

CASE 6836: ANADARKO PRODUCTION COMPANY
FOR AN NSPA DETERMINATION, EDDY COUNTY,
NEW MEXICO

CASE NO.

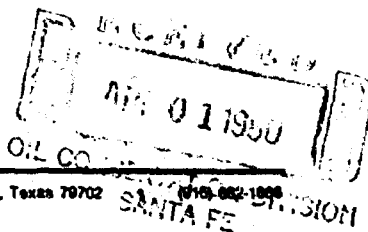
6836

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

Anadarko
PRODUCTION COMPANY

P. O. Box 2487 • Midland, Texas 79702



A
Penhandle
Eastern
Company

March 27, 1980

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attn: Dan Nutter

Dear Mr. Nutter,

Enclosed is a tabulation of original bottom hole pressures in the North Turkey Track area in Eddy County, as requested at our hearing on 3/12/80, Docket No. 6836.

The original pressure on Anadarko's N. M. State "AA" No. 1, in the original completion zone, was the highest in the area. This zone was subsequently proven through performance to be very limited.

Please call me if you have any questions on this data or on anything else pertaining to our presentation.

Yours very truly,

Dan G. Kernaghan
Division Production Manager

DGK:tlf

Attachment

*File
Case 6836*

SUMMARY OF MEASURED BOTTOM HOLE PRESSURE

NORTH TURKEY TRACK AREA

<u>WELL NAME</u>	<u>OPERATOR</u>	<u>LOCATION</u>	<u>DATE OF TEST</u>	<u>DEPTH OF TEST</u>
Turkey Track State Com. No. 1	Read and Stevens	Sec 25, T-18-S, R-28-E, 660' FEL, 1980' FSL	1-30-78	10,970'
Turkey Track State Com. No. 2	Anadarko Production Co.	Sec 25, T-18-S, R-28-E, 2030' FNL, 1980' FWL	7-31-78	10,875'
N. M. State "AA" No. 1	Anadarko Production Co.	Sec 35, T-18-S, R-28-E, 1980' FNL, 1980' FWL	1-10-79	10,954'
N. M. State "AB" No. 1	Anadarko Production Co.	Sec 36, T-18-S, R-28-E, 1980' FNL, 660' FEL	1-05-80	10,978'
Millman Deep No. 1	Hanagan Petroleum, Inc.	Sec 4, T-19-S, R-28-E, 660' FNL, 1924' FEL	1-03-72	10,875'- 895'
Merchant State No. 1	Bass Enterprises	Sec 1, T-19-S, R-28-E, 1980' FNL, 660' FEL	8-07-79	11,022'- 075'
Wright Federal No. 1	Hondo Drilling Co.	Sec 29, T-18-S, R-29-E, 660' FSL, 1980' FWL	8-15-76	11,068'- 222'
Alscott Federal No. 2	Hondo Drilling Co.	Sec 30, T-18-S, R-29-E, 660' FSL, 1980' FEL	6-25-77	10,839'- 965'
State E. R. Com No. 1	Amoco Production Co.	Sec 6, T-19-S, R-29-E, 1980' FNL, 1980' FEL	12-01-77	11,068'- 112'
Wright Federal Com No. 2	Hondo Drilling Co.	Sec 29, T-18-S, R-29-E, 1980' FNL & FEL	5-15-78	10,400'- 653'
Alscott "A" No. 1	Hondo Drilling Co.	Sec 31, T-18-S, R-29-E, 1650' FNL, 1980' FEL	6-10-76	11,050'- 111'

SUMMARY OF MEASURED BOTTOM HOLE PRESSURE

NORTH TURKEY TRACK AREA

<u>OPERATOR</u>	<u>LOCATION</u>	<u>DATE OF TEST</u>	<u>DEPTH OF TEST</u>	<u>BHP</u>	<u>SOURCE</u>
Read and Stevens	Sec 25, T-18-S, R-28-E, 660' FEL, 1980' FSL	1-30-78	10,970'	4423	Bomb
Anadarko Production Co.	Sec 25, T-18-S, R-28-E, 2030' FNL, 1980 FWL	7-31-78	10,875'	4423	Bomb
Anadarko Production Co.	Sec 35, T-18-S, R-28-E, 1980' FNL, 1980' FWL	1-10-79	10,954'	4616	Bomb
Anadarko Production Co.	Sec 36, T-18-S, R-28-E, 1980' FNL, 660' FEL	1-05-80	10,978'	4119	Bomb
Hanagan Petroleum, Inc.	Sec 4, T-19-S, R-28-E, 660' FNL, 1924' FEL	1-03-72	10,875'- 895'	4298	DST
Bass Enterprises	Sec 1, T-19-S, R-28-E, 1980' FNL, 660' FEL	8-07-79	11,022'- 075'	4256	DST
Hondo Drilling Co.	Sec 29, T-18-S, R-29-E, 660' FSL, 1980' FWL	8-15-76	11,068'- 222'	4510	DST
Hondo Drilling Co.	Sec 30, T-18-S, R-29-E, 660' FSL, 1980' FEL	6-25-77	10,839'- 965'	4324	DST
Amoco Production Co.	Sec 6, T-19-S, R-29-E, 1980' FNL, 1980' FEL	12-01-77	11,068'- 112'	4347	DST
Hondo Drilling Co.	Sec 29, T-18-S, R-29-E, 1980' FNL & FEL	5-15-78	10,400'- 653'	4300	DST
Hondo Drilling Co.	Sec 31, T-18-S, R-29-E, 1650' FNL, 1980' FEL	6-10-76	11,050'- 111'	4444	DST

