

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 26 July 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Santa Fe Exploration Company for an unorthodox gas well location, Eddy County, New Mexico. CASE 9702

10
11
12
13 BEFORE: David R. Catanach, Examiner

14
15
16 TRANSCRIPT OF HEARING

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

18
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20 Attorney at Law
21 Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico

22 For Santa Fe Exploration: Ernest L. Padilla
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I N D E X

JACK AHLEN

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WILLIAM A. McALPINE, JR.

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1 MR. CATANACH: At this time
2 we'll call Case 9702.

3 MR. STOVALL: Application of
4 Santa Fe Exploration Company for an unorthodox gas well
5 location, Eddy County, New Mexico.

6 MR. CATANACH: Are there ap-
7 pearances in this case?

8 MR. PADILLA; Mr. Examiner,
9 Ernest L. Padilla, Santa Fe, New Mexico, for the applicant.

10 I have one witness to be
11 sworn.

12 MR. CATANACH: Any other ap-
13 pearances?

14 Will the witness please stand
15 to be sworn in?

16
17 (Witness sworn.)

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

22
23 DIRECT EXAMINATION

24 BY MR. PADILLA:

25 Q Mr. Ahlen, would you please state your

1 name, please?

2 A My name is Jack Ahlen.

3 Q Where do you live, Mr. Ahlen?

4 A Roswell.

5 Q What -- are a consultant for Santa Fe
6 Exploration in this case?

7 A Yes, sir, I am.

8 Q You are a petroleum geologist?

9 A I am a petroleum geologist.

10 Q Have you previously testified before the
11 Oil Conservation Division as a petroleum geologist and had
12 your credentials accepted as a matter of record?

13 A I have and, yes, they were.

14 Q Mr. Ahlen, have you prepared certain
15 exhibits for introduction at this hearing today?

16 A Yes, sir, I have.

17 Q And you're familiar with the geology of
18 the area in question.

19 A Yes, sir, I am.

20 MR. PADILLA: Mr. Examiner, we
21 tender Mr. Ahlen as a petroleum geologist.

22 MR. CATANACH; He is so quali-
23 fied.

24 Q Mr. Ahlen, let's have you briefly ident-
25 ify what this case is about, or tell us what it is about.

1 A Santa Fe Exploration Company seeks the
2 right to drill an unorthodox location in Section 36 of
3 Township 17 South, Range 26 East, 660 feet from the south
4 and west lines, to the Morrow formation.

5 Q Okay.

6 MR. PADILLA: Mr. Examiner, we
7 have marked as Exhibit Number One our notice of this hear-
8 ing to the offset operators. The list of offset operators
9 is listed on the second page of that notice and following
10 that are the mailing receipts and the certified return re-
11 cepts that we have received back regarding notice of this
12 case.

13 Q Let's turn now to Exhibit Number Two,
14 Mr. Ahlen, and have you identify that for the Examiner.

15 A Exhibit Number Two is a land map showing
16 the section in question, as well as each section surround
17 -- each contiguous section to that section. The proration
18 unit we request is outlined, heavily outlined, and I have
19 the proposed location so marked.

20 It also shows the offset operators.

21 Q Who are the major offset operators to
22 the west?

23 A Yates Petroleum operates the section to
24 the west. They operate the section to the south, and
25 Fasken, David Fasken, operates the section to the south-

1 west.

2 Q To your knowledge, Mr. Ahlen, have any
3 of these operators objected to this application?

4 A They have not.

5 Q Mr. Ahlen, let's turn to Exhibit Number
6 Three and have you identify that for the Examiner.

7 A Exhibit Number Three is a structure map
8 on the top of the Atoka formation. It shows the wells that
9 have been drilled to the Morrow formation on this, on this
10 particular exhibit. I have deleted from this exhibit all
11 of those wells that did not go deep enough to give data in
12 the Morrow and Atoka formation; therefore, only those wells
13 that went deep enough are shown on this exhibit, as well as
14 the following exhibits that I will discuss.

