# STATE OF NEW MEXICO 1 2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION 3 IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION 5 DIVISION FOR THE PURPOSE OF CONSIDERING: **CASE NO. 10718** 6 7 APPLICATION OF S & J OPERATING COMPANY 8 REPORTER'S TRANSCRIPT OF PROCEEDINGS 9 **EXAMINER HEARING** 10 BEFORE: Michael E. Stogner, Hearing Examiner 11 April 22, 1993 12 Santa Fe, New Mexico 13 14 15 This matter came on for hearing before the 16 Oil Conservation Division on April 22, 1993, at the Oil Conservation Division Conference Room, State Land 17 Office Building, 310 Old Santa Fe Trail, Santa Fe, New 18 Mexico, before Deborah O'Bine, RPR, Certified Court 19 20 Reporter No. 63, for the State of New Mexico. 21 22 23 24 OIL CONSERVATION DIVISION

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1			1	A P	P E A R A N C E S
2	FOR	THE	DIVISION:		ROBERT G. STOVALL, ESQ. General Counsel
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8					Santa Fe, New Mexico 87504 BY: JAMES BRUCE, ESQ.
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EXAMINER STOGNER: Hearing will come to order. Call next case, No. 10718.

MR. STOVALL: Application of S & J
Operating Company for an unorthodox oil well location,
Chaves County, New Mexico.

EXAMINER STOGNER: Call for appearances.

MR. BRUCE: Mr. Examiner, Jim Bruce from the Hinkle law firm in Santa Fe representing the applicant. I have two witnesses to be sworn.

EXAMINER STOGNER: Are there any other appearances? Will the witnesses please stand and be sworn at this time.

(Witnesses sworn.)

FRANKLIN X. RATLIFF,

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

#### EXAMINATION

18 BY MR. BRUCE:

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- Q. Would you please state your name and city of residence for the record.
- A. My name is Franklin X. Ratliff, and I live in Lubbock, Texas.
  - Q. And who do you work for?
- A. I am Vice President and Land Manager of DDD Exploration, Inc.

- Q. And what is the relationship of DDD to the applicant in this case?
  - A. We are consultants for them.
- Q. Have you previously testified before the Division?
  - A. No, I have not.

- Q. Would you please outline your educational and employment background.
- A. I got my B.B.A. in Accounting from the University of Texas in 1985. I subsequently worked as a public accountant. Then I went to law school at the Texas Tech University School of Law in 1986 and obtained my law degree in 1989.

I worked for the law firm of McCleskey,
Harriger, Brazill & Graf in Lubbock, Texas, and I am
currently of counsel with them, but currently I have
started my own business with my brother, DDD
Exploration, Inc.

- Q. And are you familiar with the land matters involved in this application?
  - A. Yes, I'm familiar.
- Q. Could you kind of discuss what you've done in this?
- A. Okay. I've researched all the land. We actually put this deal together for the operator, and

I'm familiar with the land, and helped them obtain leases and extensions on leases in pertinent acreage.

- Q. With respect to, say, mineral ownership, did you research the county records to make a determination with respect to that?
  - A. Yes, I did.

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MR. BRUCE: Mr. Examiner, I would tender Mr. Ratliff as a petroleum landman.

EXAMINER STOGNER: Mr. Ratliff is so qualified.

- Q. (BY MR. BRUCE) Mr. Ratliff, the location sought is quite unorthodox for this well, isn't it?
  - A. Correct.
- Q. So I'd like you to testify a little bit about lack of effect or adverse effect on anybody else's correlative rights. If you would refer to Exhibit 1, could you discuss what that exhibit shows?
- A. Okay. Exhibit 1 in the blue crosshatched shows 960 acres. That 960 acres has the exact same working interest owners. The 40-acre tract where the unit is -- proposed unit is --
  - Q. Marked in red?
- A. -- marked in red, crosshatched, has the exact same working interest owners.
- Q. So the well units to be operated by S & J,

  S & J and its partners offset all well units

surrounding the proposed location, do they not?

A. Yes, they do.

- Q. And, therefore, in your opinion, would any working interest owners' correlative rights be affected by drilling this well at this location?
- A. In my opinion, there would be no adverse effect to the working interest owners by drilling a well in this unorthodox location.
  - Q. Because of the uniform ownership?
  - A. Yes, because of the uniform ownership.
- Q. Moving on to the royalty interests, could you discuss that? And I refer you to Exhibit 2.
- A. Okay. With regard to the 960 acres crosshatched in blue, there is a uniform royalty interest at 25 percent. The remaining 75 percent became uniform when this royalty pooling agreement set out in Exhibit 2 was executed by all of the royalty owners that weren't uniform.
- Q. So just like the working interest, the royalty interest ownership is uniform throughout this blue-shaded area?
  - A. Yes, it is.
- Q. And, therefore, again would there be -would the rights of the royalty owners in the
  offsetting tract be adversely affected by the

unorthodox location?

