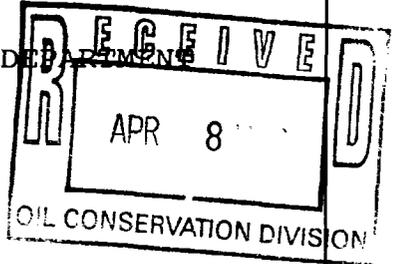


STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION



IN THE MATTER OF THE HEARING CALLED BY )  
THE OIL CONSERVATION DIVISION FOR THE )  
PURPOSE OF CONSIDERING: )  
APPLICATION OF SANTA FE ENERGY )  
RESOURCES, INC., FOR COMPULSORY POOLING, )  
EDDY COUNTY, NEW MEXICO )

CASE NO. 11,491

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

April 4th, 1996

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, April 4th, 1996, 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.

\* \* \*

## I N D E X

April 4th, 1996  
 Examiner Hearing  
 CASE NO. 11,491

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\* \* \*

## A P P E A R A N C E S

## FOR THE DIVISION:

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 Attorney at Law  
 Legal Counsel to the Division  
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 Santa Fe, New Mexico 87505

## FOR THE APPLICANT:

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 218 Montezuma  
 P.O. Box 2068  
 Santa Fe, New Mexico 87504-2068  
 By: JAMES G. BRUCE

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2           8:23 a.m.:

3           EXAMINER STOGNER: At this time I'll call Case  
4           Number 11,491.

5           MR. CARROLL: Application of Santa Fe Energy  
6           Resources, Inc., for compulsory pooling, Eddy County, New  
7           Mexico.

8           EXAMINER STOGNER: At this time I'll call for  
9           appearances.

10          MR. BRUCE: Mr. Examiner, Jim Bruce from the  
11          Hinkle law firm in Santa Fe, representing the Applicant.

12          I have two witnesses to be sworn.

13          EXAMINER STOGNER: Are there any other  
14          appearances?

15          Will the witnesses please stand to be sworn?

16          (Thereupon, the witnesses were sworn.)

17          MR. BRUCE: Mr. Examiner, before we begin, on the  
18          advertisement, five lines up from the bottom it refers to  
19          the well being drilled at an unorthodox location. It is an  
20          orthodox location. I don't think that would require it to  
21          be readvertised.

22          EXAMINER STOGNER: You think so, or you don't?

23          MR. BRUCE: I don't, I do not think so.

24          EXAMINER STOGNER: Oh, I was going to say -- I  
25          concur. Just a typo error, and the well is at a standard

1 location for a north-half dedication. In fact, with the  
2 new rules, it's more than adequate.

3 And you're asking also for a 160-acre spacing  
4 unit?

5 MR. BRUCE: Yes.

6 EXAMINER STOGNER: And also for a 40-acre. And  
7 it's standard for all of them.

8 concur, it's just a typo. Thank you, Mr. Bruce.

9 DUKE ROUSH,

10 the witness herein, after having been first duly sworn upon  
11 his oath, was examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MR. BRUCE:

14 Q. Would you please state your name and city of  
15 residence for the record?

16 A. Yes, my name is Duke Roush, R-o-u-s-h. I live in  
17 Midland, Texas.

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

19 A. Santa Fe Energy Resources, Inc. I'm the division  
20 land manager.

21 Q. Have you previously testified before the  
22 Division?

23 A. No, I have not.

24 Q. Would you briefly outline your educational and  
25 employment background?

1           A.    Yes, I graduated from the University of Texas in  
2   1978 with a PLM degree, went to work in August of 1978 with  
3   Diamond Shamrock in Amarillo, Texas, was subsequently  
4   transferred to Denver, in their Rocky Mountain office, took  
5   employment with Santa Fe Energy in Denver in May of 1981  
6   and have continued working for Santa Fe since then in their  
7   Denver office, Bakersfield office, and I transferred to the  
8   Midland office in July of 1995.

9           Q.    Does your area of responsibility include  
10  southeast New Mexico?

11          A.    Yes, it does.

12          Q.    And are you familiar with the land matters  
13  involved in this Application?

14          A.    Yes, I am.

15               MR. BRUCE:  Mr. Examiner, I would tender Mr.  
16  Roush as an expert petroleum landman.

17               EXAMINER STOGNER:  Mr. Roush is so qualified.

18          Q.    (By Mr. Bruce)  Briefly, what is it Santa Fe  
19  seeks in this case?

20          A.    We're seeking an order pooling the north half of  
21  Section 20, Township 22 South, Range 28 East, from the  
22  surface to the base of the Morrow formation.

