

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. 12,596
APPLICATION OF YATES PETROLEUM )	
CORPORATION FOR POOL CONTRACTION, POOL )	
CREATION OR, IN THE ALTERNATIVE, )	ORIGINAL
AMENDMENT OF THE SPECIAL POOL RULES AND )	
REGULATIONS FOR THE FEATHER-MORROW POOL, )	
LEA COUNTY NEW MEXICO )	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

February 22nd, 2001

Santa Fe, New Mexico

OIL CONSERVATION DIV.  
01 MAR - 8 AM 9:13

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, February 22nd, 2001, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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February 22nd, 2001  
Examiner Hearing  
CASE NO. 12,596

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

## FOR THE APPLICANT:

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By: WILLIAM F. CARR

## FOR POGO PRODUCING COMPANY:

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Santa Fe, New Mexico 87504

## ALSO PRESENT:

MICHAEL M. GRAY  
Concho Resources, Inc.  
Midland, Texas

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2   10:56 a.m.:

3           EXAMINER CATANACH: And at this time we'll call  
4   Case Number 12,596, the Application of Yates Petroleum  
5   Corporation for pool contraction, pool creation or, in the  
6   alternative, amendment of the special pool rules and  
7   regulations for the Feather-Morrow Pool, Lea County, New  
8   Mexico.

9           Call for appearances in this case.

10          MR. CARR: May it please the Examiner, my name is  
11   William F. Carr with the the law firm Holland and Hart,  
12   L.L.P. We represent Yates Petroleum Corporation, and I  
13   have two witnesses.

14          EXAMINER CATANACH: Any additional appearances in  
15   this case?

16          MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,  
17   representing Pogo Producing Company.

18          I have no witnesses. I may have a short  
19   statement at the end.

20          EXAMINER CATANACH: Any additional appearances?  
21   Will the two witnesses please stand to be sworn  
22   in?

23          (Thereupon, the witnesses were sworn.)

24          MR. CARR: May it please the Examiner, at this  
25   time we call Reed Meek.

1                                    REED H. MEEK,  
2     the witness herein, after having been first duly sworn upon  
3     his oath, was examined and testified as follows:

4                                    DIRECT EXAMINATION

5     BY MR. CARR:

6                Q.     Would you state your full name for the record,  
7     please?

8                A.     Reed H. Meek.

9                Q.     Mr. Meek, where do you reside?

10              A.     I live in Artesia, New Mexico.

11              Q.     By whom are you employed?

12              A.     By Yates Petroleum Corporation.

13              Q.     And what is your position with Yates Petroleum  
14     Corporation?

15              A.     I am a geologist.

16              Q.     Have you previously testified before this  
17     Division?

18              A.     Yes, I have.

19              Q.     At the time of that testimony, were your  
20     credentials as an expert witness in petroleum geology  
21     accepted and made a matter of record?

22              A.     Yes.

23              Q.     Are you familiar with the Application filed in  
24     this case on behalf of Yates Petroleum Corporation?

25              A.     Yes.

1 Q. Are you familiar with the Feather-Morrow Pool?

2 A. Yes.

3 Q. Have you made a geological study of the area  
4 which is the subject of this Application?

5 A. Yes, I have.

6 Q. And are you prepared to share the results of that  
7 work with the Examiner?

8 A. Yes.

9 MR. CARR: Are the witness's qualifications  
10 acceptable?

11 EXAMINER CATANACH: They are.

12 Q. (By Mr. Carr) Mr. Meek, would you briefly  
13 summarize for the Examiner what it is that Yates seeks with  
14 this Application?

15 A. We seek an amendment of the special pool rules  
16 and regulations for the Feather-Morrow Pool to provide for  
17 a 160-acre spacing and proration units.

18 MR. CARR: Mr. Examiner, Yates Petroleum  
19 Corporation also sought pool contraction and pool extension  
20 of the Feather-Morrow Gas Pool. We request that those  
21 portions of the case be dismissed. The only thing we  
22 intend to pursue with this Application is 160-acre Morrow  
23 gas spacing.

24 Q. (By Mr. Carr) Mr. Meek, when was the Feather-  
25 Morrow Gas Pool created?

1 A. In April 1st of 1982.

2 Q. And that was by Order R-6923?

3 A. Yes.

4 Q. And what are the rules which govern this pool?

5 A. Special pool rules and regulations for the pool  
6 were adopted on December 4th of 1985 by Order Number  
7 R-8089, and these rules provide for a limiting gas-oil  
8 ratio for the pool of 10,000 cubic of gas per barrel of oil  
9 produced.

