1	NEW MEXICO OIL CONSERVATION DIVISION
2	STATE LAND OFFICE BUILDING
3	STATE OF NEW MEXICO
4	CASE NO. 10471
5	
6	IN THE MATTER OF:
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8	The Application of Southwest Royalties, Inc., for compulsory
9	pooling, Eddy County, New Mexico.
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1 4	BEFORE:
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16	DAVID R. CATANACH
17	Hearing Examiner
18	State Land Office Building
19	April 30, 1992
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2 2	REPORTED BY:
23	DEBBIE VESTAL Certified Shorthand Reporter
2 4	for the State of New Mexico
2 5	· · · · · · · · · · · · · · · · · · ·
	ORIGINAL

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EXAMINER CATANACH: At this time we'll call Case 10471, Application of Southwest Royalties, Inc., for compulsory pooling, Eddy County, New Mexico.

Are there appearances in this case?

MR. COOTER: Paul Cooter with the Rode:

MR. COOTER: Paul Cooter with the Rodey law firm appearing on behalf of the applicant, Southwest Royalties. I have two witnesses, John Tate and Richard Masterson.

MR. CARROLL: Mr. Examiner, I'm Ernest Carroll with the law firm of Losee, Carson, Haas & Carroll of Artesia, New Mexico. I'm appearing on behalf of Yates Petroleum. We do not have any witnesses. I would just request time to make a short statement to explain the position of Yates Petroleum with respect to this application.

EXAMINER CATANACH: Would it be helpful to make that statement before the testimony, Mr. Carroll?

MR. CARROLL: It wouldn't hurt, because I'm not going in any way to try to contest what Mr. Cooter is trying to do.

EXAMINER CATANACH: Why don't we go ahead and do that then.

MR. KELLAHIN: May I enter my

1 appearance, Mr. Examiner?

2 EXAMINER CATANACH: I'm sorry. Yes,
3 Mr. Kellahin.

MR. KELLAHIN: Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey appearing today on behalf of Conoco, Inc.

EXAMINER CATANACH: You may proceed, Mr. Carroll.

MR. CARROLL: Thank you. Mr. Catanach, basically the position of Yates Petroleum or why it is an interested party with respect to this forced pooling application is that, and it relates basically with Mr. Kellahin's client, Conoco, Conoco and Yates Petroleum right now have a dispute with respect to a farmout agreement which contains a back-in after payout. There is a dispute as to when or how you determine this payout.

So at the present time Yates

Petroleum's interest is only a royalty interest

underlying the tract that Mr. Cooter seeks to

compulsory pool, though we contend that if we

prevail in a lawsuit, which is a pending lawsuit

now in the Eddy County District Court, State

District Court, wherein we have actually brought

suit against Conoco for an interpretation of the contract between the two of us, the only thing that we wish to make known is that we would want to join in, if our interest is shown and the Court gives it to us. But I don't know how you can even deal with that procedurally. I'm not sure.

But Yates Petroleum instructed me, knowing that and being advised that I'm not sure how their interest could be legally taken into account, they did want to go on the record of having appeared, advising the Commission that we are seeking to establish an interest through this lawsuit with Conoco, and that we would like to participate in the drilling of a well out there should we prevail and have an interest. And that is basically Yates' position.

EXAMINER CATANACH: Mr. Carroll, one question: Who owns the interest that you claim you can back into at the present time?

MR. CARROLL: Well, at the present time Conoco would be the working interest holder. We have a royalty interest there, should we prevail and get the determination of how you determine payout. We don't, and I honestly cannot tell you

if payout has occurred according to our definition on this, because we're also suing for an accounting out there with respect to this well.

So I can't make any representation other than right now we just have a royalty interest. And we are making claim to more than that, but we have not proven that nor have we had access to materials which would allow me to even make a prediction. So we may or may not under either scenario. I just don't know.

EXAMINER CATANACH: Okay. Mr.

Kellahin?

MR. KELLAHIN: Mr. Examiner, I represent Conoco in the litigation which Mr. Carroll has described to you. I don't tell fortunes, and I don't predict the outcome of litigation. I can't even represent to you an objective statement of the facts because Mr. Carroll and I are trying to still discover those facts.

It arises out of some farmouts and operating agreements that occurred back in the early 70s. And 20 years later we're trying to reconstruct the interest that Yates' entities may

1 have in the Conoco interest. To answer your question, though, Conoco 2 3 at this point, unless the Court adopts the Yates' position, Conoco controls the working interest. Out of that working interest, Yates has an overriding royalty which may be converted to a 6 working interest subject to payout and some 7 8 contract interpretations. 9 So that is the problem, and we can't 10 give you any direction on what to do in this 11 particular case because it's beyond our abilities to predict what will be the outcome of that 12 13 litigation. EXAMINER CATANACH: Thank you, Mr. 14 15 Kellahin, Mr. Carroll. 16 Mr. Cooter, you may proceed. sorry. Let's get your witnesses sworn in. Will 17 the witnesses stand and be sworn in, please. 18 19 MR. COOTER: John Tate and Richard 20 Masterson. 21 [The witnesses were duly sworn.] 22 JOHN TATE 23 Having been duly sworn upon his oath, was 24 examined and testified as follows:

EXAMINATION

1	BY MR. COOTER:
2	Q. Mr. Tate, would you state your name for
3	the record, sir?
4	A. My name is John Tate.
5	Q. By whom are you employed?
6	A. Currently employed by Southwest
7	Royalties, Inc., out of Midland, Texas.
8	Q. What is your position with Southwest
9	Royalties?
10	A. I'm land manager and vice president of
11	land recovery.
12	Q. Would you summarize briefly your
13	educational background and work experience for
14	the Hearing Examiner?
15	A. Yes, sir. I'm a graduate of
16	Hardin-Simmons University. Upon graduation from
17	school, I returned to Midland. Went to work for
18	a small independent land brokerage firm for a
19	year, worked for them a year, at which point I
20	went to work for another independent, C. F.
21	Lawrence & Associates in Midland.
22	I was with Mr. Lawrence for over seven
23	years, at which time I changed jobs and joined

the Southwest Royalties firm. I've been there a

little over three years.

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Are you familiar with the application 1 Q. filed by Southwest Royalties in this case? 2 Yes, sir, I am. 3 Α. And the area in the southeastern New Mexico and Eddy County which is the location of the proposed forced pooling? Α. Yes, sir. 8 MR. COOTER: I tender Mr. Tate as an expert witness. 9 EXAMINER CATANACH: Mr. Tate is so 10 11 qualified. (BY MR. COOTER) Let's first turn to 12 Q. 13 the application, if you would, Mr. Tate, and state what Southwest Royalties seeks by this 14 15 application. 16 Α. We are currently seeking a compulsory pooling of the northeast quarter of Section 17, 17 Township 19 South, Range 25 East, Eddy County, 18 19 New Mexico, for the purposes of drilling an Upper 20 Pennsylvanian test. What interest is owned by Southwest 21 22 Royalties in that area? We currently own a one-eighth, or 12.5 23 24 percent leasehold working interest in the entire 25 160-acre tract.

Q. And the balance is owned by Conoco?

- A. It's my understanding the balance is owned by Conoco.
 - Q. Why do you seek to force pool this 160-acre tract owning only one-eighth interest?
 - A. Well, we have taken a lease from another independent oil and gas company who is very active, very strong in Eddy County, New Mexico. Our lease is due to expire on July 21 of this year, and we have no real expectation that we can re-acquire that oil and gas lease. We believe they will probably develop that tract on their own should it no longer be under lease.
 - Q. Have you contacted Conoco in an effort to get their joinder?
 - A. Yes, I have on a number of occasions, both by telephone and written correspondence.
 - Q. We'll get into the details later on that. But let me direct your attention first to what has been marked as Exhibit No. 1. Would you identify that?
 - A. This is strictly a shot of a Midland map, land map, indicating the area that we are interested in. You'll notice the northeast quarter of Section 17 is highlighted in yellow,

1 | simply indicating the tract we wish to pool.

- Q. All right. Then next turn to what we've marked as Exhibit No. 2, identify that, and explain it.
- A. That is the leasehold takeoff that was prepared by a landman at my direction. It's dated March 9, 1992. That shows the current leasehold working interest ownership in that tract. Subsequent to acquiring this takeoff and visiting with Conoco, I was informed that Conoco had purchased the interest of Mr. Horton and Mr. Nicklaus, but those instruments of conveyance had not been placed of record in Eddy County, New Mexico.

At the time they also informed me that they had tried on a number of occasions to contact Ms. Nunes and were unable to locate her. We did the same and were unable to locate Ms. Nunes as well.

That exhibit shows Conoco owning -- or Southwest Royalties owning one-eighth and basically Conoco owning the rest of the leasehold working interest in that area.

Q. Next turn to Exhibit No. 3, Mr. Tate.

It appears to be an AFE. Identify that for us,

please.

- A. That is our proposed cost of completed well, authority for expenditure, for an 8200-foot Upper Penn well that was prepared by folks in our office.
- Q. And what is the anticipated cost of a completed producing well?
- A. As indicated by the AFE, we expect we will be right at \$526,760.
- Q. What efforts have been made to obtain approval or voluntary joinder of Conoco?
- A. Well, we have contacted Conoco on a number of occasions, as I stated, both in written form or written correspondence as well as over the telephone. In those conversations with Conoco, they told me they believed that they owned the remainder 87 percent.

We wrote them proposing the well. On a couple of occasions in my visiting with Conoco land staff in Midland, they advised me that they do indeed like the location, but there are three or four other prospects in that immediate area that they like as much, and they would prefer not to participate in the drilling of this well because their budget was limited for 1992 and

they prefer to put what few -- or the allocated drilling budget they had into other locations as opposed to this location.

