

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

21 December 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Santa Fe Energy Operat- CASE  
ing Partners, L. P. for compulsory 9563  
pooling, Lea County, New Mexico, and

Application of Santa Fe Energy Operat- CASE  
ing Partners, L. P. for compulsory 9564  
pooling, Lea County, New Mexico, and

Application of Santa Fe Energy Operat- CASE  
ing Partners, L. P. for compulsory 9565  
pooling, Lea County, New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Robert G. Stovall  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico

For Santa Fe Energy Owen M. Lopez  
Operating Partners, L.P.: Attorney at Law  
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P. O. Box 2068  
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I N D E X

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1 MR. STOGNER: We'll call next  
2 Case Number 9563.

3 MR. STOVALL: Application of  
4 Santa Fe Energy Operating Partners, L. P., for compulsory  
5 pooling, Lea County, New Mexico.

6 MR. STOGNER: Call for appear-  
7 ances.

8 MR. LOPEZ: Mr. Examiner, may  
9 it please the Division, my name is Owen Lopez with the  
10 Hinkle Law Firm in Santa Fe, New Mexico, appearing on be-  
11 half of the applicant, and we have two witnesses to be  
12 sworn.

13 At this time, Mr. Examiner, I  
14 would request that this case be consolidated with Case  
15 Number 9564 and 9565, and I have the same witnesses and es-  
16 sentially the same exhibits.

17 MR. STOGNER: Are there any  
18 objections or any additional appearances?

19 Okay, at this time we will  
20 call Cases Numbers 9564 and 9565.

21 MR. STOVALL: 9564, the  
22 application of Santa Fe Energy Operating Partners, L. P.  
23 for compulsory pooling, Lea County, New Mexico.

24 Case 9565, application of  
25 Santa Fe Energy Operating Partners, L. P., for compulsory

1 pooling, Lea County, New Mexico.

2 MR. STOGNER: Other than Mr.  
3 Lopez, are there any appearances in either one of these  
4 cases?

5 Will the witnesses please  
6 stand to be sworn.

7

8 (Witnesses sworn.)

9

10 PATRICK J. TOWER,  
11 being called as a witness and being duly sworn upon his  
12 oath, testified as follows, to-wit:

13

14 DIRECT EXAMINATION

15 BY MR. LOPEZ:

16 Q Would you please state your name and  
17 where you're employed, or where you reside?

18 A My name is Patrick J. Tower and I reside  
19 in Midland, Texas.

20 Q And what is your occupation and who is  
21 your employer?

22 A I'm a petroleum landman for Santa Fe  
23 Emergy Operating Partners, L. P.

24 Q Have you previously testified before the  
25 Oil Conservation Division as a petroleum landman?

1           A           Yes, I have.

2           Q           Are you familiar with the land matters  
3 involved in Case Numbers 9563, 64, and 65?

4           A           Yes, I am.

5           Q           Would you please briefly state what  
6 Santa Fe seeks with these three applications?

7           A           Santa Fe Energy Operating Partners, L.  
8 P., seeks three orders pooling all mineral interests from  
9 the surface to the base of the Bone Spring formation under-  
10 lying certain acreage in Section 14, Township 18 South,  
11 Range 32 East in Lea County to form standard 40-acre oil  
12 spacing and proration units.

13                       In Case Number 9565 Santa Fe seeks to  
14 pool the southeast quarter southeast quarter of Section 14,  
15 to be dedicated to the Shinnery Federal 14 No. 2 Well.

16                       In Case Number 9564 Santa Fe seeks to  
17 pool the northwest quarter southeast quarter of Section 14  
18 to be dedicated to the Shinnery 14 -- Federal 14 No. 3  
19 Well.

20                       And in Case 9563, Santa Fe seeks to pool  
21 the northeast quarter southeast quarter of Section 14 to be  
22 dedicated to the Shinnery Federal 14 No. 4 Well.

