

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. 13,037  
)  
APPLICATION OF YATES PETROLEUM )  
CORPORATION FOR APPROVAL OF A UNIT )  
AGREEMENT, CHAVES COUNTY, NEW MEXICO )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, JR., Hearing Examiner

RECEIVED

March 27th, 2003

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Santa Fe, New Mexico

Oil Conservation Division

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, JR., Hearing Examiner, on Thursday, March 27th, 2003, 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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March 27th, 2003  
 Examiner Hearing  
 CASE NO. 13,037

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

## FOR THE DIVISION:

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## FOR THE APPLICANT:

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

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2 10:01 a.m.:

3           EXAMINER JONES: Okay, let's go back on the  
4 record, and at this time we'll call Case 13,037,  
5 Application of Yates Petroleum Corporation for approval of  
6 a unit agreement in Chaves County, New Mexico.

7           Call for appearances.

8           MR. CARR: May it please the Examiners, my name  
9 is William F. Carr with the Santa Fe office of Holland and  
10 Hart, L.L.P. We represent Yates Petroleum Corporation in  
11 this matter, and I have two witnesses.

12           EXAMINER JONES: Any other appearances?  
13 Will the witnesses please stand to be sworn in?  
14 (Thereupon, the witnesses were sworn.)

15           EXAMINER JONES: Mr. Carr?

16                     CHARLES E. MORAN,  
17 the witness herein, after having been first duly sworn upon  
18 his oath, was examined and testified as follows:

19                     DIRECT EXAMINATION

20 BY MR. CARR:

21           Q. Please state your name for the record.

22           A. My name is Charles Moran, and I reside in  
23 Artesia, New Mexico.

24           Q. Mr. Moran, by whom are you employed?

25           A. Yates Petroleum Corporation as a landman.

1 Q. Have you previously testified before this  
2 Division?

3 A. Yes, I have.

4 Q. And were your credentials as an expert in  
5 petroleum land matters accepted and made a matter of  
6 record?

7 A. Yes, they were.

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

10 A. Yes, I am familiar with the Application.

11 Q. And are you familiar with the proposed Biplane  
12 Federal State Federal State Exploratory Unit, including the  
13 status of the lands in the proposed unit area?

14 A. Yes, I am.

15 MR. CARR: We tender Mr. Moran as an expert in  
16 petroleum land matters.

17 EXAMINER JONES: Mr. Moran is so tendered.

18 Q. (By Mr. Carr) Would you initially summarize for  
19 the Examiners what it is that Yates seeks with this  
20 Application?

21 A. Yates Petroleum Corporation is seeking approval  
22 of a federal state exploratory unit in Chaves County, New  
23 Mexico, in Township 6 South, 27 East, Sections 3, Lots 3  
24 and 4, all of Section 4, consisting of Lots 1, 2, 3 and 4,  
25 Section 9 all, Section 10 the west half, Section 15 the

1 west half, and all of Section 16. That is lands composed  
2 of five federal leases, two state leases and four fee  
3 leases.

4 Q. Approximately how many acres are in the unit  
5 area?

6 A. There are approximately 2170 acres in the unit  
7 area.

8 Q. Have you prepared exhibits for presentation here  
9 today?

10 A. Yes, I have.

11 Q. Would you identify what has been marked as Yates  
12 Petroleum Corporation Exhibit Number 1?

13 A. Exhibit Number 1 is the standard unit agreement  
14 for a federal/state exploratory unit, as presented to the  
15 Land Commissioner and the BLM for approval.

16 Q. Let's go to what has been marked Exhibit 2.  
17 Would you identify and review that?

18 A. Exhibit 2 is the land plat of the area in Chaves  
19 County, New Mexico, and it identifies the separate tracts  
20 within the proposed unit boundaries, setting out the  
21 ownership being federal acreage identified in white, State  
22 land identified by horizontal slash, and the fee land  
23 identified by vertical slash.

