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. 12,185
APPLICATION OF YATES PETROLEUM CORPORATION FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

June 10th, 1999

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, June 10th, 1999, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, 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

June 10th, 1999
Examiner Hearing
CASE NO. 12,185

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E X H I B I T S

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A P P E A R A N C E S

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* * *

WHEREUPON, the following proceedings were had at 10:00 a.m.:

EXAMINER CATANACH: Okay, at this time I'll call the hearing back to order and we'll call Case 12,185.

MR. CARROLL: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico.

EXAMINER CATANACH: Call for appearances.

MR. OWEN: Paul Owen of the Santa Fe law firm of Campbell, Carr, Berge and Sheridan for the Applicant, Yates Petroleum Corporation. I have one witness in this matter.

EXAMINER CATANACH: Any additional appearances?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of OXY USA, Inc.

EXAMINER CATANACH: Okay, will the witness please stand to be sworn in?

(Thereupon, the witness was sworn.)

MR. OWEN: Mr. Examiner, I call Mr. Brent May.

BRENT MAY,

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

DIRECT EXAMINATION

BY MR. OWEN:

Q. Mr. May, would you please tell us your name and

where you live?

A. Brent May, I live in Artesia, New Mexico.

Q. And who do you work for?

A. Yates Petroleum.

Q. What do you do for Yates?

A. I'm a petroleum geologist.

Q. Have you previously testified before the Division or one of its Examiners and had your credentials as a petroleum geologist accepted and made a matter of record?

A. Yes, I have.

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

A. Yes, I am.

Q. Are you familiar with the lands in the subject area?

A. Yes, I am.

MR. OWEN: Mr. Examiner, are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Owen) Mr. May, why don't you tell us what Yates seeks with this Application?

A. We're seeking approval of an unorthodox well location for the Lucky Coyote "ATD" Number 1, to be drilled 660 from the north and east lines of Section 5, Township 17 South, Range 27 East, of Eddy County, New Mexico, to an

approximate depth of about 9100 feet to test the Morrow formation. And we're -- The north half of Section 5 will be dedicated to this well, and it will be, I think, be placed in the Undesignated Crow Flats-Morrow Gas Pool.

Q. Are you familiar with the spacing rules for the subject pool?

A. Yes, they're 320-acre spacing.

Q. There aren't any special pool rules for this pool, are there?

A. Not that I'm aware of.

Q. Okay. What about the well-location requirements?

A. For orthodox setbacks for 320-acre spacing, I believe it's 660 from the long line and 1650 from the short line, and we're 660 from the short line that we're asking for today.

Q. All right, let's -- You've prepared certain exhibits for this case, have you not?

A. Yes, I have.

Q. Why don't we turn to Exhibit Number 1, which is your Yates land plat. Why don't you explain this exhibit for the Examiner?

A. This is a land plat of the surrounding area of mostly the north part of 17 South, 27 East, and the southern part of 16 South, 27 East.

The proposed location for the Lucky Coyote is the

red dot in the northeast quarter of Section 5 of 17 South, 27 East. The proration unit is the north half of Section 5.

It's kind of a busy map, but there are some more Morrow wells that have been drilled to the east and south, within a few miles. There's also a few scattered wells up to the north that also produced a little bit out of the Morrow, there's a few little San Andres wells over in Section 3.

The acreage that's colored solid yellow is the acreage that's operated by Yates. Any acreage that's outlined in yellow is designating that Yates has an interest in that acreage.

I believe with this unorthodox location the affected parties are going to be OXY and Santa Fe to the east of Section 4, and Section 33 of 16 South, 27 East.

Q. Now, is Santa Fe the operator of the north half of Section 4?

A. I believe they just have an overriding interest in Section 33 of 16 South, 27 East.

Q. OXY is the operator in the north half of Section 4; is that right?

A. Yes, that's what I understand, OXY is the operator of Section 4.

Q. Okay. Now, you -- Were you present for the

earlier case, Case Number 12,191, the Application of OXY for an unorthodox well location for their Jazz Federal Number 1?

A. Yes, I was.

Q. Did you listen to the testimony in that case?

A. Yes, I did.

Q. Did you review the exhibits in that case?

A. I have seen them, yes.

Q. Has Yates reached agreement with OXY regarding this location as part of its agreement --

A. Yes.

Q. -- to waive objection to OXY's Jazz Federal Number 1 location?

A. Yes, I believe we exchanged waivers on each other's location, as was stated in the earlier hearing.

Q. Let's turn to Yates Exhibit Number 2. Santa Fe has also entered an appearance in this case or indicated that it has an interest in this case. Why don't you tell us about the first page of Exhibit Number 2?

A. On Exhibit Number 2, this is a letter from Mr. Jim Bruce on behalf of Santa Fe basically stating that they waive any objection to the Yates location. It's dated June 7th, 1999.

Q. Now, again, the operator upon whom Yates is encroaching is OXY in the north half of Section 4, correct?

A. That's correct?

Q. Santa Fe is not the operator in that particular area?

A. That's what I understand, yes.

Q. But does the second, third page of Exhibit Number 2 indicate the agreement between OXY and Yates?

A. I believe that's correct. This is a letter on OXY's letterhead that was sent to Yates, and it's dated May 25th, 1999, stating that -- outlining the waiver -- If Yates will waive their location, they'll waive ours, Yates' location.

