

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:)

CASE NO. 12,154

APPLICATION OF TEXACO EXPLORATION AND)
PRODUCTION, INC., FOR CERTIFICATION OF)
A POSITIVE PRODUCTION RESPONSE WITHIN)
THE COOPER JAL UNIT AREA, LEA COUNTY,)
NEW MEXICO)

ORIGINAL

OIL CONSERVATION DIV.
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REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

April 15, 1999

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, April 15th, 1999, 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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Examiner Hearing
CASE NO. 12,154

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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 By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 9:53 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case
4 Number 12,154.

5 MR. CARROLL: Application of Texaco Exploration
6 and Production, Inc., for certification of a positive
7 production response within the Cooper Jal Unit area, Lea
8 County, New Mexico.

9 EXAMINER STOGNER: Call for appearances.

10 MR. CARR: May it please the Examiner, my name is
11 William F. Carr with the Santa Fe law firm Campbell, Carr,
12 Berge and Sheridan. We represent Texaco Exploration and
13 Production, Inc., in this case, and I have one witness.

14 EXAMINER STOGNER: Any other appearances?

15 Will the witness please stand to be sworn?

16 (Thereupon, the witness was sworn.)

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

20 DIRECT EXAMINATION

21 BY MR. CARR:

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

23 A. Charles Wolle.

24 Q. Mr. Wolle, where do you reside?

25 A. In Midland, Texas.

1 Q. By whom are you employed?

2 A. I'm employed by Texaco as a reservoir engineer.

3 Q. And what is your current position -- Well, you're
4 a reservoir engineer for Texaco?

5 A. That's correct.

6 Q. Have you previously testified as a reservoir
7 engineer before the Oil Conservation Division?

8 A. Yes, I have.

9 Q. And at that time were your credentials as an
10 expert witness in your field accepted and made a matter of
11 record?

12 A. Yes, they were.

13 Q. Are you familiar with the Application filed in
14 this case on behalf of Texaco?

15 A. Yes.

16 Q. Are you familiar with the Cooper Jal Jalmat and
17 the Cooper Jal Langmat waterflood projects in the Cooper
18 Jal Unit area?

19 A. Yes.

20 Q. Are you familiar with the production history of
21 the wells in these waterflood projects and the response of
22 these wells to the enhanced recovery efforts of Texaco?

23 A. Yes, I am.

24 MR. CARR: We tender Mr. Wolle as an expert
25 witness and reservoir engineer.

1 EXAMINER STOGNER: Mr. Wolle is so qualified.

2 Q. (By Mr. Carr) Mr. Wolle, would you briefly
3 summarize for the Examiner what it is that Texaco seeks
4 with this Application?

5 A. We're requesting certification of a positive
6 production response for this project under the provisions
7 of the New Mexico Enhanced Oil Recovery Act.

8 Q. Now, the way the way this is styled is, we're
9 talking about the Cooper Jal Jalmat project and the Cooper
10 Jal Langmat. Could you explain to the Examiner why it is
11 that we have two projects identified here as one?

12 A. Yes, originally each of the projects was a
13 separate project, if you would. There's an injection
14 project in the Jalmat, and there is an injection project in
15 the Langlie-Mattix. The two did not have the same
16 waterflood patterns.

17 And what we did in our EOR project area is to
18 redevelop those two fields, or those two projects, into a
19 single waterflood pattern to allow us to make more
20 effective and efficient use of the existing wellbores
21 dually completing both producers and injection wells.

22 Q. And did, the original projects, one overlies the
23 other?

24 A. That's correct.

25 Q. So you used the wellbores and were able to then

1 tackle the projects for zones --

2 A. That's correct.

3 Q. -- together?

4 When were these waterflood projects approved as
5 an enhanced oil recovery project by this Division?

6 A. On October 6th, 1993, and that was under Division
7 Order Number R-9983, which was entered in Case Number
8 10,798.

9 Q. Is a copy of that order marked as Texaco Exhibit
10 Number 1 in this case?

11 A. Yes, it is.

12 Q. Would you go to Exhibit 2, identify this and
13 review it for Mr. Stogner?

14 A. Exhibit 2 is the Certification of Enhanced Oil
15 Recovery Project for the Recovered Oil Tax Rate.
16 Certification date is October 15th, 1993.

