

**NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING
SANTA FE, NEW MEXICO
APRIL 30, 1992 -- 8:15 A.M.**

NAME	REPRESENTING	LOCATION
Richard Masterson	Southwest Royalties	MIDLAND TEXAS
Jon P. Tate	Southwest Royalties	Midland, TX
W. Kellbin	Kellbin Kellbin, Attorney	Santa Fe
Jeff Sandy, Jr.	Newburg Exploration Company	
William F. Day	Samuel, Day, Eng + Under	Santa Fe
John L. Thomas	MARALO, INC.	MIDLAND
Mark Whelan	MARALO INC.	Midland, TX.
Ernie Z. Conoc	Loose Canan Plus Prod	Artesia
Michael R. Bend	YATES PET. CORP	ARTESIA
James Bruce	Hinkle Law Firm	ABQ
Dave Cromwell	Yates Petroleum	Artesia
Brian Collins	Yates Petroleum Corp	Artesia

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

NEW MEXICO OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
STATE OF NEW MEXICO
CASE NO. 3344

IN THE MATTER OF:

The Application of Texaco, Inc.,
for Amendment of Division Order
No. R-3007, Lea County, New Mexico.

BEFORE:

DAVID R. CATANACH
Hearing Examiner
State Land Office Building
April 30, 1992

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

ORIGINAL

A P P E A R A N C E S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

FOR THE APPLICANT:

CAMPBELL, CARR, BERGE & SHERIDAN, P.A.
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
BY: WILLIAM F. CARR, ESQ.

1 EXAMINER CATANACH: We'll call the
2 hearing to order for Docket No. 13-92. We'll
3 call the continuances first this morning. Case
4 10459 will be readvertised and continued to May
5 14, and Case 10323 will be continued to May 14.

6 And at this time we'll call Case 3344,
7 Application of Texaco, Inc., for amendment of
8 Division Order No. R-3007, Lea County, New
9 Mexico.

10 Are there any appearances in this
11 case?

12 MR. CARR: May it please the Examiner,
13 my name is William F. Carr with the law firm of
14 Campbell, Carr, Berge & Sheridan of Santa Fe.
15 This case came on for hearing on April 2.
16 Shortly before that hearing date, it was
17 discovered there were two individuals named Tommy
18 Todd to whom notice had to be given; only one had
19 been notified.

20 The case was presented at that time and
21 continued for four weeks so that notice could be
22 given to Mr. Todd. That has been done. At this
23 time I would like to offer an affidavit
24 confirming that notice has been given of this
25 application, as required by Division rules.

1 And also I would tender at this time a
2 proposed order from Texaco Exploration and
3 Production. You requested we submit this order
4 at the April 2 hearing.

5 EXAMINER CATANACH: Okay. Your
6 affidavit and your proposed order will be
7 admitted in this case.

8 MR. CARR: We have nothing further in
9 this matter.

10 EXAMINER CATANACH: There being nothing
11 further, Case 3344 will be taken under
12 advisement.

13 [And the proceedings were concluded.]

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 Examination of Case No. 3344,
heard by me on April 30, 1992.
David R. Catant Examiner
Oil Conservation Division

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

NEW MEXICO OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
STATE OF NEW MEXICO
CASE NO. 3344

IN THE MATTER OF:

The Application of Texaco, Inc.,
for amendment of Division Order
No. R-3007, Lea County, New Mexico.

BEFORE:

DAVID R. CATANACH
Hearing Examiner
State Land Office Building
April 2, 1992

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

ORIGINAL

A P P E A R A N C E S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.
General Counsel
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

CAMPBELL, CARR, BERGE & SHERIDAN, P.A.
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
BY: WILLIAM F. CARR, ESQ.

I N D E X

1		
2		
3		Page Number
4		
5	Appearances	2
6		
7	WITNESSES FOR THE APPLICANT:	
8		
9	1. RONALD W. LANNING	
10	Examination by Mr. Carr	6
11	Examination by Examiner Catanach	12
12	Examination by Mr. Stovall	14
13		
14	2. JULIE GIBBS	
15	Examination by Mr. Carr	16
16	Examination by Examiner Catanach	21
17		
18		
19	Certificate of Reporter	25
20		
21		
22		
23		
24		
25		

E X H I B I T S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Page Identified

Exhibit No. 1	8
Exhibit No. 2	9
Exhibit No. 3	9
Exhibit No. 4	11
Exhibit No. 5	18
Exhibit No. 6	18
Exhibit No. 7	18

1 EXAMINER CATANACH: At this time we'll
2 call Case 3344.

3 MR. STOVALL: Application of Texaco,
4 Inc., for amendment of Division Order No. R-3007,
5 Lea County, New Mexico.

6 EXAMINER CATANACH: Are there
7 appearances in this case?

8 MR. CARR: May it please the Examiner,
9 my name is William F. Carr with the law firm
10 Campbell, Carr, Berge & Sheridan of Santa Fe. I
11 represent Texaco, Inc., and I have two witnesses.

12 EXAMINER CATANACH: Any other
13 appearances?

14 MR. STOVALL: Witnesses please stand to
15 be sworn.

16 [The witnesses were duly sworn.]

17 MR. CARR: May it please the Examiner,
18 initially I would like to point out that Texaco,
19 Inc., has changed its name to Texaco Exploration
20 & Production, Inc. The company, other than the
21 name change, remains the same.