- Q. Let's be specific on those contacts,
 Mr. Tate. And let me hand you, to refresh your
 memory, when did you first contact Conoco?
- A. Our initial contact was by certified mail on March 16, 1992. It was a letter basically proposing the well, inviting Conoco's joinder in the drilling of this well.
 - Q. What followed after that?
- A. Upon receipt of that, I received a phone call from one of the Conoco landmen.
 Unfortunately, his name escapes me right now.
 And we basically had the conversation that I just related to you about they liked the prospect, but it's not one of their favorites and they would prefer to delay drilling at this time, at which point I explained to him because of the terms of our lease, we felt like it was necessary that we had to drill the well prior to the first of July and that we were not in a position to put off the drilling of the well.
 - Q. What followed after that?
 - A. Well, at that time we went ahead and we

re-proposed a letter back to Conoco and again asked for their joinder and participation by certified mail, more in an effort to let those folks know that we were truly serious; that we intended to go forward in as rapid manner as possible to get the well drilled.

We were again given pretty much the same answer. It was just something they couldn't do right now.

- Q. Was a copy of the AFE furnished Conoco before this application was filed?
- A. Yes, it was. We went ahead about the same time, on March 30, by certified mail and furnished Conoco with an AFE stating our proposed costs in drilling completion of this well.
- Q. After this application was filed, were the interest owners, as shown on Exhibit 2, all furnished copies of the application and notified of this hearing date?
- A. Yes, sir, they were by certified mail. Unfortunately, the notification sent to Ms. Nunes returned to us, as I suppose the address is bad. But Mr. Horton and Mr. Nicklaus and Conoco were indeed informed of this hearing.

MR. COOTER: Mr. Examiner, I'd tender

Exhibit 4, which is an affidavit of Mr. Carr, who was then representing Southwest Royalties, of the mailing of the application and notification of this hearing date.

- Q. Are you prepared at this time to make a recommendation to the Hearing Examiner as to the risk penalty that should be assessed against the nonconsenting interest owners if the application is granted?
 - A. Yes, sir, I am.

- Q. What is that recommendation?
- A. We would request and recommend that a penalty of 200 percent be assessed to the property.
- Q. And upon what do you base this 200 percent recommendation?
- A. Well, there is a number of things really. It's a fairly risky well to drill. I guess most importantly we're basically banking the deal. We're going to pay -- actually seven-eighths of every dollar we spend is being paid for somebody else in that we only have an eighth interest. We're banking the deal out of our own pocket, taking the risk of drilling the well, bringing the well in.

I'm not a geologist, but I've been in the oil business long enough to know that there is some risk associated with this well inasmuch as it is down-dip from the other production.

Also, we have had to put very strong consideration into the amount of water a well such as this could produce. It could be very high volume, and that in itself could make the well uneconomic. You could have a producing oil, but if you don't have the proper disposal facilities, your well could be very uneconomical.

- Q. Do you believe that there is a distinct possibility that a well drilled at your proposed location would not be a commercial success?
 - A. Absolutely.

- Q. Do you have an estimate of overhead and administrative costs while drilling and then after drilling while the well is producing?
- A. Yes, sir, I do. We believe for a well of this depth that our company would be inclined to charge approximately \$5,000 a month for drilling well overhead and \$500 a month as a producing well rate.
 - Q. Are those in line with similar charges

by other area operators? 1 I believe they are if not substantially 2 cheaper than what most other folks are charging 3 in that area. Southwest Royalties does ask to be Q. designated operator --6 Yes, sir, we do. -- If the application is granted. In 8 your opinion would the granting of this 9 application be in the best interests of 10 11 conservation, prevention of waste, and protection of correlative rights? 12 Yes, sir, very much. 13 Α. MR. COOTER: That concludes my direct 14 examination. 15 16 EXAMINER CATANACH: Mr. Cooter, do you want to enter your exhibits as evidence? 17 18 MR. COOTER: Yes. Thank you, sir. Wе would tender -- well, let me ask you a question. 19 Were Exhibits 1 through 3 either 20 Q. 21 prepared by you or under your direction and 22 supervision? Yes, sir, they were. 23 Α. MR. COOTER: Exhibit No. 4 is the 24

affidavit of Mr. Carr, and we would tender all

four exhibits. 1 EXAMINER CATANACH: Okay. Exhibits 1 2 through 4 will be admitted as evidence. 3 Any questions of the witness? Mr. Kellahin. MR. KELLAHIN: Thank you, Mr. Examiner. 7 8 **EXAMINATION** BY MR. KELLAHIN: 9 Mr. Tate, when I look at Exhibit 1, 10 Q. 11 you've outlined for me the northeast quarter of Section 17? 12 13 Α. Yes, sir. 14 Do you have an undivided one-eighth working interest underlying the entire northeast 15 16 quarter of that section? 17 Α. Yes, sir, we do. 18 Does your company have any other working interest in the immediate vicinity? 19 20 I don't know. I really can't answer that question. We have a number of holdings in 21 Eddy County, New Mexico. And I really can't 22 answer that question, whether we do or not in 23 24 that immediate vicinity.

Do you currently operate any of the

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Q.

Dagger Draw wells?