17 Q. And when did Texaco apply for certification of a
18 positive production response in this project?

19 A. We applied by a letter dated September 28th,
20 1998, and that letter was received by the OCD on October
21 5th, 1998.

22 Q. So the Application was filed within the five-year
23 period provided in the certification?

24 A. That's correct.

25 Q. What response did Texaco receive to this

1 Application for certification?

2 A. Mr. Catanach called our attorney and advised that
3 he was going to set this Application for hearing.

4 Q. Let's go to what has been marked for
5 identification as Texaco Exhibit Number 3, and I'd ask you
6 to explain to Mr. Stogner what this shows and then just
7 review the information on the exhibit.

8 A. This shows the outline of the EOR project area.
9 That's the area outlined in red. It shows the wells in the
10 project area, the injectors, producers. It shows the
11 common pattern among both the Jalmat and Langlie-Mattix.
12 It's a 40-acre fivespot pattern.

13 And as part of the project, we drilled some
14 additional wells here and reduced the spacing units, more
15 effective drainage of the area.

16 Q. The order originally approving this project
17 talked about certain phases.

18 A. That was referring to the work being done over a
19 several-year period. The wells that were worked on or were
20 drilled were throughout the unit area. It was not a
21 geographical phased area.

22 Q. So you didn't have separate areas that you
23 developed in succession; it was all done at one time, and
24 what you --

25 A. One time over a several-year period, that's

1 correct.

2 Q. Could you just generally review the history of
3 this field and the project?

4 A. Yes, the original production from this area began
5 back in the Thirties and continued for a number of years.
6 In 1970 we received approval to initiate a water injection
7 project into each of the projects. Injection there began
8 in December, 1970, utilized 80-acre fivespot injection
9 patterns.

10 In 1993, we obtained the approval to implement a
11 40-acre fivespot pattern. At that time also, we received
12 approval to drill additional wells in the project area.

13 We started the initial injection here in October
14 15th, 1993, in the project area under the new single-
15 pattern project.

16 Q. And at that time you did request the Division
17 treat the entire project as a single phase?

18 A. That's correct, we did.

19 Q. At the time that Texaco sought initial approval
20 of this enhanced recovery oil project, how much capital
21 expenditure did you represent would be required?

22 A. We anticipated over \$8 million.

23 Q. And to date what is the actual capital expense
24 that's been incurred in this project?

25 A. Actual costs have been about \$6.7 million.

1 Q. And what accounts for this lower capital cost
2 investment?

3 A. We found we were able to drill our wells a little
4 more cheaply than we'd anticipated, and also some of the
5 workovers that we did, we did not encounter problems in
6 deepenings that we had provided some additional cost for.
7 So we were able to do the work at a lesser cost than we had
8 anticipated.

9 Q. During the 1993 hearing, you represented there
10 were approximately 3.2 million additional barrels to be
11 recovered by implementation of the project?

12 A. That's correct.

13 Q. How has the project performed?

14 A. It's performed -- We've seen response, if you
15 consider the additional response since injection began and
16 project from today's date the anticipated production to the
17 economic limit, we expect to recover in total an additional
18 something over 2 million barrels of oil.

19 Q. So the project is somewhat underperforming what
20 it was hoped?

21 A. That's correct.

22 Q. Were additional wells drilled as part of this
23 project expansion?

24 A. Yes, they were. We originally anticipated the
25 drilling of 13 wells. We eventually ended up drilling a

1 total of 19 wells, between 1993 and 1996.

2 Q. Mr. Wolle, let's go to Texaco Exhibit Number 4.
3 Would you identify and review that?

4 A. Yes, this is a listing of the wells in the
5 project area, their well type, either producer or injector,
6 and their completion date.

7 Q. At this time, how many wells do we have in each
8 of these categories?

9 A. At the present time we have 42 active producers,
10 27 active injectors, 15 shut-in producers and 7 shut-in
11 injectors.

12 Q. And the 40-acre injection actually commenced at
13 what time?

14 A. October 15th, 1993.

15 Q. When were all of the injection wells in this
16 expanded project actually up and running and injecting
17 water into the reservoir?