[Signature]
3/27/80

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6836
Order No. R-6323

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR AN NGPA DETERMINATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 12, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 24th day of April, 1980, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Anadarko Production Company, seeks a determination by the Division, in accordance with Sections 2 (6) and 102 of the Natural Gas Policy Act of 1978, and the applicable rules of the Federal Energy Regulatory Commission, that its New Mexico "AA" State Well No. 1, located in Unit F of Section 35, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, has discovered a new onshore reservoir from which natural gas was not produced in commercial quantities before April 20, 1977.
- (3) That said well was originally completed in the Lower Morrow formation in January, 1979, with perforations from 10,949 feet to 10,959 feet and a total depth of 11,705 feet.
- (4) That after some six months of production, during which slightly less than one-half billion cubic feet of gas was produced from the well, the Lower Morrow formation was adjudged to

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Case No. 6836
Order No. R-6323

be depleted, whereupon workover and recompletion operations in the Middle Morrow formation were begun.

(5) That said well was completed in the Middle Morrow formation in September, 1979, with perforations from 10,794 feet to 10,806 feet and from 10,816 feet to 10,821 feet, with a plugged back total depth of 10,870 feet.

(6) That although there are several wells in the general vicinity of said New Mexico "AA" State Well No. 1 which have penetrated or are completed in the Middle Morrow formation, non-productive wells in said formation between said wells and the subject well indicate non-continuous porosity and permeability.

(7) That said non-continuous porosity and permeability, combined with pressure differentials between the subject well and other wells in the general vicinity which are completed in the Middle Morrow formation, indicate that the subject well is completed in a heretofore undrained reservoir.

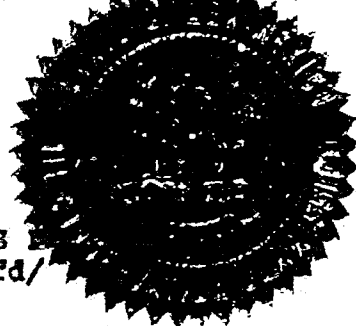
(8) That the combined geological and engineering data presented establishes that said New Mexico "AA" State Well No. 1 has been completed in a new onshore reservoir as defined by the provisions of Section 102 of the Natural Gas Policy Act of 1978 and the applicable rules of the Federal Energy Regulatory Commission.

IT IS THEREFORE ORDERED:

(1) That the Anadarko Production Company New Mexico "AA" State Well No. 1, located in Unit F of Section 35, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, is completed in a new onshore reservoir as defined by Sections 2 (6) and 102 of the Natural Gas Policy Act of 1978, and the applicable rules of the Federal Energy Regulatory Commission.

(2) That jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

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fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
12 March 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Anadarko Production)
Company for an NGPA determination,) CASE
Eddy County, New Mexico.) 6836

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 435-7409

I N D E X

RICHARD A. ERICKSON

Direct Examination by Mr. Kellahin

Cross Examination by Mr. Ramey

Cross Examination by Mr. Padilla

DANIEL G. KERNAGHAN

Direct Examination by Mr. Kellahin

Cross Examination by Mr. Nutter

E X H I B I T S

Applicant Exhibit One, Plat

Applicant Exhibit Two, Structure Map

Applicant Exhibit Three, Cross Section

Applicant Exhibit Four, Filing

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1 MR. NUTTER: Call next Case Number 6836.

2 MR. PADILLA: Application of Anadarko
3 Production Company for an NGPA determination, Eddy County,
4 New Mexico.

5 MR. KELLAHIN: Tom Kellahin of Santa Fe,
6 New Mexico, appearing on behalf of Anadarko Production Com-
7 pany in association with Mr. Russell Bishop, an attorney for
8 Anadarko, and I have two witnesses to be sworn.

9 MR. NUTTER: Are they the same two wit-
10 nesses as the previous case?

11 MR. KELLAHIN: Yes, sir. I wonder if
12 the record may reflect --

13 MR. NUTTER: The record will show they
14 are still under oath.

15 MR. KELLAHIN: Mr. Nutter, may the re-
16 cord also reflect that both Mr. Erickson and Mr. Kernaghan
17 have been qualified as respective expert witnesses in their
18 particular field?