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- A. No, they would not be.
- Q. And were Exhibits 1 and 2 compiled from company records?
- A. Yes, they were -- well, with the exception of Exhibit 2 was actually prepared by the royalty interest owners.
- Q. It was prepared by them, but this is part of your company records?
- 10 A. Right, right.
- Q. And, in your opinion, is the granting of this application in the interest of conservation and the prevention of waste?
- A. Yes, it is.
- MR. BRUCE: Mr. Examiner, I'd move the admission of Exhibits 1 and 2.
- EXAMINER STOGNER: Exhibits 1 and 2 will be admitted into evidence at this time.
- MR. BRUCE: I have no further questions of this witness.
- MR. STOVALL: I do.
- EXAMINER STOGNER: Mr. Stovall?
- 23 EXAMINATION
- 24 BY MR. STOVALL:
- Q. It's very possible I'm reading things

wrong, but Tract No. 1, the east half of Section 29, 1 that would appear to me to be the portion of 29 that 2 is not crosshatched? 3 Mr. Bruce, you're raising your hand. 4 MR. BRUCE: Yeah, it does cover a larger 5 area, but also on page 2 of that Exhibit 2 --6 7 MR. STOVALL: Oh, I'm sorry. Good, thank 8 you very much. I knew I was missing something. flipped the page and didn't see it. 9 MR. BRUCE: I did the same thing, Mr. 10 Stovall. 11 MR. STOVALL: Oh, thank you very much. 12 me just run through it real quick then. I feel much 13 better. I knew you hadn't done that to me, but I 14 15 couldn't figure out why I couldn't see it. much better. Yes, that does more consistent --16 17 MR. BRUCE: For historical purposes, the ownership of the 75 percent of the minerals here is in 18 19 a checkerboard pattern, which is why they entered into this agreement. 20 21 THE WITNESS: And for purposes of these

four sections, that 75 percent interest executed this

royalty pooling agreement so they have a uniform

interest throughout the tract. The remaining 25

percent interest was always uniform.

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MR. STOVALL: I just missed that
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    description. After I saw a narrative again, I didn't
    look real carefully. So the question I didn't finish
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    asking won't be asked.
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               EXAMINER STOGNER:
                                  There is no overriding
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    royalty interest of any kind?
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               THE WITNESS: Well, not at this time.
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    Actually, our company will receive a 2 percent
 9
    overriding royalty interest upon -- you know, assuming
    that the well gets drilled.
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               MR. STOVALL: But it will be uniform?
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               THE WITNESS: Yeah, it will be uniform.
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               MR. STOVALL: You're not too worried about
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    your correlative rights?
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               THE WITNESS:
                             No.
               EXAMINER STOGNER: Any other questions of
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   Mr. Ratliff?
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               MR. STOVALL: This is, in effect, really a
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    unit without unitization, isn't it?
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               THE WITNESS: That's right.
               MR. STOVALL: It's not leaseholding, but it
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    shares an interest in it?
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               THE WITNESS:
                             Right.
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               EXAMINER STOGNER: And I'm assuming this --
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   what did you call it?
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SANTA FE, NEW MEXICO 87504-9262
(505) 984-2244

MR. STOVALL: A unit without unitization.

Let me ask you a question, actually. Is that a single lease by which that working interest was acquired, or is that multiple leases?

THE WITNESS: There's multiple leases.

EXAMINER STOGNER: But this was -- I was trying to come up with the right wording of why it was formed. Was it formed because of the geology, what you're going to be presenting today or which your company is going to be presenting today?

THE WITNESS: You're talking about the royalty pooling agreement?

EXAMINER STOGNER: Essentially, yes.

THE WITNESS: As I said, 25 percent -- this is part of the large ranch, 25 percent of the minerals are uniform throughout. The remaining 75 percent are in checkerboard half-sections. We propose to shoot seismic out here on these four sections, and the royalty owners decided that they wanted to enter into a royalty pooling agreement because they didn't want to be left out, assuming that the well got on one-half sections. They just wanted basically to minimize their risk by forming a royalty pooling agreement so wherever the wells turned out, they would be able to participate to some extent.

