STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 12,893

)

APPLICATION OF EOG RESOURCES, INC., FOR COMPULSORY POOLING IN EDDY COUNTY, NEW MEXICO

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID K. BROOKS, Hearing Examiner

July 11th, 2002

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID K. BROOKS, Hearing Examiner, on Thursday, July 11th, 2002, at the Aztec City Council Chamber, Aztec City Hall, 201 West Chaco, Aztec, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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July 11th, 2002 Examiner Hearing CASE NO. 12,893

APPEARANCES

APPLICANT'S WITNESSES:

RICHARD L. LANNING (Landman)

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RANDALL S. CATE (Geologist) (Engineer)

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* * *

EXHIBITS

Applicant's	Identified	Admitted
Exhibit : Exhibit : Exhibit :	2 7	11 11 11
Exhibit (Exhibit (Exhibit (5 10	11 11 19
Exhibit '	7 16	19

* * *

APPEARANCES

FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR 110 N. Guadalupe, Suite 1 P.O. Box 2208 Santa Fe, New Mexico 87504-2208 By: WILLIAM F. CARR

ALSO PRESENT:

MICHAEL E. STOGNER Hearing Examiner New Mexico Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, NM 87501

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WHEREUPON, the following proceedings were had at
1
 2
     8:21 a.m.:
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 4
               EXAMINER STOGNER: Well, with that, let's call
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     Case Number 12,893, which is the Application of EOG
 6
     Resources, Inc., for compulsory pooling in Eddy County, New
 7
     Mexico.
 8
 9
               Call for appearances.
10
               MR. CARR:
                         May it please the Examiner, my name is
     William F. Carr with the Santa Fe office of Holland and
11
     Hart, L.L.P.
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13
               We represent EOG Resources in this matter, and I
14
     have two witnesses.
15
               MR. BROOKS: Okay. Well, since that's a CP I
     guess I'll be the Examiner on that.
16
               12,893, thank you.
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               Would your witnesses please stand and identify
18
     yourselves for the record?
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20
               MR. LANNING: Richard Lanning.
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               MR. CATE: Randy Cate.
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               (Thereupon, the witnesses were sworn.)
23
               MR. CARR: May it please the Examiner, at this
24
     time we call Richard Lanning.
25
               MR. BROOKS:
                            Take the witness stand, please.
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1		RICHARD L. LANNING,
2	the witne	ess herein, after having been first duly sworn upon
3	his oath	, was examined and testified as follows:
4		DIRECT EXAMINATION
5	BY MR. CA	ARR:
6	Q.	Would you state your name for the record, please?
7	Α.	Richard Lee Lanning.
8	Q.	Mr. Lanning, where do you reside?
9	Α.	Midland, Texas.
10	Q.	By whom are you employed?
11	Α.	EOG Resources.
12	Q.	And what is your position with EOG Resources?
13	Α.	I'm a landman.
14	Q.	Have you previously testified before the New
15	Mexico Oil Conservation Division?	
16	Α.	No, sir, I haven't.
17	Q.	Would you briefly review for the Examiner your
18	education	nal background?
19	Α.	I received a bachelor's degree in economics from
20	New Mexic	co State University in 1972.
21	Q.	And receiving your degree, for whom have you
22	worked?	
23	Α.	I've worked for Texaco, for Champlain Petroleum
24	Company,	for Clayton Williams and for EOG Resources.
25	Q.	And at all times have you been employed as a

petroleum landman? 1 Yes, sir. 2 Α. 3 0. Are you familiar with the Application filed in this case? 4 5 Α. Yes, sir. Are you familiar with the status of the lands in 0. the area which is the subject of this Application? 7 Yes, sir, I am. Α. 9 MR. CARR: We tender Mr. Lanning as an expert in 10 petroleum land matters. 11 MR. BROOKS: So qualified. 12 Q. (By Mr. Carr) Would you summarize for Mr. Brooks what it is that EOG seeks with this Application? 13 We seek an order pooling the minerals from the 14 15 surface to the base of the Morrow in the south half of Section 23, Township 19 South, 27 East, in order that we 16 17 can drill our Gordon "23" State Com Number 1 well at a location 997 from the south and 1455 from the west of 18 Section 23. 19 20 Let's go to what has been marked for 21 identification as EOG Exhibit 1. Would you identify that 22 and review it for Mr. Brooks? The south half of Section 23 is outlined there in 23 Α. 24 the pink outline. The well location is spotted there, as

you can see, in the southeast quarter of the southwest

quarter. The yellow indicates acreage that we currently control, EOG and its partners.