19 MR. NUTTER: They're both qualified and
20 under oath.

21 MR. KELLAHIN: Okay.

22
23 RICHARD A. ERICKSON
24 being called as a witness and having been previously sworn
25 upon his oath, testified as follows, to-wit:

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DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, Mr. Erickson, I'd like to direct your attention to what we've marked as Anadarko Exhibit Number One and have you identify that plat for us.

A That plat shows the deep gas completions in this portion of Eddy County.

Q What is Anadarko seeking to accomplish by this application?

A Seeking to accomplish a Section 102 new on-shore reservoir classification according to the NGPA.

Q The subject well for this application is located where?

A It's located in the west half of Section 35, Township 18 South, Range 28 East.

Q Would you describe in general terms what the area of investigation was by Anadarko to determine whether or not the Middle Morrow production in the subject well was in a separate reservoir under the Natural Gas Policy Act definition of a reservoir from any other well in the area that penetrated that zone?

A We examined an area several miles away from the subject well to examine any Morrow completions in that area.

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1 Q Is that area of examination set forth
2 on what we've marked as Anadarko Exhibit One-A?

3 A Yes.

4 Q During the course of that examination,
5 Mr. Erickson, would you identify for us how many wells could
6 potentially be classified as wells capable of production prior
7 to April 20th, 1977?

8 A Five.

9 Q Would you locate each of those five --

10 MR. NUTTER: Excuse me. Are you quali-
11 fying this well, which is your AA State as being a new re-
12 servoir in the Middle Morrow or the Lower Morrow, or both
13 Morrows?

14 A The Middle Morrow.

15 MR. NUTTER: Well, then --

16 MR. KELLAHIN: It would be the Middle
17 Morrow.

18 MR. NUTTER: And now when you said there
19 were five wells had been drilled, were there any wells that
20 had been drilled in the Middle Morrow --

21 A Yes.

22 MR. NUTTER: -- that are capable of
23 producing?

24 A Yes.

25 MR. NUTTER: And there were five of them?

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1 A There were five wells that penetrated the
2 Middle Morrow and only one that has subsequently been pro-
3 ducing in the Middle Morrow.

4 MR. PADILLA: Mr. Erickson, if I may ask
5 a question at this point. You have previously qualified with
6 this AA Well one portion of the Morrow, is that correct?

7 A Yes. It originally produced as a Lower
8 Morrow producer, but it has since been abandoned in the Lower
9 Morrow.

10 MR. PADILLA: But you qualified that as
11 under Section 102, is that correct?

12 A I --

13 MR. KELLAHIN: Would you give us the
14 question again?

15 MR. PADILLA: There has been a previous
16 application for this well concerning another zone of the
17 Morrow formation, and I'm not sure which one that is.

18 MR. KELLAHIN: Mr. Kernaghan can answer
19 that.

20 MR. KERNAGHAN: Can I answer that? We --
21 that well was completed originally in the Lower Morrow and
22 the perforations show up on the cross section. We filed an
23 application. It apparently went through. It was filed back,
24 you know, a year or more ago when the well was put on. It
25 subsequently depleted. It looked just like the Wright Federal

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1 No. 1.

2 MR. NUTTER: In the Lower?

3 MR. KERNAGHAN: Yes. It came down and
4 produced about -- a little less than half a billion cubic
5 feet in six or eight months time.

6 MR. NUTTER: And now you've --

7 MR. KERNAGHAN: And now we've recompleted
8 into the -- into the Middle Morrow and we're asking for a
9 new reservoir determination there.

10 We -- the application for the Lower is
11 either still in processing or has -- with FERC, or has been
12 granted, and I cannot tell you the absolute status there.

13 MR. NUTTER: But we're not concerned
14 with Lower Morrow --

15 MR. KERNAGHAN: No, sir.

16 MR. NUTTER: -- here today at all in that
17 well.

18 MR. KERNAGHAN: No, sir.

19 MR. NUTTER: Okay.

20 MR. KERNAGHAN: If we were to ever become --
21 certainly the performance of it in the Lower Morrow is pretty
22 clear cut after the fact, but, you know, it's been a very
23 small reservoir.

24 MR. NUTTER: It was producing from a
25 small, isolated reservoir, then.

1 MR. KERNAGHAN: Yes. Yes, sir.

2 Q All right, Mr. Erickson, let me have you
3 clarify a couple of points for me.

4 The subject well you're seeking a new
5 onshore reservoir determination for the Middle Morrow?

6 A Yes.

7 Q Would you identify for me what I under-
8 stood you to say was the only well in the area of investiga-
9 tion that was completed prior to April 20th, 1977, and which
10 actually produced from the Middle Morrow?