24 Q. And this is the same plat that's attached to the  
25 unit agreement as Exhibit A; isn't that right?

1 A. Yes.

2 Q. Let's go to Exhibit Number 3. This is the  
3 ownership breakdown. Review the information on this for  
4 the Examiner.

5 A. Exhibit Number 3 is Exhibit B to the proposed  
6 unit agreement, as presented to the BLM and the State Land  
7 Office. It identifies by tract number the specific leases  
8 to be included within the proposed unit boundary. It sets  
9 forth the legal description, the number of acres, the  
10 serial number, the expiration date of the leases, the basic  
11 royalty and ownership percentage, the lessees of record,  
12 any overriding royalty interests, and the working interest  
13 of the leasehold.

14 Q. What percent of the working interest is committed  
15 to this proposed unit?

16 A. Currently Yates Petroleum Corporation, Yates  
17 Drilling Company, Abo Petroleum Corporation, MYCO  
18 Industries, Inc., all own all the leasehold within the  
19 unit, and they're all here, all proposing to put forth the  
20 acreage in the unit.

21 Q. So you have a 100-percent commitment --

22 A. Yes, we --

23 Q. -- to this --

24 A. -- have 100 percent, although we have not  
25 verified the fee owners will let us commit their acreage

1 yet.

2 Q. What about the lease expiration dates in the unit  
3 area?

4 A. If you will note, on Tracts 1, 2, 3 and 4 we have  
5 an expiration date of 5-31-03. When we were putting this  
6 unit together to develop the area, previous plans fell  
7 apart and we ran into a time frame, and we're trying to --  
8 Well, we've run into a time bind, and this unit is going to  
9 help us explore the area in a prudent manner without having  
10 to get out on each one of the separate leases.

11 Q. Have you reviewed the proposed unit and unit  
12 agreement with the Commissioner of Public Lands?

13 A. Yes, I have.

14 Q. And what is Exhibit 4?

15 A. Exhibit 4 is the approval -- the preliminary  
16 approval letter from the Commissioner of Public Lands  
17 setting forth their approval of the unit as we presented to  
18 them.

19 Q. Have you reviewed this proposal with the Bureau  
20 of Land Management?

21 A. Yes, we have, that's Exhibit 5, represents the  
22 preliminary approval we received from the Bureau of Land  
23 Management just this week, with regards to the unit.

24 Q. And they have designated this as an area  
25 logically suited for development under a unit plan; is that

1 correct?

2 A. They have, for the Wolfcamp formation.

3 Q. And have they assigned a number to the unit?

4 A. The unit was assigned number NMNM109680X.

5 Q. Does Yates Petroleum Corporation seek to be  
6 designated operator of the unit?

7 A. Yes, we do.

8 Q. Does this agreement provide for the periodic  
9 filing of plans of development?

10 A. Yes, it initially requires that we submit updated  
11 plans within six months after the first well and then on a  
12 yearly basis thereafter.

13 Q. And these will be filed with the OCD as well as  
14 the Land Office and the BLM?

15 A. They will be filed with the OCD, the State Land  
16 Office and the Bureau of Land Management.

17 Q. What horizons are we proposing to unitize in this  
18 proposed Biplane Federal State Exploratory unit?

19 A. The primary objective out here is the Wolfcamp  
20 formation but we have some secondary targets, that being  
21 the Siluro-Devonian and the Strawn and the Cisco.

22 Q. And you're attempting to unitize all horizons?

23 A. We will attempt to unitize all horizons.

24 Q. Will Yates call a geological witness to review  
25 the geological portion of this case?

1 A. Yes, we will.

2 Q. Mr. Moran, were Exhibits 1 through 5 either  
3 prepared by you or compiled under your direction?

4 A. Yes, they were.

5 MR. CARR: At this time, may it please the  
6 Examiner, we would move the admission into evidence of  
7 Yates Exhibits 1 through 5.