Q. Now, did you hear the testimony in OXY's case to the effect that, in fact, such agreement had been reached?

A. Yes, I did.

Q. Is that consistent with your understanding?

A. Yes.

Q. All right, Mr. May, let's turn to Yates Exhibit Number 3. Is this exhibit evidence -- notification on behalf of Yates that -- this pending Application and notice to the operators in the offsetting spacing units?

A. Yes, it is a notice to OXY. You'll notice on page 3 it's a letter dated April 29th, 1999, and it was giving notice to OXY.

Q. All right, Mr. May, let's turn to the geologic interpretation in this case. I believe as Exhibit Number 4

you've prepared a summary of the geologic exhibits in this case. With Exhibit Number 4 in front of you, why don't you tell us about Exhibit Number 5?

A. Okay, I'll just briefly state that Exhibit 4 is just outlining the exhibits to come.

I'd also like to state that the primary interval we're going for is what we call, Yates calls, the lower Morrow or lower Morrow clastics interval, and that we will test any or all formations above that as we encounter them on the way down, if we have any significant hydrocarbon shows.

Q. Now, Mr. May, are you going after or do you expect to encounter this Roscoe sand as part of the Morrow that was discussed in the earlier case on behalf of OXY?

A. As the way it was described by Mr. Doty, we're not really expecting what OXY is calling the Roscoe sand, over on the Yates location.

Q. So you're after the lower Morrow --

A. Yes.

Q. -- but you don't expect this particular sand that was discussed?

A. No, we're not foreseeing encountering what OXY was calling the Roscoe sand.

Q. Okay. All right. Well, on Exhibit Number 5 you've prepared for us an isopach. Could you tell us about

that?

A. This is an isopach from the top of the lower Morrow clastics down to the top of what Yates calls the Mississippian unconformity, and I'll show those in just a minute on the cross-section, Exhibit 6.

But this exhibit has the proration unit outlined in red in the north half of Section 5, it's showing the proposed location in the northeast quarter. It also has in green the trace of the cross-section, which will be Exhibit Number 6.

Also, I might note that on this exhibit, this is only showing Morrow penetrations. It's not showing some of the shallow wells, as I -- such as some of those San Andres wells I briefly described earlier.

Any of the well locations that have a double circle are Morrow penetrations, and the wells that are colored red are wells that have produced or are producing from what we call the lower Morrow interval.

The contour interval is 20 feet. Basically, this isopach is showing a north-south-trending thick running through the are of the proposed location and over on OXY's acreage in Section 4.

And what this is, Yates feels like this is somewhat of a valley-cut-type sequence, and in fact Mr. Doty referred to it as a depo center, and that's exactly --

we agree with that. What has happened is, we have a series of rivers cutting down through older sediments, and then later the valley was filled with sands and shales. And the good sands that we're going after ten, you have a better chance of hitting those within the thick of this isopach. It's not saying that there is risk still involved, I'm not saying that if you hit the thick that you're guaranteed a sand, but it increases your chances of hitting a good, economic sand in the Morrow, in this lower Morrow section.

Q. Now, Mr. May, is the trending on this, this north-south trending, is that consistent with the geologic testimony that was presented in OXY's case?

A. Yes, they're showing a similar picture. Now, I might state that what their exhibit was showing, they mapped something a little bit different than what we did, but it's still showing the same, similar trend, because their map, I think, was based more solely on one particular sand, where our map is an isopach, a thickness map.

Q. Okay. All right, Mr. May, if you wouldn't mind, please turn to Exhibit Number 6 and explain that exhibit for the Examiner.

A. This is a stratigraphic cross-section. It's running from northwest to southeast. Again, the trace is on Exhibit 5. As shown here, we have -- This cross-section was hung on the top of the lower Morrow.

Also several of the tops are shown, the top of the Atoka formation, the top of what we call the -- just the plain Morrow clastics, not the lower Morrow clastics. Also, there's a wavy line showing what we call the Mississippian unconformity and also the top of the Chester lime.

On Exhibit 5, the interval that was mapped was from the top of the lower Morrow to the top of this Mississippian unconformity, and it was a true isopach, just a straight thickness of that interval.

And you can see going through the various wells that you have a thickening through some of the wells, and I'll get into that a little bit later, and that does correspond with the thick on Exhibit Number 5.

Starting on the left-hand side of the cross-section, on the northwest side, the John A. Yates Jean "M" Number 1 in Section 31 of 16 South, 27 East, this well was drilled through the Morrow and into the Mississippian originally, back in the 1970s. This well did -- It's currently plugged but did make a little bit of production out of the Morrow. It was tight, the casing was set just below 8300, and then the Morrow and Mississippian were left open-hole, and it was produced that way.

It cum'd a little bit over 174 million out of the Morrow and the Mississippian. Since it was open-hole, you

can't say for certain exactly where it was coming from. So it was a poor -- It was a poor well, though.