22 RONALD W. LANNING

23 Having been duly sworn upon his oath, was
24 examined and testified as follows:

25 EXAMINATION

1 BY MR. CARR:

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

4 A. Ronald W. Lanning.

5 Q. Where do you reside?

6 A. Denver, Colorado.

7 Q. By whom are you employed and in what
8 capacity?

9 A. I'm employed by Texaco Exploration &
10 Production, Inc., as a landman.

11 Q. Have you previously testified before
12 this Commission or Division?

13 A. No.

14 Q. Would you briefly review for Mr.
15 Catanach your educational background and
16 summarize your work experience?

17 A. I graduated from New Mexico State
18 University in 1973, bachelor of science in
19 ag. economics. For the past fifteen years, I've
20 been a landman, the last five of which have been
21 with Texaco.

22 Q. Does the geographic area of responsibility
23 for you as a landman with Texaco include the
24 portion of southeastern New Mexico involved in
25 this case?

1 A. It does.

2 Q. Are you familiar with the
3 Texaco-operated West Vacuum Unit?

4 A. Yes, sir.

5 Q. Are you familiar with the application
6 filed on behalf of Texaco in this case?

7 A. Yes.

8 Q. Could you briefly state what Texaco
9 seeks with this application?

10 A. What we would like to do is amend the
11 definition of the unitized formation in the West
12 Vacuum Unit, which was approved by Division Order
13 R-3007.

14 Q. Initially I think it would be helpful
15 if you would review for Mr. Catanach the
16 background events which have resulted in this
17 matter coming on for hearing today.

18 A. The unit was formed in 1966, approved
19 by the OCD in December of 1965. When the unit
20 became effective, twenty-three of the wells at
21 that time were completed outside the unitized
22 formation as it was defined in the unit
23 agreement.

24 This is because of a difficulty in
25 correlating the San Andres between logs and also,

1 I believe, three wells that were subsequently
2 drilled or completed out of zone. The problem
3 has been with the definition itself and not with
4 the intent of the parties.

5 Q. When was this error actually
6 discovered?

7 A. 1989.

8 Q. Now, Mr. Lanning, has all production
9 been accounted for and royalty paid as if the new
10 definition or what you're proposing today had
11 been in place throughout the operation and life
12 of this unit?

13 A. It has.

14 Q. And is the royalty common throughout
15 the unit area?

16 A. Yes.

17 Q. Let's go to what has been marked as
18 Texaco Exhibit No. 1, and I'd ask you to identify
19 that for Mr. Catanach and review it, please.

20 A. It's simply a plat of the unit itself.
21 The boundaries are outlined in orange. The wells
22 completed out of zone are marked in green. The
23 type log wells are marked in orange and purple.
24 The well marked in orange is the original type
25 log well, the State V Well No. 8, which is now

1 referred to as Unit Well No. 10.

2 And then in our new definition, we're
3 using Well No. 13, which is marked in purple.

4 Q. Texaco will call a geologist who will
5 review those type logs for us?

6 A. Yes.

7 Q. Let's move on then to Exhibit No. 2,
8 and I'd ask you to identify that for us, please.

9 A. Exhibit No. 2 is a copy of the unit
10 agreement for the West Vacuum Unit, covers
11 approximately 2,000 acres, all of which are state
12 of New Mexico minerals.

13 Q. Now, Mr. Lanning, let's move to Texaco
14 Exhibit No. 3. Could you identify that, please?

15 A. Exhibit No. 3 is a copy of letters to
16 all of the working interest owners in the unit.
17 The original letter is dated March 29, 1991, a
18 subsequent letter in July of 1991 that was sent
19 to the working interest owners from whom we had
20 not received executed amendments at that time.

21 Q. What percentage of the owners of the
22 working interest in the unit area have executed
23 the amendment and thereby agreed to the expansion
24 of the definition of vertical interval?

25 A. 99.8 percent.

1 Q. Has notice of today's hearing been
2 provided to owners who have not executed the
3 amendment?

4 A. It has with one exception.

5 Q. And who is that?

6 A. An individual named Tommy T. Todd.

7 Q. And why was notice not provided to
8 Tommy T. Todd?

9 A. There is another working interest owner
10 named Tommy E. Todd, Jr., from whom we received
11 two executed amendments. When the second one
12 came in, the name of Tommy T. Todd was
13 inadvertently marked off as having been received.

14 Q. So one person who should have been
15 notified was not notified?

16 A. That's correct.

17 Q. Has notice subsequently been provided
18 to him?

19 A. Yes, it has.

20 MR. CARR: Mr. Catanach, the notice
21 provided to Mr. Todd was mailed early this week.
22 At the end of this hearing, we're going to ask
23 you to continue the case to the hearing scheduled
24 before you on April 30. During that period of
25 time, that will allow ample time to run so that

1 Mr. Tommy T. Todd will also have received notice
2 of this proceeding and have an opportunity to
3 appear, if he should desire to do so.

4 Q. Can you identify, Mr. Lanning, what has
5 been marked as Texaco Exhibit No. 4?

6 A. Yes, sir. It's the letters that were
7 mailed to the working interest owners who had not
8 executed the amendment with the exception of
9 Tommy T. Todd.

