

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:)

APPLICATION OF MARATHON OIL COMPANY FOR)
COMPULSORY POOLING, EDDY COUNTY, NEW)
MEXICO)

APPLICATION OF MARATHON OIL COMPANY FOR)
COMPULSORY POOLING, EDDY COUNTY, NEW)
MEXICO)

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Oil Conservation Division
CASE NOS. 11,834

and 11,835

(Consolidated)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

August 21st, 1997

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, August 21st, 1997, 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

I N D E X

August 21st, 1997
Examiner Hearing
CASE NO. 11,834

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* * *

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
Attorney at Law
Legal Counsel to the Division
2040 South Pacheco
Santa Fe, New Mexico 87505

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

* * *

1 WHEREUPON, the following proceedings were had at
2 8:50 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case
4 Number 11,834.

5 MR. CARROLL: Application of Marathon Oil Company
6 for compulsory pooling, Eddy County, New Mexico.

7 EXAMINER STOGNER: Call for appearances.

8 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of
9 the Santa Fe law firm of Kellahin and Kellahin, appearing
10 on behalf of the Applicant, and I have two witnesses to be
11 sworn.

12 EXAMINER STOGNER: Any other appearances in this
13 matter?

14 Let's see, Mr. Kellahin, before I swear your
15 witnesses, do you want to elaborate on the next case?

16 MR. KELLAHIN: Yes, sir, the second case involves
17 a well that Marathon calls the James Buchanan 33 State Well
18 Number 1. It's the Division docketed Case 11,835.

19 These two wells are in the same general vicinity,
20 and if you desire, we will attempt to present these in the
21 same presentation with the landman called first. He would
22 talk about his efforts in the first case, immediately
23 followed by his efforts in the second case.

24 He would then be excused and we would call our
25 petroleum geologist, who then, during his testimony, will

1 talk about the geologic information in each of these cases
2 in support of his conclusion concerning the risk factor
3 penalty.

4 So with your permission we'd like to consolidate
5 for purposes of presentation these two cases.

6 EXAMINER STOGNER: I have no problem with that,
7 and at this time I will call Number 11,835.

8 MR. CARROLL: Application of Marathon Oil Company
9 for compulsory pooling, Eddy County, New Mexico.

10 EXAMINER STOGNER: Other than Mr. Kellahin, are
11 there any other appearances in this matter?

12 Will the witnesses please stand to be sworn?

13 (Thereupon, the witnesses were sworn.)

14 MR. KELLAHIN: Mr. Examiner, my first witness is
15 Mr. Tim Robertson. Mr. Robertson resides in Midland,
16 Texas, and he's a petroleum landman.

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

20 DIRECT EXAMINATION

21 BY MR. KELLAHIN:

22 Q. For the record, sir, would you please state your
23 name and occupation?

24 A. My name is Tim Robertson, and I'm a petroleum
25 landman.

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

2 A. I'm employed by Marathon Oil Company as a
3 landman.

4 Q. And where do you reside, sir?

5 A. I reside in Midland, Texas.

6 Q. On prior occasions, have you testified before the
7 Oil Conservation Division and qualified as an expert in
8 matters of petroleum land management?

9 A. Yes, I have.

10 Q. Pursuant to your employment as a landman, have
11 you been involved in determining the working interest
12 ownership in each of these two spacing units and, based
13 upon that determination, attempted to contact and obtain
14 the voluntary cooperation of all the working interest
15 owners?

16 A. Yes, I have.

17 MR. KELLAHIN: We tender Mr. Robertson as an
18 expert witness.

19 EXAMINER STOGNER: Mr. Robertson is so qualified.

20 Q. (By Mr. Kellahin) Let me direct your attention
21 first of all to the David Crockett 27 State 1 well, which
22 is the subject of Case 11,834.

23 Take a moment and identify for us what you have
24 prepared and what we have marked as Marathon Exhibit 1.

25 A. This Exhibit 1 is a map outlining the proposed

1 unit for the David Crockett 27 State Number 1 well. It
2 shows the state lease number and the working interest
3 ownership of this proration -- or proposed unit, and the
4 proposed location of the well.

5 Q. There is a reference on the bottom of the display
6 indicating the working interest ownership as determined
7 from a point 500 feet below the top of the San Andres
8 formation?

9 A. Yes, this is the breaking point. This is where
10 Marathon and other parties' ownership in the unit begins,
11 and our ownership is below that point, as is some of the
12 other owners in the unit.

13 Q. Your purpose, then, is consolidation of working
14 interest owners from 500 feet below the top of the San
15 Andres to the base of the Morrow formation?

16 A. That is correct.

17 Q. And if this well is successful as a producing gas
18 well from formations from the Wolfcamp down, then you're
19 proposing to space it on 320 acres?

20 A. That is correct.

21 Q. The proposed spacing unit is the west half of
22 Section 27?

23 A. Yes.

24 Q. And how did you go about determining this
25 percentage of the working interest owners that would

1 participate in a 320 spacing unit?

