

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. 12,153

APPLICATION OF ARCO PERMIAN FOR)
CERTIFICATION OF A POSITIVE PRODUCTION)
RESPONSE WITHIN THE SOUTH JUSTIS UNIT)
WATERFLOOD PROJECT, LEA COUNTY,)
NEW MEXICO)

ORIGINAL

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.

* * *

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

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OIL CONSERVATION DIV

I N D E X

April 15th, 1999
Examiner Hearing
CASE NO. 12,153

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

* * *

1 WHEREUPON, the following proceedings were had at
2 9:08 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case
4 Number 12,153.

5 MR. CARROLL: Application of ARCO Permian for
6 certification of a positive production response within the
7 South Justis Unit Waterflood Project, Lea County, New
8 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 ARCO Permian in this
13 matter, and I have one witness.

14 EXAMINER STOGNER: Any other appearances?

15 (Thereupon, the witness was sworn.)

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

19 DIRECT EXAMINATION

20 BY MR. CARR:

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

22 A. My name is Jeff Robinson.

23 Q. Where do you reside?

24 A. In Midland, Texas.

25 Q. Mr. Robinson, by whom are you employed?

1 A. I'm employed by ARCO Permian.

2 Q. And what is your current position with ARCO?

3 A. I'm a senior operations analytical engineer.

4 Q. Have you previously testified before this
5 Division?

6 A. No, I have not.

7 Q. Would you summarize your educational background
8 for Mr. Stogner?

9 A. Yes, I got a BS degree in mechanical engineering
10 from Texas A&M in 1978.

11 Q. And following graduation in 1978, for whom have
12 you worked?

13 A. I went to work for ARCO at that time and have
14 worked for them ever since as a petroleum engineer.

15 Q. At all times you've been employed as an engineer?

16 A. Yes.

17 Q. Does the geographic area of your responsibility
18 include the portion of southeastern New Mexico involved in
19 this case?

20 A. Yes, it does.

21 Q. Are you familiar with the Application filed in
22 this matter on behalf of ARCO?

23 A. Yes, I am.

24 Q. Are you familiar with the South Justis Unit
25 Waterflood project?

1 A. Yes, I am.

2 Q. Have you familiarized yourself with the
3 production history of the wells in this project and their
4 responses to enhanced recovery efforts therein by ARCO
5 Permian?

6 A. Yes, I have.

7 MR. CARR: Mr. Stogner, we tender Mr. Robinson as
8 an expert witness in petroleum engineering.

9 EXAMINER STOGNER: Mr. Robinson is so qualified.

10 Q. (By Mr. Carr) Mr. Robinson, would you initially
11 summarize for the Examiner what it is that ARCO seeks in
12 this case?

13 A. Yes, ARCO seeks a certification of a positive
14 production response for Phases IIA, B and C of the South
15 Justis Waterflood Unit, pursuant to the provisions of the
16 New Mexico Enhanced Oil Recovery Act.

17 Q. And when was this waterflood project approved as
18 an enhanced oil recovery project?

19 A. It was approved October 23rd, 1992, by Division
20 Order Number R-9747.

21 Q. And a copy of that order has been marked ARCO
22 Exhibit Number 1?

23 A. Yes, sir.

24 Q. I think it would be helpful, Mr. Robinson, if
25 initially you would explain to the Examiner what happened

1 in regard to the Phase I certification for this project.

2 A. Yes, the unit was originally certified in two
3 phases, or -- yes, or three phases, actually.

4 In Phase I -- Order Number R-9747 certified two
5 separate waterflood phases. Phase I was certified July
6 26th, 1993.

7 Since then, we've had significant changes in
8 personnel in ARCO, and we did a check of the OCD records
9 and saw the two dates, January 5th, 1994, and May 5th,
10 1995, for the Phase II stuff, but did not see the July
11 26th, 1993, date at that time. And last summer, right
12 about July, we discovered that the Phase I was out there
13 and that at that time it had lapsed. So Phase I is already
14 past the five-year period.

15 Q. And so that five-year time window passed before
16 you filed an application as to that phase?

17 A. Yes.

18 Q. So now we're looking at the remaining phases
19 within the South Justis Unit Waterflood?

20 A. Yes, the Phase IIA, B and C.

21 Q. What is the deadline for certification of a
22 positive production response in Phase IIA?

23 A. It was January 5th, 1999, which is five years
24 after it was certified.

25 Q. And the deadline for Phases IIB and IIC?

1 A. May 1st, 1999.

2 Q. Would you identify what has been marked as ARCO
3 Exhibit Number 2 and review that for Mr. Stogner?

4 A. Yes, it's the project certifications for Phase
5 IIA, dated January 5th, 1994, and Phases IIB and C, dated
6 May 1st, 1995.