- Q. And the Devon interest is the interest that we're pooling today?
 - A. Yes, sir, that's right.

- Q. What is the primary objective in the proposed well?
 - A. Morrow, and the Angell Ranch Morrow field.
- Q. Is Devon the only interest owner in the south half of this section who has not committed its interest to this well?
 - A. Yes, sir, they are.
- Q. Would you refer to EOG Exhibit Number 2 and review for Mr. Brooks your efforts to reach a voluntary agreement with Devon for the commitment of their interest to this spacing unit?
- A. Exhibit 2 contains our letter dated May 16th to Devon in which we propose the well, we state the location, we state their interest, we enclosed an AFE for their review and we requested that they either participate in the well or grant us a term assignment or reasonable farmout covering their interest.
- Q. And what conversations have you had with Devon since you sent this letter to them?
 - A. The last page of this exhibit is a log of my

8 phone calls with Devon. 1 You've been talking with Ken Gray? 2 Yes, sir. Ken Gray is the landman for Devon that 3 Α. handles this area. When was your most recent contact with Mr. Gray? 5 Q. On July the 8th. 6 Α. And what was the nature of that conversation? 7 0. I was hoping that -- not that I didn't want to 8 Α. come up here and see you all -- we were hoping that we 9 could make a deal. 10 11 0. What was your most recent conversation with Mr. 12 Gray? 13 Α. On July the 8th we tried to make a last-minute deal with Devon so that we could avoid this hearing. 14 15 Q. And what did he tell you? He indicated once again, as he had in the past, 16 17 that this was not a high-priority item with Devon, and that 18 until they were forced to make a decision that it probably would not be brought forward. 19 And he understood you were going forward with the 20 0. pooling hearing today? 21

A. Yes, sir, and he had no objection.

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- Q. What percentage of the working interest in this spacing unit is voluntarily committed to the well?
 - A. The balance of the working interest amounts to

.875522.

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- Q. So we have everything but that one 40-acre tract?
- A. Devon controls about a 99- -- a little over 99-percent interest in that tract. There is one small interest owner in that tract that we have committed.
- Q. Okay, let's go to Exhibit Number 3, the AFE.

 This is the AFE that you provided to Devon?
 - A. Yes, sir, it is.
- Q. Would you review the costs as set forth on this exhibit?
- A. The dryhole costs for the well are estimated to be \$506,000, additional \$639,600 for completion, and the total estimated well cost would be \$1.145 million.
 - Q. Has EOG drilled other Morrow wells in the area?
- A. Yes, sir, we have.
- Q. And are these costs consistent with the costs actually incurred in drilling these other wells?
- 18 A. Yes, sir, they are.
 - Q. Have you made an estimate of the overhead and administrative costs to be incurred while drilling the well and also while producing it if it is successful?
 - A. Yes, sir.
 - Q. And what are those?
- A. \$5000 for the drilling well rates and \$500 for a producing well.

How do these figures compare with the most recent 1 Q. Ernst and Young cost estimates for wells in this area? 2 3 Α. They're below Ernst and Young estimates. And these costs are in line, I would assume, with 4 Ο. what's charged by other operators in this area? 5 6 Α. In line if not a little bit below. 7 Q. Do you recommend that these figures be incorporated into the order which results from today's 8 hearing? 9 Yes, sir. 10 Α. Is EOG Exhibit Number 4 the accounting procedures 11 Q. from the operating agreement for this well? 12 13 Α. Yes, sir, it is. 14 And do these provisions provide for the Q. escalation or adjustment of well costs in accordance with 15 16 COPAS procedures? 17 Yes, sir, they do. Α. 18 Q. Do you recommend that the rates established by the order that is entered in this case also provide for 19 20 adjustment in accordance with the COPAS provisions? Yes, sir. 21 Α. 22 Q. Is Exhibit Number 5 an affidavit confirming that 23 notice of this Application and hearing have been provided to Devon in accordance with the Rules of the Oil 24 25 Conservation Division?

Yes, sir, it is. 1 Α. Were Exhibits 1 through 5 prepared by you or 2 0. compiled under your direction? 3 Yes, sir, they were. 4 Α. 5 Can you testify as to their accuracy? Q. 6 Α. Yes, sir. 7 MR. CARR: We'd move the admission into evidence of EOG Exhibits 1 through 5. 8 Exhibits 1 through 5 are admitted. 9 MR. BROOKS: 10 MR. CARR: That concludes my examination of Mr. 11 Lanning. 12 MR. BROOKS: Very good. Well, the witness speaks 13 rather rapidly, so I may need to ask him to repeat a couple 14 of things he's already said. Let me read it back to you 15 and see for sure if I've gotten this data right. 16 EXAMINATION BY EXAMINER BROOKS: 17 18 Q. This is the south half of Section 23, Township 19 South, Range 27 East, Eddy County, New Mexico --19 20 Α. Yes, sir. 21 -- correct? The name of the well is the Gordon Q. "23" State Com Number 1? 22 23 Yes, sir. Α. 24 The field is the Angell Ranch-Morrow Pool? Q.