2 A. Research of the county and state records was done
3 in order to determine what ownership these parties had in
4 this proposed unit.

5 Q. To the best of your knowledge, information and
6 belief, is this tabulation of interest owners and their
7 percentages correct?

8 A. Yes.

9 Q. Let's turn to Exhibit Number 2 and have you
10 identify and describe that exhibit.

11 Q. This is an exhibit which I have created to show
12 the working interest owners in the proposed unit, their
13 working interest percentage in the unit, and the status of
14 their voluntary participation in the unit.

15 Q. All right. When we see the three companies that
16 you have been negotiating with, there is a "P" status
17 letter associated with Yates Petroleum Corporation?

18 A. Yes, Yates Petroleum Corporation has decided to
19 participate in our well.

20 Q. In what particular way have they elected to
21 participate?

22 A. They have both signed our proposed operating
23 agreement and have submitted to us a signed copy of our AFE
24 for the well.

25 Q. Have you submitted to Atlantic Richfield Company

1 and Louis Dreyfus Natural Gas Corporation the same
2 opportunity to participate in this well as you submitted to
3 Yates?

4 A. Yes, that is correct.

5 Q. As of this morning's hearing, do you have signed
6 voluntary commitments of ARCO and Louis Dreyfus to
7 participate in this well in some fashion?

8 A. No, we do not.

9 Q. Let's turn to Exhibit 3, and let me direct your
10 attention to your summary of certain components of
11 operating agreements, particularly the overhead rates.
12 What are you summarizing here?

13 A. What I have summarized on this exhibit is two
14 operating agreements in which Marathon is a nonoperator but
15 a participant in wells, and we have voluntarily signed
16 operating agreements. Both of these operating agreements
17 have been signed within the last year and are within the
18 same general vicinity; in fact, in the same township and
19 range as the proposed wells.

20 Q. Do you have a recommendation to the Division
21 Examiner for an overhead rate on a monthly basis while
22 drilling and during production?

23 A. Yes, our proposed overhead rates for drilling and
24 production is \$5400 and \$540, respectively.

25 Q. Are those the overhead rates subject to this well

1 for which Yates has signed the operating agreement?

2 A. Yes, it is.

3 EXAMINER STOGNER: Say those figures again?

4 THE WITNESS: \$5400 for a drilling well rate and
5 \$540 a month for producing wells.

6 EXAMINER STOGNER: Okay. Are you referring to
7 Exhibit Number 3?

8 MR. KELLAHIN: Yes, sir, his rates are lower than
9 competitors in the areas at this point.

10 EXAMINER STOGNER: Okay, I just wanted to make
11 sure that the figures were right.

12 MR. KELLAHIN: Yes, sir.

13 EXAMINER STOGNER: Okay, I'm sorry. Thank you,
14 Mr. Kellahin.

15 Q. (By Mr. Kellahin) The overhead rates, while
16 being lower than Mewbourne and InterCoast are charging you
17 for similar wells in this area is still a rate, is still a
18 rate that's acceptable to your company?

19 A. Yes, it is.

20 Q. Let's turn to another topic in these operating
21 agreements. Do you recall what the risk factor penalty is,
22 if you will, for subsequent well operations under your
23 operating agreement?

24 A. Under the one that we've proposed --

25 Q. Yes.

1 A. -- for our well? Yes, it's a 300-percent risk
2 penalty for nonconsent operations for subsequent wells.

3 Q. Okay. Let's turn now to the sequence of efforts
4 to consolidate this -- the working interest owners in this
5 well, starting with your first written correspondence that
6 is a specific proposal for this well, including an estimate
7 of well cost.

8 A. Yes.

9 Q. When did you send that out?

10 A. That was sent out, on this well, around June 12th
11 and was received by Arco on June 13th and by Dreyfus on
12 June 19th of this year.

13 Q. Okay. I am looking at what is marked as Exhibit
14 3. On the top of the letterhead it shows a June 16th,
15 1997, date. Are we on the same page?

16 A. Okay, I was looking at a different --

17 Q. I think you may have looked at the other case.

18 A. Ye, I may have.

19 Q. All right, let's make sure we're on the same
20 page. I'm looking at the exhibits for 11,834, and I'm
21 looking at Exhibit 3, which purports to be a letter.

22 A. Okay, yes, that's correct. That letter was dated
23 June 16th of 1997, I'm sorry.

24 Q. All right. Is this the same kind of letter,
25 including the same proposal, that you sent to ARCO and to

1 Louis Dreyfus?

2 A. Yes, it is.

3 Q. All right. And this is the one you sent to Janet
4 Richardson of Yates?

5 A. Yes, that's correct.

6 Q. All right. As we flip through the letter,
7 there's an attachment indicating a breakout of the working
8 interest owners.