10 Q. And that is -- These are the rules that we're now  
11 seeking to amend to provide for 160-acre spacing, correct?

12 A. That's right.

13 Q. Have you prepared exhibits for presentation here  
14 today?

15 A. Yes, I have.

16 Q. Let's go first to the land portion of this case.  
17 I would ask you to identify and review for Mr. Catanach  
18 what has been marked Yates Petroleum Corporation Exhibit  
19 Number 1.

20 A. This is a land map of the Feather-Morrow Pool and  
21 surrounding acreage. It shows in yellow acreage held by  
22 Yates Petroleum Corporation. There is a heavy red line  
23 showing the outline of the Feather-Morrow Pool as it  
24 currently is defined. And also within that pool, there are  
25 six wells that have been drilled to produce from the Morrow



1 sand.

2 Q. Let's go to Exhibit Number 2. What is this?

3 A. This is the original 320-acre spacing unit  
4 proposed by Yates Petroleum for a well that we recently  
5 drilled in the northwest quarter.

6 Q. If, in fact, this Application is granted and 160-  
7 acre spacing is approved for this pool, Yates would  
8 dedicate the northwest quarter of this section; is that  
9 correct?

10 A. That's correct.

11 Q. And there are three leases within that section?

12 A. That's right.

13 Q. If the Application is not granted and the well is  
14 developed on 40-acre spacing, two of those leases would  
15 expire?

16 A. That's correct.

17 Q. Is Exhibit Number 3 an affidavit confirming that  
18 notice of this hearing has been provided in accordance with  
19 the rules and regulations of the Division?

20 A. Yes.

21 Q. And to whom was notice provided?

22 A. To all operators within the Feather-Morrow Pool.

23 Q. Were all operators of Morrow wells within a mile  
24 of those pool boundaries also notified of this Application?

25 A. Yes.

1           Q.    Let's now go to the geological portion of the  
2 presentation.  Could you refer to what has been marked as  
3 Yates Exhibit Number 4, identify this and review it for Mr.  
4 Catanach?

5           A.    Okay, Exhibit Number 4 is a net-pay isopach of  
6 the Feather-Morrow Pool.  The map illustrates the outline  
7 of the pool, the location of six wells drilled within the  
8 pool.

9                   And also indicated with the blue line is the line  
10 of cross-section, which is presented as Exhibit Number 5.

11          Q.    Let's go to Exhibit 5 and review the information  
12 on the cross-section for the Examiner.

13          A.    Okay, this is a north-to-south cross-section,  
14 including six wells.  North is on the left side of the  
15 page, south is on the right side.  The well in question,  
16 the Yates Petroleum Red Tail AWR State Number 1 is the  
17 second well from the right.

18                   Towards the bottom of the well log you'll notice  
19 colored in yellow is the Morrow sands.  Also indicated is  
20 the perforated interval in that well, as well as all the  
21 adjacent wells.

22                   I guess the main point of this cross-section is  
23 to illustrate that all wells within the Feather-Morrow Pool  
24 produce from a lower Morrow sand that appears to be  
25 correlative and continuous throughout the pool area.

1 Q. Mr. Meek, will Yates call a witness to review the  
2 engineering issues presented by this Application?

3 A. Yes.

4 Q. Were Yates Exhibits 1 through 5 either prepared  
5 by you, or have you reviewed them and can you testify as to  
6 their accuracy?

7 A. Yes.

8 MR. CARR: Mr. Catanach, at this time we would  
9 move the admission into evidence of Yates Exhibits 1  
10 through 5.

11 EXAMINER CATANACH: Exhibits 1 through 5 will be  
12 admitted as evidence.

13 MR. CARR: And that concludes my direct  
14 examination of Mr. Meek.

15 EXAMINATION

16 BY EXAMINER CATANACH:

17 Q. Mr. Meek, when was the Red Tail well drilled?

18 A. We completed drilling it approximately four weeks  
19 ago. I can't give you the exact date, but it's just a  
20 recently drilled well.

21 Q. And the Morrow was the primary objective in that  
22 well?

23 A. That's right.

24 Q. And the well has been completed and is producing?

25 A. Yes, we perforated the interval, and it's

1 producing from the Morrow, although it hasn't been filed  
2 for a completion with the State.