8 EXAMINER JONES: Exhibits 1 through 5 should be  
9 admitted to evidence.

10 MR. CARR: And that concludes my examination of  
11 Mr. Moran.

12 EXAMINATION

13 BY EXAMINER JONES:

14 Q. Mr. Moran, what is the number you said that they  
15 assigned this --

16 A. If you will look in Exhibit Number 5, second  
17 paragraph --

18 Q. Okay, there it is.

19 A. -- it's NMNM109680X.

20 Q. -- -680X?

21 A. Yes, it's in the letter dated March 21st from the  
22 Bureau of Land Management, second paragraph, fourth line.

23 Q. Okay. Can you briefly summarize what this letter  
24 says, just for me?

25 A. This letter is in the process of obtaining Bureau

1 of Land Management approval of an exploratory unit. You're  
2 going to make a preliminary presentation to them --

3 Q. Okay.

4 A. -- and then you submit what your proposed plans  
5 are. This letter is an approval. They did request two  
6 changes to the unit agreement. That's what they're  
7 referencing in Sections 9 and 11. We are agreeing to make  
8 those changes as they've requested, and those changes will  
9 be incorporated in the final unit agreement submittal for  
10 their approval.

11 Q. Okay. And this same way with the State Land  
12 Office, then, this is kind of a preliminary --

13 A. Yes, it's preliminary approval so we can proceed  
14 with getting all ratifications and all parties to join the  
15 unit.

16 Q. Okay. You mentioned the fee working interest  
17 owners haven't signed?

18 A. No, no, Yates Petroleum Corporation, MYCO, Abo  
19 and Yates Drilling own the working interest --

20 Q. -- 100 percent?

21 A. -- 100 percent. But we need to invite the  
22 royalty owners, the fee mineral owners, to whether to  
23 commit their leases to the unit. We have not been able to  
24 do that yet because I did not have the BLM approval that  
25 the unit was going to proceed ahead.

1 Q. Okay, and once you get that approval, then you go  
2 to --

3 A. Yes --

4 Q. -- the letter?

5 A. -- right.

6 Q. But then you're under a deadline of --

7 A. I've got leases expiring May 31st.

8 Q. May 31st, okay. And -- But if we get this out in  
9 time, you can go ahead and --

10 A. Yes, I can proceed --

11 Q. -- get a rig out there?

12 A. -- ahead. And they -- the feds will decide the  
13 paying -- wells in paying quantities; is that --

14 A. After the well is drilled, we will determine what  
15 information is available to determine if the well is  
16 capable of production in either paying quantities or  
17 commercial quantities, to whether the well meets the  
18 requirements of a unit.

19 Q. Oh, okay. And then it will become a unit, and  
20 you will save the leases?

21 A. Well, no, we -- By obtaining unit approval prior  
22 to the lease expiration, we can get out there and drill the  
23 one well and hold all the leases within the unit with that  
24 well.

25 Q. Okay. And you said there were six --

1           A.   Initially the plan requires that we submit  
2 evidence in the first six months after we get the initial  
3 well drilled, and then on an annual basis thereafter, to  
4 the State Land Office, the OCD and the Bureau of Land  
5 Management.

6                   EXAMINER JONES:   Okay, that's -- Mr. Brooks?

7                                   EXAMINATION

8 BY MR. BROOKS:

9           Q.   As I understand the way these things work --  
10 correct me if I'm wrong, but once the unit is approved by  
11 the BLM and approved by SLO and approved by us, it becomes  
12 a unit.  And you drill a well, that's a unit well, it holds  
13 all the leases in the unit at the moment, correct?

14           A.   Yes, at the moment --

15           Q.   And then --

16           A.   -- pending the termination of the commercial  
17 production.

18           Q.   Right.  And commercial production is different  
19 from production in paying quantities, because you can have  
20 a well that would produce in paying quantities under the  
21 state-law, commonlaw definition, that would not be deemed a  
22 commercial well under the federal regulations for an  
23 exploratory unit?

