

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. 13,018  
)  
APPLICATION OF YATES PETROLEUM )  
CORPORATION FOR APPROVAL OF A UNIT )  
AGREEMENT, EDDY COUNTY, NEW MEXICO )  
\_\_\_\_\_ )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

RECEIVED

March 13th, 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, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, March 13th, 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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## I N D E X

March 13th, 2003  
 Examiner Hearing  
 CASE NO. 13,018

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APPLICANT'S WITNESS:	
<u>JOHN F. HUMPHREY</u> (Geologist)	
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REPORTER'S CERTIFICATE	20

\* \* \*

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\* \* \*

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

## FOR THE DIVISION:

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By: MICHAEL H. FELDEWERT

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2 9:03 a.m.:

3           EXAMINER STOGNER: At this time I'll call Case  
4 Number 13,018, Application of Yates Petroleum Corporation  
5 for approval of a unit agreement, Eddy County, New Mexico.  
6           Call for appearances.

7           MR. FELDEWERT: May it please the Examiner,  
8 Michael Feldewert with the Santa Fe office of the law firm  
9 of Holland and Hart, for the Applicant Yates Petroleum  
10 Corporation, and I have one witness today.

11           EXAMINER STOGNER: Any other appearances?

12           Will the witness please step forward and remain  
13 standing to be sworn?

14           (Thereupon, the witness was sworn.)

15           EXAMINER STOGNER: Boy, you emptied out the room,  
16 Mr. Feldewert.

17           MR. FELDEWERT: I guess I did.

18                     JOHN F. HUMPHREY,

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

21                     DIRECT EXAMINATION

22 BY MR. FELDEWERT:

23           Q.    Would you please state your full name and address  
24 for the record?

25           A.    My name is John Fitzgerald Humphrey, I reside in

1 Artesia, New Mexico.

2 Q. And by whom are you employed and in what  
3 capacity?

4 A. I'm a senior geologist with Yates Petroleum  
5 Corporation.

6 Q. And have you previously testified before the  
7 Division and had your credentials as a geologist made a  
8 matter of public record?

9 A. Yes, I have.

10 Q. And are you familiar with the Application that  
11 has been filed by Yates Petroleum Corporation in this case?

12 A. Yes, I am.

13 Q. Are you familiar with the status of the lands in  
14 the proposed unit area for Yates's proposed Arley Federal  
15 Exploratory Unit?

16 A. Yes, I am.

17 Q. And have you made a geologic study of the area  
18 that is the subject of this Application?

19 A. Yes, I have.

20 Q. And are you prepared to share the results of your  
21 work with the Examiner?

22 A. Yes, I am.

23 MR. FELDEWERT: Mr. Examiner, are the witness's  
24 qualifications acceptable?

25 EXAMINER STOGNER: They are.

1 Q. (By Mr. Feldewert) Why don't you briefly state  
2 what Yates seeks with this Application?

3 A. Yates Petroleum seeks approval of the proposed  
4 Arley Federal Exploratory Unit Agreement, a voluntary  
5 exploratory unit containing approximately 2960.97 acres of  
6 federal and fee lands located in Eddy County, New Mexico.

7 Q. Does Yates Petroleum Corporation seek to be  
8 designated the unit operator?

9 A. Yes, we do.

10 Q. Okay, would you identify and review for the  
11 Examiner what has been marked as Yates Exhibit Number 1?

12 A. Exhibit 1 is the standard federal form -- based  
13 on the standard federal form for an exploratory unit.

14 Q. Okay, and does it have attached to it an Exhibit  
15 "A"?

16 A. Yes, it does.

17 Q. And does that Exhibit "A" identify the unit area?

18 A. Yes, it does.

19 Q. Now, can you tell the Examiner how many leases  
20 are involved in this unit area?

21 A. There are six leases involved in the unit area,  
22 Mr. Examiner, five of which are held by Yates Petroleum,  
23 one 80-acre fee tract held by Dominion and Echo Production.  
24 They chose not to participate in the unit, so that 80-acre  
25 tract will not be part of the proposed Arley Unit, and that

1 acreage is located in the south half of the southeast  
2 quarter of Section 7, 20 South, 23 East.

3 Q. So If I'm looking at Exhibit "A", you're talking  
4 about that little section down there that's squared off, it  
5 has "D.J. Schultz" --

6 A. "D.J. Schultz", that's correct.

7 Q. Okay. That is not going to be part of the unit  
8 area?

9 A. No, it is not.

10 Q. Okay. And that is fee land?

11 A. That is correct.

12 Q. Okay. Is all the remaining tracts that are shown  
13 within the unit area, is that federal land?

14 A. That is correct.

15 Q. You said there's five federal leases?

16 A. That is correct.

17 Q. Yates is the operator, or the lessee for all of  
18 those leases?

19 A. Yes, they are.

20 Q. And are those leases and the ownership of those  
21 leases identified on Exhibit "B" to what has been marked as  
22 Yates Exhibit Number 1?