15 You'll note that almost all of these
16 sections have wells on them. Structure contours are subsea
17 datums of 5100 feet through 5400 feet. The datums on each
18 individual well is posted to the -- to the lower right of
19 the well location.

20 Q Mr. Ahlen, in Sections 35 and 36, the
21 south half of those sections, there are some dry holes.
22 Will you please tell us about those dry holes?

23 A Those wells were drilled in the mid-
24 seventies, about 14 years ago. They were drilled through
25 the objective horizon and logged. The operator did drill

1 stem test the well in the south half of Section 36. They
2 did record significant bottom hole pressure but there was
3 only about 3 feet of pay in that particular well and the
4 operator decided that that was a noncommercial well and
5 subsequently plugged it without testing it further.

6 The well in the southeast of 35 was also
7 drilled about that time. Three feet of pay, as I will il-
8 lustrate on the next exhibit, was found at that location
9 but it was not tested or the well was not completed out of
10 the zone of interest, as well.

11 Q Mr. Ahlen, in Section 2 to the south-
12 west, how long have those wells been producing, the pro-
13 ducing wells in that section?

14 A Approximately 14 years.

15 Q And is the north half of that section
16 dedicated to the producing well in the north half of Sec-
17 tion 2?

18 A Yes, sir.

19 Q And the producing well to the -- in the
20 south half, is that dedicated -- it's --

21 A It's dedicated to the south half.

22 Q Okay. How about the wells in Section
23 1, how long have those been producing?

24 A They have been -- also been producing
25 approximately 14 years.

1 The western well is dedicated to the
2 west half and the eastern one would be to the east half.

3 Q Mr. Ahlen, do you have anything else
4 concerning this Exhibit Number Three?

5 A No, sir.

6 Q Let's go on now to your Exhibit Number
7 Four and have you identify that.

8 A Exhibit Number Four is an isopach map of
9 the net porosity in the Morrow A Sand.

10 The next exhibit will illustrate the
11 difference between the various zones within the Morrow
12 section.

13 Q You're talking about Exhibit Number
14 Five?

15 A Yes, sir.

16 Q Okay, go ahead and tell us what Exhibit
17 Four has.

18 A Exhibit Four shows the same wells that
19 were shown in the previous exhibit. I show the net poro-
20 sity in the Morrow A Sand; that is porosity greater than 5
21 percent in this particular sand. It shows several wells
22 with no sand present whatsoever and it shows some wells
23 that have a relatively thick section of the sand, 16 and 12
24 feet, to the south. The sand channel itself appears to run
25 in a north/south direction. The location we have chosen to

1 drill is in what we consider the center of the channel.

2 Q In other words, is this the best place
3 to drill this well?

4 A In our considered opinion, it is.

5 Q How about -- what -- what did you --
6 what did your investigation show with regard to the dry
7 hole in the south half of Section 36?

8 A There is a suggestion on the log that
9 the 3 feet that was penetrated there was near the edge of
10 the particular -- this particular sand channel.

11 The bottom hole pressures were 2700
12 pounds. The final shut-in pressure suggested -- suggesting
13 limited permeability. It is somewhat less than the normal
14 reservoir pressure; however, the pressure had not gotten to
15 the -- to the level off spot.

16 Q Do you believe that that sand is en-
17 countered throughout the entire south half of Section 36?

18 A I do.

19 Q Do you have anything else concerning
20 Exhibit Number Four?

21 A No, sir.

22 Q Okay, let's go on to Exhibit Number Five
23 and have you identify that and what it contains for the
24 Examiner.

25 A Okay, Exhibit Number Five is a cross

1 section showing wells in this particular area of 17 and 18
2 South, 26 and 27 East. This is cross section B-B', which
3 had been marked on the previous exhibit. The Atoka datum
4 is the structure marker that was used in preparing the
5 structure map. The Morrow section, or the Morrow Clastics
6 section, is subdivided into four units labeled Morrow A, B,
7 C and D. In this particular part of Eddy County there
8 appear to be four separate sands that do produce. We are
9 chasing the top Morrow sand, which we have labeled Morrow
10 A, and we feel as though it was in the center of the chan-
11 nel in the two wells that are shown on the exhibit and the
12 channel thins on the flanks, as indicated by the well
13 marked No. 5 and the well marked No. 10.