18 A. The last of the conversions took place in
19 September, 1995.

20 Q. How much water has actually been injected in the
21 project to date?

22 A. To date we've injected a little more than 22
23 million barrels of water.

24 Q. How soon did Texaco actually see a positive
25 production response to this water injection?

1 A. We saw a production increase beginning in
2 November of 1993.

3 Q. So almost immediately after the commencement of
4 the injection activity?

5 A. That's correct.

6 Q. Would you go to what has been marked as Texaco
7 Exhibit Number 5, identify and review this?

8 A. This is a production curve for the EOR project
9 area. The green curve is the oil production, the red curve
10 is the gas production, the blue curve is the water
11 production. The top curve, the magenta curve, is the water
12 injection.

13 Q. This response you saw to the injection, which
14 occurred when, in October, November of 1993?

15 A. Approximately November of 1993, that's correct.

16 Q. Was this response throughout the unit area?

17 A. Yes, it was.

18 Q. All right, let's go to Exhibit Number 6. What is
19 this?

20 A. Exhibit Number 6 is a tabulation of the
21 production on a monthly basis, beginning in year 1998. We
22 have updated this from our original submittal. The
23 original submittal was through August. We've updated it to
24 reflect production through February of 1999.

25 Q. Mr. Wolle, does Texaco request that the Division

1 certify this positive production response in its Cooper Jal
2 Jalmat and Cooper Jal Langmat waterflood projects?

3 A. Yes, we do.

4 Q. And does Texaco request that the Division notify
5 the Secretary of the Department of Taxation and Revenue of
6 a positive production response effective November 1, 1993?

7 A. Yes, we do.

8 Q. Were Exhibits 1 through 6 either prepared by you
9 or compiled under your direction and supervision?

10 A. Yes, they were.

11 MR. CARR: Mr. Stogner, at this time we would
12 move the admission into evidence of Texaco Exhibits 1
13 through 6.

14 EXAMINER STOGNER: Exhibits 1 through 6 will be
15 admitted into evidence.

16 MR. CARR: That concludes my direct examination
17 of Mr. Wolle.

18 EXAMINATION

19 BY EXAMINER STOGNER:

20 Q. I guess I'm a little confused here. Okay, this
21 thing was approved in October of 1993 --

22 A. That's correct.

23 Q. -- for the expansion necessary to get the area
24 qualified, and it was supposedly done under several phases;
25 is that correct? Or how was it supposed to be done? Is

1 that right?

2 A. Actually, it was done over a several-year period.
3 That was the intent.

4 Q. And then about the same time that the order was
5 issued in the original case, the certification was given
6 that it was an EOR project?

7 A. That's correct.

8 Q. But that was in 1993, and you started seeing some
9 response in November of 1993?

10 A. Yes, sir.

11 Q. Here it is, 1999. I'm missing something here.

12 A. The biggest thing that happened was some changes
13 in personnel, and it was not realized or recognized that we
14 needed to get about the business of filing for this -- the
15 certification of the positive production response here.

16 Q. So the first thing that the Division had seen in
17 this matter came by letter of September the 28th --

18 A. -- 1998, yes, sir.

19 Q. -- 1998. And then it was set for hearing?

20 A. That's correct.

21 Q. Okay. So all in all, it did what it was supposed
22 to do, but not as good as you had hoped; is that correct?

23 A. That's essentially it, yes, sir.

24 Q. Okay. Are you anticipating any more wells to be
25 drilled or converted at this point?

1 A. We don't anticipate anything. It looks like
2 we've developed the project area as far as is economically
3 feasible, based on the last of the drilling wells that we
4 have.

5 Q. Do you anticipate any other kind of tertiary
6 recovery going on out there at this time or in the future?

7 A. I won't rule it out, but at today's prices it's
8 questionable at best.

9 EXAMINER STOGNER: Mr. Carr, I don't have
10 anything of this witness. Could I ask for you to provide
11 me a rough draft?

12 MR. CARR: I'll provide the order, yes, sir.

13 EXAMINER STOGNER: The sequence, wording and
14 everything?

15 MR. CARR: We'll do it.

16 That concludes our presentation.

17 EXAMINER STOGNER: Since there's nothing further
18 in Case 12154, then this matter will be taken under
19 advisement.

20 (Thereupon, these proceedings were concluded at
21 9:08 a.m.)

22 * * *

23 I do hereby certify that the foregoing is
24 a complete record of the proceedings in
25 the Examiner hearing of Case No. 12154
 heard by me on 15 April 1999.

 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 April 16th, 1999.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002