- A. If I could defer to our second witness,
 I think he's more qualified to answer that than I
 am because I really don't know.
- Q. Do you know if you have any working interest in the production attributed to wells producing out of the Dagger Draw Pool?
 - A. No, sir, I don't.
- Q. The preparation of the AFE that you testified to, did you determine what the current costs were that other operators in this vicinity were experiencing for the costs of drilling this type of well to this depth?
- A. As best we could. What we do when we prepare an AFE, it's pretty much out of company policy that you take a minimum of three bids from all of your various vendors and contractors. We went ahead and we prepared this AFE in the same manner. We took bids with those contractors that operate, whether they drill, treat, provide pipe services, or whatever in that area. And we think they're very much in line.
- Q. Do you recall the three contractors you obtained bids from?
 - A. No, sir. I did not actually prepare

- this AFE. It was prepared under my supervision by Mr. Steve Garner.
 - Q. Garner's signature is the one at the bottom?
 - A. Yes, sir, that's correct.
 - Q. Have you awarded a bid to a contractor for this well?
 - A. No, sir, not until this compulsory pooling, hopefully, is ruled in our favor.
 - Q. Are there contingencies in there to handle the disposal of the produced water?
 - A. No, there's not in our AFE.
 - Q. Help me understand the chronology of events with regards to your interest. What is the beginning date of the primary term of the lease in question that you hold?
 - A. May I defer to my file?
- 18 Q. Certainly.

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- A. We have an oil and gas lease dated July 20 20, 1990.
- 21 Q. July 20 of 1990?
- 22 A. Yes, sir.
- Q. Was it a two-year lease then expiring on July 20 of 92?
- 25 A. 92, yes, sir.

- Q. Prior to your initial letter to Conoco, which was the March 16, 1992, letter --
 - A. Yes, sir.

- Q. -- did you make any efforts to initiate the proposed drilling of this well in this spacing unit prior to that date?
- A. Not the type you're talking about. I think, if you're talking about notifying Conoco or stuff, we run a very lean shop where we work. We have a very busy schedule, very lean shop, and we pretty much have to concentrate on things as they come. We don't have the luxury to have enough people to start working on these things a year or six months in advance.

We are very much aware of this circumstance. We knew it was coming, time that we needed to do something about it, and we take basically each buyer as they come.

- Q. Okay. So for the first 17 months or so, the primary term, you didn't do anything to develop your lease?
- A. That's right. We're kind of of the position that we had an eighth and Conoco had 87-1/2 percent, if something was to be done, it's kind of standard operating procedure that Conoco

would have proposed the well.
When it became obvious that not only
were they not going to propose the well, but that

5 no other alternative than to file for this

6 compulsory pooling.

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Q. Did you make any inquiries prior to March 16 of 92 about having Conoco initiate at your request the drilling of this well?

they had no interest in drilling the well, we had

- A. No, sir.
- Q. Who is the interest owner from whom you obtained your lease?
- A. Our lessor is Marshall & Winston, Inc.

 It's an independent oil and gas company out of --
- Q. Marshall --
- 16 A. Marshal & Winston, Inc.
 - Q. Yes. I know the company. The proposal to Conoco on the 16th of March was one in which you asked them to participate in the well?
 - A. That is correct.
 - Q. Did you give them any other options or alternatives?
 - A. Yes, we did. We offered them the option, at the time we said we would even be willing to consider a farmout under the following

It was at that point that Conoco brought 1 to our attention that this was subject to a 2 lawsuit, the issue of which was a reversionary 3 interest that somebody was entitled to after payout of evidently a number of wells out there.

With that in mind, we became a little less inclined to take a farmout from Conoco. Inasmuch as we didn't know what the other court might hold someday, we didn't feel like we could roll the dice on a deal like that.

- Q. Have you submitted to Conoco a proposed joint operating agreement at this time?
- No, sir, I have not. I did not see any Α. They told me they had no interest for need to. doing that.
- Q. I'm interested in your assessment of the risk penalty.
 - Uh-huh. Α.

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- Tell me again the components by which you support your conclusion that 200 percent is reasonable.
- By and large, if this well is -- if this well is going to get drilled, we're the only guys that are going to drill it. Nobody else is going to drill it. In doing so, even that we

have 12-1/2 percent working interest, we're basically banking another 87.5 percent of the drilling costs, which is our well's AFE for half a million dollars.

If we should drill an uneconomic well or dry hole, that's it. We have put the money up for a very expensive dry hole. Conoco gets their acreage evaluated with no cost to them. If Yates should ultimately prevail, they get their acreage evaluated at no cost to them. I think we're providing a service to those folks as well as the state of New Mexico, hopefully to ourselves.

- Q. Are there any other reasons that you used to support that conclusion about the penalty factor?
- A. Again, I'm not a geologist. I do know enough about the oil business to know that there is a relative risk. We feel like we're certainly down-dip on the well. It could be that we could make a dry hole regardless of how much water we make.

And also the water is another concern.

If you get a high-volume water well, it's going to be difficult to dispose of that water in a timely and cost-effective manner.

In coming up to a conclusion about the 1 Q. 2 penalty factor --Α. Uh-huh. 3 -- what portion of that risk do you attribute to the risk you undertake in disposing 5 of produced water from the well? 6 Maybe a third. 7 What percentage of the risk do you 8 9 attribute to the geologic portion of the project? 10 I don't know. Something -- probably a Α. 11 third, I guess. 12 Q. Okay. Then the remaining third is the 13 risk you undertake in financing the deal when you have such a small percentage? 14 Yes, sir. 15 Α. 16 Would it make a difference to you if Q. Marshall & Winston would extend your lease for 17

- A. Not particularly. We have come in and we set up these things. We look at an annual budget. We have the dollars budgeted to drill this well, and we have certain moneys committed to drill this well. We have commitments to other folks as well. And I think we would still be
- 25 inclined to go ahead and drill the well before

you?

