-Tubb Associated Pool, Lea County, New Mexico.

Are there appearances in this case?

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr, Berge and Sheridan.

We represent Texaco Exploration and Production, Inc., in each of the three cases that deal with the development of the North Teague area.

I would therefore ask that at this time this case be consolidated for the purposes of hearing with Case 11,017 and 11,018. They are interrelated, they were presented together initially.

As you may recall, the cases were consolidated, and at the time of the original hearings there was some confusion about what zone certain wells were completed in, and these three orders basically sorted all of that out and adopted temporary rules for each of these three pools.

For that reason, we intend to make one presentation today and would ask that the cases be

consolidated.

EXAMINER CATANACH: Okay, at this time I'll call Case 11,017, in the matter of Case Number 11,017 being reopened pursuant to the provisions of Division Order Number R-5353-Q, which order reclassified the North Teague Lower Paddock-Blinebry Gas Pool, Lea County, New Mexico,

and Case 11,018, which is in the matter of Case 11,018 being reopened pursuant to the provisions of Division Order No. R-10,199, which order created the North Teague Drinkard-Abo Pool, Lea County, New Mexico.

Are there additional appearances in any of these three cases?

Okay.

MR. CARR: Mr. Examiner, I have one witness.

EXAMINER CATANACH: Okay, will the witness please stand to be sworn in at this time?

(Thereupon, the witness was sworn.)

CHARLES R. WOLLE,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your name for the record, please?

A. Yes, my name is Charles R. Wolle.

Q. Would you spell your last name, please?

A. W-o-l-l-e.

Q. Where do you reside?

A. I reside in Midland, Texas.

Q. By whom are you employed?

A. I'm employed by Texaco Exploration and Production, Inc.

Q. And what is your current position with Texaco?

A. I'm a reservoir engineer in the North Hobbs Asset Team.

Q. Mr. Wolle, have you previously testified before the New Mexico Oil Conservation Division?

A. Yes, I have.

Q. At the time of that testimony, were your credentials as an expert in petroleum engineering matters accepted and made a matter of record?

A. Yes, they were.

Q. Have you studied the performance characteristics of wells in each of the subject pools since the adoption of temporary rules for those pools?

A. Yes.

Q. And are you prepared to present the results of that study to Mr. Catanach here today?

A. Yes, I am.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Carr) Initially, I think it would be helpful if you would review when the special pool rules were adopted for each of these pools and basically what those pool rules provided.

A. Case Number 11,016, the North Teague-Tubb Associated Pool, Order Number R-5353-P was adopted September 26th, 1994, created the pool, adopted a special gas-oil ratio of 6000 cubic feet per barrel.

Case Number 11,017, the North Teague Lower Paddock-Blinebry Associated Pool, Order Number R-5353-Q, adopted September 26th, 1994, adopted a special GOR of 6000 cubic feet per barrel.

Case Number 11,018, the North Teague Drinkard-Abo Pool, Order Number R-10,199, also adopted September 26th, 1994, created the pool and adopted a special GOR of 10,000 cubic feet per barrel.

Q. Mr. Wolle, would you first just identify Exhibit Number 1 for the Examiner?

A. Exhibit Number 1 is an orientation plat showing the approximate location of the Teague North field. It's in Lea County, approximately midway between Hobbs and Jal.

Q. Let's go to Exhibit Number 2. Would you identify this, please?

A. Exhibit Number 2 is an exhibit, a map showing the

top of the Abo structure -- It's a structure map showing the top of the Abo structure.

The areas outlined in yellow, or highlighted in yellow, are Texaco-owned and operated acreage. The Drinkard-Abo wells are indicated in blue.

Texaco is the operator of eight wells in this pool. Samedan is the operator of one well in this pool, up on the northern edge, and their well -- and I'll refer to this -- or this will show up on some following maps. Their well was tested in the Drinkard-Abo, in the Tubb and in the Blinebry, with a low-volume producer in each of those zones. They earlier this year made application for downhole commingling of all three zones in that well.

The structure here is basically a circular structure, more or less centered on the northwest quarter of Section 9.

At the time of the original pooled hearing, only two wells had been completed. They were the G.W. Sims Number 1, which is in the northeast quarter of Section 9, and the F.B. Davis Number 1, in the northeast quarter of Section 8.

Q. Let's go now to what has been marked Texaco Exhibit Number 3. Can you identify and review that for Mr. Catanach?

A. Exhibit Number 3 is a structure map on the Tubb

structure.