EXAMINER STOGNER: What got the whole thing 1 2 started, prior to the seismic, they were going to run seismic out there, and this was formulated for that, 3 or was it after review of the seismic? 4 THE WITNESS: It was prior. 5 There was some existing 2-D seismic out there. This was prior to the 6 running of 3-D seismic. 7 MR. STOVALL: This is as much curiosity as 8 Is the 75 percent checkerboard interest 9 anything. derived from the same original source as -- was it 10 like a family deal where they kind of --11 THE WITNESS: Yeah. What happened was when 12 the original owner of the ranch, he sold 25 percent 13 about 1950, and then he sold the ranch and half of the 14 remaining minerals, but instead of having an undivided 15 interest, they sold it in -- the minerals were in a 16 checkerboard. 17 MR. STOVALL: You kept all of some and none 18 of the others? 19 20 THE WITNESS: Yeah, all of some and none of 21 the others. 22 MR. STOVALL: And so the subsequent owners turned around and said that kind of puts us at the 23 24 luck of the draw, huh? 25 THE WITNESS: Right. They didn't desire

the luck of the draw. All parties did not desire the 1 luck of the draw in this situation. 2 MR. STOVALL: S & J is the owner of all of 3 the working interest mineral leases; is that correct? 4 THE WITNESS: Them and their partners. 5 MR. STOVALL: Okay. All right. I don't 6 7 have any others. 8 EXAMINER STOGNER: Anything else? MR. BRUCE: No, sir. 9 EXAMINER STOGNER: He may be excused. 10 11 MR. BRUCE: Call Thomas Ratliff to the stand. 12 13 THOMAS RATLIFF, the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows: 15 **EXAMINATION** 16 BY MR. BRUCE: 17 Would you please state your name and city 18 Q. of residence for the record. 19 20 Α. My name is Thomas Ratliff, and I live in 21 Lubbock, Texas. 22 Q. And what is your occupation? I'm a geophysicist, and I'm also President 23

Have you previously testified before the

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of DDD Exploration.

Q.

Division as a geologist or a geophysicist?

A. No.

- Q. Would you please outline your educational and employment background?
- A. I received a bachelor's degree in geophysics from Texas A & M in 1984. From 1984 to 1986, I worked as a geophysicist for Plains Radial Petroleum. In 1986, I returned to Texas A&M, received a master's degree in geophysics in 1988. In 1988, I worked for Mobil out of Midland. And in late 1991, I left Mobil, and me and Frank started DDD Exploration.
- Q. And are you familiar with the geology involved in this prospect?
- 14 A. Yes.
  - Q. And in fact, were you and your company involved in putting this prospect together?
  - A. Yes. Our company took the existing well control and the existing 2-D seismic, put together this prospect, sold this prospect as a 3-D deal to the operators that now own it. And we subsequently shot a 3-D survey, and this is what the 3-D survey showed.
  - Q. Have you prepared what's marked Exhibit 3 for submission for the Division?
    - A. Yes, I have.
      - MR. BRUCE: Mr. Examiner, I tender Mr.

Thomas Ratliff as an expert -- I don't know if we should qualify him as geologist or a geophysicist. MR. STOVALL: I think the crossover is pretty narrow. But I have a question first. MR. BRUCE: Sure. MR. STOVALL: Your brother referred to this as DDD, you're calling it 3D, and we're talking about 3-D seismic. Is it named after the seismic? We're into company names this week. THE WITNESS: The company name, it's spelled DDD Exploration. We often refer to it ourselves as 3D or DDD. It was named -- we set up as -- I've been dealing with 3-D seismic since 1986. We set up our company basically based on 3-D seismic exploration.

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MR. STOVALL: That answers that question, doesn't it?

EXAMINER STOGNER: Am I going to need some special glasses for that?

MR. BRUCE: We've got those coming up next as our Exhibit 4.

EXAMINER STOGNER: Mr. Thomas Ratliff is so qualified, Mr. Bruce.

Q. (BY MR. BRUCE) Mr. Ratliff, the examiner has been given Exhibit 3, which is a portion of what's

on the wall. And if you would feel more comfortable sitting or standing, would you discuss what has been done to determine the optimum location for the proposed well.

A. What we essentially did was we shot a 3-D seismic survey over the area that you see mapped here on the section lines. The seismic of the 3-D survey was 82.5 feet; so we feel like we have accuracy up to 82.5 feet.