3 Q. And this pool is currently spaced on 40 acres; is  
4 that correct?

5 A. That's correct.

6 Q. And has been producing for -- was created by  
7 R-6923. Do you know what the date of that was?

8 A. I believe I stated that. Was it 1982? Yeah,  
9 April 1st of 1982 was when the pool was originally created.

10 Q. Do you know what well was the discovery well for  
11 that pool?

12 A. It's one of the three wells north of the Red Tail  
13 location. I believe that it's the well designated as UTP  
14 State Number 2, which is --

15 MR. BONEAU: South half, Number 1.

16 THE WITNESS: Is it the Number 1? Okay, Number  
17 1, south half of Section 21.

18 EXAMINER CATANACH: Thank you, Mr. Boneau.

19 I have no further questions of this witness, Mr.  
20 Carr.

21 MR. CARR: Thank you, Mr. Catanach. At this time  
22 we call David Boneau.

23 EXAMINER CATANACH: I'm sorry, did you have any  
24 questions, Mr. Bruce?

25 MR. BRUCE: No, not of Mr. Meek. I may have a

1 few of Dr. Boneau.

2 EXAMINER CATANACH: Okay.

3 DAVID F. BONEAU,

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

6 DIRECT EXAMINATION

7 BY MR. CARR:

8 Q. Would you state your name for the  
9 record, please?

10 A. My name is David Francis Boneau.

11 Q. And Dr. Boneau, where do you reside?

12 A. Artesia, New Mexico.

13 Q. By whom are you employed?

14 A. I'm employed by Yates Petroleum Corporation.

15 Q. And what is your position with Yates?

16 A. I have the title of engineering manager. I'm a  
17 reservoir engineer.

18 Q. Have you previously testified before this  
19 Division?

20 A. Yes, sir.

21 Q. At the time of that testimony, were your  
22 credentials as an expert witness in reservoir engineering  
23 accepted and made a matter of record?

24 A. Yes, sir.

25 Q. And are you familiar with the Application filed

1 in this case on behalf of Yates Petroleum Corporation?

2 A. I'm familiar with that, yes, sir.

3 Q. And are you familiar with the Feather-Morrow  
4 Pool?

5 A. I'm familiar with the Feather-Morrow Oil Pool,  
6 yes, sir.

7 Q. And have you made an engineering study of the  
8 area which is the subject of this Application?

9 A. Yes.

10 Q. Are you prepared to share the results of that  
11 work with Mr. Catanach?

12 A. Yes, sir.

13 MR. CARR: Are the witness's qualifications  
14 acceptable?

15 EXAMINER CATANACH: They are.

16 Q. (By Mr. Carr) Dr. Boneau, initially, could you  
17 summarize for us what is the purpose of your testimony here  
18 today?

19 A. The purpose is to present data on the reservoir  
20 to show that one well will drain more than the 40 acres and  
21 that 160-acre spacing rules would best fit the technical  
22 information on this pool. So I have a little background  
23 information and basically a calculation of drainage areas  
24 of the wells where there's enough data to do that.

25 Q. And we're seeking 160-acre oil-well spacing; is

1 that correct?

2 A. Yes, sir.

3 Q. Let's go to what has been marked as Yates  
4 Petroleum Corporation Exhibit Number 6. Would you identify  
5 that and review the information on this exhibit for for Mr.  
6 Catanach?

7 A. Exhibit Number 6 says "Feather-Morrow Pool  
8 Rates", and its purpose is to introduce the six wells in  
9 the pool. There are -- Best put is three old wells and  
10 three new wells, I think is the simplest way to say it.

11 The new wells are listed 1 through 3 at the top  
12 there. There's a Pogo well, Pluma 29 State Number 1, that  
13 was drilled about a year ago, and it has produced through  
14 the year 2000, and it's now making about 500 MCF a day, and  
15 it's accumulated going on 200 million by now.

16 The second item there is Pluma 29 State Number 2,  
17 another Pogo well, also in Section 29. And it's listed as  
18 drilling, which really means it's not completed. It was  
19 spudded in July and TD'd in October, and we don't know  
20 exactly its situation, but somebody at Pogo told me it's  
21 making about 2 million a day. Anyway, I think it is  
22 producing now, but just recently.

23 The third item, the Red Tail AWR State Number 1  
24 is the Yates well. It's listed as drilling. It was  
25 spudded around November 1st and completed around -- a

1 little after the first of the -- well, completed -- in a  
2 position to produce, about the middle of January. And  
3 actually, the next exhibit I'll show what production data  
4 we have on that well, but it's a brand-new well.

5 Then there's the three old wells, and they're  
6 listed as items 4, 5 and 6. The discovery well, the UTP  
7 Number 1, is operated by Santa Fe Energy, and it started  
8 production in December of 1981. It's now producing about  
9 100 MCF a day. But it has produced about 1.6 BCF of gas  
10 and 195,000 barrels of oil. So quite a good producer.