10 Q. Advising of the hearing today?

11 A. Yes.

12 Q. Was a copy of this letter also provided
13 to the New Mexico State Land Office?

14 A. Yes, it was.

15 Q. Has Texaco reviewed this problem with
16 the Division Hobbs District Office?

17 A. Yes, sir. After we received the bulk
18 of the amendments, we reviewed it with Mr.
19 Sexton, and he advised that the matter would have
20 to come to hearing.

21 Q. You're going to be calling a geological
22 witness?

23 A. Yes, we are.

24 Q. Were Exhibits 1 through 4 either
25 prepared by you or compiled under your direction?

1 A. They were.

2 MR. CARR: Mr. Catanach, at this time
3 we move the admission of Texaco Exhibits 1
4 through 4.

5 EXAMINER CATANACH: Exhibits 1 through
6 4 will be admitted as evidence.

7 MR. CARR: That concludes my direct
8 examination of Mr. Lanning.

9 EXAMINATION

10 BY EXAMINER CATANACH:

11 Q. Mr. Lanning, is it?

12 A. Yes.

13 Q. How many various working interest
14 owners do you have in this unit, Mr. Lanning?

15 A. Almost 70. I believe it's either 67 or
16 68.

17 Q. And approximately how many royalty
18 interest owners do you have?

19 A. Just one. State of New Mexico owns all
20 of the royalty.

21 Q. Okay. Have you talked to the
22 Commissioner of Public Lands about this problem
23 and the resolution of it?

24 A. I've visited with Floyd Prando about it
25 on the telephone several months ago.

1 Q. Uh-huh.

2 A. Since the State owns all of the
3 royalty, they're going to receive all of the
4 money regardless of the situation.

5 MR. STOVALL: What you mean is it
6 doesn't matter whether these intervals are
7 unitized or not; the royalty still goes to the
8 State; right?

9 THE WITNESS: That's correct.

10 MR. STOVALL: It doesn't change their
11 percentage?

12 THE WITNESS: That's correct.

13 Q. (BY EXAMINER CATANACH:) Did Mr. Prando
14 advise you they had to do some kind of approval,
15 or did you ask him that or --

16 A. As I recall, it was just a brief
17 discussion informing him of what we were doing.
18 And they were provided notice of the hearing
19 today.

20 MR. STOVALL: Did you give them
21 anything to sign? Did you offer them anything to
22 sign or approve to change it?

23 THE WITNESS: No, sir.

24 MR. STOVALL: I would suggest that
25 might not be a bad idea, to go downstairs after

1 this hearing and talk to Mr. Prando and see if he
2 wants to sign off on anything.

3 THE WITNESS: I believe our intention
4 was to get an, in essence, a ratification from
5 the State after OCD approval.

6 MR. STOVALL: Okay.

7 THE WITNESS: And at that time all the
8 amendments and the ratification from the State
9 would be filed of record.

10 MR. STOVALL: Mr. Carr, this is not a
11 statutory unit, is it?

12 MR. CARR: No, this is not.

13 EXAMINATION

14 BY MR. STOVALL:

15 Q. Mr. Lanning, assuming that the --
16 looking at your list, you say they represent,
17 what, about 1 or 2 percent of the working
18 interest?

19 A. 1.2 percent -- excuse me, .2 percent.
20 We have approval from 99.8 percent.

21 Q. If these people don't sign this, and I
22 will say for the record that I do recognize a
23 couple of names on here as people who have not
24 signed other things at times, but if they don't
25 sign it, how do you intend to treat them or their

1 interest?

2 A. We don't anticipate anything changing.

3 Q. Because what you've said is you've
4 treated them as if it were done this way in the
5 first place; is that correct?

6 A. Yes.

7 MR. STOVALL: Mr. Carr, I assume the
8 notice, you advised of notice by regular mail --
9 was sufficient in this case; is that correct?

10 MR. CARR: We have actually provided
11 notice by certified mail to everyone. We have
12 return receipts back, actually, on everyone.
13 When we finish this up on the 30th of April, we
14 intend to provide you with an affidavit and
15 copies of all the return receipts at that time.
16 We're just waiting on the Tommy Todd matter.

17 MR. STOVALL: Okay.

18 EXAMINER CATANACH: I have no further
19 questions. The witness may be excused.

20 MR. CARR: At this time we call Julie
21 Gibbs.

22 JULIE F. GIBBS

23 Having been duly sworn upon her oath, was
24 examined and testified as follows:

25 EXAMINATION

1 BY MR. CARR:

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

4 A. Julie F. Gibbs.

5 Q. Where do you reside?

6 A. In Midland, Texas.

7 Q. By whom are you employed and in what
8 capacity?

9 A. I'm work for Texaco Exploration &
10 Production, Inc., as a geologist.

11 Q. Have you previously testified before
12 this Division?

13 A. No, I have not.

14 Q. Would you review for Mr. Catanach your
15 educational background and then briefly summarize
16 your work experience?

17 A. I graduated in 1980 from the Colorado
18 School of Mines with a bachelor's degree in
19 geological engineering, and I've worked for
20 Texaco for ten years as a geologist.

21 Q. Is the geographic area for which you're
22 responsible with Texaco include the portion of
23 Lea County which is involved in this case?