11 A It's the Yates Travis Deep in the south
12 half of Section 18.

13 Q All right.

14 A Of 18, 29.

15 Q Saving that well for a moment, identify
16 for me, then, any other wells that were drilled and completed
17 prior to April 20th of '77 that penetrated the Middle Morrow
18 and for some reason or another never actually produced from
19 the Middle Morrow?

20 A They are the Hanagan Millman Deep in
21 Section 4 of 19, 28; the Depco DHY in Section 11 of 19, 28;
22 the Hondo No. 1 Alscott Federal in the north half of Section
23 31, 18, 29; and the No. 1 Wright Federal in the south half
24 of Section 29, 18, 29.

25 Q Do you have an opinion, Mr. Erickson,

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1 whether or not the subject well is producing from a separate
2 Middle Morrow reservoir under the Natural Gas Policy definition?
3 From a separate reservoir from any other well within the
4 area?

5 A I believe it is.

6 Q All right. Would you take in any order
7 you like each of those five wells that you've identified and
8 explain to me why you believe the subject well is producing
9 from a separate Middle Reservoir than any of those wells?

10 A The Hanagan never produced out of the
11 Middle Morrow and the log showed no sand present in the
12 Middle Morrow.

13 The Depco DHY was the same case. There
14 was no sand development at all in the Middle Morrow.

15 The No. 1 Alscott Federal had no sand
16 development.

17 And the No. 1 Wright Federal is the same
18 case.

19 Q No Middle Morrow sand at all?

20 A No Middle Morrow sand development.

21 Q All right. I direct your attention, then,
22 to the Yates Well in Section 18. Why is the subject well
23 within this Middle Morrow reservoir a different Middle Morrow
24 reservoir than that being produced in the Yates Well?

25 A The main reason it's considered to be is,

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1 checking the logs, the sand occurs in a different position
2 in the Middle Morrow than it does in the subject well. Also,
3 the great spatial separation would lead us to believe that
4 they are definitely in a different reservoir.

5 MR. NUTTER: Now, which one is it you're
6 comparing now?

7 A The Yates Well in Section 18 of 18, 29.

8 MR. NUTTER: Way up to the north there?

9 A Yes.

10 Q I notice, Mr. Erickson, that there are
11 a number of wells between the subject well and the Yates Well
12 that apparently have penetrated through the Middle Morrow.

13 A Yes.

14 Q Is there -- in your examination of the
15 logs and information from any of those wells, are you able
16 to use that information to determine that those constitute
17 any kind of barrier, or the discovery of any kind of barrier
18 separating the discovery well from the Yates Well?

19 A Yes, I believe so. The Middle Morrow
20 sands occur in a different stratigraphic position than do the
21 Middle Morrow Sands in -- in the subject well, and they are
22 not necessarily the same sands that occur in the Yates Well.

23 Q Would you summarize for us generally the
24 kinds of productive characteristics we discover in Eddy
25 County when we drill to the Middle Morrow and any of the other

1 Morrow horizons within that general formation?

2 A The sands in the Middle Morrow tend to be
3 very lenticular, comprised of stringers of sand with local
4 extent. Wells that are next to each other do not necessarily
5 produce out of the same set of stringers, are not necessarily
6 in pressure communication. They tend to -- a great tendency
7 for cumulatives to vary very, very much.

8 Q Let me show you what we've marked as Ex-
9 hibit Number Two and ask you to identify the structure map
10 that we've enter -- introduced.

11 A This is the structure on the top of the
12 Morrow Clastics in the area.

13 Q In your opinion, Mr. Erickson, does
14 structural development in this area play any kind of signi-
15 ficance in determining whether there is a separate Morrow
16 reservoir?

17 A No.

18 Q Would you go to what we've marked as Ex-
19 hibit Number Three, which is your stratigraphic cross section
20 and demonstrate to us what information is available on that
21 exhibit to support your conclusion that the subject well pro-
22 duces from a separate Middle Morrow reservoir?

23 A The Middle Morrow sands are shown in
24 yellow across the cross section. The subject well is the
25 first well on the left and is completed in the Middle Morrow

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1 at approximately 10,800 feet.

2 One of the subject wells -- or one of the
3 key wells, the No. 1 Hondo Alscott Federal, is the second
4 well from the right and shows no Middle Morrow development
5 whatsoever.

6 Another one of the key wells is the Hondo
7 No. 1 Wright Federal, the first well located on the righthand
8 side of the cross section, shows some minor development of
9 Middle Morrow sands but has not been perforated in that. No
10 production characteristics are known from that.

11 Q Anything else about this exhibit?

12 A It tends to show that the -- the very
13 erratic nature of the Middle Morrow developments. Sands in
14 the area are not necessarily equivalent to any of the others
15 shown on the cross section.

