

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO

6
7
8 1 July 1987

9 EXAMINER HEARING

10 IN THE MATTER OF:

11 Application of ARCO Oil and Gas Com- CASE
12 pany for pool creation, special pool 9163
13 rules, and discovery allowable, Lea
14 County, New Mexico.

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18 BEFORE: David R. Catanach, Examiner

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APPEARANCES

For the Division: Jeff Taylor
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For the Applicant: William F. Carr
Attorney at Law
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Santa Fe, New Mexico 87501

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I N D E X

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4 BRIAN SANDERS

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Direct Examination by Mr. Carr

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7 TIMOTHY D. VERSEPUT

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Direct Examination by Mr. Carr

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Cross Examination by Mr. Catanach

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11 RICHARD D. CAMPBELL

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Direct Examination by Mr. Carr

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Cross Examination by Mr. Catanach

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E X H I B I T S

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19 ARCO Exhibit One, Land Plat

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ARCO Exhibit Two, Notice

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ARCO Exhibit Three, Structure Map

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ARCO Exhibit Four, Cross Section

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ARCO Exhibit Five, Cross Section

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ARCO Exhibit Six, Type Log

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ARCO Exhibit Seven, Map

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E X H I B I T S C O N T ' D

ARCO Exhibit Eight, Pressure Data	20
ARCO Exhibit Nine, Well Data	22
ARCO Exhibit Ten, Production Data	22
ARCO Exhibit Eleven, Analysis	23
ARCO Exhibit Twelve, Map	23
ARCO Exhibit Thirteen, C-109	26
ARCO Exhibit Fourteen, Graph	29

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MR. CATANACH: Call next Case
Number 9163.

MR. TAYLOR: The application of
ARCO Oil and Gas Company for pool creation, special pool
rules, and discovery allowable, Lea County, New Mexico.

MR. CATANACH: Are there
appearances in this case?

MR. CARR: May it please the
Examiner, my name is William F. Carr, with the law firm
Campbell & Black, P. A., of Santa Fe.

We represent ARCO Oil and Gas
Company and I have three witnesses.

MR. CATANACH: Will the witness-
ses please stand and be sworn in?

(Witnesses sworn.)

MR. CARR: At this time we call
Brian Sanders, Landman.

BRIAN SANDERS,
being called as a witness and being duly sworn upon his
oath, testified as follows, to-wit:

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DIRECT EXAMINATION

BY MR. CARR:

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

A Brian Keith Sanders.

Q Mr. Sanders, where do you reside?

A Midland, Texas.

Q By whom are you employed?

A ARCO Oil and Gas Company.

Q And in what capacity are you employed?

A As a landman.

Q Have you previously testified before this Division and had your credentials accepted and made a matter of record?

A No.

Q Would you briefly summarize for Mr. Cata-nach your educational background and your work experience?

A I have a Bachelor of Science degree in petroleum land management from the University of Houston. I have worked as a landman approximately 3-1/2 years, 2 of which primarily have been spent in southeast New Mexico.

Q Does your area of responsibility currently include that portion of southeastern New Mexico that is the subject of this application?

1 A Yes, it does.

2 Q Are you familiar with the application
3 filed in this case on behalf of ARCO Oil and Gas?

4 A Yes.

5 Q Are you familiar with the West Anderson
6 Ranch State No. 1 Well?

7 A Yes.

8 MR. CARR: Are the witness'
9 qualifications acceptable?

10 MR. CATANACH: He is so quali-
11 fied.

12 Q Mr. Sanders, would you briefly state what
13 ARCO seeks with this application?

14 A Creation of a new pool, special pool
15 rules, and a discovery allowable.

16 Q Have you prepared certain exhibits for
17 introduction in this case?

18 A Yes, I have.

19 Q Would you refer to what has been marked
20 as Exhibit Number One, and I think you may want to go over
21 to the exhibit, identify the exhibit and review the informa-
22 tion contained thereon for Mr. Catanach?

23 A This is a land plat of the general area
24 we're talking about today, primarily showing Township 16
25 South, Range 32 East, Lea County.

1 The plat shows two outlines or two cir-
2 cles. The green one is two miles from ARCO's West Anderson
3 Ranch State No. 1 Well located in Section 9. The red circle
4 is one mile from the well.

5 The plat shows record title lessees in
6 the area. It shows ARCO acreage in red. Also shows un-
7 leased acreage in green. The unleased acreage is owned by
8 the State of New Mexico.