Again, Texaco acreage is highlighted in yellow. The Tubb producing wells are shown in green circles.

Texaco operates eight wells. Again, Samedan operates the one well in that lease that I discussed earlier.

You'll note that in the lower left portion of this map there's a well identified as WD-2; that has been a Tubb producer in the past. It was completed in 1981. It was subsequently converted to a water disposal well in the San Andres, in 1988. It is no longer a producing well in the Tubb.

Again, the Tubb structure is basically a circular feature, again, with a high more or less centered over the northwest quarter of Section 9.

Q. Let's move on now to Exhibit Number 4.

A. Exhibit Number 4 is a structure map on the Blinebry structure. The Blinebry producing wells are highlighted -- are indicated by red circles. Texaco has nine wells we operate, and again the Samedan well to the north.

Again, I would note that the well in the southwest portion of the plat, WD-1, that was completed in the Blinebry in 1982 and a low-volume producer. It was converted to a water disposal well in the San Andres in

1985 and no longer produces from the Blinebry.

The Blinebry, again, is a basically circular structure with the high being approximately over the northwest quarter of Section 9.

Q. Let's move on now to the production graphs. I'd like you to first go to Exhibit 5 and explain what this is and basically what it's designed to show.

A. Exhibit 5 is a production plot of all the Texaco wells in the Teague North Drinkard-Abo Pool. The oil production is indicated by the green curve, water production by the dark blue curve, gas production by the red curve, and GOR by the light blue curve.

As you can see, the oil has been more or less stable in the 100-, 200-barrel-a-day range. The gas production has been in the -- oh, plus or minus 4-million-a-day range. It has been declining slightly.

Of significance, the GOR has been quite stable through this period, and shows no indication of any abnormal increase.

Q. What conclusions can you draw from this information concerning the gas-oil ratio?

A. We've had no operational problems with the GOR, and since there is no increase in the GOR, we see that there is no waste of reservoir energy occurring.

Q. Let's move now to Exhibit Number 6. What is

this?

A. Exhibit Number 6 is a production plot. Again, all of the Texaco wells in the North Teague-Tubb Associated Pool. Again, oil production is shown in green, water production shown in dark blue, gas production in red and GOR in light blue.

Up until the last several months, the oil production had been stable in the plus or minus hundred-barrel-a-day range. It's down slightly in the last month or so. The gas production has been on a decline for about the last nine months, and the GOR has declined more or less in conjunction with the decrease in the gas production rate.

Q. Mr. Wolle, is continuing the 6000-to-1 gas-oil ratio for this pool justified, in your opinion, based on the performance of wells in the pool?

A. Yes, it is.

Q. Do you see any potential for reservoir damage by continuing on a permanent basis the 6000-to-1 GOR for the North Teague-Tubb Associated Pool?

A. No, I do not.

Q. Let's go to Exhibit Number 7. Will you identify and review that?

A. Exhibit Number 7 is a production plot of all the Texaco wells in the North Teague Lower Paddock-Blinebry

Associated Pool, again, using the same color scheme, oil production in green, water production dark blue, gas production in red, and GOR in light blue.

The oil production has been fairly constant in the plus or minus 100-barrel-a-day range. Gas production has been pretty constant around 2 million cubic feet a day. And the GOR is fairly consistent in the 20,000 range. It's been dropping off a little in the last few months.

Q. Again, looking at this production information, do you believe it would be appropriate to continue the 6000-to-1 gas-oil ratio for this pool on a permanent basis?

A. Yes, I do.

Q. By doing this, do you see any potential for reservoir harm?

A. No, I do not.

Q. Let's go to Exhibit Number 7 -- I'm sorry, Exhibit Number 8. Would you identify that, please?

A. Yes, Exhibit Number 8 is a tabulation of wells by pool, showing the lease and well name, current status, recent test data and a cumulative production.

One of the things that's interesting to note here, there is a wide variation from well to well in any of the pools, and that's basically related to the structural position of the wells in the pool, but there are some higher gas producers and some higher oil producers there.

But there's a wide variety or a wide variation from well to well.

Q. What does this exhibit actually show? Why is it in with this?

A. It's included to show that there is a variation between wells and their type of production and to -- Because of that variation, it's appropriate we keep the current rules on a permanent basis.

Q. With this wide variation and with the gas-oil ratios as are provided in the special pool rules, is Texaco able to effectively and efficiently produce the reserves that are in this reservoir?