14 Q Mr. Ahlen, did the wells to the south
15 produce from the Morrow A Sand?

16 A Yes, sir. The two wells in the middle
17 of the cross section are producing from the Morrow A Sand
18 and they have been producing for approximately 14 years.

19 Q Mr. Ahlen, is this field, or is this
20 area of the Morrow, prorated?

21 A No, sir.

22 Q Mr. Ahlen, since this well is unortho-
23 dox, do you have a recommendation as to any penalty that
24 may be imposed as a result of it being unorthodox?

25 A I see no reason for a penalty.

1 Q Can you explain that for us, please?

2 A First, the offset to the west in Section
3 35 has already been tested by a prudent operator and they
4 chose to plug it approximately 14 years ago.

5 The wells to the southwest and directly
6 to the south have been producing out of this particular pay
7 zone for 14 years and they have -- they're near the end of
8 their productive cycle and they have produced whatever gas
9 is present in the vicinity of their wells in that part of
10 Eddy County.

11 Q Do you believe that drainage or counter-
12 drainage has already been offset; that any counter-drainage
13 you may have has already been offset by that prior produc-
14 tion from these other wells?

15 A Yes, sir.

16 Q Mr. Ahlen, do you know whether the
17 applicant has a time constraint with regard to commencing
18 drilling this well?

19 A Yes. Back on Exhibit Two, the land map,
20 you will note that the expiration date on this lease is
21 August 1st, '89. This well has been permitted with the
22 contingency of securing the approval of the Commission at
23 this hearing. Work has been done at the surface to stake
24 the location. An AFE has been prepared and Santa Fe Ex-
25 ploration is ready and poised to drill the well at the

1 Commission's earliest convenience.

2 Q Mr. Ahlen, would approval of this ap-
3 plication be in the best interest of conservation of oil
4 and gas?

5 A Yes, sir.

6 Q Could you briefly tell us why?

7 A It will secure additional reserves in
8 this particular area of Eddy County that appear to have
9 been drilled up until now, until Santa Fe Exploration had
10 decided to drill this well, so these will be new resources
11 available to the state.

12 Q Do you have anything further to add to
13 your testimony, Mr. Ahlen?

14 A I do not.

15 MR. PADILLA: Mr. Examiner, we
16 tender Exhibits One through Five and pass the witness.

17 MR. CATANACH: Exhibits One
18 through Five will be admitted as evidence.

19

20 CROSS EXAMINATION

21 BY MR. CATANACH;

22 Q Mr. Ahlen, let's briefly go over the
23 offset operator status again. The wells in Section 1 are
24 those operated by who?

25 A Yates.

1 Q Both?

2 A Yes, sir.

3 Q In Section 2?

4 A Fasken.

5 Q He operates both wells?

6 A Yes, sir.

7 Q And who, who has the east half of Sec-

8 tion 35?

9 A Those are Yates leases, also.

10 Q Including the southeast quarter?

11 A Yes, sir, to the best of our knowledge.

12 Q Because your lease map doesn't really

13 show that.

14 A This is the current lease map that is

15 available.

16 MR. STOVALL: Mr. Ahlen, were

17 you relying on this lease map when you prepared your not-

18 ices to offset operators?

19 A I'll defer to Mr. Padilla.

20 MR. PADILLA: Mr. Examiner and

21 Mr. Stovall, I received this list -- or this list of off-

22 setting operators from Santa Fe Exploration. Maybe Mr.