23          Q.    Specifically, what spacing units is Santa Fe  
24  seeking to pool?

25          A.    We would like to pool the north half for all

1 formations spaced on 320, the northwest quarter for all  
2 formations spaced on 160, and the northeast quarter of the  
3 northwest quarter for formations spaced on 40 acres.

4 Q. What is Exhibit 1?

5 A. Exhibit 1 is a plat which outlines the proposed  
6 well location and the unit, being the north half of Section  
7 20. It shows the location for the Foal Federal Number 1,  
8 which is an orthodox location, located 660 feet from the  
9 north line, 1980 feet from the east line of Section 20.

10 Q. Okay. Who do you seek to pool in this case?

11 A. We seek to pool Meridian Oil, Inc. Meridian owns  
12 15 percent of the working interest in the Federal Lease  
13 Number NM 86542, which covers all of the north half of  
14 Section 20.

15 Q. Does Meridian also own an override in this lease?

16 A. Yes, they do.

17 Q. Who owns the remaining working interest in this  
18 well?

19 A. Santa Fe Energy owns the remaining 85 percent.

20 Q. Let's discuss Santa Fe's efforts to obtain  
21 Meridian's voluntary joinder in the well. What is Exhibit  
22 2?

23 A. Exhibit 2 is a letter proposing the Foal Federal  
24 Number 1, outlining various options for Meridian Oil, along  
25 with an AFE stating the dryhole and completion costs for a

1 12,600-foot Morrow test.

2 Q. Has Santa Fe had any other contacts with  
3 Meridian, besides this letter?

4 A. Yes, we have. We sent an original proposal dated  
5 January 18, 1996, by regular mail. We followed that up  
6 with a phone call the week of January 22nd. I left a  
7 message with a Ms. Leslyn Swierc. We did not hear from  
8 them.

9 We sent a new proposal -- or not a new proposal,  
10 the same proposal, by certified mail on February 1, 1996.  
11 We received the green card indicating that Meridian had  
12 received the proposal the week of February 5th. We again  
13 phoned Ms. Swierc with Meridian.

14 The week of February 12th, we did receive a  
15 return phone call from Ms. Swierc indicating that they  
16 were very busy with workload, and we indicated that the  
17 pooling application would be filed fairly soon, since we  
18 had a 5-31-96 expiration.

19 We filed the Application. Hearing was set for  
20 3-21-96. March 12th, we again called Ms. Swierc. She was  
21 out for spring break.

22 March 18th, she called indicating they were  
23 looking at the proposal, but executives were coming in,  
24 they would be busy with other work, indicated they would  
25 probably do something, either join or farm out.

1           March 19, we again called Meridian, told Ms.  
2 Swierc that we would continue the hearing to 4-4-96. March  
3 28th, we again called Meridian and left a message with Ms.  
4 Swierc, and we have not received a response since.

5           Q.    So basically Meridian's response has been a  
6 nonresponse?

7           A.    Correct.

8           Q.    In your opinion, has Santa Fe made a good-faith  
9 effort to obtain Meridian's voluntary joinder in this well?

10          A.    Yes, we have.

11          Q.    Does Santa Fe request that it be designated  
12 operator of the well?

13          A.    Yes, we do.

14          Q.    Would you identify Exhibit 3 for the Examiner?

15          A.    It is the AFE showing the dryhole and the  
16 completed well cost.

17          Q.    And what is the approximate cost of a completed  
18 well?

19          A.    Approximately \$1.25 million.

20          Q.    Is this amount in line with costs normally  
21 encountered in drilling wells of this depth in this area of  
22 Eddy County?

23          A.    Yes, it is.

24          Q.    And do you have a recommendation for the amounts  
25 which Santa Fe should be paid for supervision and

1 administrative expenses?

2 A. Yes, we request that \$5550 a month be allowed for  
3 drilling wells and that \$550 a month be allowed for  
4 producing wells.

5 Q. And are these amounts equivalent to those  
6 normally charged by other operators in this area for this  
7 type of well?

8 A. Yes, they are.

9 Q. Was Meridian notified of this hearing?

10 A. Yes, they were.

11 Q. And is Exhibit 4 my affidavit of notice with the  
12 notice letter and certified return receipt?

13 A. Yes.

14 Q. And were Exhibits 1 through 4 prepared by you or  
15 under your supervision or compiled from company business  
16 records?