9 A. Yes.

10 Q. And then we follow in the same exhibit package
11 and get a copy of the June 16th, 1997, letter to ARCO?

12 A. Yes.

13 Q. Following that, while it has been excluded from
14 the package, you in fact did sent ARCO a copy of the AFE,
15 did you not?

16 A. Yes, all three parties received copies of the
17 AFE.

18 Q. And everything is identical in these letters
19 except for the addressee of the letter?

20 A. That's correct.

21 Q. Then attached at the end is a copy of the AFE,
22 and we move into Exhibit Number 4, which is a letter dated
23 July 9th of 1997. Is that your next written correspondence
24 to the working interest owners?

25 A. Yes, it is.

1 Q. Describe for us what you're doing here.

2 A. This was a cover letter in which I conveyed to
3 each of the working interest owners a copy of our proposed
4 operating agreement for this proposed unit.

5 Q. Okay. And in response to that, Yates has
6 executed it, and you do not have an executed agreement with
7 either Dreyfus or ARCO at this point?

8 A. That's correct.

9 Q. Are you continuing your negotiation efforts with
10 those two companies, notwithstanding the presentation this
11 morning of a compulsory pooling application?

12 A. Yes, we have continued to speak with both ARCO
13 and Dreyfus by telephone and are continuing our
14 negotiations to attempt to gain voluntary participation.

15 MR. KELLAHIN: Mr. Examiner, Exhibit 6 following
16 the legal-sized exhibits is a certificate of my
17 notification of notice of hearing today to Dreyfus and to
18 Atlantic Richfield.

19 Q. (By Mr. Kellahin) All right, Mr. Robinson, if
20 you'll set those exhibits aside for a moment, let's turn to
21 the exhibit package for the James Buchanan 33 State Number
22 1 well, which is the topic of the second case, 11,835,
23 involving the east half of Section 33 in the same township
24 and range.

25 A. Okay.

1 Q. If you'll turn your attention to Exhibit 1, are
2 you also the principal landman on behalf of Marathon that
3 identified the interest owners, their participation factor
4 and negotiated with them for participation?

5 A. Yes, I am.

6 Q. Identify and describe for us, then, Exhibit
7 Number 1.

8 A. Exhibit Number 1 is a plat showing the proposed
9 unit for the James Buchanan 33 State Number 1 well. It
10 shows the state lease number, which covers this east half
11 of Section 33. It shows the proposed well location and the
12 working interest owners and their percentage of ownership
13 in the east half.

14 Again at the bottom is an indication of the
15 ownership -- This is the ownership below 500 feet below the
16 top of the San Andres formation, for the same reasons as
17 our previous exhibit.

18 Q. Have you satisfied yourself to the best of your
19 knowledge that the identifies of these working interest
20 owners and their percentage are accurately reflected on
21 this exhibit?

22 A. Yes.

23 Q. Let's turn to Exhibit 2 and have you identify and
24 describe that exhibit.

25 A. This exhibit shows the working interest owners,

1 their percentage ownership in the proposed unit, and the
2 status of their voluntary participation in our proposed
3 well.

4 Q. As we read down the status sheet, let's look at
5 the first entity that is identified as participating and
6 have you tell us what company that is.

7 A. Yes, the first party on this list that is
8 participating is Yates Petroleum Corporation.

9 Q. In what fashion are they participating?

10 A. They have, again, signed our operating agreement.
11 I have not yet received their signed AFE, but I believe
12 that I will receive that soon.

13 Q. Is that operating agreement, except for
14 identification of the spacing unit, identical to the
15 operating agreement that you are proposing to utilize for
16 the David Crockett well?

17 A. It is.

18 Q. It includes, then, the same overhead rates and
19 the same subsequent risk factor penalty for --

20 A. Yes.

21 Q. -- subsequent well operations?

22 A. Yes, it does.

23 Q. All right. What is the status of commitment of
24 Read and Stevens, Inc.?

25 A. Read and Stevens has also elected to participate

1 in our well. They have signed our operating agreement and
2 have submitted a signed AFE to us.

3 Q. All right. And finally, Roy G. Barton, Jr.,
4 Trustee?

5 A. Yes, same as with Read and Stevens there.

6 Q. Let's go back to the top of the list and have you
7 start with those parties for which you do not have a
8 written commitment of some type of participation.

9 A. Okay. With both ARCO and Dreyfus, the status of
10 their participation is the same as with the David Crockett
11 well in our previous testimony.

12 With Enron Oil and Gas we have attempted to
13 obtain -- also have attempted to obtain their voluntary
14 participation in the well and have not been successful in
15 obtaining it.

16 Q. You are continuing your efforts, then, with ARCO
17 and Louis Dreyfus in the hope and perhaps expectation that
18 you might receive a voluntary agreement?

19 A. Yes, we are continuing to negotiate and
20 communicate with them concerning this well and this
21 proposal, and we continue to attempt to gain their
22 voluntary participation.