9 The map shows in bright green this out-
10 line is ARCO's West Anderson Rance working interest unit of
11 which ARCO is the operator. It's approximately 1120 acres.
12 Our co-owners are Chevron, Conoco, Shell, Sabine Corpora-
13 tion, and H. L. Brown, Jr.

14 It was under this operating agreement
15 which the No. 1 Well was drilled.

16 The plat also shows two proposed prora-
17 tion units, the first being the west half of the northwest
18 quarter for the already drilled No. 1 Well and the second
19 being a laydown in the north half of the northeast quarter
20 of Section 9 for ARCO's proposed No. 2 Well.

21 Lastly, it shows the unit outline or the
22 outline of the West Anderson Ranch Wolfcamp Pool, that pool
23 being here, and which is east of our No. 1 Well. It also
24 shows the North Anderson -- or at least the southern bound-
25 ary of the North Anderson Rance Wolfcamp Pool, which up here

1 is located northeast from our well, No. 1 Well.

2 Q And Amoco -- ARCO is requesting that the
3 west half of the northwest quarter of Section 9 be desig-
4 nated as a new -- a new pool.

5 A Yes, it is.

6 Q Do you want to return to your seat? Mr.
7 Sanders, has notice of this hearing been given to all opera-
8 tors of wells and each unleased mineral interest owner --

9 A Yes, it has.

10 Q -- within the proposed pool?

11 A Yes, it has.

12 Q Has it also been given to all operators
13 of wells within one mile of the proposed pool boundary, as
14 required by OCD rule?

15 A Yes.

16 Q Are there any operators of wells to whom
17 notice had to be given?

18 A No, sir.

19 Q Are there unleased minerals?

20 A Yes, sir.

21 Q Would you identify what has been marked
22 as ARCO Exhibit Number Two for Mr. Catanach, please?

23 A This was a notice that was sent to the
24 State Land Office for the unleased tracts within the area.

25 Q And this is the only owner of unleased

1 mineral interest within the area for which notice is re-
2 quired under Division rules?

3 A Yes, sir.

4 Q Were Exhibits One and Two prepared by
5 you?

6 A Yes, sir.

7 MR. CARR: At this time, Mr.
8 Catanach, we would offer into evidence ARCO Exhibits One and
9 Two.

10 MR. CATANACH: Exhibits One and
11 Two will be admitted into evidence.

12 I don't have any questions at
13 this time.

14 MR. CARR: At this time we'd
15 call Tim Verseput.

16
17 TIMOTHY D. VERSEPUT,
18 being called as a witness and being duly sworn upon his
19 oath, testified as follows, to-wit:

20

21 DIRECT EXAMINATION

22 BY MR. CARR:

23 Q Will you state your full name for the re-
24 cord?

25 A Timothy D. Verseput.

- 1 Q Mr. Verseput, where do you reside?
- 2 A Midland.
- 3 Q Why whom are you employed?
- 4 A ARCO Oil and Gas Company.
- 5 Q And in what position are you employed?
- 6 A Geologist.
- 7 Q Have you previously testified before this
- 8 Division?
- 9 A No.
- 10 Q Would you review for Mr. Catanach your
- 11 educational background and your work experience?
- 12 A I have a BS in geology and an MS in geo-
- 13 logy.
- 14 I've worked for ARCO for seven years.
- 15 Q How long have you been involved with
- 16 southeastern New Mexico?
- 17 A One year.
- 18 Q Does your area of responsibility with
- 19 ARCO include the portion of southeastern New Mexico which is
- 20 the subject of this case?
- 21 A Yes.
- 22 Q Are you familiar with the application
- 23 filed in this case?
- 24 A Yes, sir.
- 25 Q Have you studied the subject pool?

1 A Yes.

2 MR. CARR: Are the witness'
3 qualifications acceptable?

4 MR. CATANACH: They are.

5 Q Would you refer to what has been marked
6 for identification as ARCO Exhibit Number Three, and here
7 again, you'll probably want to go to the exhibit, identify
8 this, and then review the structural interpretation for Mr.
9 Catanach?

10 A This is a structure map on top of the
11 Bough C Lower Wolfcamp Zone and on here I've identified our
12 working interest unit in green, the West Anderson Ranch
13 State No. 1 Well being the orange dot, and also I have
14 traces on two cross sections which will show it a little
15 better.