24 A. Yes, it does.

25 Q. Are you familiar with the West Vacuum

1 Unit?

2 A. Yes.

3 Q. Are you familiar with the application
4 filed in this case on behalf of Texaco?

5 A. Yes, I am.

6 MR. CARR: Are the witness'
7 qualifications acceptable?

8 EXAMINER CATANACH: They are.

9 Q. (BY MR. CARR) Have you prepared or had
10 prepared certain exhibits for presentation here
11 today?

12 A. Yes, I have.

13 Q. Before we get into those, let's refer
14 back to what has been marked as Texaco Exhibit
15 No. 1. And I would ask you, just as a point of
16 general orientation, to identify the type logs
17 that you're going to be referring to for us.

18 A. The first one will be the original type
19 log, which is now the West Vacuum Unit No. 10,
20 which is located in the northwest quarter of the
21 northwest quarter of Section 34 of Township 17
22 South, Range 34 East. And on Exhibit 1 it is
23 highlighted in orange.

24 The second one will be the West Vacuum
25 No. 13, which is located in the northeast quarter

1 of the northeast quarter of the same section, and
2 that is highlighted in pink.

3 Q. Let's go to Texaco Exhibit No. 5, the
4 log section on the No. 8 well. I'd ask you to
5 review that for the Examiner.

6 A. Exhibit No. 5 is a gamma ray neutron
7 log of the West Vacuum Unit Well No. 10, which
8 was originally the State of New Mexico V Well No.
9 8. On this exhibit we have shown which interval
10 the original definition of the unitized formation
11 included.

12 Q. Was this the original type log that was
13 used?

14 A. Yes, it is.

15 Q. I think we should probably go out of
16 order and move from Exhibit 5 to Exhibit No. 7.
17 And I'd ask you to identify that and review it at
18 this time.

19 A. Exhibit No. 7 is also a gamma ray
20 neutron log from the West Vacuum Well No. 13.
21 And on that log I have shown the expanded
22 interval for the unitized formation.

23 Q. Let's move on to your cross-section,
24 which is Exhibit No. 6. And, again, first would
25 you refer to Exhibit No. 1 and review the trace

1 for this line of cross-section for Mr. Catanach?

2 A. On Exhibit No. 1, there is a line of
3 cross-section shown in black, which extends from
4 West Vacuum No. 44 on the south, up through West
5 Vacuum No. 25, to West Vacuum No. 10, and then on
6 the eastern, northeastern corner to West Vacuum
7 No. 13.

8 Q. Why was this particular line of
9 cross-section selected?

10 A. It was selected because it includes
11 wells which are completed either the furthest
12 above the original unitized formation or below.

13 Q. So this actually includes the worst
14 offenders?

15 A. Yes, that's correct.

16 Q. Let's go to your Exhibit No. 6, the
17 cross-section, now review that.

18 A. On West Vacuum No. 44 and West Vacuum
19 No. 25, each of those were completed originally
20 as open-hole completions. And the casing was set
21 in the Queen formation, which correlates to
22 roughly 130 feet above the original definition of
23 the unitized formation.

24 The West Vacuum No. 13 was completed
25 below the original unitized formation about 290

1 feet below what was originally correlated to the
2 unitized interval. The reason for this was the
3 oil-water contact at West Vacuum Unit is at
4 approximately minus 700 feet sub-sea.

5 In the West Vacuum No. 10, the original
6 type log, this sub-sea elevation corresponds to
7 the total depth of the well. However, at the
8 West Vacuum No. 13, it is higher on the
9 structure. So the same depth, minus 700 feet
10 sub-sea, correlates to over 250 feet below the
11 top of the San Andres.

12 Q. As you look at this exhibit on the log
13 for the West Vacuum Unit No. 10, you have
14 indicated the original definition of the unitized
15 interval?

16 A. Yes.

17 Q. And then if we go to the No. 13, you've
18 shown the new interval?

19 A. Yes.

20 Q. Is the new interval, does it include
21 enough of the formation to include everything
22 that could possibly be developed in this unit?

23 A. Yes, it does.

24 Q. In your opinion, will approval of this
25 application not only making the order fit the

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

4 A. Yes, it would.

5 Q. Were Exhibits 5 through 7 prepared by
6 you?

7 A. Yes, they were.

8 MR. CARR: At this time, Mr. Catanach,
9 we move the admission of Texaco Exhibits 5, 6,
10 and 7.

11 EXAMINER CATANACH: Exhibits 5 through
12 7 will be admitted as evidence.

13 MR. CARR: That concludes my
14 examination of this witness.

15 EXAMINATION

16 BY EXAMINER CATANACH:

17 Q. Ms. Gibbs, the new unitized interval
18 takes in some of the Queen?

19 A. Yes, it does.

20 Q. And an additional interval in the San
21 Andres; is that correct?

22 A. Yes.

23 Q. So your proposed interval would run
24 from 4,004 feet; is that correct --

25 A. [Nodded.]

1 Q. -- down to 4774?

2 A. Yes. That's right.

3 MR. CARR: Mr. Catanach, the actual
4 amendment is set forth in our Exhibit 3. It
5 shows those depths.

6 Q. (BY EXAMINER CATANACH) Now, this is a
7 water-flood unit; right?

8 A. Yes, it is.

9 Q. Texaco has been producing these
10 intervals in the Queen and the lower San Andres
11 all during the unitized operations?

12 A. Yes. Many of the older wells that were
13 completed back in the early 40s were open-hole
14 completions with the casing set up in the Queen
15 formation.

16 Q. And that lower Queen is productive in
17 the area?

18 A. We don't know for certain. We know we
19 do have some injectors where it is taking water,
20 so we feel it may be producing some oil.