I think it's -- It may be Morrow/Atoka.

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Α.

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it includes both now. But it's the Angell Ranch Pool.
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               EXAMINER BROOKS: Do you know the exact field
 3
     name, Mr. Carr?
               MR. CARR: It is the Angell -- It's in the
 4
 5
     Undesignated Angell, A-n-g-e-l-l, Ranch-Atoka-Morrow Gas
     Pool.
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 7
               EXAMINER BROOKS: Well, I'm glad you told me that
 8
     they spell Angell A-n-g-e-l-1, because I would never have
 9
     quessed that.
                    That's the Undesignated Angell Ranch-Atoka-
10
     Morrow?
               MR. CARR: Yes, sir.
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12
          Ο.
               (By Examiner Brooks) Okay, are there any other
13
     -- are you seeking pooling as to any -- Well, first of all,
     this is 320-acre spacing?
14
               Yes, sir.
15
          Α.
16
               Are you seeking pooling as to any formations
          Q.
17
     spaced other than 320 acres?
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               MR. CARR: Are there secondary objectives in the
19
     well?
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               THE WITNESS: We haven't identified any secondary
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     objectives, I don't believe.
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               MR. CARR: I don't believe so.
23
               THE WITNESS: I'd rather Mr. Cate testify to
     that.
24
25
          Q.
               (By Examiner Brooks)
                                     Okay.
                                            Let's see, is there
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1	anything else I need to clarify?
2	And EOG Resources, Inc., is to be the operator of
3	this well; is that correct?
4	A. Yes, sir.
5	EXAMINER BROOKS: I believe that's all I need to
6	know. The witness may stand down.
7	MR. CARR: At this time we call Randy Cate.
8	EXAMINER BROOKS: I see you filled out my form,
9	so I didn't need to
10	MR. CARR: I put from surface to base of
11	Morrow
12	EXAMINER BROOKS: Yes, that's right.
13	RANDALL S. CATE,
14	the witness herein, after having been first duly sworn upon
15	his oath, was examined and testified as follows:
16	DIRECT EXAMINATION
17	BY MR. CARR:
18	Q. Would you state your name for the record, please?
19	A. Yes, it's Randall Cate.
20	Q. Where do you reside?
21	A. In Midland, Texas.
22	Q. Mr. Cate, by whom are you employed?
23	A. EOG Resources.
24	Q. And what is your position with EOG?
25	A. My title is project reservoir engineer.

Have you previously testified before the New 1 Q. Mexico Oil Conservation Division? 2 Yes, I have. 3 Α. At the time of that testimony were your credentials as an expert in reservoir engineering accepted 5 6 and made a matter of record? 7 Yes, they were. Α. Are you familiar with the Application filed in 8 0. this case on behalf of EOG Resources, Inc.? 9 Α. Yes. 10 Have you made an engineering study of the area 11 Q. 12 which is the subject of the Application? Α. Yes. 13 And are you prepared to review the results of 14 Q. 15 that work with Examiner Brooks? 16 Α. Yes, I am. 17 MR. CARR: Are the witness's qualifications 18 acceptable? 19 EXAMINER BROOKS: The witness's qualifications 20 are accepted. (By Mr. Carr) Mr. Cate, let's go to what has 21 Q. been marked for identification as EOG Exhibit Number 6. 22 I'd like you to identify the exhibit, explain the various 23 24 types of information shown on the exhibit and review it for Mr. Brooks. 25

A. Exhibit Number 6?

Q. Yes, sir, the composite map?

A. Yes, this map is a map that details the structure and the sand isopach'd thickness that we interpret based on our log calculations that I'll also present on a crosssection in Exhibit Number 7.

We do see a fault that is dictated by well control, and we do have seismic lines that also pinpoint that fault. It's not really critical. We're hoping that it will help maybe trap this lower Morrow sand. But the prospect is primarily a lower Morrow sand.

The other point in this area is that there's approximately nine square miles shown on this map, and that out of those nine square miles, in this Township 19-27, there's 11 penetrations in the Morrow. All but two of them made less than a BCF of gas.

And one of them down in the far right lower corner is a well that made 2750 MCF. It's still producing, and I will show you on the cross-section, and that is the lower Morrow pay that we're going for. But we are about two miles away from the nearest commercial production.