16 What I've demonstrated here is two separ-
17 ate structures, the Anderson Ranch Field over here to the
18 east, and separated by a low generated in the west half of
19 Section 10 and then the high over the West Anderson Ranch
20 Area in Section 9.

21 I believe that this map demonstrates that
22 there's a structural separation of a low area between the
23 Anderson Ranch Field and the West Anderson Ranch Field.

24 Q I'd like you now to go to your southern-
25 most line of cross section, come over to Exhibit Number

1 Four, the southern cross section, and I'd ask you to review
2 the information contained on that exhibit.

3 A This is a west to east section, west
4 being on the left side here, and at this point this is the
5 West Anderson Ranch State No. 1 drilled by ARCO. We
6 perforated a zone from 9954 to 9975 in which we had rates of
7 460 barrels of oil per day and 940 MCF per day.

8 The next well to the west in Section 9 is
9 the Monsanto ARCO State -- I'm sorry, to the east, is the
10 Monsanto ARCO State No. 1. In this well they perforated
11 several intervals between 9886 to 9966. In there they
12 swabbed 237 barrels of oil per day and 87 barrels of water
13 per day; however the well was P&A'd several days later with
14 only a cumulative production of 606 barrels of oil.

15 I also would like to point out that on
16 each one of these logs, these logs indicate porosity, and
17 I've marked on there the 4 percent porosity line and
18 anything greater than 4 percent porosity I've highlighted in
19 orange and you can see the Anderson Ranch -- West Anderson
20 Ranch State No. 1 has very high porosity, a rather large
21 zone, and the Monsanto has only a couple of stringers of
22 very low porosities and therefore a very tight well.

23 The next well is the H. L. Brown State 10
24 NO. 1. They ran a DST from 9820 to 9870 and they only
25 recovered 2.2 barrels of mud and 4.8 barrels of highly oil-

1 cut mud.

2 There again the porosity zone is only
3 several feet thick. The DST would suggest that this was
4 tight also.

5 Conoco Anderson Ranch No. 19, which is
6 just now starting to get on the flank of the Anderson Ranch
7 Field, this well perforated the zone between 9716 to 9736.
8 They swabbed 30 barrels of oil per day and 1,450 barrels of
9 water. This well is temporarily abandoned and its cumula-
10 tive production has been 8,156 barrels of oil and 515,000
11 barrels of water.

12 The next well is the Conoco Ranch No. 11-
13 W. This is up in the Anderson Ranch Field. It's currently
14 shut-in but it has a cumulative production from the same
15 zone, a Wolfcamp zone, between 9736 to 9845, and it's cumu-
16 lative production was 52,000 barrels of oil.

17 The last well on this cross section is
18 Anderson -- Conoco Anderson Ranch Unit No. 4-W. This well
19 perforated zones, or originally perforated zones in this
20 lower portion from 9760 to 9828. It IP'ed at 1,758 barrels
21 of oil per day. Its cumulative production to date is
22 309,000 barrels of oil.

23 Q What I think this section demonstrates is
24 two things; that between the West Anderson Ranch State No. 1
25 and the Anderson Ranch Field there are several very tight

1 wells in terms of porosity, low production, and also the An-
2 derson Ranch No. 19 shows that the Anderson Ranch Field is
3 -- is -- this No. 19 Well is in the oil -- or in the water
4 zone of that field.

5 Q Mr. Verseput, will you now refer to what
6 has been marked ARCO Exhibit Number Five, the northern cross
7 section, and review that?

8 A Again this cross section is west on the
9 left and east on the right and what I've done is I've taken
10 the cross section up to the northern part on the Anderson
11 Ranch Field.

12 The West Anderson Ranch State No. 1,
13 being over on the west side, and as I mentioned before, we
14 perforated a zone in there and produced oil.

15 The next well on the section is the Amoco
16 Anderson C No. 1. They perforated a zone from 9896 to 9954.
17 They swabbed 244 barrels of water and 2 barrels of oil with a
18 slight show of gas. They P&A'd that well.

19 Q The next well was the Phillips (unclear)
20 A No. 2 and in there they perforated zones from 9682 to
21 9868. They pumped 110 barrels of oil per day, 500 MCF per
22 day, and 16 barrels of water. This well is about a year and
23 a half old. It's cumulative production is 6,259 barrels of
24 oil and 41,183 barrels of water.