21 Q. How about the lower San Andres?

22 A. We have not really seen a significant
23 increase in production when we have deepened
24 wells to the minus 700 foot oil-water contact.

25 Q. On Exhibit No. 7 where would that

1 oil-water contact fall on this log section here?

2 A. On West Vacuum No. 13?

3 Q. Right.

4 A. It would be at a depth of 4739 feet.

5 Q. 4739.

6 A. Actually, the Td here, I think, is at
7 minus 735 feet.

8 Q. If there is any production in the Queen
9 and the lower San Andres, this is about the only
10 way that you're going to get it out of there;
11 right --

12 A. That's correct.

13 Q. -- through this operation?

14 A. It would not be economic to drill a
15 well just to that depth for the production we
16 would get.

17 EXAMINER CATANACH: I believe that's
18 all I have.

19 Do you want to delve into some geology,
20 Bob?

21 MR. STOVALL: I was toying with the
22 idea. No. I think I'll pass. Thanks.

23 EXAMINER CATANACH: The witness may be
24 excused.

25 Anything further in this case, Mr.

1 Carr?

2 MR. CARR: Nothing further, Mr.
3 Catanach. Texaco requests this case be continued
4 to the Examiner hearing scheduled for April 30,
5 1992.

6 EXAMINER CATANACH: This case will be
7 continued to the April 30th hearing.

8 MR. CARR: Thank you.

9 [And the proceedings were concluded.]

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. 3344,
heard by me on April 19 1992;

David R. Catanach, Examiner
Oil Conservation Division

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 23, 1965

EXAMINER HEARING

IN THE MATTER OF:)

Application of Texaco Inc. for a unit)
agreement, Lea County, New Mexico.)

Applicant, in the above-styled cause,)
seeks approval of the West Vacuum Unit Area)
comprising 2000 acres, more or less, of)
State land in Township 17 South, Range 37)
East, Lea County, New Mexico, and)

Case No. 3344 and
3345.

Application of Texaco Inc. for a waterflood)
project, Lea County, New Mexico. Applicant)
in the above-styled cause, seeks authority)
to institute a waterflood project in its)
West Vacuum Unit by the injection of water)

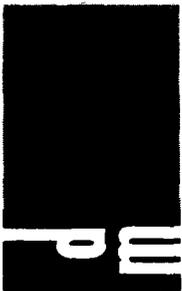
into the Grayburg-San Andres formations)
through six injection wells located in)
Sections 3 and 4, Township 18 South, Range)

BEFORE:

34 East, and Section 33 and 34, Township)
17 South, Range 34 East, Vacuum Pool, Lea)
County, New Mexico.)

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING



MR. DURRETT: Application of Texaco Incorporated for a unit agreement, Lea County, New Mexico.

MR. WHITE: If the Examiner please, Charles White of Santa Fe, attorney on behalf of the Applicant. We have one witness, Mr. Yost, to be sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 8 marked for identification.)

MR. NUTTER: Are these cases closely enough related?

MR. WHITE: Yes, sir. I was going to ask if we could have them consolidated with case 3345.

MR. NUTTER: We will call the next case, 3345.

MR. DURRETT: Application of Texaco for a waterflood project, Lea County, New Mexico.

W I L L I A M P. Y O S T, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Yost, will you state your full name, please?

A My name is William P. Yost.

Q By whom are you employed and in what capacity?

A I am employed Texaco Incorporated as a petroleum engineer.

Q Are you familiar with the subject application?

A Yes, I am.

Q What is Texaco seeking in cases 3344 and 3345?

A In the first case Texaco seeks approval of a unit agreement. In the second case Texaco seeks authorization for a waterflood project in the West Vacuum Unit.

Q For secondary recovery operations?

A For secondary recovery operations, yes.

Q Now Mr. Yost, will you testify as to Exhibit Number 1?

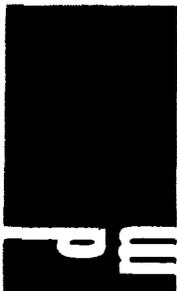
A Yes. Exhibit 1 is a plat of the over-all area outlining the proposed unit area and also indicating all properties, the operators of the properties, and the zones which have been completed within a two mile radius of the proposed unit area.

Q Does that also show the injection wells?

A Injection wells are indicated by the red triangle at each pertinent location. There are to be six of these injection wells in the initial stage and this initial stage which will be a pilot stage and this unit area consists of 2,000± acres.

Q If I'm not mistaken, in your original application didn't you say this would be a five spot.

A In the original application it was a five spot. However, since that time, this project has been re-evaluated and it appears as if an inverted nine spot would probably be



the most economical pattern. The six injection wells will be in a pilot stage. If in the event evaluation of this inverted nine spot pattern in the pilot stage indicates that a five spot pattern may be preferable, then this pattern will be converted to a five spot rather readily.

Q Now, referring to your proposed unit agreement, when did Texaco first undertake this study of the well area?

