

1 STATE OF NEW MEXICO  
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
3 OIL CONSERVATION DIVISION  
4  
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7 EXAMINER HEARING  
8

9 IN THE MATTER OF:  
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11 Application of Yates Petroleum Case 9779  
12 Corporation for a unit agreement  
13 in Lea County, New Mexico.  
14  
15  
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17 TRANSCRIPT OF PROCEEDINGS  
18

19 BEFORE: MICHAEL E. STOGNER, EXAMINER  
20

21 STATE LAND OFFICE BUILDING

22 SANTA FE, NEW MEXICO

23 October 18, 1989  
24

25

**ORIGINAL**

## A P P E A R A N C E S

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BY: DAVID R. VANDIVER, ESQ.

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1 HEARING EXAMINER: I'll call next case, No.  
2 9779, which is the application of Yates Petroleum  
3 Corporation for a unit agreement in Lea County, New  
4 Mexico.

5 I'll call for appearances.

6 MR. VANDIVER: Mr. Examiner, my name is  
7 David Vandiver of the law firm of Fisk & Vandiver in  
8 Artesia, appearing on behalf of the Applicant, Yates  
9 Petroleum Corporation.

10 I have two witnesses to be sworn this  
11 morning.

12 HEARING EXAMINER: Are there any other  
13 appearances?

14 Will the witnesses please stand and be  
15 sworn?

16 (Witnesses sworn.)

17 HEARING EXAMINER: You may be seated.

18 Mr. Vandiver?

19 MR. VANDIVER: May I proceed?

20 HEARING EXAMINER: Please.

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

24 DIRECT EXAMINATION

25 BY MR. VANDIVER:

1 Q. Mr. Cowan, state your name, your  
2 occupation, and by whom you're employed, please.

3 A. My name is Cy Cowan. I work for Yates  
4 Petroleum Corporation in Artesia, New Mexico, and I'm  
5 an associate landman.

6 Q. Mr. Cowan, you've testified previously as a  
7 petroleum landman before the New Mexico Oil  
8 Conservation Division, had your qualifications as a  
9 landman accepted, and your qualifications are a matter  
10 of record, are they not?

11 A. Yes, they are.

12 Q. Are you familiar with the title to the land  
13 within the proposed Woodstock State Unit?

14 A. Yes, I am.

15 MR. VANDIVER: I tender Mr. Cowan as a  
16 petroleum landman, Mr. Examiner.

17 HEARING EXAMINER: Mr. Cowan is so  
18 qualified.

19 Q. (BY MR. VANDIVER) Mr. Cowan, would you  
20 briefly summarize the purpose of Yates Petroleum  
21 Corporation's application in Case No. 9779?

22 A. Yates Petroleum is seeking approval of the  
23 Woodstock State Unit in Lea County, New Mexico. We  
24 feel by establishing this unit we will be able to  
25 effectively explore and develop the area.

1           Q.       If you could refer to Applicant's Exhibit 1  
2 in this case and orient the examiner with respect to  
3 the location of the proposed unit?

4           A.       Yes. Exhibit 1 is a land plat outlining  
5 the proposed Woodstock State Unit. The unit is found  
6 in Township 9 South, Range 33 East, in Lea County, New  
7 Mexico.

8                   The unit is outlined in yellow. The unit  
9 is comprised of portions of Section 3, 4, all of  
10 Section 5, and portions of Section 6.

11                   Our proposed location is outlined with a  
12 red dot in the southeast of the southeast quarter of  
13 Section 5. We are proposing to drill an Abo test well  
14 at this site.

15                   The unit is comprised of 1,758.82 acres of  
16 land, and these are primarily 100 percent state lands.

17           Q.       When you say "primarily," all the minerals  
18 within the lands covered by the proposed unit are  
19 owned by the State of New Mexico, are they not?

20           A.       That is correct.

21           Q.       What's the footage location of your initial  
22 test well?

23           A.       Initial test well will be located 660 from  
24 the south line and 540 feet from the east line.

25           Q.       What's the primary objective in drilling

1 the initial test well under the unit?

2 A. The primary objective is the Abo formation  
3 at approximately 9,000 feet.

4 Q. Now, Mr. Cowan, if you could identify  
5 what's been marked as Applicant's Exhibit 2, which is  
6 the unit agreement, describe what it contains.

7 A. Exhibit 2 is the unit agreement for the  
8 Woodstock State Unit. This unit agreement is on the  
9 standard State of New Mexico form.

