

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:	)	CASE NO. 11,384
	)	
APPLICATION OF SANTA FE ENERGY	)	
RESOURCES, INC.	)	
	)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

ORIGINAL

BEFORE: DAVID R. CATANACH, Hearing Examiner

September 21, 1995

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, September 21st, 1995, 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

September 21st, 1995  
Examiner Hearing  
CASE NO. 11,384

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## E X H I B I T S

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\* \* \*

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

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY  
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 10:25 a.m.:

3 EXAMINER CATANACH: At this time i'll call Case  
4 11,384, Application of Santa Fe Energy Resources, Inc., for  
5 an unorthodox oil well location, Lea County, New Mexico.

6 Are there appearances in this case?

7 MR. BRUCE: Mr. Examiner, Jim Bruce representing  
8 the Applicant, and I have two witnesses.

9 EXAMINER CATANACH: Any additional appearances?

10 MR. BRUCE: One of my witnesses was already  
11 sworn, Ms. Walker, but we have a different geologist.

12 EXAMINER CATANACH: Okay, let me get this witness  
13 to stand and be sworn in.

14 (Thereupon, the witness was sworn.)

15 MR. BRUCE: As I said, Mr. Examiner, Ms. Walker  
16 was previously sworn in, was qualified as an expert  
17 petroleum landman.

18 EXAMINER CATANACH: The record shall so reflect  
19 that, Mr. Bruce.

20 DANITA R. WALKER,  
21 the witness herein, after having been first duly sworn upon  
22 her oath, was examined and testified as follows:

23 DIRECT EXAMINATION

24 BY MR. BRUCE:

25 Q. Ms. Walker, in this case what does Santa Fe

1 Energy seek?

2 A. Santa Fe Energy seeks approval of an unorthodox  
3 oil well location for its proposed Mesaverde 6 Federal Well  
4 Number 7.

5 Q. What is Exhibit 1?

6 A. Exhibit 1 is a land plat of the area, marking the  
7 proposed location with a red square.

8 Q. And what does the yellow indicate on this plat?

9 A. Leasehold acreage owned by Santa Fe Energy.

10 Q. What is the exact footage location of the  
11 proposed location?

12 A. 660 feet from the north line and 2540 feet from  
13 the east line of Section 6, Township 24 South, Range 32  
14 East. The well will be drilled to the Bone Spring  
15 formation.

16 Q. Is this location based on geology?

17 A. Yes, our witness will discuss the geological  
18 factors for the well location.

19 Q. Who are the offset operators to this proposed  
20 location?

21 A. Referring to Exhibit 1, Santa Fe Energy operates  
22 all of Section 6 in Township 24 South, Range 32 East, and  
23 is the only affected operator.

24 To the north, Texaco operates all of Section 31,  
25 Township 23 South, Range 32 East. We gave notice of this

1 hearing to Texaco, although we do not believe Texaco is  
2 affected by this location.

3 Q. And what is Exhibit 2?

4 A. Exhibit 2 is my affidavit of notice which  
5 contains my letter to Texaco and the return receipt.

6 Q. And were Exhibits 1 and 2 prepared by you?

7 A. Yes, they were.

8 Q. And in your opinion, is the granting of this  
9 Application in the interests of conservation and the  
10 prevention of waste?

11 A. Yes, it is.

12 MR. BRUCE: Mr. Examiner, I would move the  
13 admission of Exhibits 1 and 2.

14 EXAMINER CATANACH: Exhibits 1 and 2 will be  
15 admitted as evidence.

16 EXAMINATION

17 BY EXAMINER CATANACH:

18 Q. Ms. Walker, the acreage in Section 6, is that a  
19 single lease or multiple leases or --

20 A. It's a single lease.

21 Q. Federal, state?

22 A. Federal.

23 Q. Single federal lease. So the ownership within  
24 the entire Section 6 is common?

25 A. Yes, sir.

1 EXAMINER CATANACH: Okay, I have nothing further.

2 MR. BRUCE: Call Mr. Anderson to the stand.

3 CURTIS ANDERSON,

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

6 DIRECT EXAMINATION

7 BY MR. BRUCE:

8 Q. Would you please state your name and city of  
9 residence?

10 A. My name is Curtis Anderson, and I live in  
11 Midland, Texas.

12 Q. Who do you work for and in what capacity?

13 A. I'm a geologist for Santa Fe Energy.

14 Q. Have you previously testified before the  
15 Division?

16 A. Yes, I have.

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

19 A. Yes, they were.

20 Q. And are you familiar with the geological matters  
21 pertaining to this Application?

22 A. Yes.

23 MR. BRUCE: Mr. Examiner, I would tender Mr.  
24 Anderson as an expert petroleum geologist.

25 EXAMINER CATANACH: Mr. Anderson is so qualified.

1 Q. (By Mr. Bruce) Mr. Anderson, would you please  
2 refer to your Exhibit 3, I believe, and discuss the zone of  
3 interest for the proposed well?

4 A. Yes, Exhibit 3 is a small two-well cross-section  
5 that exhibits the objective formation at the proposed  
6 location. In this case it's highlighted in yellow, and  
7 it's called the Avalon sand. It is within the Bone Spring  
8 formation.

9 It also denotes in red the cutoff that was used  
10 to map the isopach map of Exhibit Number 4.

11 Q. Now, let's move on to your Exhibit 4 and discuss  
12 the reasons for the proposed location. Would you identify  
13 this map for the Examiner?

14 A. Exhibit Number 4 is actually in two parts, one on  
15 the left-hand side and one on the right-hand side.

16 Directing your attention to the left-hand side,  
17 we have a map there that's scaled 1 to 1000. Again, Santa  
18 Fe acreage is in yellow. Our proposed unorthodox location  
19 is a red square. The Avalon sand producers are highlighted  
20 in green, and the 40-acre proration units are outlined in  
21 red.