23 Q. Is the advancement of that effort similar to or
24 different when we get to the Enron Oil and Gas Company?

25 A. It is similar to Enron in that we have received

1 no -- nothing from Enron that would indicate that they were
2 willing at this time to voluntarily participate in the
3 well.

4 Q. And who are you dealing with on behalf of Enron's
5 interest?

6 A. I'm dealing with Pat Tower, Mr. Pat Tower.

7 Q. Let's turn now to having you verify the written
8 correspondence that shows formally proposing the well,
9 including the submittal of an AFE, to the parties who are
10 not yet committed to the well. Starting with Exhibit
11 Number 3, would you identify the correspondence and
12 continue through the package?

13 A. All right, the first letter under Exhibit Number
14 3 is our well proposal to Mr. Roy G. Barton of Hobbs, New
15 Mexico, in which we propose the well to him.

16 These letters are, again, identical to the
17 letters we sent out under our David Crockett well, except
18 for the parties that they were sent to and the location of
19 the well and the well name.

20 The next letter was addressed to Mr. Bob Watson
21 at Read and Stevens.

22 Q. That's Exhibit Number 4?

23 A. Oh, I'm sorry --

24 Q. Yes, sir --

25 A. -- I thought these were all together. Yeah,

1 that's the next exhibit.

2 Q. They're in sequence, but they're marked as
3 separate exhibits?

4 A. Yes, they are.

5 Q. All right, let's start with Exhibit Number 4,
6 then. Identify that.

7 A. Yes, Exhibit Number 4 was addressed to Read and
8 Stevens. It is an identical letter to the others that had
9 been submitted except for the addressee and the well name.
10 It includes a copy of our receipt, showing when the
11 proposal was received by Read and Stevens, and it also
12 included a copy of the AFE with the letter.

13 Q. Okay. Exhibit Number 6?

14 A. Do you want to cover Number 5?

15 Q. Yes, sir, let's do that.

16 A. Number 5 is a letter to Mr. Larry Cunningham of
17 Enron Oil and Gas Company, and in all other respects the
18 letter is the same as the previous two exhibits.

19 Q. All right, now 6.

20 A. That one was to Mr. Lee Scarborough at Atlantic
21 Richfield Company.

22 Q. And Exhibit 7?

23 A. That one was addressed to Mr. Rusty Waters of the
24 Louis Dreyfus Natural Gas Corporation.

25 Q. And finally Exhibit 8?

1 A. I'm sorry, I'm missing Exhibit 8.

2 Q. All right, my Exhibit 8 should be the Janet
3 Richardson letter.

4 A. Yes, on Exhibit 8 the letter is the same except
5 it was addressed to Janet Richardson at Yates Petroleum
6 Corporation.

7 Q. Let's turn now to the next letter, which is a
8 July letter, and you've submitted an operating agreement to
9 the various working interest owners, pursuant to that
10 exhibit?

11 A. Yes, this is a letter which I sent on July 11th
12 to all of the working interest owners under this proposed
13 unit, proposing an operating agreement to go with our well
14 proposal for the James Buchanan 33 State Number 1 well.

15 This operating agreement was identical to the
16 operating agreement we proposed on the David Crockett well.

17 Q. Okay, now let's turn to Exhibit 10. I think
18 we've marked Exhibit 10 to be a portion of the operating
19 agreement itself?

20 A. Yes, this includes the first page of the
21 operating agreement, which is on AAPL Form 610-1982.

22 The second page included shows the proposed
23 nonconsent penalty rates of 100 and 300, and the third page
24 included shows the fixed overhead rates of \$5400 and \$540,
25 respectively, for drilling and producing well rates.

1 The next page shows Yates Petroleum Corporation's
2 signature to this operating agreement, and then Read and
3 Stevens' signature, and lastly Mr. Roy Barton, Jr., who is
4 the trustee of the Roy G. Barton, Sr., and Opal Barton
5 Revocable Trust.

6 Q. At this point, Mr. Robertson, in both of these
7 situations, have you received any objection from any of
8 these parties to be pooled as to having Marathon Oil
9 Company designated the operator?

10 A. No, I have not.

11 Q. Have you received any objection concerning the
12 proposed AFE?

13 A. No, I have not.

14 Q. Have you received any objection as to the well
15 location or the spacing units attributable to each well?

16 A. No, I have not.

17 Q. Have you received any objection to the proposed
18 operating agreement that you've submitted?

19 A. No, I have not.

20 Q. At this point do you believe you've exhausted
21 good-faith opportunities to have these parties participate
22 on a voluntary basis, and are you now seeking the entry of
23 a pooling order to cover those parties that are not
24 voluntarily committed?

25 A. Yes, we are.

1 MR. KELLAHIN: That concludes my examination of
2 Mr. Robertson.

3 At this point, Mr. Examiner, I would direct your
4 attention and request the admission of the certificate of
5 notification in Case 11,835, in which I attest to sending
6 notification to all these parties.