Now, I do show the cumulative production on each of the wells that did produce the Atoka-Morrow, and as can be seen, we're directly offsetting a well that EOG had drilled in the north half of Section 23, which was called

the Barbie "23" Number 1, and it's on the cross-section also. We were not able to effect a commercial completion there. So from a risk point of view we are surrounded by noncommercial tests.

Then you go upthrown to the northeast with the fault and noncommercial tests up there, and that's also on the cross-section.

The structure is basically regional dipping northwest to southeast at approximately 100, 150 feet per mile, except for where the fault is.

- Q. Is the trace on this exhibit for the crosssection?
 - A. Yes, that's shown in blue and it's B-B'.
 - Q. Let's go to that now, which is Exhibit 7.
- A. Yes. We interpret the lower Morrow to occur where the lower Morrow itself is thicker, isopach thicks, some people call it enseisements, but -- we're not sure if it's actually that, but it does tend to correlate to an isopach thick.

The well on the far right, B', the far right, that's the well I was referring to earlier that is the prospect here, the sand that we're going for. And you can see down in the lower Morrow -- By the way, this is hung on the lower Morrow, stratigraphic cross-section hung on the lower Morrow. And that sand actually did not produce in

the well. We're looking at this sand that is approximately 10,950 to 11,000 feet, and it's wet at this location. But we believe as we go updip we might have a chance of encountering the sand updip in a gas column.

The second well from the right is a Mewbourne well. And as you can see, the lower Morrow has thinned in this area, and they did make a completion in the lower Morrow sands, but they only cum'd 46 1/2 million gas, and that well is now inactive.

So on these first two wells you can see we have water risk in the Morrow, and we also have limited size.

And it looks to me like the Morrow sands in the Mewbourne well were approximately 10-percent crossplot porosity, which should produce -- I think we've got limited reservoirs as another risk in this area.

Then if you move to the third well from the right, which is the EOG Barbie "23" that we drilled, we have made a completion and it's a noncommercial test. But we do see that the lower Morrow is thickening once again, and so we believe that we have a chance that we just missed it, and moving south we might pick up a thicker isopach and therefore catch that lower Morrow sand.

And then the well on the far left is upthrown from the indicated fault, and Yates had DST'd and did not try to complete it, so it was as the DST shows. There was

no flow of gas, and they even picked up a little bit of water in some of the lower -- but it looks very, very tight, in my opinion.

So the risks that we're seeing are water, limited reservoir, stratigraphic nature of the lower Morrow channels, just -- and also a potential for just being tight. If we have sand it could be too low a porosity to produce.

- Q. Are you prepared to make a recommendation to Mr. Brooks as to the risk penalty that should be assessed against the Devon interest if it is not voluntarily committed to the well?
- A. Yes, I believe that this location is worthy of the maximum 200 percent.
 - Q. Are there secondary objectives in the area?
- A. No, I looked at -- There has been some noncommercial Atoka and Strawn, but we don't anticipate it here. But I do believe our -- for -- for 320s, and then for a smaller spacing unit than that, I believe 40s or 160s if it was a Wolfcamp well or something, would fall entirely on our dedicated acreage.
- Q. And you had owned that spacing unit, so pooling would be unnecessary?
 - A. That's right.
 - Q. Does EOG Resources, Inc., seek to be designated

operator of the proposed well? 1 Yes, we do. 2 Α. In your opinion, will the granting of this ο. 3 Application and the drilling of the well be in the best 4 interest of conservation, the prevention of waste and the 5 protection of correlative rights? 6 Α. Yes. 7 Were EOG Exhibits 6 and 7 prepared by you? 8 0. 9 Α. Yes, under my supervision. 10 Q. And have you reviewed them? 11 Α. Yes. 12 Q. And can you confirm their accuracy? 13 Α. Yes. 14 MR. CARR: At this time, Mr. Brooks, we move the admission into evidence of EOG Resources, Inc., Exhibits 6 15 and 7. 16 17 EXAMINER BROOKS: Exhibits 6 and 7 are admitted. That concludes my direct examination 18 MR. CARR: of Mr. Cate. 19 20 EXAMINATION 21 BY EXAMINER BROOKS: Okay, Mr. Cate, did I correctly understand you 22 Q. 23 that the Gulf Eddy GL State Number 1, while it was perforated in the lower Morrow, was not produced from the 24 25 lower Morrow?