17 A. Yes, they were.

18 Q. And in your opinion, is the granting of this  
19 Application in the interest of conservation and the  
20 prevention of waste?

21 A. Yes, it is.

22 MR. BRUCE: Mr. Examiner, at this time I'd tender  
23 Santa Fe's Exhibits 1 through 4.

24 EXAMINER STOGNER: Exhibits 1 through 4 will be  
25 admitted into evidence at this time.

## EXAMINATION

1  
2 BY EXAMINER STOGNER:

3 Q. You said that Santa Fe had 85 percent of the  
4 working interest?

5 A. Yes, sir, that's correct.

6 Q. And then Meridian has in its possession the other  
7 15 percent?

8 A. That's correct.

9 Q. And what percentage of override did you say that  
10 Meridian owns?

11 A. Meridian owns a 1.875-percent overriding royalty.

12 Q. In Exhibit Number 2, subparagraph b), you talked  
13 about a farming out the right, title and interest. Then  
14 you mention a 77.5-percent net revenue interest lease.  
15 What is that referring to?

16 A. That they would deliver us, in the event we had a  
17 producing well, a lease covering their interest in the  
18 north half of Section 20, delivering to us a net revenue  
19 interest of 77.5, with no back-in potential.

20 Q. And as far as the mineral rights for the royalty  
21 interest out here, is that federal?

22 A. That's correct.

23 Q. Now, does Santa Fe own the 85 percent, or do you  
24 own it and control it?

25 A. A combination of both. We acquired 25 percent of

1 the interest from Louis Dreyfus, via a farmout. We traded  
2 acreage with Mr. Ray Westall, who owned 50 percent, for  
3 some acreage we had in another area, so we owned that. And  
4 we purchased the remaining 10 percent from a consortium of  
5 people, including Turnco, Bettis and a gentleman by the  
6 name of Opperman.

7 Q. And I heard you in your testimony, if I  
8 understand the expiration date for this lease, is May 31st?

9 A. That's correct.

10 EXAMINER STOGNER: Mr. Bruce, I have no other  
11 questions of this witness.

12 MR. BRUCE: Neither do I.

13 EXAMINER STOGNER: You may be excused.

14 THE WITNESS: Thank you.

15 GENE DAVIS,

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

18 DIRECT EXAMINATION

19 BY MR. BRUCE:

20 Q. Would you please state your name and city of  
21 residence for the record?

22 A. My name is Gene Davis, and I live in Midland,  
23 Texas.

24 Q. And who is your employer?

25 A. Santa Fe Energy Resources.

1 Q. And what is your position at Santa Fe?

2 A. I'm the division geological and geophysical  
3 manager.

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

6 A. Yes, I have.

7 Q. And were your credentials as an expert petroleum  
8 geologist accepted as a matter of record?

9 A. Yes, they were.

10 Q. And are you familiar with the geology involved in  
11 this Application?

12 A. Yes, I am.

13 MR. BRUCE: Mr. Examiner, I tender Mr. Davis as  
14 an expert petroleum geologist.

15 EXAMINER STOGNER: Mr. Davis is so qualified.

16 Q. (By Mr. Bruce) First, Mr. Davis, what is the  
17 primary zone of interest in this proposed well?

18 A. The primary zone of interest in this well is the  
19 Strawn formation at a depth of plus or minus 10,600 feet.

20 Q. But the well is going deeper than that?

21 A. The well is going to be drilled down to 12,600  
22 feet to test the Atoka and the Morrow section as well.

23 Q. What is Exhibit 5?

24 A. Exhibit 5 is an isopach map of the Strawn  
25 carbonate, showing the net clean reef carbonate and reef

1 debris with porosity greater than or equal to three  
2 percent.

3 This map basically is located -- the area itself  
4 is located about -- approximately eight miles southeast of  
5 Carlsbad, New Mexico. The prospect is located in Township  
6 22 South, Range 28 East, and of course the well will be  
7 drilled in Section 20.

8 What we're looking for here in the Strawn,  
9 there's an analogous field that is located approximately  
10 three miles or so away from -- to the south and west, away  
11 from the proposed well in Section 20.

12 That field is the Carlsbad South field. It is a  
13 Strawn field that was discovered by Santa Fe Energy  
14 Resources back in 1982. It is a very, very good producing  
15 field. It produces from a reef core, if you will, where  
16 the Strawn builds up to a thickness of close to 300 feet.

17 It also produces from a debris apron which, in  
18 this case, surrounds the entire -- or at least the portion  
19 on both the east and the west flanks, and also on the north  
20 flank of the reef and is quite productive, to the tune of  
21 in excess of 6 and 7 BCF in the Strawn in wells from that  
22 debris apron.