24           A.   But that well will work to meet your unit  
25 obligations for drilling a well --

1 Q. For the moment?

2 A. For the moment, and will allow you to go commence  
3 a second well if necessary.

4 Q. Yeah. And if it doesn't go into a participating  
5 area at some point in time, then that drillblock will be  
6 contracted out of the unit at some point, right?

7 A. It would go to production on a lease basis.

8 Q. But any area that would be held by the unit  
9 production that's then contracted out of the unit, you have  
10 two years after it's contracted out to establish production  
11 to keep that lease in force, if I remember right?

12 A. That's if the unit is terminated.

13 Q. Oh, okay. There's some grace period for acreages  
14 contracted out, is there not?

15 A. On the contraction of a unit, a lease that is  
16 contracted out of a unit, you will get an additional two-  
17 year period added to the lease term if it's within the last  
18 year of its life or past its primary term.

19 MR. BROOKS: Okay, thank you.

20 FURTHER EXAMINATION

21 BY EXAMINER JONES:

22 Q. Mr. Moran, one more question. The lease --  
23 Sections 3 and 4, this is just a partial section you're  
24 trying to put in the unit?

25 A. Those are correction sections --

1 Q. Okay.

2 A. -- they represent the full section.

3 Q. Okay, great. Good.

4 A. Yeah, my memory is that each one of those  
5 sections is a little over 160 acres each, and it's just a  
6 correction section.

7 EXAMINER JONES: Okay, that concludes my  
8 questioning of Mr. Moran. Thank you very much.

9 MR. CARR: Mr. Examiner, at this time we'd call  
10 Tim Miller, and I would request that the record reflect  
11 that Mr. Miller testified in the previous case, that his  
12 credentials as an expert in petroleum geology have been  
13 accepted, and he remains under oath.

14 EXAMINER JONES: That sounds acceptable.

15 TIM MILLER,

16 the witness herein, having been previously duly sworn upon  
17 his oath, was examined and testified as follows:

18 DIRECT EXAMINATION

19 BY MR. CARR:

20 Q. Mr. Miller, are you familiar with the proposed  
21 Biplane Federal State Exploratory Unit?

22 A. Yes, I am.

23 Q. Have you made a geological study of the area  
24 which is the subject of this unitization effort?

25 A. Yes, I have.

1 Q. Are you prepared to share the results of that  
2 work with the Examiners?

3 A. Yes, I am.

4 Q. Let's go to what has been marked as Exhibit 6.  
5 And I'd like you, as you go into this, to first explain  
6 what the primary objective is in this unit area.

7 A. Okay, what you're looking at in Exhibit 6 is the  
8 structure map on top of this Wolfcamp pay zone, and this is  
9 the primary objective. We call it a Wolfcamp-Spear zone,  
10 and I will relate that later in my testimony, because we  
11 basically have found tremendous amounts of gas production  
12 out of this Wolfcamp zone in the Four Ranch area, which is  
13 about 25 to 30 miles southwest of this area.

14 So what you're looking at here in Exhibit 6, once  
15 again, is a structure map on top of this pay zone. And the  
16 unit outline, as you can see, is in -- depends, I guess, if  
17 you're color-blind or not, you have trouble distinguishing  
18 -- That looks pink to me, my draft people said it was red,  
19 so... Anyway, that outlines the unit.

20 Our proposed well, which is the Biplane Unit  
21 Number 1, is in the northeast quarter of Section 16. It is  
22 660 from the north and east line.

23 The reason why we are placing this well here, we  
24 have learned from our previous production in this Wolfcamp  
25 zone that the better porosity is developed more on the

1 flanks, lower down the structure. If you try to place the  
2 well on the crest of the structure you'll have the  
3 carbonate zone, the limestone zone, but you will lose your  
4 porosity. It seems the porosity develops better down the  
5 flanks of these structures, and that is why we are  
6 positioning the Biplane Unit Number 1 well in the northeast  
7 quarter of that section. It is slightly downdip from the  
8 crest of the structure.