11 The second well, the UTP Number 2 in the north  
12 half of 21, which was the second well in the pool, started  
13 production in August of 1983. When you -- It kind of hit  
14 the edge of the pool, and it produced from 1983 to 1988,  
15 when it was shut in and recompleted to the Wolfcamp.  
16 Through its life it produced about 300 million cubic feet  
17 and 42,000 barrels of oil, and it's no longer active in the  
18 Morrow.

19 And the last of the old wells, item number 6, is  
20 the UTP Number 3 in Section 16. It began production in  
21 September of 1984 and it's still producing a little, but  
22 it's the best producer in the pool. It has produced over 3  
23 BCF of gas and about 167,000 barrels of oil.

24 So the old wells, there's two really good  
25 producers, a third well that was kind of decent and then



1 was abandoned, and then the three new wells.

2 Q. All right, let's go to Exhibit Number 7 and  
3 review the information on the Red Tail AWR State Com Number  
4 1 well.

5 A. Okay. When we made this Application, we didn't  
6 know if it was a gas well or an oil well, via the rules,  
7 and that's why the convoluted Application.

8 Exhibit 7 shows what production data we have from  
9 the Red Tail on a daily basis since February 3rd, and the  
10 well has produced about 50 barrels of oil and say 1400 MCF  
11 a day of gas. It has a GOR in the 20,000 to 30,000 range,  
12 and according to the rules it looks like an oil well. And  
13 so we think it's an oil well, we think it's an oil pool, we  
14 think it's an oil pool that should be spaced on 160s.

15 Q. Let's go and look at the production histories on  
16 certain wells in the pool, and start with Exhibit Number 8  
17 and review the production history on the UTP Number 1.

18 A. Okay, the rest of my presentation is a  
19 calculation of drainage areas, and there's various  
20 components that need to go into that, including the amount  
21 of production, the hydrocarbon pore volume in the logs, the  
22 gas analysis. So that's where we are, we're starting that.

23 So Exhibit 8 is a production history of the  
24 discovery well, the UTP Number 1. And again, it's produced  
25 over 1.6 BCF of gas. It's still producing about 100 MCF a

1 day, and I've extrapolated its future production via some  
2 lines that you can barely see on the right-hand side of the  
3 exhibit.

4 The next exhibit, if I can go to that for Mr.  
5 Carr --

6 Q. Yes, sir.

7 A. -- Number 9, shows the production history of the  
8 UTP Number 2, and again it began producing in 1984 and  
9 actually produced fairly strongly for 1984 and 1985 and  
10 then just kind of fell off and was abandoned with  
11 cumulative production of 327 million and 42,000 barrels of  
12 oil.

13 Q. Exhibit 10 is the UTP Number 3?

14 A. It's the UTP Number 3, yes, sir. And this,  
15 again, is the best producer in the pool. It began  
16 production in 1984. At the start of 2000 it was producing  
17 about 150 MCF a day. There's a big break around 1984 when  
18 there were some leaks in the casing that were repaired, and  
19 the well really hasn't done quite so well since then, but  
20 you see that break about 1984 -- 1994, 1995. That's a  
21 casing leak and some remedial work there. But the Number 3  
22 has produced over 3 BCF and quite a lot of oil.

23 Q. And then go to Exhibit Number 11.

24 A. And Exhibit Number 11 is what production data we  
25 have on the year-old Pogo well, the Pluma 29 State Number

1 1. It was making about 500 MCF a day and a cum of 134  
2 million as of the middle of last year, which is the last  
3 data, and then there's my estimate of what it would produce  
4 in the future. That is just my estimate.

5 Q. Okay, let's go to Exhibit Number 12, the  
6 production forecast. Would you explain the source of the  
7 information you've used and then what this exhibit shows?

8 A. Okay, so what we're doing when we finally get to  
9 the end, what you'll see is a calculation of a drainage  
10 area for the production to date, and then another number  
11 for the ultimate drainage area when the additional  
12 production I forecast for the wells might actually come to  
13 happen.

14 So Exhibit Number 12 are the computer-generated  
15 forecasts from myself on the future production of these  
16 wells, and I really don't think that you want to see any of  
17 the numbers on it, it's just -- I showed the lines on my  
18 prediction of production on the previous exhibits, and here  
19 we just calculate year by year into the future what  
20 additional production will get. So -- well --

21 Q. There it is.

22 A. There it is. Page 2 says that UTP Number 1 will  
23 produce an additional 397 million cubic feet of gas, and  
24 page number 4 says that UTP 3 will produce an additional  
25 430 million cubic feet of gas, and page 6 says that the

1 Pluma well will produce an additional 471 million cubic  
2 feet of gas. They're just numbers.

3 Q. All right, let's talk about the gas analysis, and  
4 let's move to Exhibit Number 13.

5 A. Okay, so we have pretty solid numbers on what the  
6 wells have produced to date, and then just my estimates of  
7 what they will produce in the future.