23 A. Yes, they are.

24 Q. Is all of the federal acreage set forth on  
25 Exhibit "B", has that been dedicated to the unit area?

1 A. Yes, it has.

2 Q. And has the BLM, the Bureau of Land Management,  
3 designated the proposed unit area as an area logically  
4 suited for development under a unit plan?

5 A. Yes, they have.

6 Q. And has that letter been marked as Yates Exhibit  
7 Number 2?

8 A. Yes, it has.

9 Q. Now, what horizons are being unitized under the  
10 proposed Arley Federal Exploratory Unit?

11 A. All horizons will be unitized.

12 Q. Okay. Now, does this Unit Agreement that has  
13 been marked as Exhibit 1, does it provide for periodic  
14 filing of plans of development?

15 A. Yes, it does.

16 Q. And where is that within the Unit Agreement?

17 A. It's Article 10, which is located on page 6 in  
18 the Unit Agreement.

19 Q. Does Article 10 also require Yates to file plans  
20 of development with the Division as well as with the BLM?

21 A. Yes, they do.

22 Q. And how often --

23 A. Yes, it does.

24 Q. -- are these plans to be filed?

25 A. The initial plan will be filed six months after



1 completion of the initial unit well, and the subsequent  
2 plans will be filed 12 months thereafter.

3 Q. Okay. Would you now turn to Yates Exhibit Number  
4 3, identify it and review that for the Examiner, please?

5 A. Yates Exhibit 3 is the AFE for the initial test  
6 well. Dryhole cost is estimated to be a little over  
7 \$483,000 and the completed well is estimated to be  
8 approximately \$874,000.

9 Q. And what is the projected depth for this proposed  
10 well?

11 A. We're looking in that, sometime early fall, to  
12 drill this.

13 Q. And what's the depth?

14 A. Depth is 8300 feet.

15 Q. And this is going to be the Arley "BBE" Federal  
16 Number 1?

17 A. That's correct.

18 Q. Now, when is the first lease due to expire within  
19 the unit area?

20 A. December 1st, 2003.

21 Q. And you're proposing to spud this well as early  
22 as this fall?

23 A. We'd like to, yes.

24 Q. I'd like you to turn now to Yates Exhibit Number  
25 4. Is this a written summary of your geologic

1 presentation?

2 A. Yes, it is.

3 Q. Does this written summary identify the location  
4 of the initial test well?

5 A. Yes, it does. The initial test well will be  
6 located in the south half of Section 6, Township 20 South,  
7 Range 23 East, bottomhole location to be 660 feet from the  
8 south line, 660 feet from the west line.

9 Q. Okay. And this is going to be drilled at 8300  
10 feet. What's your primary objective for this well?

11 A. Primary objective for this well is the lower  
12 Morrow sandstone.

13 Q. Is this a wildcat well?

14 A. Yes, it is.

15 Q. Okay, are there any secondary objectives?

16 A. Secondary objectives in this area include the  
17 Atoka sands, the Cisco limestone, and there's a remote  
18 possibility of Abo dolomite.

19 Q. And are these formations identified in the second  
20 paragraph of Exhibit Number 4?

21 A. Yes, they are.

22 Q. All right. Okay, why don't you leave that  
23 exhibit out in front of you then and turn to Yates Exhibit  
24 Number 5. Identify and review that for the Examiner,  
25 please.

1           A.    Yates Exhibit 5 is a net sand isopach for the  
2 lower Morrow in this area.  By net sand, I use a gamma-ray  
3 cutoff of 50 API units to indicate clean sand.  And at  
4 least what I'm visualizing here is trying to extend  
5 production in the lower Morrow from the Little Box Canyon  
6 area, which has a cumulative production of over 67 BCF to  
7 date, and we're hoping to extend production to the north  
8 over the Arley Federal Unit.

9           Q.    Okay.  Now, your proposed well is identified on  
10 this map?

11          A.    Yes, it's the red dot located in Section 6, 20  
12 South, 23 East.

13          Q.    Now, is this going to be a straight well or a  
14 deviated?

15          A.    This will be a deviated well.  There's fairly  
16 severe topography over a lot of the unit area.

17          Q.    So does that red dot represent the bottomhole  
18 location?

19          A.    Yes, it does.

20          Q.    Okay.  You have a well listed there in blue?

21          A.    Yes, there is one control point within the unit  
22 that did have a thick Morrow sand, lower Morrow sand  
23 section that tested -- on drill stem tested -- had a show  
24 of gas with formation water in the lower Morrow.