9           And as you will see on a cross-section later,  
10 there's those two old oil wells in the northwest quarter of  
11 15 that produce from a deeper formation, basically the  
12 Siluro-Devonian. We feel that since we will take this well  
13 all the way to the basement we could have some secondary  
14 objectives there, and we would be slightly updip to those  
15 wells.

16           Basically, this shows the structure, two separate  
17 structures. We are on a small anticline in the unit area.  
18 And then down to the south, which is obviously out of the  
19 unit area, is another small structure that could possibly  
20 be tested sometime in the future by itself.

21           Q. Mr. Miller, this exhibit shows a number of wells.  
22 Has the particular Wolfcamp zone that we're interested in  
23 here, the Wolfcamp-Spear zone, ever been tested in the unit  
24 area?

25           A. No, this particular zone that is our primary

1 objective has never been tested in the area.

2 Q. You're going to be drilling the initial test well  
3 to approximately what depth?

4 A. We are going to drill it to 6600 feet.

5 Q. And what is the approximate cost of a well to  
6 this depth?

7 A. The cost of a well to this depth is around  
8 \$650,000.

9 Q. And it's your objective to get this unit approved  
10 and the well commenced prior to the May 31 expiration date?

11 A. Yes, it is.

12 Q. Let's go to what has been marked Exhibit Number  
13 7, the A-A' cross-section. I'd ask you to first explain  
14 the line of cross-section, then review the information on  
15 the exhibit.

16 A. Okay, if you use you structure map more as an  
17 index to which way the cross-section is running you'll be a  
18 little more orientated on how it stands.

19 Once again, it's a cross-section from A-A'.  
20 Technically I guess you could it runs generally from the  
21 north to the south, but basically this is a combination  
22 north-to-south and west-to-east cross-section, just to give  
23 you an idea on the structure in here, how it is and how we  
24 think it will affect where we're proposing our location.  
25 Again, it's hung on a minus 1350 subsea datum.

1           If you look on the cross-section starting up at  
2 the north, at the Blackrock Oil Company well, the Bates  
3 McIntyre Number 1, you'll see we have labeled the Wolfcamp-  
4 Spear zone. That is our primary objective out there.

5           And all these logs -- except for, I think, one  
6 log on the cross-section which we'll get to in a -- which  
7 is the McClellan Pearl State Number 1 -- are sonic logs.  
8 Most of these wells were drilled in the 1960s and 1970s,  
9 and some in the late 1950s, basically for -- determine  
10 porosity. All they ran was your sonic log.

11           Now, as you can see on the Wolfcamp-Spear zone,  
12 where there is porosity, or what we believe is porosity in  
13 the sonic log, that's colored in red.

14           And as you just glance at it from left to right  
15 on the cross-section, just quickly going through the wells,  
16 you can see the Blackrock Oil Company's well has porosity  
17 in there, and basically that's calculated around 7 or 8  
18 percent.

19           The Jack McClellan well, which is the second well  
20 on the cross-section, again it has some porosity in it.

21           The next McClellan well has a little porosity.

22           We are hoping where our proposed location, our  
23 Biplane Unit is, we will have similar porosity, maybe even  
24 better.

25           And as you can see, we're going updip. If you

1 look at the McClellan Oil Corporation's Pearl State Number  
2 1, this again is near -- we think a little higher on  
3 structure than where our Biplane Unit is, and this is not a  
4 sonic log, this is a neutron density log, which is used a  
5 lot to show gas crossover. Once again, there is basically  
6 no porosity in this interval.

7 As you go further updip the old Shenandoah Oil  
8 Corporation New Mexico State Number 1, that once again is  
9 more on the crest of the structure knob. That has a little  
10 porosity in it.

11 And then the last well, which you go back to the  
12 east, is the old Read and Stevens State 16 Number 1. It  
13 has very little porosity in it either.