8 To calculate drainage areas, you need to know  
9 what kind of gas you're producing. And Exhibit 13 is a gas  
10 analysis taken by Yates for the Red Tail AWR State Number  
11 1. It's 81 percent methane and about 10 percent ethane,  
12 it's fairly rich gas. And the presentation here calculates  
13 the critical pressure and temperature of the gas in the  
14 bottom left corner. They have to be using the  
15 calculations, and the critical pressure for the gas is 670  
16 p.s.i., and the critical temperature is 387 degrees R.

17 Q. The next several exhibits are log analysis,  
18 Exhibits 14 through 16. Would you review those for Mr.  
19 Catanach?

20 A. Yes, surely. Exhibit 14 is my analysis of the  
21 porosity, resistivity and eventually the hydrocarbon pore  
22 volume in the discovery well, the UTP State Number 1. This  
23 is a well that has produced about 1.6 BCF. It has the best  
24 logs of the wells, it has the best logs.

25 In the lower middle of the page, you can see the

1 average of this like 20-foot zone is 13.3 percent, fairly  
2 low water saturation of 24 percent. In the way lower  
3 right-hand corner I calculate hydrocarbon pore volume in  
4 this well of 1.826 feet. That's another number that goes  
5 into the calculation.

6 Likewise on Exhibit 15 is the log analysis of the  
7 UTP Number 2. That's the well that produced for four or  
8 five years and then was abandoned. It also has about a 20-  
9 foot zone but it has low porosity, average porosity of  
10 about seven or eight percent. And I calculate hydrocarbon  
11 pore volume for this well of 0.905 feet, so about half of  
12 the Number 1 well.

13 And Exhibit 16 is the same kind of calculation  
14 for the best producer, the UTP State Number 3, and here the  
15 zone is maybe 25 feet thick. But again, the porosity is  
16 really fairly low for such great production. The average  
17 porosity is only about 8 percent, and I calculate  
18 hydrocarbon pore volume of 1.068 in the lower right-hand  
19 corner for this well. And those hydrocarbon pore volume  
20 numbers then go into the drainage area calculation. That's  
21 coming up.

22 Q. Let's go to the calculation, Exhibit 17.

23 A. So Exhibit 17 outlines and shows the details of  
24 the calculations. As you know, it involves gas properties,  
25 temperatures, pressures, recovery factors, hydrocarbon pore

1 volumes, et cetera.

2 And rather than go through it, the equation for  
3 the drainage area is about 2 inches from the bottom in bold  
4 print, A equals 1.748, et cetera, where it depends on how  
5 much gas is produced, and that's a thing called  $G_p$ , and it  
6 depends on the hydrocarbon pore volume, which is the  
7 brackets that say " $[H*\Phi*S_g]$ ". That whole mess is  
8 hydrocarbon pore volume.

9 Then at the very bottom, the last several lines  
10 is a sample calculation for the Number 1 well current  
11 drainage area. With the amount of gas it's produced I  
12 calculate 172 acres as that drainage area, as an example.  
13 And all the results are shown on Exhibit 18, which is the  
14 end.

15 So on Exhibit 18, I have mostly results, but the  
16 results are for the UTP Number 1, 2, 3 and also the Pluma  
17 29 Number 1 well, the year-old well. And like I tried to  
18 say, I've calculated a drainage area for actual production  
19 through the end of 2000, and then another number for what  
20 would be the drainage area eventually when all the gas I  
21 predict would actually be produced from the well. And  
22 there's not a whole lot of difference, but we'll go through  
23 those.

24 So the answers are in the bold black. So for the  
25 UTP Number 1, I calculate present drainage area, 172 acres,

1 and and ultimate drainage area of 211 acres. For the UTP  
2 Number 2, current drainage area of 69 acres, and since the  
3 well is not producing anymore, that's all you're going to  
4 get, is 69 acres.

5 The UTP Number 3 is the super well in production,  
6 over 3 BCF and not that great a log, and the calculations  
7 say it is draining 525 acres and eventually will drain  
8 maybe 600 acres.

9 In the far right column, the Pluma 29 Number 1,  
10 it's only produced for about a year. In that year I  
11 calculated it drained 31 acres, and my estimate for its  
12 ultimate would show a drainage of 96 acres.

13 So I guess the point is, you get a variation in  
14 these calculated drainage areas, but they're all quite a  
15 bit bigger than 40. In fact, you just can't get enough gas  
16 in 40 acres to pay for drilling a Morrow well.