23 The prospect that we're looking for, we have a  
24 number of wells that have penetrated the Strawn in the  
25 area. And as you can see, they're shown by circles with

1 numbers next to them which show the thickness of the Strawn  
2 formation.

3 There are two cross-sections that are also  
4 accompanying this, Exhibits 6 and 7, which I think the  
5 Examiner has with him as well, A-A' and B-B', and these are  
6 cross-sections which are just stratigraphic cross-sections  
7 of the Strawn interval, which show the similarities between  
8 the two prospects.

9 A-A' is across the Carlsbad South field, and you  
10 can see the producing wells, the Henry Number 1, which is  
11 on the right-hand side of your cross-section there, A-A'.  
12 I'll give you a minute to find that.

13 A-A', you see the Henry Number 1 well, which is a  
14 well that's producing from the reef core. You can see  
15 there's excellent porosity throughout the reef core, and  
16 that well is going to a cum -- It's cum'd 5 BCF. It's  
17 probably good to make about 6.

18 Adjacent to it and to the west is the Santa Fe  
19 Energy Neely Number 1 well, and that well you can see that  
20 there's a lot -- a much increased amount of carbonate  
21 present from the Strawn, and in fact it is mostly debris  
22 that's associated with the area around the reef buildup  
23 itself. That debris in this case is extremely porous and  
24 very productive.

25 This well has made about 7 BCF and will probably

1 make about 7.5 before all is said and done.

2           The location -- The well we're planning to drill  
3 in Section 20 is basically being drilled to test an  
4 opportunity we see for a debris apron associated with a  
5 reef core that has been drilled and discovered in Section  
6 16.

7           If you look at cross-section B-B', which is  
8 Exhibit Number 7, that cross-section going from right to  
9 left, you see the Dinero Operating Corporation, Dinero  
10 State Number 1 well there on the right. It penetrated a  
11 substantial thickness of reef core, about 388 feet worth.

12           This well had no Strawn tests in it. The  
13 porosity log that you see present there is a cased-hole  
14 porosity log. They ended up running pipe over the top  
15 portion of the zone there, and actually the -- excuse me,  
16 while I reiterate -- want to just change something quickly  
17 for you.

18           The upper portion of the Strawn there is cased  
19 hole. Once you get below a depth of about 10,692 feet or  
20 so, you go into a normal log, okay? Into a typical density  
21 neutron log. They may have encountered some porosity in  
22 the top; we don't know that.

23           They did have a dual lateral log that was run  
24 across that portion of the hole. It did show some  
25 permeability, some crossover -- some separation of the

1 curves, which may have been showing us that there was some  
2 porosity there in the top.

3 They never tested it, and the well is still  
4 producing out of the Morrow at present. So we don't know  
5 if that well is productive or not.

6 We postulate that there is a reef -- or a debris  
7 apron, rather, associated with this reef buildup, and that  
8 that reef apron would be located in a similar position to  
9 the reef apron in an analogous field that is off to the --  
10 around to the west. And we plan to drill our well in  
11 Section 30 to test that theory.

12 Q. Okay. What is Exhibit 8?

13 A. Exhibit 8 is a structure map on top of the Atoka.  
14 You can see on the cross-sections that datum plane that we  
15 have at the very bottom of the cross-section. The flat  
16 plane there is the datum. That is the top of the Atoka,  
17 and that is the structure map that you're looking at here,  
18 is that datum plane.

19 You can see that there are a number of circled  
20 wells which are Atoka producers, and you can see there are  
21 a significant number of these in the area.

22 What the structure map shows is that we do see a  
23 postulated structural closure at the location where we plan  
24 to drill our well. Obviously, this structural closure  
25 would enhance the opportunity for us to trap hydrocarbons

1 in not only the Strawn but also in secondary horizons,  
2 being the Morrow and the Atoka.

3 Q. In your opinion, what penalty should be assessed  
4 against Meridian if it goes nonconsent?

5 A. I believe, based on the risk of drilling the  
6 well, I think it should be cost plus 200 percent.

7 Q. Okay. Now, we've requested pooling of all zones.  
8 Would you refer to your Exhibit 9 and discuss secondary  
9 zones in this area?

10 A. Exhibit 9 is a production map for the basic area  
11 around our well. There are numerous zones that produce in  
12 the area: the Delaware, the Bone Spring, Wolfcamp, Strawn,  
13 Atoka and Morrow are all zones, all pay in the area.