14 Basically what this cross-section is showing,  
15 that if you stay on the flanks of the structure you have a  
16 better chance of developing porosity. And since back then  
17 most of these wells, they did not have a neutron density  
18 tool, the only way you're going to really know if -- in our  
19 experience, if this zone is productive, you have to run the  
20 neutron density to see if you have gas in it. We're mainly  
21 hoping that we're in for gas in this zone.

22 None of these wells were ever tested in it, and  
23 it's from our experience as we're drilling through this  
24 Wolfcamp-Spear zone, normally we usually drill with a  
25 somewhat heavy mud, usually around 10-pound mud.

1           And the reason why we do that, we have to keep  
2 the Abo -- keep it under control uphole. Red shale, if you  
3 get it wet a lot, if you leave -- the water loss goes up,  
4 it will start sloughing in on you, and if you just -- do  
5 not have heavy enough mud around -- between 9-1/2 to 10-  
6 pound mud, you'll start losing the hole. Otherwise you'll  
7 be -- basically lose the hole or not able to log it.

8           And what I'm getting at there is, when you drill  
9 through these zones, the mudlogger on location will see a  
10 slight increase in gas, because what we've found so far,  
11 these are not real high-pressured zones. If you're running  
12 10-pound mud, they do not give up that much gas. And when  
13 I say gas on a mud log, a poor to medium show would be  
14 around 20 to 30 units. But in the case of this zone that  
15 is a good show for this well, and we have just learned that  
16 through experience.

17           Like I said, this zone was never tested in the  
18 area, and as you can see just by the cross-section, it is  
19 virtually almost in -- it has porosity almost in every well  
20 except for the McClellan Pearl State and the Shenandoah  
21 well, which we think are -- is more on top of the  
22 structure.

23           Now, what this cross-section also depicts, there  
24 are some deeper zones downhole. The Blackrock oil well, or  
25 the Blackrock Oil Company's Bates McIntyre well, they

1 tested and tried to produce out of the Cisco where you see  
2 the perms in it, and they ran several DSTs.

3 Just to sum it up, they did get some pretty good  
4 gas out of one of the DSTs in the Cisco, basically 3.2  
5 million. They tried to produce these.

6 They initially potentialized it for 350,000 and 20  
7 barrels of water, but when they put it on production they  
8 basically got about 1 1/2 million cubic feet of gas and  
9 just basically plugged it.

10 There are some other tests in the well. They've  
11 tested some Strawn sands, they tested some Mississippian,  
12 and they did get some gas and oil on those.

13 The two other deeper wells, the Jack McClellan  
14 Bar J Federals 2 and 1, these wells initially were drilled  
15 through the Siluro-Devonian, the deepest pay zone out here,  
16 and the Bar J Federal Number 2 had accumulated 1600 barrels  
17 of oil, no gas, and 12,000 barrels of water.

18 The best well out there was the McClellan Bar J  
19 Federal Number 1. They drilled down into the Siluro-  
20 Devonian, perf'ed it, and they accumulated 34,000 barrels  
21 of oil and 3.6 million cubic feet of gas and, as you can  
22 see, 323,000 barrels of water. It made a lot of water.  
23 That is another reason why we think that we need to be a  
24 little further updip, but not right on the crest, to  
25 basically get the primary formation, which is the Wolfcamp-

1 Spear, but also be updip and maybe be out of the water  
2 better to -- if we do have some pay zones in the Siluro-  
3 Devonian.

4 And you also see that the Pearl State, the  
5 McClellan Pearl State, the next -- the last -- next to the  
6 last wells on the cross-section, the Shenandoah Oil, we  
7 think these are upfaulted block down from basement up  
8 through the low -- the fault runs up through the lower part  
9 of the Wolfcamp. And basically these are higher in the  
10 Siluro-Devonian, but basically they were nonproductive, and  
11 we think this is just because of an upfaulted block and the  
12 productive oil is on the downthrown side in McClellan's two  
13 Bar J Federals, Number 1 and 2.