10 On page 2, the unit area is outlined in  
11 Township 9 South, Range 33 East. It is made up of  
12 Section 3, the southwest quarter; Section 4, the  
13 southeast quarter and the west half; Section 5, all of  
14 Section 5; Section 6, the east half and the northwest  
15 quarter, and it is comprised of 1,758.82 acres, more  
16 or less.

17 Q. Who's designated as operator under this  
18 unit agreement?

19 A. Under the unit agreement, Yates Petroleum  
20 Corporation of Artesia is designated as unit operator.

21 Q. What formations are to be unitized under  
22 this unit agreement?

23 A. All formations from the surface to the Abo  
24 formation will be unitized.

25 Q. There's no limitation on formations covered

1 by the unit agreement, is there, if you'll refer to  
2 paragraph 2 on page 2?

3 A. That is correct.

4 Q. There's no depth limitation?

5 A. There's no depth limitation, excuse me.

6 Q. This is an exploratory unit?

7 A. That's correct.

8 Q. As required, the unit agreement allocates  
9 production from any well on the committed tracts  
10 within the unit area to each separately owned tract on  
11 a surface-acreage basis; does it not?

12 A. That's correct.

13 Q. Refer to Exhibit A of the unit agreement,  
14 and tell the examiner what information is contained in  
15 that exhibit.

16 A. Exhibit A is a plat showing the outline of  
17 the proposed unit. It designates the record  
18 titleholder of each lease in the unit, which is Yates  
19 Petroleum in all five of the leases.

20 Four of the five leases will expire on  
21 November 1, and we will appreciate approval of this  
22 unit as soon as possible.

23 Q. Now, refer to Exhibit B of the unit  
24 agreement, and review for the examiner the information  
25 shown on that exhibit.



1           A.       Exhibit B to the unit agreement outlines  
2 the tract numbers, the description of the lease in  
3 that particular tract, the number of acres in the  
4 lease, the serial number and expiration date of the  
5 leases. These are all V leases owned by the State of  
6 New Mexico. Basic royalty owner and the percentage,  
7 lessee of record, overriding royalty owners and  
8 percentages, and working interest owner and  
9 percentages.

10          Q.       And who are the owners of the various  
11 leases to be committed to this unit?

12          A.       The owners of the leases are Yates  
13 Petroleum Corporation, Yates Drilling Company, Abo  
14 Petroleum Corporation, and MICO Industries, Inc.

15          Q.       Will all these parties be joining the unit  
16 agreement?

17          A.       Yes, they will.

18          Q.       So you'll have 100 percent joinder?

19          A.       That is correct.

20          Q.       And as you said, certain of the leases  
21 expire November 1, 1999?

22          A.       That is correct.

23          Q.       And you would be required to have approval  
24 by the Commissioner of Public Lands and Oil  
25 Conservation Division and be drilling your well by

1 that date?

2 A. Yes, that is correct.

3 Q. Now, identify Exhibit 3 and describe what  
4 that is, please, sir.

5 A. Exhibit 3 is the Model Form Operating  
6 Agreement, A.A.P.L. Form 610, dated 1977, for the  
7 Woodstock State Unit. It designates Yates Petroleum  
8 Corporation as the operator, and the location of the  
9 unit as in Lea County, New Mexico.

10 Q. And this unit operating agreement has been  
11 submitted to all working interest owners?

12 A. Yes, it has.

13 Q. Refer to Exhibit A of the unit operating  
14 agreement and review the manner in which the initial  
15 test well will be paid for.

16 A. Exhibit A to the unit operating agreement  
17 sets out the percentage interest and the parties who  
18 will pay for the drilling of the initial test well.  
19 The parties in the well are Yates Petroleum, Yates  
20 Drilling Company, Abo Petroleum Corporation, and MICO  
21 Industries, Inc.

22 Q. And this unit operating agreement contains  
23 customary contractual terms and has been approved by  
24 all working interest owners?

25 A. That is correct.

1 Q. Identify Exhibit 4, please, and tell the  
2 examiner what that is.

3 A. Exhibit 4 is an Authority For Expenditure  
4 for the Woodstock State Unit No. 1 Well. It gives the  
5 location of the well; horizons are Abo formation about  
6 9,000 feet. It breaks out the dry hole costs to drill  
7 this well, which would be \$243,600. Completed well  
8 would be \$499,500. At the bottom it lists the working  
9 interest owners and their percentages in the well.  
10 And, also, this AFE has been signed by all working  
11 interest parties.