14 If you look at our actual well-symbol location,  
15 Section 20, immediately to the north and west of our  
16 location is the Indian Draw Delaware Pool, which produces  
17 from the Cherry Canyon. There are numerous Atoka-Morrow  
18 completions in the area, and there are also Wolfcamp  
19 production up to the north and west, which is drilled on  
20 160 acres.

21 We'd like to have all those zones pooled, because  
22 we think there's potential for production from any and all  
23 of those zones in this particular wellbore.

24 Q. Were Exhibits 5 through 9 prepared under your  
25 supervision?



1 when we encountered the Strawn. The Strawn, obviously,  
2 very productive.

3 As we drilled down to the east and we were  
4 working our way downdip, we encountered a gas-water contact  
5 in the well in Section 22. The well that shows it has 24  
6 feet of pay in it. That well produced about a half a BCF  
7 of gas, 8000 barrels of oil, and a significant amount of  
8 water.

9 As we drilled father down, searching for the  
10 Morrow zones beneath it, we did encounter the Strawn and it  
11 was shown to be wet. So there is an actual water leg to  
12 that reservoir.

13 As you climb updip to the west, you end up going  
14 into the gas that's trapped in that debris apron.

15 Q. In looking back up to the apron and reef that  
16 were -- that you're proposing at this time to drill in that  
17 apron, the debris apron --

18 A. Yes, sir.

19 Q. -- actually the first thing I see is a lack of  
20 well control. Did you use a seismic?

21 A. No, we have not. This is based strictly on  
22 subsurface. We are postulating that that debris apron is  
23 there.

24 There are numerous fields along this Strawn shelf  
25 edge that produce from either the reef core or the debris

1 apron that is associated with it: the Frontier Hills field,  
2 which is located south and west of here, the Carlsbad South  
3 field and the Carlsbad field both are also located along  
4 this trend to the south and west.

5 Then as you go north, you go into the Big Eddy  
6 Unit, and there are a number of wells that have penetrated  
7 the reef for tight accumulations, but they are not  
8 productive. As you know, the Big Eddy Unit is not overly  
9 drilled.

10 And then as you go north of that, north and east  
11 of that, you run into the Lusk field. The Lusk, of course,  
12 is a very, very large field. There are numerous reef --  
13 Well, I think there's four wells that actually drilled reef  
14 cores. All those reef cores are tight, they do not  
15 produce.

16 However, the debris aprons that are associated  
17 with that, they're -- There's a significant amount of  
18 debris apron there. It's very, very productive in the Lusk  
19 field itself.

20 What we're looking for here in this particular  
21 prospect, we postulate that there is a debris apron  
22 associated with this fairly large reef core that we see  
23 here. We see that type of reef apron very much associated  
24 with all these reef cores that we see here to the south and  
25 west, and we hope to encounter one here in Section 20.

1           There is a risk, obviously, but this area is  
2 very, very well suited for multiple-pay potential, so we  
3 think we have a lot of opportunities to see a lot of things  
4 happen for us.

5           Q.    As you get back behind the shelf, the Strawn  
6 shelf edge --

7           A.    Yes.

8           Q.    -- back up to the north, are there any other  
9 reefs back in there? Do we see this phenomenon back off of  
10 the shelf, in toward the --

11          A.    Once you get back on the shelf, away from the  
12 actual edge, where the reefs have actually grown, these  
13 fairly large mound complexes have grown, you see much more  
14 low-relief-type mounds. They don't have near the height.  
15 And there are some debris piles associated with those as  
16 well, but they're not near as graphic as these are, where  
17 you have very, very thick accumulations of the buildup of  
18 the mounds.

19           EXAMINER STOGNER:   Okay, I have no other  
20 questions of this witness.

21           THE WITNESS:   Thank you.

22           MR. BRUCE:   I have nothing further, Mr. Examiner.

23           EXAMINER STOGNER:   You may be excused.

24           Do you have anything further, Mr. Bruce?

25           MR. BRUCE:   No, sir.



CERTIFICATE OF REPORTER

STATE OF NEW MEXICO )  
 ) SS.  
COUNTY OF SANTA FE )

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

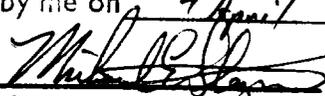
WITNESS MY HAND AND SEAL April 9th, 1996.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in the examiner hearing of Case No. 11491, heard by me on 4 April 1996.

  
Michael R. Slagter, Examiner  
Oil Conservation Division