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the first of July. 1 Is this a financial arrangement where 2 Q. Southwest Royalties fronts the entire cost of the 3 well, or do you have investors that help you bear that risk? We would front the entire cost of this Α. well. MR. KELLAHIN: Thank you, Mr. 8 9 Examiner. 10 EXAMINER CATANACH: Any questions, Mr. 11 Carroll. MR. CARROLL: No, Mr. Examiner. 12 EXAMINATION 13 BY EXAMINER CATANACH: 14 15 Mr. Tate, the parties you're actually pooling in this application are Conoco and the 16 Nunes' interest? 17 Yes, sir, that would be true. 18 Α. Unfortunately, we cannot locate Ms. Nunes. 19 20 Q. Can you describe for me your efforts to do so? 21 It's my understanding that Mr. Carr 22 Α. 23 originally represented us in this pooling hearing 24 and Mr. Carr sent to her a notification of

pooling by certified mail, return receipt

requested, which was returned to his office by 1 the Postal Service.

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- Q. Do you know where Mr. Carr obtained the address?
- He got -- I believe he got the address Α. off of our takeoff, I think, Exhibit 2, which is my understanding that address for Ms. Nunes came out of the Eddy County Tax Assessor's Office.
- So there's not been any additional Q. efforts to track her down?
- Α. No, sir. In visiting with Conoco when we originally started talking about this deal, they told me -- they obviously were interested in buying other interests in there. They told me that they had bought the two gentlemen's interest, just not placed them of record, and that they had tried very hard to find Ms. Nunes.

As a matter of fact, they told me, "Good luck in trying to find her." Thev indicated to me they had spent a lot of time and effort trying to locate Ms. Nunes and were unable to do so.

- Mr. Tate, has Southwest drilled any Q. Pennsylvanian wells in this area?
 - Not to my knowledge. Α.

- 1 Q. Have you examined the drilling costs of any other operators in the area?
 - Α. Our company is structured, by and large, we acquire a lot of properties. Most of the properties we acquire, a large majority of them come from major oil companies. We are very familiar with those costs, both administration and drilling well rates. We consistently have -our AFEs for drilling the workovers consistently cheaper, light-years cheaper.

We know what the costs are to operate in there. We believe our administrative overhead is substantially less than most folks. We feel like we have a good handle on the costs for what other folks would charge in that area; we know we do.

EXAMINER CATANACH: I have nothing further of the witness. He may be excused.

MR. COOTER: May I ask just another question very briefly?

FURTHER EXAMINATION

BY MR. COOTER:

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In response to Mr. Kellahin's question about the factors that went into your recommendation for the risk penalty, I think you

1	named three of them. Has there been any really
2	division of you named three factors and then
3	indicated that maybe each one was a third to it.
4	Has that been done purposely to attach a third
5	factor to each one of those or just generalized
6	ballpark?
7	A. Just trying to answer Mr. Kellahin's
8	question.
9	MR. COOTER: Thank you.
10	EXAMINER CATANACH: The witness may be
11	excused.
1 2	MR. COOTER: Next we call Richard
13	Masterson.
14	RICHARD MASTERSON
15	Having been duly sworn upon his oath, was
16	examined and testified as follows:
17	EXAMINATION
18	BY MR. COOTER:
19	Q. State your name for the record, sir.
20	A. Richard Masterson.
21	Q. And by whom are you employed?
22	A. Southwest Royalties, Inc.
23	Q. And where do you work for the company?
24	A. Midland, Texas.
25	Q. What's your position with Southwest

_	ROYATCIES:
2	A. Vice President of Exploration and
3	Acquisitions.
4	Q. Relate briefly your educational
5	background and work experience.
6	A. I graduated from Trinity University in
7	1974 with a BA in geology. I went to work for
8	Texaco, Monsanto, and Grand Banks Energy. In
9	1986 I went to work for Southwest Royalties and
10	have been there since.
11	Q. What was your degree in at Trinity?
12	A. Geology.
13	Q. Have you practiced that profession?
14	A. Since 1974.
15	Q. Are you familiar with the application
16	filed by your company in this case?
17	A. Yes.
18	Q. And familiar with the area concerned in
19	southeastern New Mexico?
20	A. Yes.
21	MR. COOTER: We would tender Mr.
22	Masterson as an expert witness.
23	EXAMINER CATANACH: He is so qualified.
24	Q. (BY MR. COOTER) Let me direct your
25	attention, please, to Exhibit No. 5. Would you

identify that and explain it to the Examiner.