7 And at this point, then, we're ready to submit
8 for your consideration Marathon Exhibits 1 through 6 in
9 Case 11,834 and Exhibits 1 through 11 in Case 11,835.

10 EXAMINER STOGNER: Exhibits 1 through 6 in Case
11 11,834 will be admitted into evidence, as will Exhibits 1
12 through 11 in Case 11,835.

13 Thank you, Mr. Kellahin.

14 EXAMINATION

15 BY EXAMINER STOGNER:

16 Q. In looking at the first page on both Exhibit
17 Number 1, I notice that the lease number is the same on
18 both of these tracts?

19 A. Yes, that's correct.

20 Q. But the ownership is different?

21 A. Yes, these are -- This lease is a state lease
22 dating back to 1922 which covered about 12,000 acres, and
23 during the past number of years the ownership in the
24 different tracts of the lease has become different. And I
25 believe the ownership is based on documents that have been

1 filed in the county, and not necessarily with the State
2 Land Office.

3 Q. Does the entirety of this lease take in both
4 sections, or is there additional acreage or --

5 A. As I mentioned, the entirety of the original
6 lease covered about 12,000 acres within this township and I
7 believe the township to the south, and perhaps some lands
8 in the township to the north.

9 The original lease was granted to Mr. Martin
10 Yates, Jr., in 1922.

11 Q. 12,000 acres?

12 A. I believe that's correct, sir.

13 Q. That's got to be a record.

14 A. It is very -- probably the largest state lease in
15 -- well, that I've certainly come across.

16 Q. Okay. The overhead charges on both are \$5400 and
17 \$540?

18 A. That's correct.

19 Q. Has there been any telephone conversation with
20 Atlantic Richfield, since they're the biggest contributor?

21 A. Yes, we -- I've had a number of conversations
22 with the landman at ARCO concerning this, and we continue
23 to work with them and hope that we can work out an
24 agreement with them.

25 EXAMINER STOGNER: I don't have anything further

1 of Mr. Robertson. You may be excused at this time.

2 Mr. Kellahin?

3 MR. KELLAHIN: Thank you, Mr. Examiner.

4 EXAMINER STOGNER: Thank you.

5 MR. KELLAHIN: Mr. Examiner, at this time we
6 would call Mr. Bill DeMis. He spells his last name
7 D-e-M-i-s.

8 Mr. Examiner, when we begin presentation of Mr.
9 DeMis's geologic conclusions, I think it will be convenient
10 to look at the David Crockett exhibits first. He's got
11 three displays. They're marked 7, 8 and 9. I think we can
12 put those all in front of us at the same time, and it will
13 help visualize his study and his conclusions.

14 WILLIAM D. DeMIS,
15 the witness herein, after having been first duly sworn upon
16 his oath, was examined and testified as follows:

17 DIRECT EXAMINATION

18 BY MR. KELLAHIN:

19 Q. All right, sir. For the record, would you please
20 state your name and occupation?

21 A. My name is William D. DeMis. I'm a petroleum
22 geologist employed by Marathon Oil Company in Midland,
23 Texas.

24 Q. On prior occasions, Mr. DeMis, have you testified
25 before the Division and qualified as an expert in petroleum

1 geology?

2 A. Yes, I have.

3 Q. Pursuant to your employment in that capacity,
4 have you made a geologic investigation of both the location
5 and the geology involved in each of these pooling cases?

6 A. Yes, I have.

7 Q. And based upon that study, do you now have
8 conclusions and opinions concerning an appropriate risk-
9 factor penalty to be assessed?

10 A. Yes, I do.

11 Q. In each of these two cases, what is that opinion?

12 A. My opinion is, 200 percent.

13 Q. And that represents the maximum that the Division
14 is allowed by statute to award in this type of case?

15 A. Yes.

16 Q. Let's turn, then, to the Crockett well. That's
17 up in Section 27. We're looking at the west half of that.
18 If you start with Exhibit 7, it will help us visualize the
19 relationship of the Crockett well to the Buchanan well,
20 which is south and west of the Crockett, and it would be in
21 the east half of 33. On this display it's shown as an open
22 circle.

23 All right, let's start with Exhibit 7 and have
24 you identify what's on this display in terms of the ability
25 of the operators to obtain production out of the Morrow

1 channel sand system in this vicinity.

2 A. Yeah, yes, what this shows is, it shows those
3 wells deeper than 9000 feet that have penetrated the
4 Morrow. And in the field of view of this map it's about
5 nine square miles, and there are nine penetrations or
6 roughly one penetration per square mile. The control is
7 fairly loose here.

8 Q. Give us a general overview of the Morrow
9 deposition and type of system that you're attempting to
10 explore here.

11 A. In this case, the Morrow is composed of a series
12 of fluvial, or river, channels that trend north northwest-
13 south southeast. And these river channels deposited sand,
14 and that's the reservoir in this part of Eddy County.

