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 Operating Partners, L. P. for compulsory pooling, Lea County, New Mexico, and	CASE 9563
Application of Santa Fe Energy Operating Partners, L. P. for compulsory pooling, Lea County, New Mexico, and	CASE 9564
Application of Santa Fe Energy Operating Partners, L. P. for compulsory pooling, Lea County, New Mexico.	CASE 9565

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 Operating Partners, L.P.:	Owen M. Lopez Attorney at Law HINKLE LAW FIRM P. O. Box 2068 Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

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

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

MR. STOGNER: Call for appearances.

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

At this time, Mr. Examiner, I would request that this case be consolidated with Case Number 9564 and 9565, and I have the same witnesses and essentially the same exhibits.

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

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

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

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

pooling, Lea County, New Mexico.

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

Will the witnesses please stand to be sworn.

(Witnesses sworn.)

PATRICK J. TOWER,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

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

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

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

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

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

A Yes, I have.

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

A Yes, I am.

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

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

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

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

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

All these wells will be drilled at standard locations.

Santa Fe also requests consideration of the cost of drilling and completing the wells and allocation of the cost thereof, as well as actual operating costs and charges for supervision.

Santa Fe asks that it be designated the operator of the three wells and a charge for the risk involved in drilling the wells be assessed.

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

MR. STOGNER: Mr. Tower is so qualified.

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

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

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

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

A The parties involved are Petro Atlas

documented in this previous case.

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

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

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

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

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

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

compulsory pooling order, some type of voluntary agreement.

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

Q Now I'd ask you to refer to what you anticipate the costs of the wells to be and in this connection I refer you to what's been marked Exhibit Three.

A Okay. Exhibit Number Three is an AFE or three separate AFE's, all the same amount for the individual wells. The dry hole cost is estimated to be $344,315. The completed well cost is estimated to be $758,562.

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

A Yes, they are.

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

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

Q What type of operating agreement are you using?

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

Q What penalty do you recommend against nonconsenting interest owners?

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

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

A Yes, they were.

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

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

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

A Yes, they were.

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

rights?

A Yes, they will?

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

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

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

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

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

JOHN THOMA,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

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

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

Q By whom are you employed and in what

capacity?

A I am employed by Santa Fe Energy Operating Partners, L. P., as a geologist.

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

A No, I have not.

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

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

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

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

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

Q And what areas do your duties as a geologist for Santa Fe cover?

A Permian Basin.

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

A Yes, I am.

MR. LOPEZ: Does the Examiner consider the applicant -- the witness qualified?

MR. STOGNER: Yes, Mr. Thoma is so qualified.

Q Mr. Thoma, I now refer you to what's been identified as Exhibit Four and ask you to explain what it shows.

A Exhibit Four is a production map of the area of interest and of Querecho Plains, of the Querecho Plains Bone Springs, First Bone Springs Sand Pool. The wells which are colored in green represent wells productive from the First Bone Springs Sand.

The areas which show stippling, notably in Section 14 of Township 18 South, Range 32 East, represent Santa Fe Energy Operating Partnership leasehold.

The three locations of interest, the Shinnery Federal No. 2-14, No. 3-14, and 4-14, are shown in red.

The No. 2-14 is located in the southeast southeast of Section 14, 18, 32.

The No. 3 is located in the northwest southeast of Section 14, and the No. 4 is located in the northeast southeast of Section 14.

The sands that are productive in

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

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

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

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

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

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

located in the northwest of the northeast of Section 23.

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

And we're therefore comparable in proposing these three together with this single set of illustrations.

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

The line of Section A to A' is illustrated on Exhibit Five, on Exhibit Five, Seven and Eight.

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

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

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

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

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

Q Would you characterize deposits as heterogeneous or homogeneous?

A The deposits are heterogeneous.

Q I now refer you what's been marked Exhibit Number Seven and ask you to explain and show what this means.

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

You can see that the sand channel in the B-1-D narrows to the north and widens, or fans out to the south. You call also see the highly erratic nature of the porosity development within the B-1-D sand and to highlight this I call your attention to four wells, two wells being those in the southeast northeast of Section -- I'm sorry, the southwest northwest of Section 23 and the southeast northwest of 23, where we have 38 feet. Moving directly t the west into a direct west offset, located roughly 600 feet away, there is approximately 4 feet of sand.

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

So you can see the rapid loss of reservoir moving just 600 feet.

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

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

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

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

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

The Exhibit Eight shows the areal distribution of the B-1-C Sand. Once again you see it developing a more fan-like shape to the south, narrowing to the north.

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

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

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

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

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

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

A I believe that the risk should be maximum.

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

A Yes, I do.

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

A Yes, they were.

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

MR. STOGNER: Exhibits Four

through Eight will be admitted into evidence.

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

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

I have no questions of this witness and we will go ahead and just waive Mr. Tower's questions and take this case 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 Nos. 9563, 9564, and 9565 heard by me on 21 December 1988.

Michael E. Stogner, Examiner
Oil Conservation Division