14 And so as you can see, we -- the primary  
15 objectives are the Wolfcamp-Spear zone, but there are  
16 possibilities you could have pay zones in the Cisco, the  
17 Strawn and the Siluro-Devonian. And basically that is a  
18 compilation of what this cross-section is showing.

19 Q. Mr. Miller, is Exhibit Number 8 a neutron density  
20 log section?

21 A. Yes.

22 Q. And where is the Aurora "AUR" State Number 1?

23 A. Okay, the -- Yates Petroleum's Aurora State  
24 Number 1, this is the Wolfcamp-Spear-productive zone that I  
25 have alluded to. This is in the Four Ranch field, which is

1 about 25 to 30 miles southwest of us.

2           What I've done here, this is an example, like Mr.  
3 Carr said, of a neutron density log showing the Wolfcamp-  
4 Spear zone, which is highlighted in blue. What is colored  
5 in red is the neutron density crossover. The solid line,  
6 again, is the density curve, and is reading right at 13  
7 percent. The neutron is down at 2 percent.

8           And also you can see if you look to the left  
9 where the gamma-ray is, where we have the best wells out of  
10 this zone and have -- it seems to be the better porosity,  
11 it is a hot limestone. You can see the gamma-ray go to the  
12 right.

13           What we normally run in our logging programs, we  
14 run an NGT tool, which takes out the uranium in the rock  
15 and just does the potassium. And what it shows is, since  
16 the uranium is knocked out, that this is -- a lot of people  
17 would think that is probably a shale because the gamma-ray  
18 is going off-scale. It is not, it's just a hot lime. And  
19 we have found that the porosity -- this has several --  
20 vuggy porosity, and it is leached, and we think at one time  
21 that it was maybe just at water table or below and you had  
22 groundwaters flowing through it that opened up the  
23 permeability.

24           But we think that on the cross-section this  
25 Wolfcamp-Spear zone, that you have seen -- most of the

1 wells have porosity, but until we actually drill our new  
2 well and go in and run this neutron density curve, that's  
3 about the only way we can tell that the Wolfcamp-Spear zone  
4 possibly could have hydrocarbons in it and mainly gas.

5 Q. In this Aurora well, how good a well was it?

6 A. Yeah, the Aurora well is the best well we've  
7 found to date for the Wolfcamp-Spear. It has made 1.9 BCF  
8 since July of 2000, and basically this is through January,  
9 this year production.

10 Q. Is Yates Exhibit Number 9 a written summary of  
11 your geological presentation?

12 A. Yes, it is.

13 Q. Would you refer to this summary and then review  
14 for the Examiners why it is that Yates is attempting to  
15 develop this area under a unit plan?

16 A. Okay, the geological summary basically is a --  
17 states where the unit is located. And once again, on the  
18 structure map that is the unit outline.

19 And we are planning to propose the Biplane Unit  
20 Number 1 in the northeast quarter, which is 660 from the  
21 north and east of Section 16, to initially target the  
22 primary pay zone, which would be the Wolfcamp-Spear zone,  
23 which would open up a new pay interval in this township.

24 And also we think that positioning where it is,  
25 as I have stated before, we feel that you lose porosity on

1 the crest of the structure. Down on the flanks of the  
2 structure you gain better porosity, better development.  
3 And it also helps us that we are a little higher  
4 structurally if we encounter any hydrocarbons down in the  
5 Siluro-Devonian.

6 Q. Will developing this property under a unit plan  
7 enable Yates to, after drilling the first well, engage in  
8 the type of stepout development that's dictated by the  
9 information you acquire in the reservoir?

10 A. Yes, it will.

11 Q. In your opinion, will approval of the Application  
12 and development of this area under a unit plan be in the  
13 best interests of conservation, the prevention of waste and  
14 the protection of correlative rights?

15 A. Yes, it will.

16 Q. Were Yates Exhibits 6 through 9 prepared by you?

17 A. Yes, they were.

18 MR. CARR: At this time, may it please the  
19 Examiners, we would move the admission into evidence of  
20 Yates Petroleum Corporation Exhibits 6 through 9.