16 MR. NUTTER: Mr. Erickson, there's a
17 well in the east half of Section 35 that's not on the cross
18 section.

19 A Yes, there is.

20 MR. NUTTER: And what is the -- that well
21 completed in?

22 A That well is not yet drilled.

23 MR. NUTTER: That's just a location?

24 A That's just a location.

25 MR. NUTTER: All right. Now, the second

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1 well from the left on Exhibit Number One is on the cross
2 section.

3 A Yes.

4 MR. NUTTER: And it's a Northern Natural
5 Middle Morrow Well, is that correct?

6 A It has not yet been completed. It is
7 drilled but they're in the process of testing and evaluating
8 the well, whether they're going to abandon the Morrow or
9 not.

10 MR. NUTTER: All parts of the Morrow?

11 A They have already abandoned the Lower
12 Morrow and are considering the Middle Morrow at this time.

13 MR. NUTTER: And when was that well
14 spudded?

15 A That well was spudded November 2nd, 1979.

16 MR. KELLAHIN: I have no further questions
17 of Mr. Erickson.

18 MR. NUTTER: Are there any questions of
19 Mr. Erickson?

20 MR. RAMEY: Yes.

21

22 CROSS EXAMINATION

23 BY MR. RAMEY:

24 Q Mr. Erickson, the well in Section 25
25 that's on the cross section is between the Yates Well and

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1 your well.

2 A Yes.

3 Q I note a little SP kick on the log of
4 this well at around, I guess that's 10,000 feet. In your
5 estimation is there enough sand development there to be pro-
6 ductive?

7 A No, there's not, in my opinion.

8 Q So you in fact have a nonporous interval
9 between your well and the other productive well up in Section
10 18?

11 A Yes.

12 Q So there's an indication that there is
13 a porosity pinchout between your well and --

14 A Yes.

15 Q -- this well, establishing a new reservoir.

16 A Yes.

17 MR. RAMEY: Thank you.

18 MR. NUTTER: Are there any --

19 MR. PADILLA: Mr. Examiner, I have a
20 question, if I may ask.

21

22

CROSS EXAMINATION

23 BY MR. PADILLA:

24 Q Mr. Erickson, is it your testimony that
25 there's no communication between the Alscott -- or the Middle

1 Morrow in the Alscott Federal No. 2 is not the same as in the
2 Anadarko AA No. 1?

3 A Yes, we contend that it's not the same.

4 Q Was gas produced from the Alscott Federal
5 No. 2 prior to November 1st, 1978?

6 A No. Oh, November 1st?

7 MR. KELLAHIN: The Alscott Federal No. 2
8 Well was completed after April 20th of '77.

9 MR. PADILLA: I'm asking November 1st,
10 1978, which was the effective date of the NGPA.

11 A Yes, it was completed before that.

12 Q Was gas sold from the Middle Morrow prior
13 to November 1st, 1978?

14 A I would assume so.

15 Q Could have been produced or could have
16 been sold?

17 A Could have been. Just a minute here.

18 Okay, the date of first production for
19 the Hondo Alscott Federal No. 2 was August 3rd, 1977.

20 Q But it's your contention that that
21 Middle Morrow reservoir -- the Middle Morrow zone in the
22 Alscott Federal No. 2 and the Anadarko AA are not the same?

23 A Yes, we contend they are not the same.

24 MR. NUTTER: Well, was that Alscott
25 Federal perforated in that Middle Morrow zone, Mr. Erickson?

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1 A Yes, it is.

2 MR. NUTTER: Okay, that's the yellow well
3 in the south half of 30, right?

4 A Right.

5 Q Let me ask you, Mr. Erickson, were Exhibits
6 One through Three prepared by you or compiled under your
7 direction and supervision?

8 A Yes.

9 MR. KELLAHIN: That concludes our exam-
10 ination of Mr. ERickson.

11 MR. NUTTER: Are there any questions of
12 Mr. Erickson? He may be excused.

13
14 DANIEL G. KERNAGHAN

15 being called as a witness and having been previously sworn
16 upon his oath, testified as follows, to-wit:

17
18 DIRECT EXAMINATION

19 BY MR. KELLAHIN:

20 Q Mr. Kernaghan, I show you what we have
21 marked as Anadarko Exhibit Number Four to this particular
22 case, and ask you if you can identify that document?

23 A This document is the -- to the best of
24 my knowledge, is the filing made with the New Mexico Oil
25 Conservation Division for the status -- category determination

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1 for our New Mexico AA State No. 1 Well.

2 Q All right.

3 A On its recompletion in the Middle Morrow.

4 Q Do you have any testimony you would like
5 to place of record with regards to this application for a
6 new Middle Morrow reservoir determination in this case?

7 A No, sir.

8 Q All right.

9 MR. KELLAHIN: Mr. Kernaghan is available
10 to answer questions, Mr. Nutter, and if there are none, we
11 would move the introduction of Exhibits One through Four.