A Texaco commenced studying its property in the unit area and surrounding areas early in 1963 for the purpose of evaluating the feasibility of secondary recovery. During the course of this study it was determined that secondary recovery measures were a prospect and should be commenced in the near future. After this was determined, other operators' properties adjacent to Texaco properties were examined and it was felt that these properties were also prospective for secondary recovery and that Texaco should initiate a proposal to the operators to form a unit in this area. In the middle of 1965 a ballot letter was submitted by Texaco to these other operators requesting their approval or disapproval for further investigation under study and leading toward the study of the unit operation. All parties within the proposed area indicated an affirmative answer. From there Texaco conducted further work and arrived at various perimeters in which to unitize. Correspondence was mailed to these pertinent operators for their comments and

approval or disapproval and after negotiations with these other operators, all perimeters were agreed upon and this unit agreement was circulated to these people for that application.

Q Is the unit agreement marked Exhibit 2?

A Exhibit 2 is the unit agreement.

Q Is it the standard API form of agreement?

A Yes. This is a model API standard form revised to meet the New Mexico State Land requirements and applicable to these specific areas.

Q Are there any amendments to be made to this unit agreement?

A Yes. Exhibit A, which is a plat of the proposed area, should be amended to exclude the southeast quarter of the southwest quarter of Section 28, Township 17 South, Range 34 East.

MR. NUTTER: Is that Tract 3?

THE WITNESS: That's Tract 3 on Exhibit A.

Q (By Mr. White) And your participation factors will be amended accordingly?

A We will delete this property.

Q What per cent of the working interests are committed?

A All of the working interests have been committed to the unit with the exception of those properties, tract numbers, in Continental owns and those in Mesa Retailers and those that

Don Angle owns.

Q Now, where would they be indicated on your unit agreement that you referred to, where are they reflected?

A The Continental properties are indicated on the agreement as being Tract Number 6 and Tract Number 13. The Mesa Retailers and Don Angle properties are joint properties and that would be Tract Number 17 and Tract 19.

Q Do you have every reason to believe that they will be committed to the unit later on?

A Yes. Continental advised last Friday that their district office recommended that they ratify. Texaco's land department advised last Friday that the Mesa Retailers and Don Angle properties would be coming into the unit.

Q The percentage interests and the kind of ownership are reflected on Exhibit B of the unit agreement?

A They are reflected there on Exhibit B.

Q The area comprises approximately 2,000. Is that all State land?

A Yes, that's all State land.

Q Do you know whether or not the State Land Commissioner will approve the unit agreement?

A The State Land has advised Texaco that they would ratify the agreement subsequent to the Oil Conservation Commission's approval of the agreement.

Q Does that complete your testimony in reference to the unit agreement?

A There is one item there in overriding royalty interest. As indicated on Exhibit B of the proposed agreement, Martin Yates and Lillie M. Yates have an overriding royalty in Tract 17 and also Tract 19 who have not signed the agreement but we have been advised that they will be signing in the very near future.

Q Now, will you refer to your diagramatic sketches, Exhibit Number 3, and explain the exhibit?

A Yes. Exhibit 3 illustrates what will be a typical injection well. And the log portion reproduced is a log on this well. This well being Texaco State of New Mexico "V" Well Number 6.

Q Is that the only log you have?

A This is the only log we have and also this particular well is not to be an injection well. This was submitted for the purpose of having a log to indicate the pay zones but this well will be typical of all the injectors.

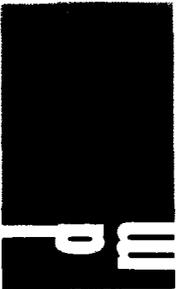
Q Well, will each well that's going to be transferred to water injection be logged prior to its being converted?

A Yes, sir, it will.

Q Will this casing program include contamination?

A Yes, it will.

Q And what will be your source of water supply?



A Exhibit 4 indicates a description of the water rights and I'll not go into the detailed description since it is spelled out on this exhibit.

Q What do you anticipate your initial injection rates to be?

A We anticipate a maximum of 600 barrels per day of water into each injection well at a maximum pressure of 2,200 psi. The initial injection rate has not been determined since these initial injection wells will be in the pilot stage and evaluation for -- the injection rate will have to be determined.

Q Are there similar waterflood projects within the area?

A Yes.

Q Is that shown by Exhibit 5?

A Yes. Exhibit 5 indicates the performance data of both pilot waterflood approximately two and a half miles northeast of the proposed unit area. They commenced their operation injecting water early in 1959 on a five spot pattern. For a while there it seemed as if this project might be somewhat questionable in its ultimate economics. However, early in 1963 Mobil increased, as indicated on these curves, their injection rate into the injection wells and the pressures thereby the oil production correspondingly increased. The water to oil ratio decreased. The gas/oil ratio decreased so that data lead

us to believe that probably a high injection rate might be the optimum method to go at rather than a lower injection rate.

Q Now, will you explain Exhibit 6 which is a structure map?

A Yes. Exhibit 6 indicates contours in the area of the proposed unit. These contours being based on the top of the San Andres formation and it also indicates a water/oil contact on the southern portion of the pool as well as the southern portion of the unit area and this structure is indicated by the contours as a continuous structure throughout the entire proposed unit area as well as the area surrounding the proposed unit which is similar to the Mobil's waterflood to the north.

Q Have you conducted any studies as to your productive performance in the area?

A Yes. Exhibit 7, referring to the lower curve on that exhibit which is a refinement of the upper curve, production decline curve extrapolated from the year commencing in 1950 to the year ending in 1958 indicated that an average of 10 barrels of oil per day per well within the unit area would reach 10 barrels a early in the year in 1962. However, as indicated on this lower curve extensive remedial work was performed on wells within the unit area in order to increase the primary producing rate. During this period of time commencing early in 1959 and ending in December of 1963 some 27 wells had remedial

work performed on them and now the production is back on decline and the remedial work has served its useful purpose. The next logical step since remedial work has served its usefulness is to commence secondary recovery operations in order to increase production.