- A. This is a structural map based on -mapped on the top of the Upper Penn Reef
 carbonates mapping horizon. The yellow is our
 subject acreage; green dots, proposed location
 signified with the red arrow. The red dots are
 mainly control points to construct the map. And
 the green triangles are basically nearby water
 disposal wells that were shown in the January,
 Volume I, Conservation Committee's publication.
- Q. Where is the location of your proposed well on the structure?
- A. It's on the -- appears to be on the down-dip edge of the basically monoclinal dip down to the east.
- Q. Are you ready to go to the cross-section?
- A. The mapping horizon that this map is constructed on is signified by this correlation line.
 - Q. Now, we're looking at Exhibit 6?
- A. Here. The cross-section basically runs from northwest to southeast starting in the Yates No. 2 Roy AET, going through the No. 1 well on that lease through the Roger Hanks, Barbero

Federal No. 3, through the proposed location into the Roger Hanks Julie Com. lease.

The red coloration or perforated intervals in each well, scout card information is below each well. It's a structural cross-section hung on minus 4,000 feet below sea level. And vertical scale is 1 inch equals 40 feet; horizontal, 1 inch equals 200.

Basically this is used to just show the structural dip, its relationship between the other wells in the area. One of the things we were looking at and some of the questions asked Mr. Tate probably could be answered if they're re-asked to me in a little more concise form on the risk and the predictability of risk.

- Q. I wanted to ask you that next. You heard Mr. Tate's testimony. One factor for seeking the 200 percent risk factor was the location of this proposed well on the structure, is it not?
- A. That's correct. And the main predictability problem we have is in the amount of oil cut or water cut in each individual well.
 - Q. All right. Let's go to Exhibit No. 7.
- 25 A. 7.

Q. That's what you're referring to, are you not?

A. Right. Variations in water production are pretty hard to predict. A well that's slightly up-dip and on this cross-section, Yates No. 1 Roy, in January produced 2,000 barrels of water a day.

And this helps to show the risk in getting an economical well and predicting how much water will be moved, predicting what type of pumping mechanism will have to be used versus a beam pump, submersible pump, and the expenditures in each case. Water disposal was also a major concern to us.

- Q. Go a little further with what is shown on Exhibit No. 7, if you would, Mr. Masterson.
- A. Basically these are just numbers derived from the latest production book, the statistical information from the Conservation Committee's most recent production.
- Q. There are a couple of wells to the north in the south half-south half of Section 8. What are those figures?
- A. The No. 1 Roy is an older well that basically produces approximately 90 barrels of

oil per day and approximately 2,000 barrels of water a day with Mcf, you know, Mcf of gas per month.

- Q. That well, too, is a little higher on the structure than your proposed well, is it not?
- A. That's correct. Also there's new information on the 3 AJJ well just to the northeast of there in the northwest quarter of the southeast quarter of Section 8. It originally came in with a rather large water cut.
- Q. And that same finding is throughout the area as far as the amount of water?
- A. That's correct. Water varies throughout the field depending on the perforated interval and depending somewhat on structural situation. It's a combination of these two things.
- Q. Considering the location of the proposed well on the down-dip side of the formation and also the problems with reference to the water and water disposal, do you believe that there is a distinct possibility that the well which Southwest Royalties proposes drilled at the location contemplated would not be a commercial success?

- A. There's definitely that risk involved.

 That's one of the main reasons we're asking the penalty.
 - Q. Did you participate with Mr. Tate in the review of those problems and in formulating the recommendation that was made to the Examiner today?
 - A. Yes.

- Q. Anything else?
- A. One of the things -- AFE.
- Q. Yes. Okay.
- A. As far as water -- one of the questions that was asked: Was water disposal input in the initial AFE? No, it isn't. Probably a supplemental AFE would have to be issued to know how much flow line, how much work over an existing dry hole in the area, what would be the results, and then this would be based somewhat on the results of the well test and what we found in the wellbore. But research has been gathered in the area for water disposal.

Cost on the well, we'll bid out. We have not agreed to any bids at this point. And we do operate wells in Eddy County. We do not operate any in the North Dagger Draw. We do have

1	working interests. Our company buys many
2	nonoperated working interests. We have
3	nonoperated working interests in many wells in
4	Eddy and Lea Counties and many wells in this type
5	reservoir, and we do have a pretty good handle of
6	what normal operating expenditures are.
7	One problem in nailing this down
8	exactly is: What is the final result of water
9	disposal? What is the final result of type of
10	pumping mechanism? And where will the water go?
11	That's a very difficult number.
1 2	Q. That completes my oh, first, were
13	Exhibit Nos. 5, 6, and 7 either prepared by you
14	or under your direction and supervision?
15	A. Yes, sir.
16	MR. COOTER: We would tender Exhibits
17	5, 6, and 7 at this time.
18	EXAMINER CATANACH: Exhibits 5 through
19	7 will be admitted as evidence.
20	MR. COOTER: That concludes our direct
2 1	examination.
22	EXAMINER CATANACH: Mr. Kellahin.
23	MR. KELLAHIN: Thank you, Mr.
24	Examiner.
25	EXAMINATION

BY MR. KELLAHIN:

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- Q. Mr. Masterson, on your cross-section can you use one of those wells to identify for me what would be the top and the bottom of the North Dagger Draw Pennsylvanian Pool?
- A. Different wells have been perforated, not on this cross-section unfortunately, to the south in various different zones and intervals. But for the most part, in the local area of this wellbore, the upper section in between the first two correlative lines here on the cross-section in the upper part between the second and third is mainly tight and it's in a nonproductive. And there are localized instances where it develops.