23                       All these wells will be drilled at  
24 standard locations.

25

1                   Santa Fe also requests consideration of  
2 the cost of drilling and completing the wells and alloca-  
3 tion of the cost thereof, as well as actual operating costs  
4 and charges for supervision.

5                   Santa Fe asks that it be designated the  
6 operator of the three wells and a charge for the risk in-  
7 volved in drilling the wells be assessed.

8                   MR. LOPEZ: Mr. Examiner, are  
9 the witness' qualifications as a landman acceptable?

10                   MR. STOGNER: Mr. Tower is so  
11 qualified.

12                   Q           Mr. Tower, would you please refer to  
13 what's been identified as Exhibit Number One and explain  
14 what it shows?

15                   A           Yes. Exhibit Number One is a land plat  
16 identifying the acreage involved with these three wells.  
17 The east half of Section 14 is basically one Federal lease  
18 with a common ownership underlying the ownership of the  
19 various parties.

20                               We have outlined in red on this plat the  
21 proration units for the three involved tests.

22                   Q           Okay. Who are the interest owners that  
23 Santa Fe seeks to force pool and in this respect I refer  
24 you to what's been marked Exhibit Number Two?

25                   A           The parties involved are Petro Atlas

1 Corporation, who controls 18.75 percent of an undivided  
2 interest in each of these tests.

3 The other party involved is C. Daniel  
4 Walker and wife, Joanne Walker, who collectively controls  
5 10.9375 percent undivided interest in each of the three --  
6 three wells we want to drill.

7 Q Would you please describe the efforts  
8 you have made to get these three -- these interest owners  
9 to join in the well?

10 A Yes. By reference to a previous case  
11 that was heard before the OCD, Case Number 9433, that  
12 compulsory pooling order was issued under Number 8740, the  
13 -- we initially dealt with these people or these parties  
14 starting in approximately April of 1988.

15 At that time we proposed the formation  
16 of a tract or an operating agreement and/or farm in agree-  
17 ments covering the entire east half of Section 14 with  
18 contemplating drilling several wells at that time.

19 Since that time these -- these parties  
20 of the owners were the only ones who would not commit to an  
21 east half contract arrangement. Santa Fe Energy Operating  
22 Partners, as well as all other parties, have agreed to such  
23 arrangement.

24 The conversations that took place in re-  
25 gard to negotiations (not clearly understood) were

1 documented in this previous case.

2                   Since that time I have had numerous con-  
3 versations with James Hardin, who's the principal with  
4 Petro Atlas, and also Mr. Walker, trying to work out some  
5 type of settlement and those conversations took place on --  
6 starting September 1st, September 9th, September 30th,  
7 November 22nd, November 30th, December 7th, and December  
8 16th. Various of those conversations, in some cases we  
9 provided them information concerning offsetting well pro-  
10 duction data in hopes to encourage them to join or commit  
11 to some form of arrangement.

12                   At this point we have not entered into a  
13 contractual arrangement to drill these wells and that's why  
14 we're here.

15                   Q           What percentage of the working interest  
16 in each unit does Santa Fe own?

17                   A           At this time we control 40 percent;  
18 however, we anticipate some of the contractual arrangements  
19 allow for parties to commit additional interest to us. We  
20 anticipate we'll end up with anywhere from 40 to 80 percent  
21 in this well, but currently we own 40 percent.

22                   Q           Have you been advised of Santa Fe's  
23 plans for drilling these wells?

24                   A           Yes. We hope to start the SHINNERY  
25 Federal No. 2 once we have finalized and received the

1 compulsory pooling order, some type of voluntary agreement.

2                   The other two wells will follow in  
3 succession, hopefully, under one drilling contract where we  
4 can move the rig.

5                   Q           Now I'd ask you to refer to what you  
6 anticipate the costs of the wells to be and in this connec-  
7 tion I refer you to what's been marked Exhibit Three.

8                   A           Okay. Exhibit Number Three is an AFE or  
9 three separate AFE's, all the same amount for the indivi-  
10 dual wells. The dry hole cost is estimated to be \$344,315.  
11 The completed well cost is estimated to be \$758,562.