17 So these are the drainage areas of the wells  
18 where there's enough data and...

19 Q. Summarize your conclusions, the conclusions you  
20 can reach from these drainage calculations.

21 A. Well, the conclusions are, 40 acres is way too  
22 small for a drainage area for these kind of wells. In my  
23 opinion, 160 is the number that works, and that's the  
24 number that we're seeking.

25 And if you look at Exhibit 1, I mean you can see

1 that the people that drilled back in the 1980s were smarter  
2 than some of us, and they actually drilled the wells on  
3 160s, if you just look at them. There's one well on 160.

4 Q. If the pool rules are changed to 160 spacing, it  
5 would, in fact, be consistent with how the reservoir has  
6 been developed; is that correct?

7 A. That's my opinion. And the only exception to  
8 that is that Pogo has actually drilled two wells on the  
9 northeast quarter of Section 29, and that would be an  
10 inconsistency with the statement you and I are making.

11 MR. CARR: One of the Pogo wells has mechanical  
12 problems and has a tiny liner down through the Morrow, and  
13 I think -- I've heard it's not producing anymore, I don't  
14 know.

15 But anyway, it's probably not a significant  
16 producer, and so I kind of think that Pogo really has one  
17 real well on theirs and is not that much an exception to  
18 what we're saying.

19 The other part of the Pogo story, I think, would  
20 be, if we go to 160 acres, then our assumption, at least,  
21 is that the depth bracket allowable would be taken out of  
22 the rule book, and that says 650 barrels of oil, and with  
23 the 10,000 GOR, that would mean 6.5 million would be the  
24 allowable, which is pretty high and should give -- I think  
25 is way higher than Pogo can produce, and hopefully is no



1 problem to Pogo.

2 Q. So you see, if we use the standard depth bracket  
3 allowable, no problem for other operators in the reservoir;  
4 is that correct?

5 A. That's correct. 160 fits what's happened, and I  
6 think 160 fits even the recent wells.

7 Q. What would be the impact n Yates if this  
8 Application were denied?

9 A. Well, if this Application is denied, then two of  
10 our leases go away, I think is the -- the real purpose were  
11 here is to save those leases, or the motivating force in  
12 getting us to look at this was to save those leases. And  
13 it looks to me like the data says 160-acre spacing would be  
14 reasonable, and it just so happens that 160-acre spacing  
15 would save Yates' leases.

16 Q. If those leases, the other leases, expire,  
17 because the Application was denied, what would be the  
18 potential for future development in that portion of this  
19 pool?

20 A. Well, if those leases expired and the Feather-  
21 Morrow Oil Pool remains on 40s, there's a good chance  
22 somebody would buy those leases and drill 40-acre offsets  
23 and just plain overdrill the pool.

24 Q. In your opinion, is that development pattern  
25 justified by any of the information you have seen?

1           A.    No, it would be totally -- misapplication of the  
2 whole idea.

3           Q.    And if development was, in fact, on 40 acres, in  
4 your opinion would that result in a wasteful drilling  
5 practice?

6           A.    Very much so, yes, total waste there.

7           Q.    In your opinion, would approval of the  
8 Application be in the best interest of conservation, the  
9 prevention of waste and the protection of correlative  
10 rights of all owners in this pool?

11          A.    Yes, sir, definitely.

12          Q.    Were Yates Exhibits 6 through 18 prepared by you  
13 or compiled under your direction?

14          A.    They were prepared by me, yes, sir.

15          Q.    Does Yates request that the order in this case be  
16 expedited to the extent possible?

17          A.    That would help us out actually, yes.

18               MR. CARR:  Mr. Catanach, at this time we move the  
19 admission into evidence of Yates Petroleum Corporation  
20 Exhibits 6 through 18.

21               EXAMINER CATANACH:  Exhibits 6 through 18 will be  
22 admitted as evidence.

23               MR. CARR:  And that concludes my direct  
24 examination of Dr. Boneau.

25               EXAMINER CATANACH:  Mr. Bruce, do you have any

1 questions?

2 MR. BRUCE: Just a couple of questions.

3 CROSS-EXAMINATION

4 BY MR. BRUCE:

5 Q. Dr. Boneau, what was the depth of the discovery  
6 well, the perforations? Do you recall?

7 A. All the wells are -- well, about that same depth.  
8 It's 12,300-something.

9 Q. Okay. And you are proposing to retain that same  
10 GOR, the 10,000-to-1, that's currently in place?

11 A. Yes, sir.

12 Q. And then just one other question on your  
13 production chart on UTP Number 1. I think it's your  
14 Exhibit 8.

15 A. Okay.

16 Q. That well was declining, and then it increased in  
17 production in 1994 and flattened out. Do you know why that  
18 occurred?