25 The next well is the Conoco Anderson

1 Ranch Unit No. 16. They perforated a zone from 9720 to
2 9904; IPed at 1008 barrels of oil per day. Its cumulative
3 production is 173,000 barrels of oil and it's currently a
4 salt water disposal well.

5 The last one is the Conoco Anderson Ranch
6 Unit No. 17. They perforated a zone from 9636 to 9810 and
7 in there it IPed at 1560 barrels of oil per day. Its
8 cumulative production to date is 383,000 barrels of oil.

9 Again this section demonstrates that the
10 Anderson C No. 1 and the (unclear) No. 2 are in the water
11 zone of the Anderson Ranch Field, Wolfcamp production.

12 What I think both of these cross sections
13 with the map demonstrate is that these wells down in here
14 and also the 19 Well are in the oil zone of the Anderson
15 Ranch Field. We have indication of tight wells in terms of
16 porosity, and then the map demonstrates structural
17 separation.

18 Q Mr. Verseput, would you identify what has
19 been marked as ARCO Exhibit No. 6, please?

20 A This is a compensated density, compensate
21 neutron log for the West Anderson Ranch State No. 1.

22 Q Is that a complete log of the well?

23 A Yes, it is.

24 Q Have you marked formation tops and
25 bottoms on this log?

1 A Yes, I have.

2 Q Were Exhibits Three through Six either
3 prepared by you or compiled under your direction and
4 supervision?

5 A Yes, they were.

6 MR. CARR: At this time we
7 would offer into evidence ARCO Exhibits Three through Six.

8 MR. CATANACH: Exhibits Three
9 through Six will be admitted into evidence.

10 MR. CARR: That concludes my
11 direct examination of this witness.

12

13 CROSS EXAMINATION

14 BY MR. CATANACH:

15 Q Mr. Verseput, is it?

16 A Verseput.

17 Q How do you spell that?

18 A V-E-R-S-E-P-U-T.

19 Q Is this the same type of structural --
20 same type of structure that we have separating the two
21 pools, the Anderson and the North Anderson Ranch?

22 A These two pools?

23 Q Yeah.

24 A No, it isn't. There is also a strati-
25 graphic component in here in that you have several mound

1 complexes developed in this area, and what you have over in
2 here is a (unclear) dip and that the mound that developed to
3 the North Anderson Ranch Field is just porosity, up dip
4 trend of the porosity.

5 This is more structurally controlled, the
6 Anderson Ranch Field is more structurally controlled, how-
7 ever, you actually have several mound complexes developed in
8 there.

9 And then over in here again a separate
10 structure but also probably a separate mound.

11 MR. CATANACH: That's all I
12 have for now. I may have something later.

13 MR. CARR: At this time we call
14 Danny Campbell.

15

16 RICHARD D. CAMPBELL,

17

18 being called as a witness and being duly sworn upon his
19 oath, testified as follows, to-wit:

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21 DIRECT EXAMINATION

22 BY MR. CARR:

23 Q Will you state your full name for the re-
24 cord, please?

25 A Richard Daniel Campbell.

1 Q Where do you reside?

2 A Midland, Texas.

3 Q And by whom are you employed?

4 A ARCO Oil and Gas.

5 Q And what is your position with ARCO?

6 A Senior Engineer.

7 Q Have you previously testified before this
8 Division?

9 A No, I have not.

10 Q Would you briefly review for Mr. Catanach
11 your educational background and your work experience?

12 A I have a Bachelor of Science from Louis-
13 iana State University.

14 I've been employed with ARCO Oil and Gas
15 for six and a half years. Have been in Midland for three
16 years of that.

17 Q Does your area of responsibility with
18 ARCO include that portion of southeastern New Mexico which
19 is the subject of today's hearing?

20 A Yes, it does.

21 Q Are you familiar with the application
22 filed in this case on behalf of ARCO?

23 A Yes, I am.

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

1 MR. CATANACH: They are.

2 Q Mr. Campbell, will you refer now to what
3 has been marked for identification as ARCO Exhibit Number
4 Seven --

5 A Yes, I will.

6 Q -- identify this and then review the in-
7 formation contained on this exhibit?

8 A On Exhibit Seven what we're showing in
9 the center is the West Anderson Ranch State No. 1 where
10 we're showing a red circle as one mile, a green circle as
11 two miles. All wells within a two mile radius have been
12 identified as formation tested, date completed, or date
13 drilled and abandoned, and TD, total depth drilled to.