Q In other words in your opinion it is not economically feasible to continue this remedial work?

A That is correct. The wells that can be considered responsive to remedial work have been treated.

Q Have you made a study of the daily production of each well?

A Yes. Exhibit 8 indicates the average daily production for each of these concerned wells within the unit area for the month of September, 1965.

Q How many wells are making their top allowable?

A There are currently six wells producing top allowable; four of these wells were of the later group on which remedial work was performed in order to increase production but these four should decline to considerably less than top allowable in the very near future. Also indicated on this you may see that most of the wells produce less than 10 barrels per day.

Q What per cent of the wells produce less than 10 barrels per day within the unit?

A It's 56.3 per cent or 27 of the 48 wells produce less

than 10 barrels per day.

Q What per cent of the wells produce between 10 and 20 barrels per day?

A 29.2 per cent or 14 of the 48 wells produce between 10 and 20 per day.

Q Would you say that 87 per cent of the total wells are incapable of producing their top allowable?

A Yes, sir, that is correct. There is one well that produces 22 barrels per day so included approximately seven and a half per cent of the wells are in the later life for primary recovery.

Q Mr. Yost, did you file a copy of the application with the State Engineer, and if so, what result did you obtain?

A We filed with him. We received a copy of a letter which he submitted to the Oil Conversation Commission advising certain stipulations he would like to have incorporated and insured in the injection wells.

Q Now, are you willing to meet these requirements?

A Yes. Texaco will more than meet these requirements insofar as setting the packer at the proper depth and the cement tops and the other specifications he desires.

MR. WHITE: Did the Examiner receive --

MR. NUTTER: We have a letter dated October 29, would that be the one, Mr. Yost?

THE WITNESS: Yes, that would be the one.

Q (By Mr. White) In your opinion would the proposed

project be in the interests of conservation and tend to protect correlative rights?

A Yes. It is estimated within the unit area that the calculated secondary recovery oil will be 6,160,811 barrels.

Q And by this application you are seeking secondary rights pursuant to Rule 701?

A Yes, we do.

Reporting Service, Inc.

CONVENTIONS

ARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY.

PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO
PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO

THE WITNESS: Yes, that would be the one.

Q (By Mr. White) In your opinion would the proposed project be in the interests of conservation and tend to protect correlative rights?

A Yes. It is estimated within the unit area that the calculated secondary recovery oil will be 6,160,811 barrels.

Q And by this application you are seeking secondary rights pursuant to Rule 701?

A Yes, we do.

Q And would you like administrative approval to expand your area in accordance with the present rules?

A Yes, that is correct.

Q And is it possible that you may convert to five point instead an inverted nine?

A Yes, it's possible after the evaluation of the nine spot pattern has been performed.

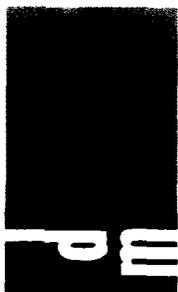
Q Does that complete your testimony?

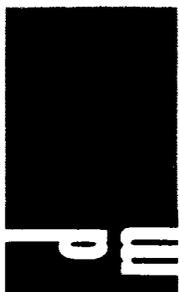
A Yes.

MR. WHITE: At this time we offer exhibits 1 through 8.

MR. NUTTER: Texaco's Exhibits 1 through 8 will be admitted into evidence.

(Whereupon, Applicant's Exhibits 1 through 8 were offered and admitted in evidence.)





MR. WHITE: That completes our direct.

MR. NUTTER: Does anyone have any questions of Mr. Yost?

CROSS EXAMINATION

BY MR. PORTER:

Q Mr. Yost, these wells have been producing for quite a few years, have they not?

A Yes, sir, Mr. Porter. The initial well within the unit area I believe was completed by Ohio Oil Company in November of 1938 and during the 1940's some 23, I believe, or some 21 wells were developed during the year 1940.

Q I see.

A The remaining 23 were in the late 40's and early 50's and four were drilled during the year 1961.

Q You testified that you would expect to recover a little bit in excess of 6 million barrels on secondary recovery?

A Yes, sir.

Q Do you have the figures for the primary recovery for this particular area?

A Yes, sir, I do. The estimated primary reserve as of December 1, 1963; 2,279,000 barrels of oil.

Q And do you know much has been recovered up to now by these wells in this area?

A No, sir, I do not have that number.

Q I see.

A I don't have that with me.

MR. PORTER: Okay. Thank you.

BY MR. NUTTER:

Q What is the participation formula for the various tracts, Mr. Yost?

A It's a two-phase formula: Phase one being based on 100 per cent on the current producing rate for the period from June 1, 1963 to December 1, 1963. This phase one formula is the remaining primary reserves and is to remain in effect approximately estimated to January 1, 1975. At that time we expect that the total primary reserves of 10,268,019 barrels of oil shall have been recovered.

Q In other words, phase one remains in effect until this amount of primary oil being 2,679,000 barrels has been recovered?

A That is correct.

Q And you expect that to be in 1975?

A Early in '75, yes.

Q And then it goes into phase two?