12                   Q           Are the proposed well costs in line with  
13 those normally encountered in the drilling of wells to this  
14 depth in Eddy County?

15                   A           Yes, they are.

16                   Q           Do you have a recommendation as to the  
17 amount which Santa Fe should be paid for supervision and  
18 administration expenses for each well?

19                   A           Yes. It's our recommendation that a  
20 drilling well rate of \$3,520 per month be allowed and a  
21 producing well rate of \$352.00 per month be allowed. I  
22 will point out that these are rates that were approved  
23 under the previous case I mentioned and also are basically  
24 the same rates that all the other parties have agreed to  
25 under the operating agreements.

1           Q           What type of operating agreement are you  
2 using?

3           A           We have an AAPL Form 610, 1982 Model  
4 Form.

5           Q           What penalty do you recommend against  
6 nonconsenting interest owners?

7           A           It would be our recommendation of cost  
8 plus 200 percent, and this figure, as pointed out, is used  
9 in the operating agreement and the geologist will testify  
10 further concerning the risk in justification of these  
11 numbers.

12          Q           Were all parties, all interested parties  
13 notified of this hearing?

14          A           Yes, they were.

15          Q           And I -- I believe we've introduced as  
16 Exhibit two the notice letter and certified copies of the  
17 receipts?

18          A           Yes. The certified receipts for the  
19 parties involved are attached to the proposal letters.

20          Q           Were Exhibits Numbers One through Three  
21 prepared by you or compiled from your company records?

22          A           Yes, they were.

23          Q           In your opinion will the granting of  
24 this application be in the interest of conservation, the  
25 prevention of waste, and the protection of correlative

1 rights?

2 A Yes, they will?

3 MR. LOPEZ: Mr. Examiner, I  
4 would offer the applicant's Exhibits One through Three.

5 MR. STOGNER: Exhibits One  
6 through Three will be admitted into evidence.

7 MR. LOPEZ: That concludes our  
8 testimony for this witness.

9 MR. STOGNER: Mr. Lopez, I do  
10 have some questions but I'm going to hold off asking Mr.  
11 Tower at this time. We may call him back.

12 MR. LOPEZ: Fine. We'd call  
13 our next witness, then, Mr. Thoma, T-H-O-M-A.

14

15 JOHN THOMA,  
16 being called as a witness and being duly sworn upon his  
17 oath, testified as follows, to-wit:

18

19 DIRECT EXAMINATION

20 BY MR. LOPEZ:

21 Q Would you please state your name and  
22 where you reside?

23 A My name is John Thoma and I reside in  
24 Midland, Texas.

25 Q By whom are you employed and in what

1 capacity?

2           A           I am employed by Santa Fe Energy Oper-  
3 ating Partners, L. P., as a geologist.

4           Q           Have you previously testified before the  
5 Commission and had your qualifications accepted as a matter  
6 of record?

7           A           No, I have not.

8           Q           Would you therefore briefly describe  
9 your educational background and employment experience?

10          A           Yeah. In May, 1980, I graduated from  
11 Southampton College of Long Island University with a  
12 Bachelor of Science in environmental geology.

13                       In June of 1980 I went to work for Kane  
14 and Carruth, P. C., as an environmental technician.

15                       In May of 1981 I went to work for  
16 Fayette Oil and Gas Corporation in Denver, Colorado, as a  
17 geological technician.

18                       And in June of 1982 I joined Santa Fe  
19 Energy Company in Denver as a geologist, and I was since,  
20 in 1984, transferred to Midland with Santa Fe.

21          Q           And what areas do your duties as a geo-  
22 logist for Santa Fe cover?

23          A           Permian Basin.

24          Q           Are you familiar with the application of  
25 Santa Fe in Case Numbers 9563, 64 and 65?



1 Querecho Plains adjacent to the proposed locations were  
2 deposited in relatively deep water. They are -- they  
3 represent submarine sand deposits. They were deposited on  
4 the slope, the fore slope of the Abo Reef. They thin and  
5 pinch out to the north and thin and widen to the south.