We do not expect that to develop in this wellbore. It would be very hard to predict that it would, and it would be very risky.

- Q. What I'm looking at, the datum, minus 4,000 feet on the cross-section, where is that in relation to the top of the pool?
- A. Where is that in relation to the top of the pool? I'm not sure. It's within 100 feet general.
 - Q. In which direction?
- A. It's above 100 feet.

- Q. This datum point, minus 4,000 is approximately 100 feet?
- A. Above the top of the Upper Penn Reef.

 Above the main perforations it's several hundred feet.
- Q. Okay. When we look at the bottom section of the cross-section, how deep can we go in the Pennsylvanian Reef and still attain oil production in this pool?
- A. We're expecting in our wellbore to be able to go approximately 7900. We will base this on mud logging information, well log information, and if there is not lost circulation, there are a lot of other problems involved here. Basically on logs and any type offset, further offset production. Initially the well will be produced basically in this interval much like the offset wells where it's shaded red on the map.
- Q. The drilling plan is to take the well down to a total depth to penetrate at least the lowest horizontal?
 - A. Yes.

Q. Until it basically shales out. You can see it better on the first log here because they went deep enough and had enough rat hole when

they logged the well that you can see the base of the carbonate.

- Q. Have the operators that have drilled wells in the pool been able to affect the oil-water ratio by perforating in certain portions of the reef?
- A. They have -- with my limited knowledge of each individual wellbore and what they have done, especially in recent times on workovers, not all that information is available to me. They have improved in cutting down on some water production throughout the pool, yes. The answer to that is yes.

In the local area I have not seen that occur. In fact, all the recent wells on strike or even slightly up-dip in this local area have large water production. In fact, this field, as you know, was about to be abandoned by Conoco when it was revitalized because they did find that oil and other zones would be found in oil below existing water pays or wells that have gone to water. I know I'm not wording that properly. But basically they found new oil pays below existing water production.

Q. On your structure map, when you mapped

the top of the Upper Penn Reef --

A. Yes.

- Q. -- does that correspond on the cross-section to the line that you've identified as the top of the Upper Penn Reef?
 - A. Right.
 - Q. That's what you're mapping?
- A. Right. It is mainly -- the map is to show that it's mainly just slight dip, monoclinal dip, down-dip to the east. It's to show that there isn't -- it's not a structural closure, so to speak, in this localized area.
- Q. I believe I heard you to say under direct examination that structure did affect your decision in picking a location for the well.
- A. It's not a tectonic, I should say, type of trapping mechanism. In other words, there's not major faulting occurring here. There's not major folding occurring here. It's a build-up type, or sort of, to use the correct vocabulary.
 - Q. Structure taking part in --
 - A. Structure --
- Q. Let me ask you the question before you answer it. Does structure play a part in picking a location in the northeast quarter of the

section?

- A. Structural position is of some importance in picking the location. The wells to the north on strike have big water already up-dip, structurally up-dip. There's two things that go into picking location, known porosity development and structural position, okay.
- Q. Did you prepare an isopach to show me the porosity distribution?
- A. No. Isopach was not prepared to show porosity distribution. Isopach on the electric log calculations is even suspect. You're dealing with the type of porosity development that isn't always a quantitative cutoff that you can use. It's somewhat qualitative on electric log calculations. This is one reason why so much has been passed up in the area.
- Q. I'm trying to understand the geologic tools that you have selected upon which to base your location. And you have told me now you have not used an isopach methodology to help you define the porosity of the reservoir.
- A. This is one problem. Isopach methodology is not always the correct way to find the continuity of a reservoir. Sometimes direct

- correlation between logs can -- it can be discontinuous between wells.
 - Q. I didn't ask you why you didn't use it. You just didn't use it?
 - A. I didn't use it, and that's why, or the reason why.
 - Q. You've used a structure map, though?
 - A. Yes. I've used a structure map just to show basically our position on the down-dip edge of the field.
 - Q. When you look at the structure map, did you pick a location based on the structural relationship?
 - A. Not totally, no. Partially it is based on structural position, partially because we have two logs here, two known points where we would be in between that do have porosity development within the field and the formation, and this also helps to reduce risk.
 - Q. Can you define a water well contact?
- 21 A. No.

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- Q. Why did you choose to take your cross-section the way you did?
- A. Log availability. The wells -- many of the logs have not been released. I contacted the

Conservation Committee. Logs have not been 1 released or through PDI. That's one of the main 2 reasons, the newer wells. But these wells are 3 representative wells.

- What caused you not to pick a location 0. in the northeast -- I'm sorry, the northwest of the northeast? That would be an up-structure position.
- We possibly might change that bearing Α. the outcome of any information we find in the future. This is an ongoing area of development. The main risk difference is that it is not between two logs where I have control of porosity.
 - How are you going to change? Q.
- Structurally it will be slightly Α. It will have higher risk for porosity up-dip. development. That's my answer.
- 0. You running out of time on your base lease, Mr. Masterson?
 - That's right. Α.