15 Q. Is there a general orientation to the Morrow
16 channel system in this area?

17 A. Yes, north northwest-south southeast trending.

18 Q. What is the challenge, then, for you as a
19 geologist in attempting to locate and explore for Morrow
20 gas production in this area?

21 A. Well, the biggest challenge of all is just to
22 simply find the channel, and that, indeed, can be fairly
23 daunting.

24 Q. When we look at Exhibit 7, can you give us an
25 indication of the productivity of the wells in the

1 immediate area?

2 A. Yes, there are -- On this map of the nine
3 penetrations of the Morrow, there are three that we at
4 Marathon could consider economic successful efforts, and
5 those are in 23, 27 and 26.

6 Q. All right, let me do that again. In 23, that one
7 would be commercial?

8 A. Yes.

9 Q. In the east half of 27, that one's commercial?

10 A. Yes.

11 Q. And what was the other one?

12 A. The well in Section 26, in the west half.

13 Q. Okay.

14 A. There's also a well in Section 35 that cum'd just
15 a bit under a half a BCF, which would be quite marginal.

16 Q. What about the rest of them that are shown?

17 A. The rest of these wells are either recently
18 drilled wells or -- The rest of the wells are either dry
19 holes or wells that were recently drilled, and we feel that
20 these -- Let me just go through them case by case.

21 The well in Section 21 had a high calculated
22 absolute open flow, but it was completed for 404 MCF per
23 day, and our best estimate on the ultimate of that well
24 would be about .2 BCF, so that we would not consider a
25 successful effort.

1 The well in Section 28 in the north half was
2 entirely inadequate. It was 0.4 BCF.

3 And the well in the south half of Section 34 was
4 recently completed by Mewbourne. It's only been on line
5 for about three months. It's declined fairly rapidly from
6 an IP of 3.43 million a day, down to about -- a bit over a
7 million.

8 And the data is still very tenuous, but we see
9 this as possibly cum'ing about 1.2 BCF. This might be an
10 additional successful effort in the area, but with only
11 four months' production we can't be certain.

12 So what this map shows is that of the nine
13 penetrations in nine square miles there are three
14 successful efforts. This is pretty risky.

15 Q. When you look at the north half of 34, there's a
16 dryhole symbol?

17 A. Yes.

18 Q. Was that a penetration in a test of the Morrow?

19 A. Yes, it was.

20 Q. Let's turn to Exhibit 8 briefly. This is
21 obviously a structure map on the lower Morrow. Does
22 structure play a part in your exploration strategy in this
23 Morrow channel?

24 A. Actually, we feel that it does not, really. You
25 have to find the main part of the Morrow channel, and that

1 seems to determine the production better than structure.

2 We've had cases, say, in Indian Basin where we've
3 drilled updip of good Morrow wells, and we lose -- we run a
4 greater risk of losing reservoir. I mean, that seems to
5 hurt us the most.

6 And we can even find places in these -- if you
7 will, string of pearls. The sand just is lined up as a
8 string of pearls. And you can move updip from a porous and
9 productive well, you can ultimately move updip in these
10 channel sands and find another well updip that's wet and
11 porous.

12 Q. Let's pass by the structure map, then --

13 A. Yeah.

14 Q. -- and turn to your sand map, your isopach on
15 Exhibit 9.

16 A. Yes.

17 Q. When we look at how you have contoured the
18 thickness, they're -- the wells with the greatest thickness
19 appear to be to the northeast, and the well with the
20 greatest thickness is 22 feet?

21 A. Yes, that's correct.

22 Q. Is this a net sand map, or is this a gross
23 number?

24 A. This would be what I would call the net sand.
25 That is...

1 Q. When you relate the productivity of the wells to
2 net sand thickness, is there an approximation of the
3 minimum amount of thickness you need in order to establish
4 commercial production?

5 A. Yes, about 20 feet.

6 Q. How does that explain your conclusion of a
7 maximum risk factor penalty in relation to sand thickness?

8 A. Well, as you can see from the map, we have very
9 little control -- We're drilling to the west and southwest
10 of the only three good wells out here, and we don't have
11 any thick sand wells off to the west to help constrain
12 where that channel should be.

13 Moreover, and most importantly, there's a contour
14 option where you could just as easily map the main axis of
15 the channel north and east of the well located in Section
16 27.

17 Q. All right, let's take a look at that point. If
18 you're keying off the well in the northeast of 27 --

19 A. Yes.

20 Q. -- which is a commercial well with 18 feet --

21 A. Yes.

22 Q. -- you have chosen to locate this channel that's
23 oriented northwest to southeast, you've located the channel
24 south of that well, right?

25 A. Yes, I have --

1 Q. Can you --

2 A. -- but that is an optimistic contour option.

3 Q. Can you honor all the data points available in
4 this area and just as equally put this channel system
5 northeast of the well in the northeast of 27?

6 A. Yes, I can, and that, of course, is a bit of
7 concern for us in terms of the risk here.

8 Q. In addition, you have chosen to optimize the
9 thickness in the channel through the west half of 27. But,
10 in fact, do you have any evidence of sand thickness greater
11 than 18 feet?