19 A. No, I don't. I did not find anything in the file  
20 that explains that.

21 MR. BRUCE: That's all I have, Mr. Examiner.

22 EXAMINATION

23 BY EXAMINER CATANACH:

24 Q. Mr. Boneau, if those two leases expire, certainly  
25 Yates has the opportunity to reacquire those leases; is

1     that correct?

2           A.     I think that's correct, that's almost always  
3     correct, yes.

4           Q.     There appears to be some considerable difference  
5     in at least the UTP Number 1 and 3, the drainage areas for  
6     those two wells, compared to the newer wells to the south  
7     -- well, the Pluma 29 Number 1. Did you see any -- What  
8     are the differences that can be attributed to those  
9     differences in drainage areas?

10          A.     A number of factors. Well, the UTP Number 1 has  
11     160, 200 acres. They'd all be my friend if they were all  
12     like UTP Number 1.

13                 The UTP Number 3, the real high-productivity  
14     well, just doesn't have that great a log, and it -- in my  
15     head, it must be a better reservoir real close by, so that  
16     I really don't think it's draining 600 acres. I think it's  
17     draining, you know, 400 acres or 300 acres or some smaller  
18     number.

19                 The other main point, the newer wells have some  
20     pressure depletion. Okay. This is actually relatively  
21     important. The original pressure, bottomhole pressure, in  
22     the discovery well, the Number 1 well, was like 5480  
23     pounds. A couple years later, when the Number 3 well was  
24     drilled, the bottomhole pressure was 4850 pounds. A little  
25     drop, but not much.

1           Our well, the Red Tail, where we have actually  
2           measured the pressure, the original pressure there was 3501  
3           pounds, and I'm almost sure that that huge decline is not  
4           due to the Pluma 29-1. I think it's due mostly to  
5           production from those UTP wells over the 15 years.

6           And so there is that pressure evidence that,  
7           well, the pressures have moved over those areas, which says  
8           40 acres is too little, another way of saying 40 acres is  
9           too little.

10           But it also means that the newer wells are not  
11           going to produce as much as the older wells, because some  
12           of their pressure and their reserves has been taken away,  
13           and that then factors into the drainage-area calculations  
14           for the newer wells.

15           So you maybe have lost a third of the gas, and so  
16           you've lost a third of the drainage area, so that my 96 or  
17           whatever I get for the Pluma, if it had been drilled 15  
18           years ago, would go to 150 acres if it could capture the  
19           gas that has moved to those UTP wells.

20           So my two factors were, the one huge number, I  
21           think, just has got to have better reservoir nearby. And  
22           my other factor was, the pressure depletion over the years  
23           has reduced the amount of gas available to the newer wells  
24           and thereby reduced the drainage areas of the newer wells.

25           Q.    Okay. The Red Tail Number 1, you don't believe

1 you have enough data at this point to calculate a drainage  
2 area?

3 A. No, I don't.

4 Q. Well, let me ask you this. How does the initial  
5 producing rate of the Red Tail Number 1 compare to some of  
6 these other wells?

7 A. Well, you look, the initial rate is in line with  
8 the rates of other wells. We've only got two weeks of  
9 data, and I don't know if it's going to hold up there or  
10 not.

11 The other wells, the original wells, held at  
12 fairly high rates for, you know, eight to ten years, and I  
13 just am quite sure that ours won't do that, but I sure hope  
14 it would.

15 Q. But you're averaging, I believe you said, 50  
16 barrels a day and --

17 A. 1400 MCF a day, I said, yeah.

18 Q. So you're saying those rates compare the same,  
19 basically, to the other producing wells?

20 A. Yeah, the other wells completed for less than 2  
21 million gas. This well had made 3 BCF, completed for less  
22 than 2 million, with more oil than 50, with a couple  
23 hundred barrels of oil. And that's comparable to the kind  
24 of gas we're getting out of our wells.

25 The original wells did not fall very much over

1 five to ten years. And our well, if you look at the  
2 numbers, maybe has fallen a couple hundred MCF in two  
3 weeks. So it hopefully is too early to say.

4 No, I don't expect our well to produce 3 BCF, but  
5 I don't know what it will produce.

6 Q. And you just can't -- With the data available,  
7 you just can't speculate on the drainage area for the Red  
8 Tail well at this point?

9 A. I can speculate on anything, but I really -- I  
10 really don't think there's enough data there to have  
11 calculated a number for you, and I did not calculate a  
12 number for you.