21 EXAMINER JONES: Exhibits 6 through 9 are so  
22 admitted.

23 EXAMINATION

24 BY EXAMINER JONES:

25 Q. Mr. Miller, the -- so are you going to case off

1 the Abo, then, and drill out with more pressure?

2 A. No, we'll just do our normal drilling operation  
3 up there. I don't know if I actually understand the  
4 question, but --

5 Q. Well, you said the Abo needed to be 10-something-  
6 pound mud.

7 A. We just are able to control it better running in  
8 the range of 9-1/2 to 10-pound mud, and keep it from  
9 basically caving in on you. Because obviously that happens  
10 while you're drilling, and the mudlogger can normally tell  
11 that. He's getting red shale samples all the way down the  
12 hole.

13 When it comes time to log, a lot of times you  
14 can't get the logging tools downhole because of all the Abo  
15 shale. So we found that if you keep the mud weight around  
16 10 pounds, you can keep the Abo under control.

17 Q. Okay, and what's your dryhole cost, or just --  
18 you said something about \$650,000 --

19 A. Overall completion cost would be \$650,000.

20 Q. Okay.

21 A. Dryhole is probably more in the range of around  
22 \$450,000.

23 Q. Okay, this well, this analogy well, 1.9 BCF  
24 for --

25 A. Yes.

1 Q. -- six feet of pay --

2 A. Yes, yes --

3 Q. -- six or seven feet?

4 A. -- it's really amazing.

5 Q. So --

6 A. This was an old field that -- including us, we  
7 had bypassed the zone. This well offset an old well  
8 location half a -- about a quarter mile to the east.

9 We came uphole after it was producing out of the  
10 Siluro-Devonian, decided to hit this because it had this  
11 characteristic on the neutron density log. It had a mudlog  
12 show.

13 It initially did -- that's the old Spear Number 3  
14 -- initially did just over 2 million a day. So we decided  
15 to offset it and we got a very -- as you can see.

16 Q. So it was necessary to offset it to --

17 A. -- to prove it, to see if it actually --

18 Q. Oh, okay.

19 A. -- is the best in the area, right.

20 Q. But in this unit area you're going to go ahead  
21 and drill another well, just so you can get better logs  
22 and...

23 A. Right, right.

24 Q. You can't run a -- oh, a TDT or something through  
25 this -- some kind of a cased-hole porosity tool that will

1 kind of tell you a little more about the porosity?

2 A. Well, we have tried to run cased-hole tools in  
3 some of our brand-new holes we've drilled because, like  
4 I've said before, we've lost the -- basically, we can't get  
5 normal-sized, you know, regular open-hole logs, and we have  
6 just -- are never satisfied with the data. It just doesn't  
7 -- in our opinion, it just doesn't tell you what a regular  
8 open-hole log will tell you.

9 Q. Okay.

10 A. You just get information with open-hole logs.

11 Q. And you've got the mudlog along with it.

12 A. And you -- of course, yes, you have the mudlog  
13 along with it.

14 Q. Now, you've probably already said. How deep are  
15 you going to drill?

16 A. We're going to drill down to around 6600 feet.

17 Q. But is the unit -- the unit will be covering all  
18 depths; is that right?

19 A. Yes.

20 EXAMINER JONES: Okay, that was -- Let's see  
21 here. That was all my questions.

22 MR. BROOKS: No questions.

23 EXAMINER JONES: Thanks.

24 MR. CARR: That concludes our presentation of  
25 this case.

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EXAMINER JONES: Okay. With that, Case 13,037  
will be taken under advisement.

(Thereupon, these proceedings were concluded at  
10:36 a.m.)

\* \* \*

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 13037  
heard by me on 3/27 2002  
[Signature], 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 April 4th, 2003.



STEVEN T. BRENNER  
 CCR No. 7

My commission expires: October 16th, 2006