12 MR. NUTTER: Are there any questions of
13 Mr. Kernaghan?

14
15 CROSS EXAMINATION

16 BY MR. NUTTER:

17 Q Mr. Kernaghan, when was the AA State
18 completed and put on production from the Lower Morrow zone?

19 A Okay, it was completed on January 4th,
20 1979; put on production February 2nd, 1979, from perforations
21 10,949 to 959.

22 Q All right, turning to the Form C-105
23 that's in this packet here.

24 A Yes, sir.

25 Q Again the dates are obliterated for the

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1 first production and the tests on that well. Maybe you can
2 fill me in on what those dates are.

3 A On the -- okay. On the 105, well, this
4 shows the date of first production as 12-12 -- well, that's
5 on a -- just a second.

6 It reads to me, okay, the 12 has been
7 scratched out. It becomes 1-12-79 in both cases.

8 Q It's 1-12-79. Now, turn over two or
9 three pages, four or five pages, and I see another form. I
10 suppose it's the same form, and that would be a 1-12-79, also,
11 then.

12 A Yes, sir.

13 Q First production and date of test.

14 A Yes, sir.

15 Q And then it was connected on what date?

16 A My records indicate February 2nd.

17 Q Of '79.

18 A Yes, sir.

19 Q And that's Lower Morrow?

20 A Yes, sir.

21 Q And when was the end of production in
22 the Lower Morrow?

23 A The end of -- the last month for which
24 we show production from the Lower Morrow was July of 1979.

25 Q And then when -- what's your first month

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1 of -- what's your first production from the Middle Morrow
2 from that well?

3 A The report, the sundry report, of September
4 20th, 1979, shows the activity of returning the well to the
5 sales line.

6 Q And this would be after the workover re-
7 completion?

8 A That is correct. I show another date
9 here of September 2nd. These dates, there is ambiguity in
10 these dates because we shot the well and turned it into the
11 sales line, came back and acidized it and turned it down the
12 sales line, came back and fraced it and turned it down the
13 sales line. We didn't -- we didn't vent gas to the air any
14 more than was possible out of this thing, since the sales
15 line connection was already there.

16 That is the reason for some ambiguity in
17 the actual date of first sale.

18 Q So it was probably put back on the line
19 in September, though.

20 A Oh, yes, sir. The September 2nd date
21 is on the Anadarko company form, and I would assume that that
22 is correct.

23 I'm sorry. Pardon me. Let me -- it's
24 October 2nd. It's 10-2-79.

25 Q Well now, it couldn't have been that. It

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1 couldn't have been that because the form that is dated Sep-
2 tember 20 says returned well to sales.

3 A That's correct.

4 Q No, that's a notice of intention. I'm
5 sorry. That was what they planned to do.

6 A All right, you're right. We may have
7 sold some small quantities of gas into the line before the
8 October 2nd date, and it may have been so reported. I would
9 take the October 2nd date to be the first substantial sales
10 down the line.

11 Q And this permit which was filed September
12 20th says the date work will start will be 10-1-70 -- no,
13 that's when they first got the drilling permit. Let's forget
14 it. It was in September or October of '79.

15 A Yes, sir.

16 Q It went back on the line.

17 A Yes, sir.

18 Q After recompletion.

19 MR. NUTTER: Are there any further ques-
20 tions of Mr. Kernaghan? He may be excused.

21 Do you have anything further, Mr. Kellahin?

22 MR. KELLAHIN: No, sir.

23 MR. NUTTER: You want to introduce -- what
24 exhibits do you have in this?

25 MR. KELLAHIN: Exhibits One through Four.

1
2 MR. NUTTER: Anadarko Exhibits One
3 through Four will be admitted in evidence.

4 Does anyone have anything they wish to
5 offer in Case Number 6836?

6 We'll take the case under advisement.
7

8 (Hearing concluded.)
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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that
the foregoing and attached Transcript of Hearing before the
Oil Conservation Division 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 C.S.R.

SALLY W. BOYD, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6836
heard by me on 3/12 1980.

[Signature], Examiner
Oil Conservation Division

Docket No. 6-80

Dockets Nos. 8-80 and 9-80 are tentatively set for March 26 and April 9, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - MARCH 11, 1980

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6609: (DE NOVO) (Continued and Readvertised)

Application of Napeco Inc. for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn oil pool for its Benson Deep Unit Well No. 1 located in Unit 0 of Section 33, Township 18 South, Range 30 East, and special rules therefor, including 160-acre spacing and standard well locations.

Upon application of Yates Petroleum Corporation and Napeco Inc., this case will be heard De Novo pursuant to the provisions of Rule 1220. Applicants allege this is not an "oil" pool but is a "volatile" oil pool.