A Yes, sir.

Q And actually how do the tracts participate under phase one or phase two?

A These tracts have their formula calculated in their

percentage of current production during this six-month period, the latter part of 1963 times their remaining reserves gives their percentage for phase one participation. In phase two --

Q Well, I see it here in the unit agreement, "tract participation", under phase two would be the ratio of the ultimate primary oil production underlining each tract to the primary oil underlining all tracts.

A That's it.

Q And the participation formula is in this agreement and has been agreed to by the various working interests?

A Yes, sir, that is correct.

Q Now, in your Exhibit 3, you show a schematic diagram of one injection well. Is this a typical well?

A I believe I mentioned before this diagram is not of an injection well. This is the only well on which we have an adequate log but all injection wells will be typical of this particular installation.

Q What about the top of the cement in each of these injection wells? I notice one of the conditions of approval stated in there in their letter that was the packer should be set well below the top of the cement surrounding the 5-1/2" casing?

A Yes, sir, in all cases that will be the case. We propose to set the packer within 50 feet or less from the casing

shield. Each of these injection wells were cemented with 200 to 300 sacks of cement and that percentage would vary from say 200 per cent from base of the casing shield to the base of the salt so this should insure a good cementing program throughout the entire area.

Q And the packer will be set within 50 feet of the shield?

A Yes.

Q So it would be below the base for the top of the cement?

A Yes.

Q Now, on your production decline curves in Exhibit Number 7 you had a kick in production there in the beginning of 1964 but evidently three wells were worked over about that time?

A Three wells were treated in December of 1963 and this increased production in '64 as a resulting factor in the program.

Q Now, in 1964 you had another production kick but there is no evidence of any workovers. What do you attribute that to?

A Not knowing definitely, probably it was due to subsurface equipment repairs being made.

Q Now, of these area wells that are top allowable, you states that four are top allowable.

A There are six top allowables now, yes, sir.

Q Which would they be, Mr. Yost?

A Texaco's State of New Mexico "X" and NCT-1, Well Number 5, Texaco's "X", NCT-1 Well Number 2, and the Texaco's State of New Mexico "V", Wells Number 2, 4 and 5.

Q In other words those six wells are the six highest producers shown on Exhibit A?

A Yes, sir.

Q Well now, were any of these six wells some that were subject to remedial work back here in this period shown by Exhibit 7 or are these new completions?

A All of these production increases were realized by remedial work.

Q I see. Now, you have an inverted nine spot. What pattern is Socony-Mobil following on their flood?

A They have a standard five spot pattern.

Q They have a five spot?

A Yes, sir.

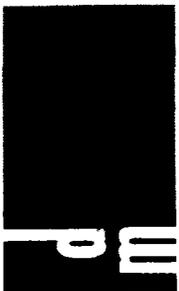
Q And the Union tract is being excluded. That well is plugged and abandoned?

A It's plugged and abandoned. It has no useful purpose really to the secondary recovery operations.

MR. NUTTER: I see. Are there any further questions of Mr. Yost? You may be excused.

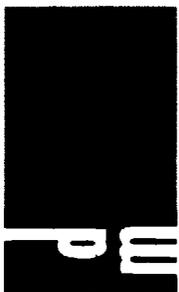
Do you have anything further, Mr. White?

MR. WHITE: That concludes our presentation.



MR. NUTTER: Does anyone else have anything they wish to offer in this particular case or either of these cases?

MR. DURRETT: If the Examiner, please. I have a statement that was left with me by Mr. Richard D. Seba, representing Shell Oil Company, from Midland, Texas. He had a statement in each case; case 3344 his statement reads: "Shell Oil Company as a working interest in the proposed West Vacuum Unit concurs with the unit area as proposed by Texaco, Inc. which comprises 2,000 acres more or less of State lands in Township 17 South, and Township 18 South, Range 34 East, Lea County, New Mexico." His statement in Case 3345 reads as follows: "Shell Oil Company as a working interest owner in the West Vacuum Unit supports Texaco's proposal to institute a waterflood project in the aforementioned unit by injecting water into the Grayburg-San Andres formation through six injection wells in Sections 3 and 4 of Township 18 South, Range 34 East and in Sections 33 and 34 of Township 17 South, Range 34 East, Lea County, New Mexico." The Commission has received a letter from Dalport Oil Company referring to case 3334, the unit agreement, stating that they request approval of the unit agreement and waterflood program. We have a letter from Gulf Oil Corporation concurring with Texaco. We have a letter from Phillips Petroleum Company concurring with Texaco in both of these applications.



dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO
1213 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO

MR. NUTTER: Thank you. Is there anything further in Case 3344 or 3345? We will take the cases under advisement and call case 3346.

(Whereupon, Case Numbers 3344 and 3345 were concluded.)

I N D E X

WITNESS	PAGE
William P. Yost	
Direct Examination by Mr. White	2
Cross Examination by Mr. Porter	13
Cross Examination by Mr. Nutter	14

E X H I B I T S

<u>EXHIBIT</u>	<u>MARKED FOR IDENTIFICATION</u>	<u>OFFERED</u>	<u>ADMITTED</u>
App's. 1	2	12	12
App's. 2	2	12	12
App's. 3	2	12	12
App's. 4	2	12	12
App's. 5	2	12	12
App's. 6	2	12	12
App's. 7	2	12	12
App's. 8	2	12	12