14 The wells you see on the south end are
15 Queen wells that are less than 5000 feet. The wells you see
16 highlighted in red are wells that have penetrated deeper
17 than the Wolfcamp, the Wolfcamp formation or deeper.

18 As we can see, most of the wells --
19 there's only two wells within the one mile radius. One was
20 the Monsanto ARCO State No. 1, drilled and completed in
21 November of 1972. It only produced 606 barrels of oil
22 before it was plugged and abandoned and approved in 1973.

23 The other well is a well down in Section
24 15 that was plugged and abandoned.

25 Then within the two mile radius we see we

1 start moving east towards the Wolfcamp Anderson Ranch Pool
2 and we see a couple of wells on the edge of the field, that
3 all the wells are at least a mile and a half away.

4 Q Will you now refer to Exhibit Number
5 Eight, your table on pressure data and review that?

6 A What we're showing here with Exhibit
7 Eight is the discovery pressures in the two fields that are
8 closest to us.

9 The first is the Anderson Ranch Wolfcamp
10 discovery pressure. It was -- the discovery well for the
11 Wolfcamp was in Section 11, Lot B, which is now called the
12 Anderson Ranch Unit No. 4. Its DST of July of 1953 from
13 9841 to 9914 showed a pressure of 3,950.

14 There was also a DST run in the Wolfcamp
15 formation from 9650 to 9841 of 3575, which is not shown on
16 this exhibit.

17 Then to the north of us, northeast of us,
18 is the North Anderson Ranch Wolfcamp discovery pressure. It
19 was in the Union of California Well in Section 33, Lot E.
20 It was originally called the State 33 No. 1. It is now
21 called the North Anderson Ranch No. 1.

22 Its discovery was in May of 1960. Its
23 DST was from 9948 to 88. Its DST pressure was 3640.

24 The most recent pressure we have in the
25 Anderson Ranch Wolfcamp Field is from the Anderson Ranch

1 Unit No. 18 in 1985. It's in Section 11, Lot D. Its
2 pressure in 1985 was less than 1700 pounds and it is the
3 closest well to our well that we have a pressure on in the
4 Wolfcamp formation.

5 The West Anderson Ranch Wolfcamp State
6 No. 1, DST of February of this year, 1987, showed a Wolfcamp
7 pressure of 3550. Based on the virgin reservoir pressure,
8 we feel like it's a separate pool from the other two pools,
9 Anderson Ranch Wolfcamp and the North Anderson Ranch Wolf-
10 camp.

11 Q Mr. Campbell, I'd like to now move from
12 the area of pool separation and ask you several questions
13 about 80-acre drainage.

14 First of all, what are the spacing re-
15 quirements in the North Anderson Ranch Pool?

16 A North Anderson Ranch is on 80-acre prora-
17 tioning.

18 Q And the Anderson Ranch?

19 A Anderson Ranch is in statewide 40 acres.

20 Q Have you made an analysis or a comparison
21 of the drainage on 40-acre spacing units as opposed to 80-
22 acre spacing units in Wolfcamp pools in this area.

23 A Yes, I have.

24 Q And are the results of this analysis
25 summarized in exhibits which you've prepared for presenta-

1 tion in this case?

2 A Yes, it has been.

3 Q Would you refer to what has been marked
4 Exhibit Number Nine, which contains certain well data,
5 identify the exhibit, and review it for the Examiner?

6 A Exhibit Nine is the 80-acre and 40-acre
7 wells drilled in the Anderson Ranch Wolfcamp Field.

8 The top line in red is the 80-acre wells
9 and bottom line, the green line, are the 40-acre wells. You
10 can see that the original development started in 1953 with
11 80-acre wells and 40-acre wells come on in 1961.

12 Q Okay, will you now go to Exhibit Number
13 Ten?

14 A Exhibit -- Exhibit Ten is production data
15 for the Anderson Ranch Wolfcamp Field.

16 The black line is production data in
17 thousand barrels per year per well. You can see when we
18 originally come on in 1953 and up to about 1956, we see how
19 we have a very high production rate from the initial wells.

20 The red line is the producing number of
21 wells. The green line is the shut-in number of wells. You
22 can see we get a major jump in 1969, around 1970. That jump
23 occurs because of one well. Without that one well you can
24 see that the dashed line represents without that well. I
25 will talk about that well, which is the Anderson Ranch Unit
No. 2, in more detail at a later time.

