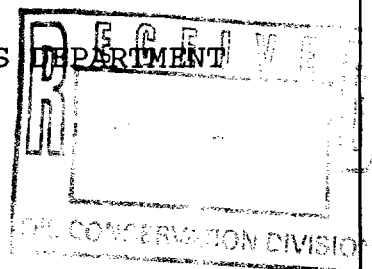


STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION



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 )

018  
and 11,108  
(Consolidated)

ORIGINAL

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.

\* \* \*

STEVEN T. BRENNER, CCR  
(505) 989-9317

## I N D E X

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

PAGE

## APPLICANT'S WITNESSES:

CHARLES R. WOLLE (Engineer)

Direct Examination by Mr. Carr

4

Examination by Examiner Catanach

13

## REPORTER'S CERTIFICATE

18

\* \* \*

## E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	6	13
Exhibit 2	6	13
Exhibit 3	7	13
Exhibit 4	8	13
Exhibit 5	9	13
Exhibit 6	10	13
Exhibit 7	10	13
Exhibit 8	11	13

\* \* \*

## 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

\* \* \*

STEVEN T. BRENNER, CCR  
 (505) 989-9317

1           WHEREUPON, the following proceedings were had at  
2   10:00 a.m.:

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

8           Are there appearances in this case?

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

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

15           I would therefore ask that at this time this case  
16   be consolidated for the purposes of hearing with Case  
17   11,017 and 11,018. They are interrelated, they were  
18   presented together initially.

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

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

STEVEN T. BRENNER, CCR  
(505) 989-9317

1 consolidated.

2 EXAMINER CATANACH: Okay, at this time I'll call  
3 Case 11,017, in the matter of Case Number 11,017 being  
4 reopened pursuant to the provisions of Division Order  
5 Number R-5353-Q, which order reclassified the North Teague  
6 Lower Paddock-Blinebry Gas Pool, Lea County, New Mexico,  
7 and Case 11,018, which is in the matter of Case  
8 11,018 being reopened pursuant to the provisions of  
9 Division Order No. R-10,199, which order created the North  
10 Teague Drinkard-Abo Pool, Lea County, New Mexico.

11 Are there additional appearances in any of these  
12 three cases?

13 Okay.

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

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

17 (Thereupon, the witness was sworn.)

18 CHARLES R. WOLLE,  
19 the witness herein, after having been first duly sworn upon  
20 his oath, was examined and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. CARR:

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

24 A. Yes, my name is Charles R. Wollé.

25 Q. Would you spell your last name, please?

STEVEN T. BRENNER, CCR  
(505) 989-9317

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

2 Q. Where do you reside?

3 A. I reside in Midland, Texas.

4 Q. By whom are you employed?

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

7 Q. And what is your current position with Texaco?

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

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

12 A. Yes, I have.

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

16 A. Yes, they were.

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

20 A. Yes.

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

23 A. Yes, I am.

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

1 EXAMINER CATANACH: They are.

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

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

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

14 Case Number 11,018, the North Teague Drinkard-Abo  
15 Pool, Order Number R-10,199, also adopted September 26th,  
16 1994, created the pool and adopted a special GOR of 10,000  
17 cubic feet per barrel.

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

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

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

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

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

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

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

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

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

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

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

1 structure.

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

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

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

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

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

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

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



1 1985 and no longer produces from the Blinebry.

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

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

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

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

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

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

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

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

1 this?

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

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

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

17 A. Yes, it is.

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

21 A. No, I do not.

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

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

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

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

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

12 A. Yes, I do.

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

15 A. No, I do not.

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

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

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

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

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

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

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

13 A. Yes, we are.

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

16 A. Yes, sir.

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

20 A. That is correct.

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

24 A. Yes, that is my recommendation.

25 Q. Will adoption of these rules on a permanent basis

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

3 A. Yes.

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

6 A. Yes, they were.

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

9 EXAMINER CATANACH: Exhibits 1 through 8 will be  
10 admitted as evidence.

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

13 EXAMINATION

14 BY EXAMINER CATANACH:

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

17 A. Solution gas drive.

18 Q. In all three reservoirs?

19 A. Yes, sir.

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

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

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

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

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

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

11 A. Yes, sir.

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

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

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

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

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

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

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

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

1 are more or less gas producers?

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

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

13 Q. Has this structure been fully developed?

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

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

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

25 Q. Those production figures indicate that most of

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

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

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

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

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

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

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

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

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

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

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

24 A. Yes, sir.

25 EXAMINER CATANACH: That's all the questions I



1 have of this witness.

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

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

7 (Thereupon, these proceedings were concluded at  
8 10:24 a.m.)

9 \* \* \*

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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, 1956.  
David H. Catanach, Examiner  
Oil Conservation Division

STEVEN T. BRENNER, CCR  
(505) 989-9317

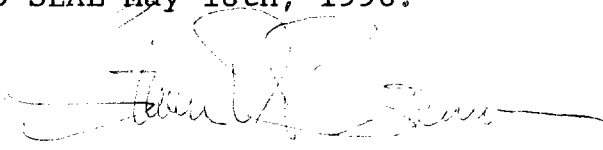
## CERTIFICATE OF REPORTER

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

STEVEN T. BRENNER, CCR  
(505) 989-9317



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

September 27, 1994

KELLAHIN AND KELLAHIN  
Attorneys at Law  
P. O. Drawer 2265  
Santa Fe, New Mexico 87504

RE: CASE NO. 11016  
ORDER NO. R-5353-P

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

*Sally E. Martinez*  
Sally E. Martinez  
Administrative Secretary

cc: BLM - Carlsbad