12 Q. Now, identify Exhibit 5 for the examiner  
13 and describe its contents.

14 A. Exhibit 5 is a letter from the Commissioner  
15 of Public Lands dated October 12, 1989, to Yates  
16 Petroleum Corporation regarding the Woodstock State  
17 Unit. This letter states that they have granted us  
18 preliminary approval for this unit.

19 Q. One of the requirements of the Commissioner  
20 of Public Lands' final approval of this unit agreement  
21 would be that you obtain an order of the New Mexico  
22 Oil Conservation Division approving the unit  
23 agreement; is it not?

24 A. That is correct.

25 Q. Mr. Cowan, were Exhibits 1 through 5

1 prepared by you or under your direction and  
2 supervision or, with respect to Exhibit 5, taken from  
3 the business records of Yates Petroleum Corporation?

4 A. Yes, they have been.

5 MR. VANDIVER: Mr. Examiner, I'd move  
6 admission of Exhibits 1 through 5, and I have no  
7 further questions of this witness.

8 HEARING EXAMINER: Exhibits 1 through 5  
9 will be admitted into evidence.

10 I have no questions of this witness. You  
11 may be excused.

12 THE WITNESS: Thank you.

13 HEARING EXAMINER: Mr. Vandiver?

14 STERLING FLY III,  
15 the witness herein, after having been first duly sworn  
16 upon his oath, was examined and testified as follows:

17 DIRECT EXAMINATION

18 BY MR. VANDIVER:

19 Q. Mr. Fly, state your name, your occupation,  
20 and by whom you're employed, please.

21 A. My name is Sterling Fly III. I'm a  
22 petroleum geologist at Yates Petroleum Corporation.

23 Q. You have previously testified before the  
24 New Mexico Oil Conservation Division as a petroleum  
25 geologist, had your qualifications accepted, and your

1 qualifications are a matter of record, are they not?

2 A. Yes.

3 Q. Have you made a study of the available  
4 geological information regarding the proposed  
5 Woodstock State Unit for the purposes of your  
6 testimony today, and are you familiar with the  
7 geological basis for the formation of the proposed  
8 unit?

9 A. Yes.

10 MR. VANDIVER: Tender Mr. Fly as an expert  
11 petroleum geologist, Mr. Examiner.

12 HEARING EXAMINER: Mr. Fly is so qualified.

13 Q. (BY MR. VANDIVER) Mr. Fly, summarize for  
14 the examiner the geological factors which dictate the  
15 formation of this exploratory unit.

16 A. Well, we have determined the presence of an  
17 east-plunging structural nose through the length of  
18 the proposed unit. We expect to encounter porosity  
19 concentrate along the crest of the structure.

20 Q. What's Yates's principal objective in  
21 forming this unit and drilling the initial test well?

22 A. Our objective is to obtain hydrocarbon  
23 production within the Abo dolomite.

24 Q. I believe Mr. Cowan testified the initial  
25 test well will be located in the southeast quarter

1 southeast quarter of Section 5; is that correct?

2 A. Correct.

3 Q. Identify what's been marked for  
4 identification as Applicant's Exhibit 6, which is your  
5 cross-section, and review the information contained in  
6 that exhibit for the examiner, please.

7 A. Okay. The stratigraphic cross-section in  
8 which the datum, stratigraphic datum, is the upper  
9 shale marker of the Wolfcamp XX, marker W.  
10 Correlators within this interval are just some marker  
11 beds within the Abo formation.

12 What's evident from the cross-section and  
13 highlighted in orange or red is the persistence of  
14 porosity within the Abo, what's labeled as the Abo  
15 porosity zone, which sits just above the Wolfcampian  
16 lime and beneath a dirtier Abo dolomite shale  
17 interval.

18 Q. The wells reflected on that cross-section  
19 are shown on the small map at the bottom of the  
20 exhibit?

21 A. Yes. The base map, as you can see, is  
22 essentially a northwest to southeast cross-section.  
23 I'll point out there the proposed location there in  
24 the southeast quarter of Section 5, which would be  
25 just to the left of the middle well on the

1 cross-section.

2 Q. Anything else with regard to that exhibit,  
3 Mr. Fly?

4 A. I might point out that the better porosity  
5 tends to be located along the higher structures or  
6 along the higher portions of the structures.

7 Q. All right, now, if you could refer to  
8 Exhibit 7 and identify it, please, sir, and describe  
9 its contents for the examiner.