1 till December of 1986, we see that 80-acre wells have pro-
2 duced 2,992 MBO and 40-acre wells have produced 660 MBO.

3 Remaining reserves for the 80-acre and
4 40-acre wells are 337 MBO and 165 MBO, respectively.

5 Estimated total recovery from 80-acre
6 wells is 3,329 MBO and the on the 40-acre wells it's 825
7 MBO.

8 Recovery per well is 237 MBO for a well
9 on 80-acre spacing and projected from 40 acres is 75 MBO per
10 well.

11 If we look at a direct ratio of 80-acre
12 versus 40-acres, we see here we have a 3.16 ratio of 80-acre
13 wells recovering more than the 40-acre wells.

14 We need to look a lot closer at the 40-
15 acre wells. There's one well that's contributing over a
16 half million barrels of oil in these 40-acre wells and I
17 have alluded to it earlier in Exhibit Ten and it's the An-
18 derson Ranch Unit No. 2 Well in Lot C of Section 11.

19 This well was recompleted from the
20 Devonian formation in December of 1969 and has come on in
21 1970. Looking back at Exhibit Ten, that's what causes this
22 major jump in barrels per year per well. That well comes on
23 at 80,000 barrels in that first year, but at that point in
24 time there was no wells west of the No. 2 Well, so we feel
25 like the No. 2 Well was really not acting like a 40-acre

1 your second well, the well in the north half of the north-
2 east?

3 A We have -- we currently have an AFE out
4 to co-owners and we plan to spud by August 1st of this year,
5 1987.

6 Q Do you have a lease expiring in that time
7 frame?

8 A Yes. we do, a lease in the northeast
9 northeast quarter of Section 9 expires 8-1-87.

10 Q Are you therefore requesting that the
11 Division expedite the order in this matter?

12 A We'd greatly appreciate it.

13 Q Are you also seeking a discovery allow-
14 able for the West Anderson Ranch State No. 1 Well?

15 A Yes, we are.

16 Q Would you identify what has been marked
17 as ARCO Exhibit Thirteen?

18 A C-109, Application for Discovery Allow-
19 able and Creation of a New Pool.

20 Q Does this form contain all data required
21 by Division Rule 509 for a period of time during which you
22 would request temporary rules be in effect?

23 A Based on our current development plans we
24 would seek 18 months to 24 months so it would give us a
25 chance to drill an additional four wells to evaluate the

1 pool on a proper drainage spacing.

2 Q Do you believe at the end of 24 months
3 you could come in and present more definitive data to estab-
4 lish 80-acre drainage for permanent rules?

5 A Yes, I do.

6 Q Were Exhibits Nine through Thirteen pre-
7 pared by you or compiled under your direction?

8 A Yes, they were.

9 MR. CARR: At this time, Mr.
10 Catanach, we would move the admission of ARCO Exhibits Nine
11 through Thirteen.

12 MR. CATANACH: Exhibits Nine
13 through Thirteen will be admitted into evidence.

14 MR. CARR: That concludes my
15 direct examination.

16

17

CROSS EXAMINATION

18 BY MR. CATANACH:

19 Q Mr. Campbell, has ARCO consulted our Dis-
20 trict Office in Hobbs about the forming of this new pool?

21 A No. The only -- the only correspondence
22 we've had with them is the C-102, C-104, C-105, and they
23 have sent correspondence back to us asking for us to apply
24 for the creation of a new pool or extension of a current
25 pool.

1 Q Okay. Does ARCO operate any wells in the
2 Anderson Ranch Pool or the North Anderson Ranch Pool?

3 A We did until the first quarter of this
4 year when we sold them to Hondo Oil and Gas.

5 Q In both pools?

6 A Yes, in both pools.

7 Q Were your wells -- well, did you ever do
8 any calculations on those wells as to what acreage they were
9 draining?

10 A I did not cover the area at the time so
11 I'd hate to say one way or the other on that. I know that
12 through evaluation of some pressure data that we do have,
13 and with discussion with Conoco, who operates the Wolfcamp
14 Anderson Ranch Pool, we see a two porosity system, being
15 fractured and matrix porosity and we feel like this is the
16 reason that we are seeing the large drainage areas, is the
17 fractured porosity that's being created in these carbonates
18 that was giving us the extended drainage area.