12 A. No, I do not. We don't have any 3-D seismic data
13 to help delineate these channels in this area, so this is
14 based on just simply extrapolating contour trends farther
15 to the north, say, in Section 16, on down through this
16 area. So it's highly interpretive, and therefore quite
17 risky.

18 Q. In conclusion, then, summarize your points as to
19 the necessity for maximum penalty for the Crockett well.

20 A. Yes. The reasons we need the maximum penalty is
21 because the area is sparsely drilled. The chance of
22 success here, based on just empirical review of the known
23 penetrations, is only about one in three.

24 Q. The orientation -- pardon me, the location of the
25 channel is problematic. All that we have is subsurface

1 data -- we don't have any 3-D seismic data, and the channel
2 could just as easily be north of the well that we're keying
3 off of, instead of south.

4 And finally, the well control itself does not
5 provide any thick sand penetrations west of our location
6 that we propose to help draw the contours through there or
7 help us think that we may have thicker sand at our
8 location.

9 Therefore, based on these criteria, we feel that
10 the maximum risk penalty is warranted.

11 Q. Let's turn your attention now to the three
12 geologic displays, or -- yeah, our information concerning
13 the Buchanan 33 State 1. They are marked as Exhibits 12,
14 13 and 14. Take a moment and let us get those out in front
15 of us.

16 When we turn to the Buchanan case, Exhibit 12 is
17 your structure map. These are marked in a little different
18 sequence. Exhibit 12 is your structure map, 13 is your
19 isopach, and 14 now is the summary of production
20 information.

21 Let me ask you this: In relation to the Crockett
22 well, does this Buchanan well stand on its own in terms of
23 its geologic risk and the conclusions you're reaching
24 concerning these displays?

25 A. Yes, it does, it's an independent effort.

1 Q. So although they're in reasonable proximity,
2 they're targeting a different portion of a different Morrow
3 sand channel?

4 A. Yes, they are.

5 Q. So that information derive by you for the
6 Crockett well is not going to be useful in assessing risk
7 for the Buchanan well?

8 A. No, it would not.

9 Q. And vice-versa?

10 A. Yes, that's correct.

11 Q. All right. Let's start with the Buchanan well,
12 Exhibit 12, again structure map. Is this significant to
13 you, and if so, why?

14 A. One always feels better drilling upstructure of
15 production, so that may be of some assistance to us here in
16 this -- at the Buchanan well. But again, our experience in
17 the Morrow is that structure is by no means to having a
18 successful effort in the Morrow.

19 Q. Let's skip 13 for a moment, and give us some
20 information on 14 so we know the relative productivity --

21 A. Yeah.

22 Q. -- of the Morrow wells within the target area.

23 A. Yeah, the well in Section 34, immediately to the
24 east, is the Mewbourne well, which was recently drilled,
25 and that well may be a successful effort, and it may well

1 cum 1.2 BCF. But again, those are very preliminary
2 findings on that well. We can only be hopeful.

3 To the southeast in Section 3 is the Maralo well,
4 which is currently -- which is shown as an inactive Morrow
5 well. And that well also cum'd about 1.2 BCF.

6 Then -- Those would be two successful efforts.

7 Then there's the well in Section 4, which cum'd
8 0.128 BCF. That would be an unsuccessful effort. The well
9 in the north half of 34 was a dry hole. The well in
10 Section 28 was a dry hole. And we've already discussed the
11 well in Section 27.

12 But what we see here is that there are seven
13 penetrations, again, in approximately nine square miles and
14 only two economic wells in that area.

15 Moreover, our location that we have here in
16 Section 33 is located west of the economic wells, and you
17 can see by the blank white spot on the west half of the
18 map, there's no control to help constrain the orientation
19 of the Morrow reservoir in Section 33 and on off to the
20 west and northwest.

21 Finally, we don't have any 3-D seismic out here
22 either, so all these factors would argue that this is
23 fairly risky.

24 Q. Let's turn now to the sand map, Exhibit 13.

25 A. Yes, sir.

1 Q. When we look at the thicknesses here, are we
2 again dealing with some type of net calculation?

3 A. Yes, thank you, these are net sand maps.

4 Q. In what way have they been netted?

5 A. What I did was, I went through and I looked at
6 those -- I counted up all the intervals in the Morrow that
7 had FDCC and all crossover or a PE curve that showed sand.

8 In the absence of modern PE curves, I also looked
9 at mudlogs or core reports to determine the net sand
10 thickness.

11 But these are -- In my lexicon, net sand means
12 it's just sand, not sand greater than two percent or six
13 percent or ten percent. And that's what these maps
14 reflect.

15 Q. When we look down to the south and east of the
16 Buchanan location, there is an area in which there are
17 three Morrow wells, each of which have different net sand
18 number. Is that of significance to you?