6 Q Okay. I now refer you to what's been  
7 marked Exhibit Number Five and ask you to explain what it  
8 shows.

9 A Exhibit Five is a structure map on top  
10 of the First Bone Springs B-1-D Sand marker. It shows the  
11 proposed locations in red; producing wells from the B-1-D  
12 Sand in green; and structure on top of the B-1-D Sand, and  
13 I might point out that that structure is dipping to the  
14 southeast and that the three proposed locations are each  
15 located up dip of the Querecho Plains Bone Springs Pool.

16 Q Okay. I now refer you to what's been  
17 marked Exhibit Number Six and ask you to explain what this  
18 exhibit shows.

19 A Exhibit Six is a stratigraphic cross  
20 section A to A'. It is a north/south cross section which  
21 begins at the left at point A, which is the Mewbourne  
22 Federal "L" No. 2 Well, located in the northwest of the  
23 southeast of Section 23, 18, 32.

24 The second well on the cross section  
25 moving north, is the Mewbourne Oil Federal "L" No. 4,

1 located in the northwest of the northeast of Section 23.

2 The next location is the proposed loca-  
3 tion for the No. 2 Well, the 2 Shinnery Federal 14, which  
4 is located again in the southeast southeast of 14. We feel  
5 that the -- that the other locations, the No. 3 and the No.  
6 4, will be comparable structurally to this location and  
7 we'll demonstrate in a few moments that we feel they will  
8 be comparable from a reservoir standpoint, as well.

9 And we're therefore comparable in pro-  
10 posing these three together with this single set of illus-  
11 trations.

12 Moving to the very northern end of the  
13 cross section, or the right, the final well is a dry hole,  
14 the Amoco Federal "BY" No. 1, which is located in the  
15 northwest of the northeast of Section 14.

16 The line of Section A to A' is illustra-  
17 ted on Exhibit Five, on Exhibit Five, Seven and Eight.

18 Looking at the cross section, the sands  
19 which are colored yellow represent potential pay zones  
20 within the First Bone Springs Sand interval in the Querecho  
21 Plains Field area.

22 The primary zones which are being pro-  
23 duced in the field proper are the B-1-C sand and the B-1-D  
24 sand. The B-1-A and the sands below the B-1-D, which are  
25 not labeled, are secondary targets which have not been

1 perforated or are not currently producing in Querecho  
2 Plains, but do represent viable targets.

3           The red shading on the logs represents  
4 that porosity greater than 10 percent.

5           I might point out that moving north from  
6 the Mewbourne "L" No. 4 through the location and into the  
7 Amoco "BY" No. 1, we lose the B-1-A sands, the B-1-C sands,  
8 and a very substantial amount of the porosity in the B-1-D  
9 sand. This is indicating what I've mentioned previously  
10 that the reservoir is generally terminating as you move to  
11 the north and to the northeast, and we feel this repre-  
12 sents one of the risks in drilling these locations, the 2,  
13 3 and 4 locations, as we will be moving up dip and into a  
14 less controlled, higher risk from a reservoir standpoint,  
15 part of the field area.

16           Q           Would you characterize deposits as  
17 heterogeneous or homogeneous?

18           A           The deposits are heterogeneous.

19           Q           I now refer you what's been marked Exhi-  
20 bit Number Seven and ask you to explain and show what this  
21 means.

22           A           Exhibit Seven is an isopach map of the  
23 First Bone Springs B-1-D Sand and what we're mapping is net  
24 porosity greater than 10 percent, and again that's shown in  
25 red on the cross section.