7 Q. And when did ARCO actually apply for
8 certification of the positive production response in Phases
9 IIA, B and C?

10 A. We sent a letter dated December 21st, 1998, which
11 was received by the Oil Conservation Division on December
12 23rd, 1998.

13 Q. So your Application for certification as to these
14 phases was timely filed?

15 A. Yes, it was.

16 Q. And what response did ARCO receive to the
17 Application?

18 A. I believe approximately a month or so, Mr.
19 Catanach called and advised that he was going to set the
20 Applications up for a hearing.

21 Q. Let's go to ARCO Exhibit Number 3. Would you go
22 to that exhibit and explain what this exhibit shows?

23 A. Yes, Exhibit Number 3 is an outline of the South
24 Justis Unit area. The color coding is, the pink outline
25 are areas Phase IIA, and the green area is Phase IIB and C,

1 and the uncolored area is the Phase I area.

2 Q. And this shows the injection and producing --

3 A. Yes, the triangles are all the injection wells,
4 and the circles are the producers.

5 Q. Generally summarize for us how this waterflood
6 project has been developed.

7 A. Basically, it was developed in phases, with Phase
8 I being the heart of the field, and then the peripheral
9 areas were drilled after that, the Phases IIA, B and C, and
10 the ultimate result of was, it's 20-acre spacing resulting
11 in 40-acre fivespots.

12 Q. And it's just a waterflood project?

13 A. Yes, a standard waterflood project.

14 Q. Could you generally review the history of this
15 field and project area?

16 A. Yes, originally the field, I think, was developed
17 back in the 1950s, and I think in 1984 the unitization
18 efforts began, and finally in 1992 the unit was approved.
19 And then --

20 Q. When did injection commence in the --

21 A. First injection was August, 1993, in Phase I.

22 Q. Okay. Now, what we're doing here today is
23 seeking certification of all phases except Phase I?

24 A. Yes.

25 Q. At the time ARCO sought initial approval of the

1 enhanced oil recovery project, how much in terms of capital
2 expenditure did you testify was necessary to implement the
3 project?

4 A. For the total project, we estimated \$56 million.

5 Q. And how much have you actually expended to date?

6 A. We've actually spent over \$58 million, of which
7 \$15 million can be directly attributed to the Phase IIA, B
8 and C.

9 Q. In the 1992 hearing, did ARCO propose to drill
10 additional injection and producing wells throughout the
11 unit area?

12 A. Yes, we proposed to drill approximately 96 wells.

13 Q. And have those wells been drilled?

14 A. Yes, they have.

15 Q. Let's go to Exhibit Number 4. Would you identify
16 and review that, please?

17 A. Yes, Exhibit Number 4 is just a list of the
18 wells, injectors and producers, in Phase IIA and IIB and C,
19 showing the completion dates of those wells.

20 Q. And how many wells do you have -- each of these
21 types of wells, in each of these phases?

22 A. In Phase IIA there's 22 producing wells, 8
23 injection wells, and we currently have one well shut in for
24 evaluation.

25 In Phase IIB and C there's 29 producing wells, 13

1 injection wells, and we've currently got 3 of the producers
2 shut in for evaluation.

3 Q. When were all the injection wells in the phases
4 actually injecting water into the reservoir?

5 A. We actually began injection in IIA in early 1995,
6 and in IIB and C in mid-1995.

7 Q. And how much water has been injected to date?

8 A. In IIA we've injected over 7 million barrels. In
9 IIB and C we've injected over 9 million barrels.

10 Q. And how soon after injection commenced did ARCO
11 see a positive production response?

12 A. Basically immediately, we saw a response.

13 Q. Would you identify what has been marked as ARCO
14 Exhibit 5?

15 A. Yes, Exhibit 5 is just a production plot of Phase
16 IIA, showing oil production, water production and water
17 injection.

18 Q. And Exhibit Number 6 is what?

19 A. Exhibit Number 6 is a production plot showing oil
20 production, water production and water injection for Phase
21 IIB and C.