25          Q.    Okay.  Now, you mentioned the Little Box Canyon

1 Morrow field to the south. Is there a well within that  
2 area that you're going to be referencing later on?

3 A. Yes, Exhibit 6 is a type log for the area, and  
4 this compares the log signatures to a typical well on the  
5 Little Box Canyon field, in this case, Stevens and Tull  
6 Little Box State 2, which is located in the south half of  
7 Section 36, 20 South, 21 East. It's about, oh, six miles  
8 from the control point well.

9 Again, what this type log shows is the similarity  
10 and sand quality and characteristics between the two areas,  
11 and what we would like to do, at least in that north half  
12 -- we'll look at a structure map for the lower Morrow in a  
13 minute, but the reason we include the north half of Section  
14 6 is, we believe we can get updip to that control well and  
15 be gas productive.

16 Q. Okay, so Exhibit Number 6, you have a well on the  
17 right, which is the Wilson well?

18 A. That's the Wilson well, located in 20 South, 23  
19 East, Section 6, and again it's comparing it to an average  
20 well in the Little Box Canyon field, and in the example  
21 I've shown that particular well has cum'd approximately 16  
22 BCF to date.

23 Q. Okay, all right. Then why don't you move to  
24 Yates Exhibit Number 7, identify that and review that for  
25 the Examiner.

1           A.    Yates Exhibit 7 is cross-section A-A' that you  
2 see on both the net sand isopach and the structural map  
3 we'll see next. This is basically showing kind of the  
4 lateral, the width of this particular fluvial channel  
5 system. You see Buckaroo "AYG" Federal 1, which is the  
6 westernmost well. I believe both that and the Mesa  
7 Petroleum Buzzard, what I consider to be overbanked  
8 nonproductive-type deposits, and that basically sets your  
9 east and west boundaries of this fluvial channel system,  
10 with the Wilson well in the middle, smack in the channel  
11 system.

12           Q.    All right, now you mentioned your structure map.  
13 Has that been marked as Exhibit Number 8?

14           A.    Yes, it is.

15           Q.    Okay, why don't you review that for the Examiner,  
16 please?

17           A.    This is a structure map on the top of the lower  
18 Morrow interval. As you can see on the map in Exhibit 8  
19 the proposed Arley "BBE" Federal Number 1 location, we are  
20 predicting that to be almost 200 feet higher than the Max  
21 Wilson Wildernhl Federal 1 well that was shown on the type  
22 log in cross-section A-A'.

23                   In addition, you could drill a well 660 from the  
24 north and west in the north half of 6 there and be almost a  
25 hundred feet high, even at that location.

1           So again, I think that's -- I think you can get  
2 updip, and I think that's justification for having the  
3 north half of 6 and 6 in the unit, even though there's a  
4 control point there.

5           Q.    You think by moving updip you will eliminate the  
6 problem that they saw in the Wilson well?

7           A.    Yes, hopefully.

8           Q.    All right. Well, why don't you summarize for the  
9 Examiner why you're proposing to develop this area under a  
10 unit plan?

11          A.    Yates is proposing to develop the area under a  
12 unit plan because well costs are expensive in the area.  
13 This is an area and a reservoir that can be effectively  
14 developed under a unit plan. The formation of this unit  
15 will result in the most reasonable and efficient  
16 development of these reserves.

17          Q.    Mr. Humphrey, in your opinion will the approval  
18 of this Application be in the best interests of  
19 conservation, the prevention of waste and the protection of  
20 correlative rights?

21          A.    Yes, I believe it will.

22          Q.    Were Yates Exhibits 1 through 8 prepared by you  
23 or prepared under your direction and supervision?

24          A.    Yes, they were.

25          MR. FELDEWERT: Mr. Examiner, at this time I

1 would move the admission into evidence of Yates Exhibits 1  
2 through 8.

3 EXAMINER STOGNER: Exhibits 1 through 8 will be  
4 admitted into evidence.

5 MR. FELDEWERT: And that concludes my examination  
6 of this witness.

7 EXAMINATION

8 BY EXAMINER STOGNER:

9 Q. I want to refer now to the first exhibit, last  
10 page -- that's Exhibit B to this document --

11 A. Uh-huh.

12 Q. -- and that is Tract 6, the fee acreage?

13 A. That's correct.

14 Q. And that is leased -- who's the lessee of record  
15 again on this?

16 A. That's Dominion, that's held by Dominion and Echo  
17 Production.

18 Q. When you say "held", they have the lease from --

19 A. Yes. Yes, sir.

20 Q. -- William Runyan? I show a William F. --

21 A. Yeah, a William F. Runyan. Yes, yes.

22 Q. Okay. What communications or -- was their  
23 approach to join the unit?

24 A. Yes, we approached both parties to join the unit,  
25 and they both declined to join the unit.

1 Q. Okay. Also, I think it's important that we cover  
2 something here, for people who don't know the area. I  
3 especially want to refer to the maps, Exhibit 8 and 5, and  
4 then the description of this unit area. It's the blatant  
5 absence of a Township 20 South and Range 22 East. This is  
6 not a typo, is it?