23 McAlpine would be a better person to answer that. I don't

24 have any independent knowledge as to who the actual off-

25 set operators are. It's my understanding they made some

1 investigation as to who the offset operators were and they
2 came up with this list.

3 MR. STOVALL: Let me ask Mr.
4 Ahlen a question, then. Do you have any knowledge as to
5 how the list was prepared?

6 A No, sir.

7 MR. STOVALL: Were you involved in that
8 project?

9 A No, sir.

10 MR. STOVALL: All right. I
11 think perhaps I would like to see the witness who would
12 have some knowledge of that. If you've got Mr. McAlpine to
13 do it, I'd like to see him called after we're through with
14 this witness.

15 MR. PADILLA: Okay.

16 MR. CATANACH: All right,
17 we'll save those questions.

18 Q Mr. Ahlen, you said the wells in Section
19 1 and 2 are nearing the end of their producing life. Do
20 you know what -- what these wells are producing at this
21 point or --

22 A There is a list. I did not prepare it
23 for introduction.

24 Q If you could just give me some -- some
25 number, Mr. Ahlen.

1 A In Unit O of Section 2 the latest pro-
2 duction is 64,000 cubic feet of gas a day and that is as of
3 three months ago.

4 In Section 1, Unit K, 61,000 cubic feet
5 of gas a day.

6 And in Unit E, that well is apparently
7 plugged. No production for the month of -- that would be
8 May.

9 Q How about the well in Unit G of Section
10 2?

11 A I do not have that on this list. I was
12 just looking for it.

13 Q That well in Section 35 was -- was never
14 tested in the Morrow, is that correct?

15 A Yes, sir. That is illustrated on the
16 cross section as Well No. 5.

17 Q And that's got the same amount of net
18 porosity sand as the well in Section 36.

19 A Yes, sir.

20 Q And the well in Section 36 was deemed to
21 be nonproductive?

22 A Noncommercial.

23 Q Who was that drilled by, if you know?

24 A David Fasken drilled the well in Section
25 35. Harvey Yates drilled the well in Section 36.

1 Q Is that the only potentially productive
2 zone in this area, is the Morrow?

3 A No. The Wolfcamp also produces in this
4 area of Eddy County, as does the Atoka, as does the Strawn.

5 Q So you will be testing the Atoka as well
6 as the -- the Morrow?

7 A Oh, yes.

8 Q And the Strawn.

9 A Yes, sir. We will be penetrating those
10 horizons, as well.

11 As well as the other zones in the
12 Morrow, the Morrow B Zone, the Morrow C Zone, and the
13 Morrow D Zone.

14 Q Was there any Atoka production in this
15 area?

16 A Not in these immediate wells. In the --
17 they are to the north. The well in Unit P of Section 1 is
18 producing out of the Morrow B Zone, as is the well in Unit
19 P, that looks like Unit P, of Section 2. That's also pro-
20 ducing out of the Morrow B Zone.

21 So we will test all horizons as we drill
22 the well.

23 Q Where is the -- where is the Strawn
24 production located in reference to this well?

25 A To the northeast.

1 Q Not in any of these sections which --

2 A No, sir.

3 Q The location you've chosen will put you
4 about at -- at how many feet of sand in the Morrow? Over
5 20, isn't that correct?

6 A The isopach indicates we should have
7 about 20 feet or a little bit more.

8 Q So that would be the most sand that any
9 of these wells have ever encountered --

10 A Yes, sir.

11 Q -- in this area.

12 A Yes, sir.

13 Q Potentially a pretty productive zone.

14 A We hope so.

15 Q If you were to move into the well loca-
16 tion to the east, would -- what would that do to your pros-
17 pect?

18 A We'd be getting closer to the flank of
19 the channel or the -- closer to the lower permeability
20 well. We don't have any geophysical data that will tell us
21 where the center of the channel is but the highest prob-
22 ability is that it's at the location we have chosen.