CASE 6823: Application of Amoco Production Company for 640-acre carbon dioxide gas well spacing, Harding, Quay, and Union Counties, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Rule 104 of the Division Rules and Regulations to require that wildcat and development carbon dioxide gas wells projected to the Tubb or older formations in Harding, Quay, and Union Counties must be located on 640-acre spacing and proration units, and must be located no nearer than 1650 feet to the outer boundary of the tract and not nearer than 330 feet to any interior quarter-quarter section line.

Docket No. 7-80

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 12, 1980

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for April, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves County, New Mexico.
- (2) Consideration of the allowable production of gas for April, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6813: (Continued from February 27, 1980, Examiner Hearing) (This case will be dismissed.)

Application of Petroleum Development Corporation to amend Order No. R-6196, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to amend Order No. R-6196 which authorized re-entry of a well at an unorthodox location in the Lusk-Morrow Gas Pool to be dedicated to the N/2 of Section 13, Township 19 South, Range 31 East. Applicant now seeks approval for a new revised location 750 feet from the North line and 660 feet from the West line of said Section 13.

CASE 6834: Application of Conoco Inc. for a dual completion and unorthodox well location, Lea County, New Mexico. (This case will be continued to March 26 and readvertised.)

Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its SEMU Burger Well No. 107 at an unorthodox location 2615 feet from the South and East lines of Section 24, Township 20 South, Range 38 East, to produce oil from the Blinbry Oil and Gas and Drinkard Pools.

CASE 6824: Application of American Trading and Production Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Talco Unit Area, comprising 4,800 acres, more or less, of State and Federal lands in Township 26 South, Range 35 East.

CASE 6815: (Continued and Readvertised)

Application of Florida Exploration Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Ross Draw Unit Well No. 8, a Wolfcamp gas well 1650 feet from the North and East lines of Section 27, Township 26 South, Range 30 East, the E/2 of said Section 27 being dedicated to the well.

CASE 6823: Application of Husky Oil Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its North Shore Woolworth Well No. 5 to be located in Unit E of Section 33, Township 24 South, Range 37 East, Jalmat Pool, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6826: Application of Tahoe Oil and Cattle Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Penrose Skelly Pool underlying the SE/4 SE/4 of Section 25, Township 21 South, Range 36 East, to be dedicated to its Bromlee Well No. 1 located thereon. Also to be considered will be the cost of recompleting said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in recompleting said well.

CASE 6827: Application of Consolidated Oil & Gas, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup formation underlying the SE/4 of Section 2, Township 30 North, Range 12 West, and in the Mesaverde formation underlying the S/2 of said Section 2, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6828: Application of Etheldred T. Ross for three non-standard gas proration units, Harding County, New Mexico. Applicant, in the above-styled cause, seeks approval of the three following non-standard gas proration units, all in Township 19 North, Range 30 East: a 40-acre unit comprising the SW/4 NE/4 of Section 12; and two 80-acre units in Section 14, the first comprising the N/2 NW/4 and the second comprising the N/2 SE/4; each of said units would be dedicated to a well to be drilled to the Tubb formation at a standard location thereon.

CASE 6829: Application of Alpha Twenty-One Production Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks findings that the drilling of its El Paso Tom Federal Wells Nos. 1, 2, and 3, in Units D, E, and F, respectively, of Section 33, Township 25 South, Range 37 East, Langlie Mattix Pool, is necessary to effectively and efficiently drain that portion of the existing proration unit which cannot be drained by the existing well on each of said well's respective proration unit.

CASE 6830: Application of Enserch Exploration, Inc. for special pool rules or, in the alternative, a special gas-oil ratio, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order promulgating special pool rules for the South Peterson-Pennsylvanian Field including a special gas-oil ratio of 4,000 to 1, or in the alternative, establishing a special gas-oil ratio of 4,000 to 1 for its Lambirth Well No. 3, located in Unit G of Section 31, Township 5 South, Range 33 East.

CASE 6831: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the recompletion of its State "JM" Well No. 1 in the Wolfcamp thru Cisco formations at an unorthodox location 660 feet from the North and East lines of Section 25, Township 18 South, Range 24 East, the N/2 of said Section 25 to be dedicated to the well.

CASE 6832: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the recompletion of its Cities "JC" Well No. 1 in the Wolfcamp thru Cisco formations at an unorthodox location 660 feet from the South and East lines of Section 13, Township 18 South, Range 24 East, the E/2 of said Section 13 to be dedicated to the well.

CASE 6833: Application of Harvey E. Yates Company for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Betenbough Well No. 1, the surface location of which is 660 feet from the North line and 1980 feet from the West line of Section 32, Township 13 South, Range 36 East, in such a manner as to bottom it within 100 feet of a point 660 feet from the North line and 1830 feet from the West line of said Section 32 in the Austin-Mississippian Pool.