22 Q. And these exhibits show that a positive
23 production response was observed almost immediately
24 following injection --

25 A. Yes.

1 Q. -- is that correct?

2 A. Yes.

3 Q. Would you now go to ARCO Exhibit Number 7 and
4 review that for the Examiner?

5 A. Yes, Exhibit 7 is just a tabular listing of the
6 production and injection for the Phases IIA and IIB and C
7 from the start of the unit through February of 1999.

8 Q. And you have supplemented this data to make it
9 current, so --

10 A. Yes.

11 Q. -- it's been supplemented since the --

12 A. Yes, the original application was through
13 October, so we've updated it through February.

14 Q. Does ARCO request that the Division certify this
15 positive production response in Phases IIA, IIB and IIC --

16 A. Yes.

17 Q. -- of the South Justis Waterflood Project?

18 A. Yes, we do.

19 Q. And does ARCO request that the Division notify
20 the Secretary of the Department of Taxation and Revenue of
21 these positive production responses?

22 A. Yes, we do. We would like IIA to be effective
23 February, 1990 -- as of February, 1995, and IIB and C as of
24 June of that --

25 Q. Were Exhibits 1 through 7 prepared by you or

1 compiled under your direction?

2 A. Yes, they were.

3 MR. CARR: At this time, Mr. Stogner, we move the
4 admission into evidence of ARCO Exhibits 1 through 7.

5 EXAMINER STOGNER: Exhibits 1 through 7 will be
6 admitted into evidence.

7 MR. CARR: And that concludes my direct
8 examination of Mr. Robinson.

9 EXAMINATION

10 BY EXAMINER STOGNER:

11 Q. Mr. Robinson, do you know of any time constraint
12 that an operator has to request the -- or report positive
13 production response on these projects?

14 A. As far as I'm aware, you have five years from the
15 date of certification.

16 Q. Okay, five years from certification. Now, that
17 is not the time of the hearing, but the actual
18 certification, in this case --

19 A. That's right.

20 Q. -- and were the certifications --

21 A. For Phase IIA it was January 5th, 1994, and IIB
22 and C it was May 1st, 1995 --

23 MR. CARR: And Mr. Stogner --

24 THE WITNESS: -- which is Exhibit 2.

25 MR. CARR: -- those are shown on Exhibit 2, the

1 actual certifications are there.

2 EXAMINER STOGNER: Uh-huh.

3 MR. CARR: And at the bottom of the page it just
4 has certification date set. And the point on that -- This
5 was, I think, the first of these that was done in phases,
6 and the concern was that if you were doing it in phases,
7 you wanted that five-year window to be triggered when you
8 started injecting any particular phase.

9 And so that's why you have these different dates.
10 You notified the Division at the time you would like to
11 start injection in Phase II, and that could be some time
12 after Phase I. And so that's why we have these different
13 dates.

14 Q. (By Examiner. Stogner) January 5th is over five
15 years from today, isn't it?

16 A. Yes, sir.

17 MR. CARR: But we filed in December --

18 EXAMINER STOGNER: Okay.

19 MR. CARR: -- having learned a very painful
20 lesson when we failed to file last summer on the Phase I.

21 EXAMINER STOGNER: Anything further in this case?

22 MR. CARR: Nothing further.

23 EXAMINER STOGNER: You may be excused.

24 I'll request a rough draft --

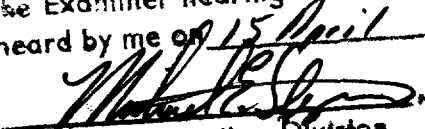
25 MR. CARR: Yes, sir.

1 EXAMINER STOGNER: -- and will take case 12,153
2 under advisement.

3 Let's take a ten-minute recess, at which time
4 we'll reconvene and take the Case 12,161 at that time.

5 (Thereupon, these proceedings were concluded at
6 9:20 a.m.)

7 * * *

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12
13 I do hereby certify that the foregoing is
14 a complete record of the proceedings in
the Examiner hearing of Case No. 12153
15 heard by me on 15 April 1999.
16  Examiner
Oil Conservation Division
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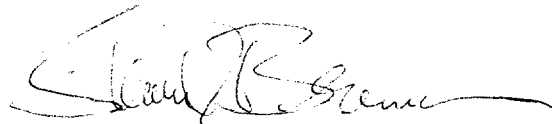
CERTIFICATE OF REPORTER

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