23 Q So you think it's considerably more
24 risky to drill at a standard location than it --

25 A Yes, sir, it would be.

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CROSS EXAMINATION

BY MR. STOVALL:

Q Just one question, Mr. Ahlen. If this application is granted, what, in your opinion, would be the effective spacing pattern in this area of this well (unclear)?

A The same as it has been, 320.

Q It would still be an effective 320 as well as in a legal 320?

A Yes, sir. Well, the fact that they did have good, moderate pressures, at least, in the other well in Section 36, suggests that the sand extends at least that far and that there is some gas to be produced that far east.

Q The density of the wells based upon their location is what I was more interested in, that would also be an effective 320 (unclear) field? Do you understand my question, I guess?

A Not quite.

Q For example, it is possible in certain situations that while you have a, for example, a 320, that the well locations could be established in such a way as to drill on a -- to develop an area on 160 acres. Do you follow what I'm saying? Because if all four wells were

1 located around the corner, it appears to me that that might
2 be more in a 160 pattern.

3 A Yes. Okay, I understand now.

4 Q Do you concur that this is effective; I
5 mean truly being developed on 320's in that area?

6 A I think most of the operators in this
7 area have developed the field in a random pattern. Cer-
8 tainly the orientation of the proration units appear to be
9 that way.

10 Q I think that answers my question.

11 MR. CATANACH: The witness may
12 be excused at this time, and if we may call Mr. McAlpine.

13 MR. PADILLA: Mr. McAlpine.

14

15 (Mr. McAlpine sworn.)

16

17 WILLIAM A. McALPINE, JR.,

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. PADILLA:

23 Q Mr. McAlpine, for the record please
24 state your full name.

25 A William A. McAlpine, Junior.

1 Q And you live in Roswell?

2 A I do.

3 Q And you are the president of Santa Fe
4 Exploration Company?

5 A I am.

6 Q And are you familiar with the land
7 ownership surrounding the -- of the offsetting operators in
8 acreage in the area of the proposed unorthodox location?

9 A I'm familiar with it; however, we have
10 not gone to the courthouse to get an abstract of ownership
11 in adjacent sections.

12 Q Mr. McAlpine, are you generally familiar
13 with the ownership on the offsetting acreage?

14 A Yes, sir.

15 Q Can you -- let me hand you what we have
16 marked as Exhibit Number Two and have you identify that,
17 have you refer to that, please, and I believe a question
18 was asked as to the ownership in Section 35. Is that
19 correct, Mr. Stovall?

20 MR. STOVALL: I -- I believe
21 the Examiner asked that question and I asked a more general
22 question.

23 MR. PADILLA: Okay.

24 MR. STOVALL: Why don't you
25 proceed and then if I have any questions I'll follow up.

1 Q Can you tell us generally the ownership
2 on the east half of Section 35?

3 A Yates Petroleum, it is my recollection,
4 is the operator in all of Section 35.

5 Q What -- what reason do you have to be-
6 lieve that Yates Petroleum is the operator of that section,
7 of the entire section?

8 A Well, obviously, we had a petroleum land
9 map produced by Midland Map Company, and then we checked
10 the production records and had the well names and the oper-
11 ators' names in this area.

12 Q Have you spoken with anyone with Yates
13 Production -- Yates Petroleum Corporation?

14 A I have.

15 Q And who have you talked with?

16 A I have talked to the people in the Land
17 Department. You'll have to forgive me, I'm getting a
18 little old and my mind doesn't -- I'm sorry, I can't tell
19 you the name offhand.

20 Q Was it a land person or a landman with
21 Yates Petroleum?

22 A Yes.

23 Q And why did you call Yates Petroleum?

24 A Kathy --

25 Q Colbert?

1 A -- Colbert.

2 Q Why did you call Yates Petroleum?

3 A I asked them, since they had adjacent
4 acreage, if they would like to participate and, if not, if
5 they would like to farmout the north half of Section 1 to
6 us.