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- What more information are you going to 0. get on which to decide what to do?
- A. Offset drilling to the north of us, if the logs are released and are available, we will 25

be able to input even more information into the
drilling of this location.

- Q. North of you then --
- A. Yates.
- O. -- in Section 8?
- A. Yes.

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- Q. There is what looks like a well location that's identified with a No. 4?
 - A. That's correct.
 - Q. Is that a drilling well?
 - A. That's a stake location. It may be drilling at this time, I don't know. They may have moved the rig out since the last PI report. The location to the north is a completion out of that vicinity.
 - Q. Is there a change in the oil-water ratio as you move structurally within the reservoir?
 - A. Basically the higher water initial -higher initial water-to-oil ratio or higher water
 percentage is in the down-dip wells. There are
 wells after time, especially depending on where
 you're looking in the lives of these wells, that
 make production structurally up-dip.

This is part of my point, and the

cross-section itself is the No. 1 well -- was completed a little earlier on the Roy lease than the No. 2. A lot of the wells come in making lower water percentage and over anywhere from a range of several months to several years go to large water cut.

- Q. Your proposed well location appears to be offset on three sides by dry well symbols.
 - A. Plug producers.

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- Q. Those are plug producers?
- A. Plug producers. They all complete. In fact, two of them are on this cross-section, and they show the producing intervals.
- Q. Have you examined the ultimate recovery of production from those wells to determine if they were economic successes?
- A. They vary. Of the three wells, the wells that were drilling in between were, I would think, economic successes at the time they were drilled. I don't know. I didn't calculate. But they would be economical successes to date. The well to the south would not.
 - Q. If you move up again?
- A. I can't remember the exact "cums," but
 I can find that out.

Q. If you move up again into the northwest of the northeast, there is a 40-acre tract within that area that appears not to have been exposed prior to depletion by produced wells.

- A. To some extent it would be -- it may be less depleted than this location.
 - Q. Wouldn't that reduce your risk?
- A. It's arguable that it might. It does increase the risk on the reservoir development. It reduces risk on drainage. It reduces slightly the risk on structural position.
- Q. In response to a question of Mr. Cooter you said that this represented a high-risk location for you.
- A. It's, okay, relatively high risk in that the water disposal problem, the water production problem, the unpredictability of initial water production and further water production down the line, yes. That's true for us.
- Q. On a scale of 1 to 100, what is the percentage of risk that you will get on a noncommercial well?
- A. I don't know if I can -- a noncommercial well?

- Q. I'm trying to have you focus for me as a layman to understand when you roll in all these technical things --
 - A. I understand what you're --

- Q. -- and reach a conclusion, if I'm the guy writing the check so that you do this deal --
 - A. What would I tell my boss?
 - Q. Yes. What would you tell him?
- A. All right. I'd tell him -- I would explain this in more than zero to 100 percent. Is that okay? Tell me if this is a good answer, and you can ask it again if it's not. To get a well that would pay out is -- depending on what happens while drilling.

After drilling getting a well that will pay out barring no mechanical problems, you would probably have a fifty-fifty chance to get a well that would be future revenues to cost of two-to-one, your risk goes up quite a bit, and you have probably a third of a chance to do this at the situation it is now.

The risks increase as you predict rate of return. As you approach different "cums," oil cumulative production. Is that --

MR. KELLAHIN: Yes, sir. That helps me

1	understand.
2	Thank you, Mr. Examiner.
3	THE WITNESS: I can't do much better
4	than that.
5	EXAMINER CATANACH: Anything, Mr.
6	Carroll?
7	MR. CARROLL: No, Mr. Examiner.
8	EXAMINER CATANACH: Okay. I don't have
9	any questions of the witness. You may be excused
10	unless you have anything further.
11	MR. COOTER: No, sir. That concludes
1 2	our presentation.
13	EXAMINER CATANACH: Okay. Is there
14	anything further in this case?
1 5	MR. KELLAHIN: No, sir.
16	EXAMINER CATANACH: There being nothing
17	further, Case 10471 will be taken under
18	advisement.
19	[And the proceedings were concluded.]
20	
2 1	
2 2	I do hereby certify that the foregoing is
2 3	a complete record of the proceedings in the Examiner hearing of Case No. 10471
2 4	heard by me on April 30 1973.
2 5	David R Catant, Examiner
	Oil Conservation Division

CERTIFICATE OF REPORTER 1 2 STATE OF NEW MEXICO 3 SS. COUNTY OF SANTA FE I, Debbie Vestal, Certified Shorthand 6 Reporter and Notary Public, HEREBY CERTIFY that 7 the foregoing transcript of proceedings before 8 the Oil Conservation Division was reported by me; 10 that I caused my notes to be transcribed under my 11 personal supervision; and that the foregoing is a true and accurate record of the proceedings. 12 I FURTHER CERTIFY that I am not a 13 relative or employee of any of the parties or 14 attorneys involved in this matter and that I have 15 16 no personal interest in the final disposition of 17 this matter. 18 WITNESS MY HAND AND SEAL May 6, 1992. 19 20 21 22 VESTAL, DEBBIE

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