13 Q. Okay. For the ultimate drainage area, what end  
14 point did you use for those, Dr. Boneau, as far as  
15 production rate? Do you recall?

16 A. Yeah, I used when they became uneconomic with  
17 operating costs of \$1500 and gas prices of three dollars,  
18 so that's -- I can look here. So at the end, they're  
19 producing about 30 MCF a day, when I stopped their  
20 production.

21 Q. The northwest quarter of Section 28, that would  
22 be all, as far as you know, that's commonly owned at this  
23 point; is that --

24 A. Yeah, the yellow shows the leases that were  
25 Yates', but there's an agreement with Concho whereby we

1 have common ownership in the west half of 28. So in the  
2 northwest quarter of 28 Yates owns 75 percent and Concho 25  
3 percent throughout there.

4 Q. And that interest ownership is not going to  
5 change, regardless if it's spaced on 40 or 160?

6 A. If it's spaced on 40, Yates would still own 75  
7 percent of the well, even though it looks like the well  
8 location is on a white square.

9 Q. Okay, and Concho would still own a percentage of  
10 that?

11 A. Would still own -- Yes.

12 Q. And you mentioned the other Pogo well is --  
13 That's currently being drilled?

14 A. Well, it was spudded last July or August, and  
15 latest information from PI is, it was a TD in October. I  
16 think it's Mr. Meek that told me he thought it was making  
17 about 2 million a day, but that's just geology talk.

18 (Laughter)

19 Q. Mr. Boneau, upspacing a pool certainly brings  
20 into play some possible scenarios that --

21 A. Yes, I think we're -- I mean, we're fortunate in  
22 this case that the three old wells are really drilled on  
23 160-acre leases. We've got our problem leases for our Red  
24 Tail, and the Pogo wells are drilled on a lease that's the  
25 whole Section 29, so they should have common ownership.



1           The only little bad thing in that scenario is  
2   that Pogo has those two wells. And we have lots of places  
3   where we have two wells on a spacing unit making one  
4   allowable, for example, Dagger Draw. And so I think --  
5   Well, I didn't know if they would be here to protest or  
6   not, and they're not protesting too seriously, so I think  
7   they would be okay.

8           (Laughter)

9           Q. Well, certainly you're not testifying that the  
10   three -- the two Pogo wells in the north -- I'm sorry, the  
11   wells in the north, the UTP wells, it's not your testimony  
12   that if we change the spacing to 160 those interests will  
13   be the same as they were if they were spaced on 40? I  
14   mean, there may be some difference in interest that will be  
15   now included in a 160 that didn't participate in the 40  
16   acres.

17          A. I do not know that that's not true, yes.

18          Q. And certainly -- I mean, as far as downspacing,  
19   that's certainly one of the reasons the Division doesn't  
20   like to downspace a pool, is because of that reason. It  
21   creates inequities like that.

22                I don't know what the effect of upspacing a pool  
23   like this would be on those interest owners to the north  
24   there, and that's certainly a concern.

25          A. All we can say is that we noticed them, and they

1 did not respond.

2 Q. Well, you noticed the operators of those wells.

3 A. Yes.

4 EXAMINER CATANACH: Certainly the interests that  
5 were not participating in the wells were not notified.

6 I believe that's all the questions I have.

7 MR. CARR: That concludes our presentation in  
8 this case.

9 EXAMINER CATANACH: Mr. Bruce, do you have  
10 anything further?

11 MR. BRUCE: No, Mr. Examiner. We weren't exactly  
12 sure -- Pogo wasn't exactly sure what Yates was proposing  
13 today and is just here to preserve its rights.

14 MR. GRAY: Mr. Catanach?

15 EXAMINER CATANACH: Yes, sir.

16 MR. GRAY: I'm Mike Gray with Concho Resources in  
17 Midland, and I have a letter that's addressed to Mr. Carr  
18 regarding this case, and Concho wishes to express its  
19 support for the Yates Application.

20 We're a working interest owner in the well, and  
21 we also own offsets to the south and southeast, direct  
22 offsets to the proposed 160.

23 And we just wish to express our support for the  
24 160-acre spacing proposed by Yates.

25 EXAMINER CATANACH: Okay, thank you, sir.

1 Anything else?

2 There being nothing else in this case, Case  
3 12,596 will be taken under advisement.

4 (Thereupon, these proceedings were concluded at  
5 11:45 a.m.)

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I hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 12596  
heard by me on February 22 19 2001  
David R. Catant, Examiner  
Oil Conservation Division

## 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 February 26th, 2001.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 2002