No, it did produce its 2.7 BCF in the very most 1 Α. lower Morrow sand. 2 Okay, so I didn't correctly understand. 3 Q. Yeah. But our target is actually this thicker Α. 4 sand up above, is what -- We have mapped that interval from 5 10,950 to 11,000, and that is the thickness reflected on 6 7 the map, Exhibit 6, for the isopach. 8 Q. Okay, and that was perforated in the Gulf Eddy GL 9 but not produced, correct? That's correct. They squeezed the lower Morrow 10 11 perfs and middle Morrow perfs that they had tested and then 12 ended up in that very most --It's that lowest red line, down at the bottom of 13 Q. the lower Morrow, is the perforations through which that 14 15 produced? That's correct. 16 Α. 17 Okay. Given that there aren't any good wells in Q. 18 the horizon that is your target, is it the fact that it's 19 updip from there, is that what makes it an attractive 20 prospect? 21 Yes, that's correct. Updip, and that in the EOG 22 Barbie well, which is in the north half of 23 --23 Q. Right. 24 -- we see the lower Morrow beginning to thicken

25

again.

Q. Right.

- A. And we're hoping that it will be thick enough to contain the sands at this location.
- Q. And high enough not to experience the water problems that Gulf did?
 - A. That's correct.
- Q. Did you prepare the AFE that was admitted as Exhibit Number 3?
- A. No, I did not, that's prepared by our drilling department.
- Q. Okay, so if I were to ask you questions about that, you wouldn't be able to answer them?
- A. Well, I'm familiar with the AFE and did the PAF, is our project approval forms. I haven't run all the economics, which incorporates the AFE, and of course we had just drilled the well just within half a mile north, so we know what the drilling days should be. I did not actually prepare it, but I have looked at it, and it looked very reasonable.
- Q. Okay. The thing that I was a little curious about, about it, and I don't know a lot about these things, but it seemed that while the total amount was actually rather low for a Morrow well in Eddy County, I guess the Morrow is not as deep here as it is some places, but the ratio of completion costs to drilling costs was higher than

what we normally see. Do you know why that is in this particular location?

- A. Yes, we typically put costs in for stimulation.

 Yes, \$120,000, if you'll -- Let's see. Yes, if you'll

 notice under the completion stimulation --
 - Q. Right.

- A. -- that's \$120,000. Our common practice is that we will frac the well. We have found, especially in these areas where there's tight sands, that to really get a decent initial rate out of them the need a frac job. And so they require typically an alka-foam frac, which is -- it's sensitive to the sandstone, it doesn't damage it, and it's very expensive. That's why these cost -- the frac jobs cost so much.
- Q. And is that an expenditure that often is not included on AFEs?
 - A. Ours typically have the in there --
 - Q. Yeah.
- A. -- and we do typically frac them, so this would
 be reasonable to expect --
 - Q. Well, it's fairly typical to frac the Morrow, is it not?
 - A. Yes --
- Q. All operators --
- 25 A. -- these days it is, yes.

23 I was just wondering why the completion costs as 0. a percentage of the total cost were higher than what you very often see in the Morrow AFEs. Yeah. Like I say, I believe it's due to the higher stimulation cost on the completion. EXAMINER BROOKS: Very good, thank you. all I have. EXAMINER STOGNER: I have a couple of questions for Mr. Cate. EXAMINER BROOKS: Go ahead. EXAMINATION BY EXAMINER STOGNER: I'm referring now to the cross-section. Q. This pool that you're proposing to complete in is an Atoka-Morrow Pool. When I look across here the Atoka is not

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- included. Are there some Atoka perforations in these wells shown on the cross-section?
- No, Mr. Examiner, not on these wells. Like I Α. say, I had looked at the Atoka. I saw one that they had recompleted. Frankly, I can't remember exactly which well it is, but it was a noncommercial, like maybe less than 50 million cubic feet. And so we really don't see it as a potential. But had we, you know, lucked into one as a possible recompletion, we would obviously want to be able to produce that.

1	Q. So you don't know why the Atoka was included in
2	that pool?
3	A. No, I really don't know that.
4	EXAMINER STOGNER: No other questions.
5	MR. CARR: That concludes our presentation in
6	this case.
7	EXAMINER BROOKS: Very good. If there's nothing
8	further, then Case Number 12,893 will be taken under
9	advisement.
10	(Thereupon, these proceedings were concluded at
11	8:52 a.m.)
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16	Me Bor Carron and Carron Marin Control of the Carron of th
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19	Of Conservation Division Exercises
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CERTIFICATE OF REPORTER

STATE OF NEW MEXICO ss. COUNTY OF SANTA FE

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL July 26th, 2002.

STEVEN T. BRENNER

CCR No. 7

My commission expires: October 14, 2002