CASE 6818: (Continued from February 27, 1980, Examiner Hearing)

Application of Tenneco Oil Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination for its State HL 11 Well No. 1 located in Unit N of Section 11, Township 19 South, Range 29 East.

CASE 6835: Application of Anadarko Production Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination for its New Mexico State "AB" Com. Well No. 1 located in Unit H of Section 36, Township 18 South, Range 28 East.

CASE 6836: Application of Anadarko Production Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination for its New Mexico "AA" State Well No. 1 located in Unit F of Section 35, Township 18 South, Range 28 East.

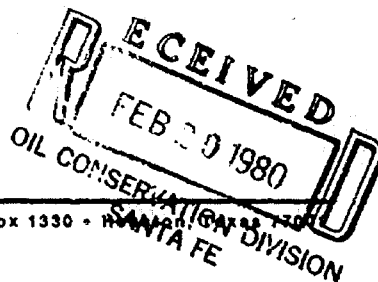
CASE 6837: Application of Curtis Little for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 7, Township 25 North, Range 3 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6819: (Continued from February 27, 1980, Examiner Hearing)

Application of V-F Petroleum, Inc. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the McKee or Devonian formations, or both, underlying four 40-acre units, being the SE/4 SE/4, NE/4 SE/4, NW/4 SE/4, and SW/4 SE/4 of Section 21, Township 23 South, Range 37 East, North Teague Field, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

Anadarko
PRODUCTION COMPANY

2777 Allen Parkway • P. O. Box 1330 • Santa Fe, New Mexico 87501



A
Penhandle
Eastern
Company

February 18, 1980

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Case 6836

Attention: Mr. Joe Ramey

RE: Applications for
Category Determination
Natural Gas Policy Act
of 1978 - Section 102

Gentlemen:

Pursuant to your notice dated January 25, 1980, this
is to request a hearing before the New Mexico Oil
Conservation Division for a new reservoir determination
on the following wells:

✓ New Mexico "AA" State No. 1	New Mexico State "AB" Com.
(Recompletion) Unit F	No. 1 Well Unit H
Section 35-18S-28E	Section 36-18S-28E
Eddy County, New Mexico	Eddy County, New Mexico

Please notify Anadarko at the address shown above of the time,
date and location of the hearing.

Respectfully submitted,

ANADARKO PRODUCTION COMPANY

By:

Robert G. Bush

Robert G. Bush
Manager of Hydrocarbon Sales

RGB/cmg

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6836

Order No. R-6323

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR AN NGPA DETERMINATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 12
19 80, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.
NOW, on this day of April, 1980, the
Division Director, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required
by law, the Division has jurisdiction of this cause and the
subject matter thereof.

(2) That the applicant, Anadarko Production Company, seeks
a determination by the Division, in accordance with Sections 2 (6)
and 102 of the Natural Gas Policy Act of 1978, and the applicable

rules of the Federal Energy Regulatory Commission, that its New Mexico "AA" State Well No. 1, located in Unit F of Section 35, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, has discovered a new onshore reservoir from which natural gas was not produced in commercial quantities before April 20, 1977.

(3) That said well was originally completed in the Lower Morrow formation in January, 1979, with perforations from 10,949 feet to 10,959 feet and a total depth of 11,705 feet.

(4) That after some six months of production, during which slightly less than one-half billion cubic feet of gas ~~had been~~ was produced from the well, the Lower Morrow formation was adjudged to be depleted, whereupon workover operations and recompletion operations in the Middle Morrow formation were begun.

(5) That said well was completed in the Middle Morrow formation in September, 1979, with perforations from 10,794 feet to 10,806 feet and from 10,816 feet to 10,821 feet, with a plugged back total depth of 10,870 feet.

(6) That although there are several wells in the general vicinity of said New Mexico "AA" State Well No. 1 which have penetrated ~~and~~ or are completed in the Middle Morrow formation, non-productive wells in said formation ~~to~~ between said wells and the subject well indicate non-continuous porosity and permeability.

(7) That said non-continuous porosity and permeability combined with pressure differentials between the subject well and other wells in the general vicinity which are completed in the Middle Morrow formation indicate that the subject well is completed in a heretofore undrained reservoir.

(8) That the combined ~~scientific and pressure~~ ^{geological and engineering} data presented establishes that said New Mexico "AA" State Well No. 1 has been completed in a new onshore reservoir as defined by the provisions of Section 102 ~~of~~ of the Natural Gas Policy Act of 1978 and the applicable rules of the Federal Energy Regulatory Commission.

IT IS THEREFORE ORDERED:

(1) That the Anadarko Production Company New Mexico "AA" State Well No. 1, located in Unit F of Section 35, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, is completed in a new onshore reservoir as defined by Sections 2 (6) and 102 ~~of~~ of the Natural Gas Policy Act of 1978, and the applicable rules of the Federal Energy Regulatory Commission.

(2) That jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

in January, 1979,

wells and the subject well