This is a map of the top of the Mississippian, which lies directly over the top of the Fusselman. The Fusselman is our target zone. What we have here is we have a faulted anticline, rollover anticline on the east side of the fault. And our goal is to, as economically as possible, produce this field. And we feel to do that, we need to drill at the crest of the anticline as high on the anticline or on the top of the Fusselman as we can. And that is where the proposed well location lies.

- Q. And you are trying as a matter of safety --
- A. Yes, we tried to --
- Q. -- to remain away from the fault?
- A. To remain 250 to 300 feet to the east side of the fault as a precautionary measure to alleviate any possibility of getting on the wrong side of the

fault.

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- Q. If this initial well is successful, what would you anticipate as far as further development?
- A. I would anticipate another location to the south, and I will point out on this map -- I would anticipate another location right here.
  - Q. Which section are you pointing to?
- A. Which would be in Section 30 or in Section 31.

EXAMINER STOGNER: Tell you what, when you say "right here," how far south of the intersection of that box in that map of Exhibit No. 3 --

THE WITNESS: It's approximately, off the top of my head, 400 feet to the south, but about 200 feet to the west of the section line.

- Q. (BY MR. BRUCE) Was Exhibit 3 prepared by you or under your direction?
  - A. It was prepared under my direction.
- Q. And, in your opinion, is the granting of this application in the interest of conservation, the prevention of waste, and the protection of correlative rights?
  - A. Yes, it is.
- MR. BRUCE: Mr. Examiner, I move the admission of S & J Exhibit No. 3.

MR. STOVALL: Mr. Bruce, Exhibit No. 3 is 1 only the one piece that we've been handed and not that 2 total exhibit that's on the wall; is that correct? 3 MR. BRUCE: That's correct. 4 EXAMINER STOGNER: Do you have another 5 6 witness today? MR. BRUCE: I have no other witnesses. 7 It's your intent that you're MR. STOVALL: 8 not submitting the 3-D cross-section and the 3-D 9 structure part of the exhibit on the wall? 10 THE WITNESS: Yes. 11 MR. STOVALL: Is it your intent --12 MR. BRUCE: We could xerox that for you if 13 you desire. This was a rather costly exhibit to make 14 15 up. 16 MR. STOVALL: I quess it's not part of the 17 record, but let me ask you some questions on the development of that, if you don't mind, Mr. Bruce. 18 THE WITNESS: 19 Sure. 20 **EXAMINATION** BY MR. STOVALL: 21 22 Q. It appears that what is on the wall 23 incorporates this two-dimensional drawing which is marked as Exhibit 3. Above that was sort of an area 24 25 locator, I assume. Am I correct in interpreting that

what is to the left of that on the exhibit that's on the wall and which is not being submitted is a three-dimensional depiction of this same structure that is mapped; is that correct?

A. You are correct.

- Q. And to the right is a cross-section which supports your interpretation?
- A. To the right are five seismic sections extracted from the 3-D survey. If you'll look, those cross-sections are depicted on the structure map.
- Q. So those are -- it is on the basis of that other information that you come up with a structure map that is Exhibit 3; is that correct?
- A. The structure map, I came up with the structure map on the basis of the entire 3-D survey. We put this montage together initially when we tried to sell the deal, and these are just five cross-sections extracted just so people could get an idea of what the structure looked like in a cross-sectional view via the 3-D seismic.
- Q. So the five cross-sections that you've referred to, that's really the original data that you have evaluated? That is actually the seismic itself?
- A. That is part of the 3-D seismic survey itself, it sure is.

- Q. So Exhibit 3 and then the three-dimensional colorful display on the left of the big thing is really putting that together and kind of making a picture of it; is that correct?
  - A. That's right, a more conceptual view.
- Q. Just so we understand the basis of how you created this information. And so really what it amounts to is Exhibit 3 represents your opinion of the structure based upon this information. And this is your final conclusion as to how that structure looks?
  - A. That is correct.
    - MR. STOVALL: I'm through.

### **EXAMINATION**

#### BY EXAMINER STOGNER:

- Q. Exhibit No. 3, when I look at the center of the map, I see a dot, and it's represented underneath, as negative 30-217. What does that dot depict?
- A. That is a well that was drilled,
  preexisting Fusselman test. That was drilled in early
  January of 1990.
  - Q. Is that a producing well, or is it plugged and abandoned?
  - A. It has not been producing for a year and a half, and, to my knowledge, it is plugged and abandoned.

- Q. Were you able to obtain any information on that well to help substantiate your mapping?
  - A. Yes.