7 Q Did you talk to them with regard to any
8 kind of protest they may have with regard to acreage in
9 Section 2 or in Section 35?

10 A I did not discuss that specifically.

11 Q Were they aware of your application?

12 A They were.

13 Q Was any representation made to you that
14 they did not operate Section 35?

15 A No, nor did they represent they did.

16 Q Okay. Looking at Exhibit Number Two,
17 would you -- and also with looking at the second page of
18 our Exhibit Number One, would you go down that list and
19 tell us where those folks are located in relation to Exhi-
20 bit Number Two?

21 A Well, as has been previously testified
22 to here, Yates Petroleum is the operator in the abutting
23 Section 35 to the east, the first one on your list.

24 At the time we --

25 Q To the east or to the west?

1 A Excuse me, to the west in Section 35.

2 The next one on the list here is
3 Blackmer and at the time we did the check, it appeared that
4 there was some unleased acreage in Section 1 to the south,
5 so we included him, as we did the next one on your list,
6 which was Lovelace.

7 Barbara Fasken operates one well in
8 Section 2 to the southwest of the proposed location.

9 Mewbourne Oil was the operator in the
10 two wells in Section 1 that Yates now has leased, so Yates
11 was contacted because of the location, because they had
12 surrounding acreage and operations in Section 26, in Sec-
13 tion 35, in Section 25, in Section 1, but at the time we
14 sent the -- you sent these notices out, Mewbourne had not
15 announced their intention to plug those wells. We have
16 still not seen of record those intentions, but it's our
17 understanding that Yates now has those leases and Mewbourne
18 is in the process or has completed plugging those two wells
19 in Section 1.

20 Q Have you spoken to anyone with Mewbourne
21 regarding your well?

22 A I have.

23 Q And in what respect?

24 A I asked them if they would like to par-
25 ticipate and told them where we were drilling and in gen-

1 eral discussed what we were up to.

2 Q Okay.

3 A Exxon is on the -- next on the list and
4 I, frankly, I can't recall where they had acreage, but it
5 must have -- they must have had a lease, probably in
6 Section 6 to the -- and Section 31 to the east and south-
7 east, it appears from the land map.

8 Hondo Oil & Gas again had a lease, it
9 appears, in Section 6 to the southeast.

10 Breck Operating Company also had a lease
11 in that Section 6.

12 Mark Production had a lease in Section 2
13 to the southwest.

14 Amoco had a lease to the east in Section
15 Number 31.

16 Q Mr. McAlpine, to your knowledge, is --
17 does the list on this Exhibit Number One constitute all of
18 the offset operators or owners of unleased acreage sur-
19 rounding your proposed well location?

20 A To my knowledge, it does.

21 MR. PADILLA; Mr. Examiner,
22 we'll pass the witness at this time.

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CROSS EXAMINATION

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BY MR. STOVALL:

Q Just a couple of questions, Mr. McAlpine. This is the -- this map is your primary source of the operatorship information, is that correct?

A Yes, sir.

Q And have you been --

A Well, I say -- you say "primary", I'm not positive that that would be primary; certainly where we got started, but then we took from the records the production of the wells in the adjacent acreage, and so the combination of the two certainly was our source of information.

Q Okay, so in other words, if I understand what you're saying correctly, you confirmed the information that was on this map, confirmed or corrected the information that you started with on this map by going to actual production records --

A Yes.

Q -- records that would indicate actual operatorship.

A Yes, sir.

Q Okay.

MR. STOVALL: I have no further questions.

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MR. CATANACH: That's all I have. The witness may be excused.

Is there anything further in this case?

MR. PADILLA: Nothing further, Mr. Examiner.

MR. CATANACH: Being nothing further, Case 9702 will be taken under advisement.

(Hearing concluded.)

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. 9702, heard by me on July 26, 1989.

David L. Cabanal, Examiner
Oil Conservation Division