22 And in looking at the left-hand side of the  
23 exhibit, you can see the green wells as they are oriented  
24 north and south. You can also see the contours. These are  
25 the contours of 12-percent or better porosity within the



1 Avalon sand. It's a 10-foot contour interval. It defines  
2 a north-south trending turbidite deposit, with the better  
3 wells concentrated towards the center of the deposition.

4           You can see near the center of that map the  
5 cross-section A-A', as it is labeled on the two wells, one  
6 located -- which would be the left well on the cross-  
7 section -- in the northeast of the northwest of 6. The  
8 well on the right of the cross-section is located in the  
9 southeast of the southwest of Section 31. And those are  
10 the two wells that are closest to our proposed location.

11           Now, as you move to the right side of the  
12 exhibit, I've expanded the scale from 1 to 1000 over to a  
13 1 to 5000, to enhance the particular area affected by the  
14 unorthodox location.

15           Again, here you'll see the cross-section A-A',  
16 the two closest wells to the proposed location. You'll see  
17 the footages highlighted between what is the proposed  
18 location, the red square, and the producing wells, and also  
19 the footages between existing wells in the field. Now, the  
20 purpose there is to show that as far as drainage purposes,  
21 this unorthodox location is pretty much the same as the  
22 rest of the wells in the field.

23           Also shown here is an attempt to show some areas  
24 of drainage. And what it does, these circles that you see  
25 on there are a diameter of a 40-acre proration unit. With

1 that producing well or that location in the center, you  
2 draw a circle to see if there's any 40-acre interference  
3 between wells.

4 And we note here that the red circle, of course,  
5 does not interfere with the wells to the north or the  
6 Texaco acreage. It barely touches the well to the west.

7 Also indicated on there is a blue circle. The  
8 blue circle is around a blue triangle, which is a legal  
9 location in that 40-acre proration unit. That particular  
10 legal location would affect acreage to the north.

11 So the proposed location, unorthodox, that we're  
12 suggesting here is, I think, in the best interests of  
13 conservation, because we're moving towards the center of  
14 deposition of this particular unit to effect a better  
15 drainage, plus not interfering with any of the offset  
16 wells.

17 Q. What is the approximate thickness you desire in  
18 the Bone Spring?

19 A. What we try to attain here -- and this being a  
20 fairly narrow channel -- we try to attain, we try to get as  
21 close to the 30-foot contour as we can get, towards the  
22 center.

23 Q. Okay. And so the good producers are all pretty  
24 much to the west of your proposed location?

25 A. That's correct.

1 Q. And so by moving to the east, you'd substantially  
2 increase the risk in drilling this well?

3 A. That's correct.

4 Q. And so as a result, you desire to remain in the  
5 far western portion of this particular proration unit?

6 A. That's correct.

7 Q. In your opinion, if this Application is granted,  
8 should a penalty be assessed against Santa Fe?

9 A. No, sir.

10 Q. Okay, and what is the reason for that?

11 A. Well, that would severely hamper the economics of  
12 the drilling of this particular well.

13 Q. And as you stated by your footage distances you  
14 marked on this exhibit and the radius of drainage, you are  
15 not affecting any offset operators, such as Texaco to the  
16 north?

17 A. That is correct.

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

21 A. Yes.

22 Q. And were Exhibits 3 and 4 prepared by you?

23 A. Yes, they were.

24 MR. BRUCE: Mr. Examiner, I would move the  
25 admission of Exhibits 3 and 4.

1 EXAMINER CATANACH: Exhibits 3 and 4 will be  
2 admitted as evidence.

3 EXAMINATION

4 BY EXAMINER CATANACH:

5 Q. Mr. Anderson, you're moving approximately 230  
6 feet west of a standard location. How much thickness are  
7 you gaining in the reservoir?

8 A. We should be gaining approximately five to ten  
9 feet.

10 Q. Now, by moving towards the center of the  
11 deposition, does that also increase the -- or did you  
12 encounter better quality reservoir as you move east?

13 A. That is correct.

14 Q. West, sorry.

15 A. The wells located towards the edge of the  
16 depositional system do incorporate more siltstone or finer  
17 particles within the rock. That makes it less permeable.

18 Down towards the center of the depositional  
19 system you get the coarser-grained or better rock.

20 Q. The well to the south, in the quarter-quarter  
21 section to the south, the one that shows 13 feet of pay, is  
22 that a commercial well?

23 A. That is a commercial well that is currently  
24 producing in the Delaware.

25 Q. Oh, that's a Delaware?

1 A. It has not been attempted yet in the Avalon sand.

2 Q. The well to the southwest that shows eight feet  
3 of pay, is that a commercial well?

4 A. Okay, that is -- The Number 8 well actually has  
5 24 feet of pay.

6 Q. A lot of numbers on this thing.

7 A. I know, it's confusing.

8 Q. That has 24 feet of pay?

9 A. We just finished that well approximately six  
10 weeks ago, and yes, it is a good well.

11 Q. So how many feet of pay will you encounter at  
12 your proposed location?

13 A. I anticipate between 20 and 35 feet.

14 EXAMINER CATANACH: I believe that's all I have  
15 of the witness, Mr. Bruce.

16 MR. BRUCE: I have nothing further in this  
17 matter.

18 EXAMINER CATANACH: All right. There being  
19 nothing further in this matter, Case 11,384 will be taken  
20 under advisement.

21 (Thereupon, these proceedings were concluded at  
22 10:38 a.m.)

23 \* \* \*

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner Hearing of Case No. 11384,  
heard by me on 9/21/1995.

24 David R. Catnach, Examiner  
25 Oil Conservation Division


## 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 September 25th, 1995.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 1998