A. Yes, we are.

Q. And you can do that in compliance with the temporary rules?

A. Yes, sir.

Q. And you see no potential for reservoir harm by continuing these temporary rules on a permanent basis; is that right?

A. That is correct.

Q. Are you recommending that the temporary pool rules for each of these pools be continued on a permanent basis?

A. Yes, that is my recommendation.

Q. Will adoption of these rules on a permanent basis

be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. Were Exhibits 1 through 8 either prepared by you or compiled at your direction?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission into evidence of Texaco Exhibits 1 through 8.

EXAMINER CATANACH: Exhibits 1 though 8 will be admitted as evidence.

MR. CARR: And that concludes my direct examination of Mr. Wolle.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Wolle, the drive mechanism in each of these reservoirs is what?

A. Solution gas drive.

Q. In all three reservoirs?

A. Yes, sir.

Q. Is there any indication in any of these reservoirs of the presence of a gas cap?

A. No, sir, we've not seen any indication of that.

Q. I'm curious, and I don't recall why we initially classified the Teague as an associated pool. That's generally -- an associated pool is generally associated

with an oil column and a gas cap. Do you recall why we might have done that, or why you asked for that?

A. I did not testify at the original hearing. I was not involved with this project at the time. But in reviewing the notes, the producing characteristics of the pool were more like producing characteristics from associated pools, and associated pools in the area, as I recall.

Q. Okay. We did this same thing, I see, for the Paddock-Blinebry Pool.

A. Yes, sir.

Q. I may have to go back and take a look and see why we did that.

The only real special pool rule in each of these is the GOR; is that correct?

A. Yes, sir, that's correct.

Q. It looks like -- well, there is a -- what you've termed a gas well in the Paddock-Blinebry, the --

A. -- B.F. Harrison "B" Number 5.

Q. Right. And I guess that's based on the producing GOR?

A. Yes, sir, that's correct. There's also a gas well in the Tubb, the B.F. Harrison "B" Number 25. Again, the same reason there.

Q. Do you have an explanation as to why those wells

are more or less gas producers?

A. They're structurally high -- the higher wells. I won't say the highest, I'd have to check on that. But they're high on the structure.

Let me make one further comment about Exhibit Number 8, if I may, in the Blinebry. You note the B.F. Harrison "B" Number 26 is shut in. That well has been recompleted uphole. And in the Drinkard-Abo the B.F. Harrison "C" Number 3, also shown as shut in, that has been recompleted uphole. Those wells are not shown in the appropriate color code on the structure maps for those zones.

Q. Has this structure been fully developed?

A. If it's not fully developed, we think it's close to it. There may possibly be another location, but it's -- The production from the outermost wells is kind of borderline as far as carrying it out any farther, and we think we've pretty well got it developed. I wouldn't rule out the possibility of another well, but it's not a high likelihood in my opinion at this time.

Q. The production data shown on Exhibit Number 8, you show test data. When was that test conducted? Do you know?

A. Most if not all of this was in March of 1996.

Q. Those production figures indicate that most of

these wells are probably marginal wells at this point in time; is that correct? As far as oil production?

A. Yes, sir, that's essentially correct.

Q. Do you know -- Do you have an idea what the ultimate recovery from these reservoirs will be in terms of recovery factors, Mr. Wolle?

A. No, sir, I don't have that information.

Q. Did Texaco ever run any PVT analysis on this?

A. I can't give you a definite answer on that. I'm not sure one way or the other.

Q. On your graphic displays, now, these are -- these represent all the wells combined in the field; is that correct?

A. All the Texaco wells. We did not have all the information on the Samedan well, so I just included the Texaco well.

Q. If you were producing these wells at too high a gas-oil ratio, what would you expect to see from this data?

A. I would expect to see the GOR increasing at a fairly rapid rate.

Q. The fact that the GOR is fairly stable in this well -- in these wells, makes you comfortable that this is the appropriate GOR for the pools?

A. Yes, sir.

EXAMINER CATANACH: That's all the questions I

have of this witness.

MR. CARR: That concludes our presentation in this case, Mr. Catanach.

EXAMINER CATANACH: There being nothing further in these cases, Cases 11,016, 11,017 and 11,018 will be taken under advisement.

(Thereupon, these proceedings were concluded at 10:24 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11016, 11017, 11018 heard by me on May 16 1996.

David R. Catanach, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL May 18th, 1996.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998