19 Q So even though the Anderson Ranch is --
20 is officially spaced on forties there is quite a number of
21 wells drilled producing --

22 A Correct. The reason 40-acre wells were
23 even drilled in the Wolfcamp Anderson Ranch is there's a De-
24 vonian which lies below this, so the original development
25 was the Devonian wells were in A, C, G, type scenario, and

1 the Wolfcamps were the alternate 40-acre wells, and so as
2 they reached the limits of the Devonian or plugged or aban-
3 doned the Devonian wells, most of, I'd say 75 percent of the
4 40-acre wells were Devonian deep wells that had been plugged
5 back and now completed in the Wolfcamp, and I think that's
6 the reason we see this scenario, the analysis of 80 versus
7 40, showing up so strong, is because the wells were used as
8 Devonian and recompleted for the Wolfcamp. When they were
9 recompleted to the Wolfcamp we see that their production
10 rate didn't increase because the surrounding 40 -- 80-acre
11 wells were already draining that, that part of the reser-
12 voir, and I feel like the Anderson Ranch Unit No. 2 is an
13 excellent example of that.

14 If I could, I'd like to also present Ex-
15 hibit Fourteen. Until April of '84 there was no wells west
16 of the No. 2 Well and when the No. 18, Unit No. 18 Well was
17 drilled we were very curious of how that well would operate
18 since it was on the westernmost flank, and as you can see,
19 when it come on in '84, the No. 2 Well immediately dropped
20 off and the 18 Well picked up that production.

21 We think that is very significant because
22 we feel like the No. 2 production was definitely coming from
23 the west and now what has happened is the No. 18 Well has
24 cut that drainage point off, with it now oil coming in at
25 the Anderson Ranch Unit No. 18.

1 MR. CARR: We would move the
2 admission of Exhibit Fourteen.

3 MR. CATANACH: Exhibit Fourteen
4 will be admitted into evidence.

5 Q I'm trying to find out where the amounts
6 of discovery allowable that you're requesting -- do you
7 have that, sir?

8 A The amount?

9 Q Yes.

10 A No, I --

11 Q I guess, let's see, the top of your per-
12 forations are --

13 A The top of our perforations are actually
14 9956 to 9975, a 5 foot -- at 5 barrels a foot, that would
15 be equivalent to about 1600 barrels per day.

16 MR. CATANACH: I think that's
17 all I have for now.

18 Anything else, Mr. Carr?

19 MR. CARR: Nothing further, Mr.
20 Catanach.

21 MR. CATANACH: Okay, there being
22 nothing further, Case 9163 will be taken under advisement.

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(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO
HEREBY CERTIFY the foregoing Transcript of Hearing before
the Oil Conservation Division (Commission) was reported by
me; that the said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 9163,
heard by me on July 1, 1987.

David L. Catorack, Examiner
Oil Conservation Division

1 STATE OF NEW MEXICO
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BUILDING
5 SANTA FE, NEW MEXICO

6 18 January 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 In the matter of Case No. 9163 being CASE
10 reopened pursuant to the provisions of 9163
11 Division Order No. R-8470, which promul-
12 gated special rules and regulations for
13 the West Anderson Ranch-Wolfcamp Pool in
14 Lea County, New Mexico.

15 BEFORE: Victor T. Lyon, Examiner

16 TRANSCRIPT OF HEARING

17 A P P E A R A N C E S

18 For the Division: Robert G. Stovall
19 Attorney at Law
20 Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico

21 For Arco Oil and Gas William F. Carr
22 Company: Attorney at Law
23 CAMPBELL and BLACK, P. A.
P. O. Box 2208
24 Santa Fe, New Mexico 87501
25

1 MR. LYON: We'll call next
2 Case 9163.

3 MR. STOVALL: In the matter of
4 Case 9163 being reopened pursuant to the provisions of Div-
5 ision Order No. R-8470, which promulgated temporary special
6 rules and regulations for the West Anderson Wolfcamp Pool
7 of Lea County, New Mexico, including the provision for
8 80-acre spacing units.

9 MR. CARR: May it please the
10 Examiner, in the original case ARCO Oil & Gas Company was
11 the applicant.

12 ARCO does not intend to pursue
13 this matter further. The well has not been a commercial
14 success and ARCO would request that the rules be rescinded.

15 MR. LYON: Thank you, Mr.
16 Carr.

17 An order will be entered res-
18 cinding the rules, temporary rules, entered for this pool.

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(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9163, heard by me on Jan 18 1989.

W. Boyd, Examiner
Oil Conservation Division