- Q. And what did you review?
- A. Well, this is where the well projects into the seismic. We feel that we can get 100 to 80 feet high to that particular well. This well came in for 50 barrels of oil and quite a bit of water. We feel like it was close to the old water contact. Our objective is to get height of the well and to drain the structure that we feel is filled with oil, everything updip to the well.
- Q. When I look at this map, is it a different shading depicting the oil:water mark?
- A. What the different shading depicts in yellow is everything that is structurally even.

MR. STOVALL: Let's use Exhibit 3 here because Exhibit 3 does not have the colors.

THE WITNESS: Okay. In white is everything that is either even to the well that was drilled in 1990 or updip to the well that was drilled in 1990. We feel that everything in yellow is filled with oil, everything in white is filled with oil, and in that dark color, that is where the actual spill point occurs in the 3-D perspective. If we had an oil

column that was thick enough, potentially all that could be filled with hydrocarbons, although this well seems to show that we are starting to get into water.

- Q. (BY EXAMINER STOGNER) Does there appear to be any gas association with this production that you are aware of?
- A. There is some gas association, but the GOR's are extremely low.
- Q. What do you surmise as being the reservoir energy in this area?
  - A. A water-drive.
- Q. Is your company anticipating putting the proposed well on pump if it's allowed to be drilled?
  - A. Yes.

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- Q. Any kind of stimulation will be necessary?
- A. I'm not really qualified to say. I'm not the engineer on this project.
- Q. Give me a little elementary -- let's go back to elementary portions here of this particular reservoir. It's an anticline on the -- it's on this fault line; right?
- A. Right, on the east side of the fault. And that fault happens to be about 400 feet, 400-foot fault.
  - Q. How about the matrix of the reservoir

itself?

A. The reservoir is a carbonate. It's a limestone up on structures, in analogous fields, and the Fusselman in general on structures, we feel we have additional fracture porosity as well as vugular porosity.

## FURTHER EXAMINATION

### BY MR. STOVALL:

- Q. While the examiner is looking at that, your well is proposed to be in Section 29; is that correct?
  - A. That is correct.
- Q. On Exhibit 3, it almost looks like a square is pretty much on the left side of -- actually over into Section 30, but that's --
- A. This exhibit was made using the 3-D seismic. What we did was, we actually went out to the location, and we surveyed in the trace extracted from the seismic that we want to drill the well on. And when we went out to the field and surveyed again, it just happened to be 15 feet from the west side of the lease line. But it's just the -- there's about a 50-foot inaccuracy of this particular map of what's actually there on the ground. That is the reason for that slight discrepancy.
  - Q. Is there good correlation between that well

that you've referred to in 29 and the seismic as far 1 as tops that are structure? 2 Α. Yes, there is. 3 FURTHER EXAMINATION 4 5 BY EXAMINER STOGNER: When were the seismic lines run? 6 0. 7 The 2-D seismic lines were run in 1989 Α. 8 subsequent to the first well that was drilled. This 3-D survey was run in July of 1992. 9 EXAMINER STOGNER: Any other questions of 10 11 this witness? He may be excused. Mr. Bruce, do you have anything further? 12 13 MR. BRUCE: No, sir. EXAMINER STOGNER: Anybody else have 14 anything further in case No. 10718? 15 This case will be taken under advisement. 16 17 18 19 I do hereby certify that the foregoing is a complete report of the proceedings to 20 the Examiner hearing neerd by me on 22 21 Examiner 22 Oil Conservation Division 23 24 25

1	CERTIFICATE OF REPORTER
2	
3	STATE OF NEW MEXICO )
4	) ss.
5	COUNTY OF SANTA FE )
6	I, Deborah O'Bine, Certified Shorthand
7	Reporter and Notary Public, HEREBY CERTIFY that I
8	caused my notes to be transcribed under my personal
9	supervision, and that the foregoing transcript is a
10	true and accurate record of the proceedings of said
11	hearing.
12	I FURTHER CERTIFY that I am not a relative
13	or employee of any of the parties or attorneys
14	involved in this matter and that I have no personal
15	interest in the final disposition of this matter.
16	WITNESS MY HAND AND SEAL, May 5, 1993.
17	Deborak O'Bure
18	DEBORAH O'BINE
19	CCR No. 63
2 0	
21	OFFICIAL SEAL
2 2	DEBORAH O'BINE
23	NOTARY PUBLIC - STATE OF NEW MEXICO
24	My Commission Expires Dept. 19, 1994

24