1                   You can see that the sand channel in the  
2 B-1-D narrows to the north and widens, or fans out to the  
3 south. You can also see the highly erratic nature of the  
4 porosity development within the B-1-D sand and to highlight  
5 this I call your attention to four wells, two wells being  
6 those in the southeast northeast of Section -- I'm sorry,  
7 the southwest northwest of Section 23 and the southeast  
8 northwest of 23, where we have 38 feet. Moving directly to  
9 the west into a direct west offset, located roughly 600  
10 feet away, there is approximately 4 feet of sand.

11                   I might point out that the 4 feet is not  
12 posted on this map. That's a drafting error, but the  
13 footage of sand in that direct offset is 4 feet.

14                   So you can see the rapid loss of reser-  
15 voir moving just 600 feet.

16                   To the north, looking at wells on and  
17 offsetting Santa Fe Energy Operating Partners leasehold,  
18 the Shinnery Federal No. 1, located in the southwest of the  
19 southeast of 14, encountered 20 feet of porosity, 10 per-  
20 cent porosity.

21                   Moving roughly 1000 feet to the west in  
22 a direct offset, the Quanah Federal No. 1, located in the  
23 southeast of the southwest, encountered 3 feet.

24                   So once again a direct offset has lost  
25 most of the commercial reservoir in this interval.

1           Q           Okay. Now I'd ask you to refer to  
2 what's been marked Exhibit Number Eight and ask you to  
3 explain what this shows.

4           A           Exhibit Number Eight is an isopach map  
5 of the First Bone Springs B-1-C Sand and again we're  
6 mapping porosity greater than or equal to 10 percent, and I  
7 might point out that the green dots on this map show wells  
8 productive from the B-1-C, and backing up to Exhibit Seven,  
9 the green dots on that will define production from the  
10 B-1-D Sand.

11                   The Exhibit Eight shows the areal dis-  
12 tribution of the B-1-C Sand. Once again you see it devel-  
13 oping a more fan-like shape to the south, narrowing to the  
14 north.

15                   We also see the erratic nature of the  
16 porosity development within that sand demonstrated once  
17 again in the two wells mentioned previously, the Shinnery  
18 No. 1 and the Quanah Federal No. 1, where we run from 14  
19 feet in the Quanah Well to 3 feet in the Shinnery Well.

20                   Moving directly south of the Shinnery  
21 Well into the Mewbourne Federal 4 "L", there's 13 feet.

22                   So within 600 feet in both directions  
23 from the Shinnery No. 1 you develop reservoir, but there is  
24 no reservoir present, relatively speaking no reservoir  
25 present, in the Shinnery No. 1.

1 I might also point out that the control  
2 we have on the state of the sand and reservoir development  
3 to the north, it is highly interpretive in that both con-  
4 trol points, both the control point shown in Section 13 and  
5 the control point shown in the northeast quarter of Section  
6 14, have no porosity developed in that interval.

7 The basis for this projection of sand is  
8 -- goes back to the model where we believe the sands are  
9 being deposited further up the slope, but the risk is cer-  
10 tainly evident from the data on the map.

11 Q Do you have an opinion as to what the  
12 risk factor is that should be applied if this application  
13 is granted?

14 A I believe that the risk should be  
15 maximum.

16 Q Is it your opinion that the granting of  
17 the application is in the interest of prevention of waste  
18 and protection of correlative rights?

19 A Yes, I do.

20 Q Were Exhibits Five, Four, Four through  
21 Eight prepared by you or under your supervision?

22 A Yes, they were.

23 MR. LOPEZ: I would offer  
24 Applicant's Exhibits Four through Eight.

25 MR. STOGNER: Exhibits Four

1 through Eight will be admitted into evidence.

2 MR. LOPEZ: That concludes the  
3 testimony of this witness.

4 MR. STOGNER: You only have  
5 two witnesses, Mr. Lopez?

6 I have no questions of this  
7 witness and we will go ahead and just waive Mr. Tower's  
8 questions and take this case under advisement.

9  
10 (Hearing concluded.)

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## 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 Nos. 9563, 9564, and 9565 heard by me on 26 December 1958.

Walter H. Boyd Examiner  
Oil Conservation Division