19 A. Yes, it's of great significance. What this one
20 little area here in the south half of 34 and in Section 3
21 show is that you can go from a well with 33 feet of sand to
22 a well with six feet of sand in 1500 feet. In short, it's
23 easy to miss these channels, even when you're offsetting a
24 well with 33 feet.

25 Q. Your interpretation, then, that this Morrow

1 channel system is oriented such that you might have the
2 opportunity to have a sand thickness of greater than 20
3 feet at the Buchanan location, has what level of risk
4 associated with it?

5 A. A 200-percent risk.

6 Q. Okay.

7 A. Yes, absolutely.

8 Q. Summarize, then, for us your conclusions that
9 support that, the reasons that support that conclusion.

10 A. Yes, first off, we know just from simply the
11 offset control that the variations in the Morrow thickness
12 can change abruptly.

13 Secondly, we have no 3-D seismic data to help
14 mitigate our risk in this play.

15 Also, while we do have a little bit of control
16 south of our location, certainly west and northwest of our
17 location, we have no well control and we have no seismic
18 that can help us render where that channel is.

19 And then finally, just simply based on the number
20 of penetrations out here, there have not been many
21 successful efforts, only what we can say are two, maybe
22 three, successful efforts in the entire field of view here,
23 out of the seven penetrations.

24 So based on the low well density, the lack of
25 seismic, the erratic nature of the reservoir, we feel that

1 the maximum penalty is warranted.

2 MR. KELLAHIN: Mr. Examiner, that concludes my
3 examination of Mr. DeMis.

4 We move the introduction of Exhibits 7, 8 and 9
5 in Case 11,834, Exhibits 12, 13 and 14 in Case 11,835.

6 EXAMINER STOGNER: Exhibit 7, 8 and 9 in Case
7 Number 11,834 will be admitted into evidence, and 12, 13
8 and 14 in Case 11,835 will be admitted into evidence also.

9 EXAMINATION

10 BY EXAMINER STOGNER:

11 Q. Elaborate a little more, if you will, down there
12 in Section 3 -- that is, to the south and east of your
13 proposed Buchanan well --

14 A. Yes, sir.

15 Q. -- for that well that you showed a dry hole --

16 A. Yes.

17 Q. -- that it indicated 33 feet of sand.

18 A. Ah, yes, that's a very intriguing well. That
19 well was drilled in 1954 by the Stanolind Oil Company, and
20 they pulled two DSTs in the morrow, and the first one had
21 gas to surface at 1.12 million a day with a shut-in
22 pressure of 4150.

23 They cut four cores in the Morrow in that well
24 and found porous, coarse -- what they described as coarse,
25 porous sand in it, 33 feet of it.

1 They later attempted to complete the well, and
2 they report one unit of gas and a flowing tubing pressure
3 of 20 pounds, and the well was plugged.

4 My insight into that well is that they didn't
5 have a real sophisticated understanding of how to complete
6 the Morrow at that time, and it's a plugged producer.

7 Q. And how about the well just to the west of it,
8 over in the next half section? When did that follow that
9 1954 test?

10 A. Yes, that well was drilled in 12-95. It had a
11 calculated absolute open flow of 7.381 million a day. It
12 cum'd 1.267 BCF of gas with 490 barrels of condensate and
13 150 barrels of water. Its current status is now listed as
14 inactive.

15 Q. Which well is going to be the first one?

16 A. Right now, it looks like as though the well in
17 Section 27 will be the first.

18 Q. The Crockett?

19 A. Yes, sir.

20 EXAMINER STOGNER: Mr. Kellahin, with that in
21 mind is there going to be any need for additional language
22 in the proposed orders or --

23 MR. KELLAHIN: They can stand alone, Mr.
24 Examiner.

25 EXAMINER STOGNER: I have nothing further of Mr.

1 DeMis. You may be excused. Thank you.

2 THE WITNESS: Thank you, sir.

3 MR. KELLAHIN: That concludes our presentation of
4 these two cases, Mr. Examiner.

5 EXAMINER STOGNER: If there's nothing further in
6 Cases 11,834 and/or 11,835, those cases will be taken under
7 advisement at this time.

8 (Thereupon, these proceedings were concluded at
9 9:40 a.m.)

10 * * *

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15 I do hereby certify that the foregoing is
16 a complete record of the proceedings in
the Examiner hearing of Case Nos. 11834 and 11835
heard by me on 21 August 1997.

17  Examiner
18 Oil Conservation Division
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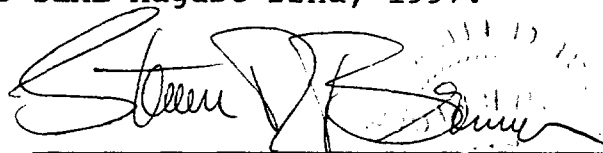
CERTIFICATE OF REPORTER

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 August 22nd, 1997.

A handwritten signature in cursive script, appearing to read "Steven T. Brenner", is written over a horizontal line.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998