7 A. No, it is not.

8 Q. There is no Township 20 South, Range 22 East?

9 A. No, there is not.

10 Q. Okay, did Yates have anything to do with there  
11 not being this township, 36 sections? What happened to it?

12 A. I think this even predated Yates, so...

13 Q. Okay, this was essentially a correction in the  
14 survey; is that correct?

15 A. That is correct.

16 Q. And so everything is contiguous?

17 A. Uh-huh.

18 Q. The two wells that are within -- I'm sorry, the  
19 two old plugged and abandoned or dry and abandoned wells  
20 within the proposed unit area --

21 A. Uh-huh.

22 Q. -- there is only two; is that correct?

23 A. Yes, sir. The one in Section 18, which I didn't  
24 mention, reached a TD of 100 feet, which is not sufficient  
25 to get to anything. They have surface -- I didn't check,



1 but sometimes you have severe surface hole problems out  
2 here and that may have been the case with that one, and  
3 they just abandoned it after hitting some surface karst or  
4 something. But that's the other dry hole within the unit.

5 Q. Okay. And actually, I'm glad you brought that  
6 up. This is in the cave and karst area of the recognized  
7 BLM cave and karst area?

8 A. Yes, sir. And a lot of these are going to have  
9 to be drilled directionally. The topography is pretty bad  
10 over most of the -- or difficult.

11 Q. Actually you bring up a good point. Now  
12 referring back to this Exhibit "B" of Exhibit "A" --

13 A. Uh-huh.

14 Q. -- the royalty -- with the exception of that  
15 small fee acreage, the royalty is all U.S. government and  
16 the working interest looks like it's identical throughout  
17 the unit, other than that 80-acre fee unit?

18 A. Yes, sir, that's correct.

19 Q. And your first well that's going to be drilled,  
20 it's going -- yeah, please identify -- Let's talk about  
21 that test well.

22 A. The test well will be located 660 feet from the  
23 south and west line, Section 6, 20 South, 23 East, and if  
24 you're looking at Exhibit "A" you can see it's a 1-BBE on  
25 that. It's in Tract 1.

1 Q. Oh, okay, it is identified --

2 A. Yes, sir.

3 Q. -- on that Exhibit A that you --

4 A. Yeah, it's just in writing on it.

5 Q. Now, has this well been staked? Is this the  
6 proposed -- Are you going to do any directional drilling on  
7 this well?

8 A. Yes, sir, this well, we have an approved APD on  
9 this particular well.

10 Q. Now, is it going to be directionally drilled,  
11 or --

12 A. Yes, sir. Yes, sir.

13 Q. Where's the bottomhole going to be?

14 A. I didn't put that. It's going to be about 1000  
15 feet to the -- approximately 1000 feet, 1000, 1500 feet to  
16 the east.

17 MR. FELDEWERT: Let me -- If I may, Mr. Examiner,  
18 I'm looking at Exhibit 4. We show -- If we need to correct  
19 this, we need to -- it says a bottomhole location of 660  
20 from the south line and 660 from the west line. Is that  
21 surface or bottomhole, do you know?

22 THE WITNESS: That's bottomhole.

23 MR. FELDEWERT: Okay.

24 THE WITNESS: Exhibit 4 says bottomhole location  
25 of 660 from the south and 660 from the west.

1 Q. (By Examiner Stogner) Okay, I'm confused here.  
 2 Okay, now I've got Exhibits 3 and 4. Now, the location you  
 3 show on Exhibit 3 that's 660 from the south and west, and  
 4 then we refer to Exhibit 4. The bottomhole is 660 from the  
 5 south, 660 from the west. Okay, so -- and now you say it  
 6 was going to be directionally drilled 1000 feet to the --

7 A. No, I apologize for the mis- -- The surface  
 8 location will be 1000 to 1500 to the west.

9 Q. Okay, so --

10 A. I mean to the east, excuse me.

11 Q. -- any reference to the 660 south, 660 west, is  
 12 the actual bottomhole location?

13 A. That's the actual bottomhole location, Mr.  
 14 Examiner. I apologize for the confusion.

15 EXAMINER STOGNER: Anything further in this  
 16 matter?

17 Thank you. Since there's nothing further, Case  
 18 Number 13,018 will be taken under advisement.

19 Let's take about a five-minute recess at this  
 20 time.

21 (Thereupon, these proceedings were concluded at  
 22 9:22 a.m.)

23 \* \* \*

13 March 2003  
 13018  
 [Signature]  
 Oil Conservation Division