10 A. Exhibit 7 is a structure map, again on the  
11 Wolfcampian XX marker. It indicates an east-plunging  
12 structural nose which runs the length of the unit.

13 Further evidence or an analogy to the east-  
14 plunging nose is the fact that the Veta field, which  
15 is a Bough-C field, just to the east of the unit.  
16 Production in the Bough-C toward the south trends in a  
17 northeast-southwest direction, and then there right  
18 even with our unit there, say, in Section 2, the Veta  
19 trend turns eastward; so that indicates that there's  
20 structural control for the old Bough-C north shoreline  
21 there.

22 Q. Anything else with regard to that exhibit?

23 A. I think not.

24 Q. If you would refer to Applicant's Exhibit  
25 8, identify that, and describe the information

1 contained in that exhibit, please.

2           A.       Exhibit 8 is a net feet of porosity map in  
3 the lower Abo dolomite or the clean dolomite  
4 interval. This indicates that favorable porosity  
5 trends run east-west, coinciding with the locations of  
6 the Structural highs or running through the unit where  
7 the favorable porosity is met; also coincides with the  
8 east-plungin structural nose.

9           Porosity in the dolomite is developed in  
10 sediments that were formerly oolitic and bioclastic  
11 grain stones and packed stones. These were deposited  
12 on highs in the Paleocene floor as higher energy  
13 facies, lithofacies.

14           Later dolomitization of these higher energy  
15 lithofacies resulted in more porous, coarse  
16 crystalline dolomites than would be found in the  
17 adjacent lows, which were muddier sediments. So the  
18 subsequent dolomites tended to be tighter.

19          Q.       Anything else with regard to Exhibit A?

20          A.       No.

21          Q.       Based upon your review of this data, could  
22 you briefly state what conclusions you've drawn from  
23 your study?

24          A.       Well, the primary goal in drilling an Abo  
25 dolomite well is obtaining favorable porosity in the



1 clean dolomite interval. Favorable porosity is  
2 anticipated to be encountered along this crest of  
3 structures which we have mapped through our proposed  
4 unit area.

5 Q. Is your proposed initial test well located  
6 on the crest of the structure?

7 A. Yes. As you say, in Exhibit No. 7, it's  
8 right near the crest of the structural nose.

9 Q. Mr. Fly, in your opinion, will the approval  
10 of this exploratory unit be in the interest of  
11 conservation, the prevention of waste, and protection  
12 of correlative rights?

13 A. Yes.

14 Q. Were Exhibits 6, 7 and 8 prepared by you or  
15 under your direction and supervision?

16 A. They were.

17 MR. VANDIVER: Mr. Examiner, I'd move the  
18 admission of Applicant's 6, 7, and 8, and I have no  
19 further questions of this witness.

20 HEARING EXAMINER: Exhibits 6, 7, and 8  
21 will be admitted into evidence at this time.

22 CROSS-EXAMINATION

23 BY HEARING EXAMINER:

24 Q. Something for the record, did you have any  
25 decision of where to drill the initial test well in

1 this unit?

2 A. Yes, I picked the location.

3 Q. This is going to be an Abo gas test or  
4 oil?

5 A. Abo oil.

6 Q. Forty-acre?

7 A. Yes.

8 HEARING EXAMINER: I have no other  
9 questions of this witness. He may be excused.

10 Does anybody else have anything further in  
11 Case No. 9779? If not, this case will be taken under  
12 advisement.

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CERTIFICATE OF REPORTER

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2

3 STATE OF NEW MEXICO )  
 ) ss.  
 4 COUNTY OF SANTA FE )

5

6 I, Deborah O'Bine, Certified Shorthand  
 7 Reporter and Notary Public, HEREBY CERTIFY that the  
 8 foregoing transcript of proceedings before the Oil  
 9 Conservation Division was reported by me; that I  
 10 caused my notes to be transcribed under my personal  
 11 supervision; and that the foregoing is a true and  
 12 accurate record of the proceedings.

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

17 WITNESS MY HAND AND SEAL November 13, 1989.

18

19

20

*Deborah O'Bine*  
 DEBORAH O'BINE  
 CSR No. 127

21 My commission expires: August 10, 1990

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I do hereby certify that the foregoing is  
 a complete record of the proceedings in  
 the Examiner hearing of Case No. 9779,  
 heard by me on 18 October 1989.  
*Mark E. Hays*, Examiner  
 Oil Conservation Division