The next well on the cross-section is the proposed location of the Lucky Coyote in Section 5 of 17 South, 27 East, and you can see that we are projecting that we will see a lower Morrow sand that we should hit of sufficient thickness to give us economic quantities of gas. And you can note that it's getting in the thicker part of this lower Morrow sequence.

The next well on the cross-section is the OXY LD "4" Federal Number 1 in Section 4 of 17 South, 27 East. This is one of the wells that I think Mr. Doty referred to. You can see this well was drilled down into the Mississippian. It did encounter a nice thick Morrow sand where that is shown on the cross-section. It was IP'd for around 3.6 million, and this -- in the Morrow sand, and this has been a good well. And also, this is also in the thick of the lower Morrow sequence.

The well on the far right-hand side of the cross-section is the OXY Magni State Number 1, in Section 10 of 17 South, 27 East. This was a dry hole. It also drilled down through the Morrow and into the Mississippian, and it was plugged. You can see that it encountered just a couple of thin little Morrow sands. And you can also see that it's getting on the flank of the thick.

And this goes back to what I stated about Exhibit 5. When you start getting off on the flank of these thicks, your chances decrease -- your chance of encountering good, thick sands decreases. You want to be in the thick on the isopach to increase your chances of hitting the thick sands like you see in the OXY LD "4" Federal Number 1.

Q. Now, I notice that OXY's Roscoe Federal Number 1 well is not represented on your cross-section. Do you expect -- Once again, do you expect any similar production characteristics from your proposed well with the Roscoe well?

A. We're not expecting to see the Roscoe sand at all. It appears to be back in OXY's Roscoe well, and we don't foresee it appearing in the Lucky Coyote.

I might state that Yates, the way we map this lower Morrow clastics units using the isopach is that we're not exactly sure what sand we're going to hit, because these Morrow sands are very narrow, but thick when they're good. But we're trying to -- by getting in the thick of the isopach, decrease the chances of hitting one of these good Morrow sands.

But looking at the area and considering what I've seen, I would have to agree with what Mr. Doty was saying about the Roscoe sand. I don't foresee it occurring on the

Yates location.

Q. Now, I think that on Exhibit Number 7 you do indicate the production from the Roscoe well. Why don't you tell us what Exhibit Number 7 is?

A. This is just a small, little chart of production. I might note that it was from *Dwight's*, a commercial source, and *Dwight's* lags behind most of the production that was testified to in the earlier hearing about the OXY wells, is much more up to date. But this is just showing some of the production in the area on some of the Morrow wells.

And also Mr. Doty talked about some of the Yates Riverside and their well offsetting it and production on it. Some of the newer wells are not on this chart, because *Dwight's* has not had the information to update their database.

Q. Mr. May, were Exhibits 1 through 7 prepared by you or under your direction?

A. Yes, that's correct.

MR. OWEN: Mr. Examiner, I offer Yates Exhibits Numbers 1 through 7.

EXAMINER CATANACH: Exhibits 1 through 7 will be admitted as evidence.

MR. OWEN: That's all I have at this time.

Well, Mr. Examiner, I might ask a follow-up

question.

Q. (By Mr. Owen) Mr. May, do you believe that granting this Application and drilling the proposed well will be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A. Yes, I do.

MR. OWEN: That concludes my presentation, Mr. Examiner.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. May, on your Exhibit Number 5, exactly what is it that you have mapped there? Is it just the thickness from the lower Morrow to the top of the Mississippian?

A. That is correct, it is a true isopach. And as you look on Exhibit 6, that marker showing the lower Morrow down to the wavy line of the Mississippian unconformity, it's just a straight thickness map, is what it is.

And we feel like that's been very helpful to us where we feel like that we're in some of these valley-cut-type situations. We look for the area where the rivers have cut the deepest, and that should be your depositional center.

Q. Well, is that thickness a direct correlation to sand thickness in the Morrow?

A. Not direct, but it -- we feel like that since it is representing the depositional center, that increases the likelihood of encountering more sands and higher quality sands. That's not to say that you could get out on the edge and encounter a good sand, but also on the flip side it's not saying that you could get in the center of the thick and hit something either. There is risk involved there.

But we feel like it does decrease -- or increase the chances of hitting a good, productive sand, when you get into a thick. And that's why we want to move as close to the thick as possible. We're increasing our chances when we do that.

Q. Well, do you have an estimate on what you believe the sand thickness will be at this location?

A. We -- I could make a wild guess. We generally do not map the individual sands because the individual sands are so narrow and so hard to predict where they're going. They can be very thick but very narrow, and so you can move over just a few hundred feet and totally miss a sand.

But we're hoping to find something similar to what you see on Exhibit Number 6, like the OXY LD "4" Federal Number 1 or something similar to what we hit in our Riverside well down in Section 8 of 17-27, and it had about a 50-foot sand in it. That's the type of sands that we

think we could encounter in these thicks.

Q. And the difference between your location and moving to the standard location, can you maybe quantify in terms of how much that might be reduced?

A. If we move to a standard location, we drastically reduce the possibility of hitting one of these sands, because we've moving away from the thick that has been shown on Exhibit 5. So we're drastically decreasing our chances of hitting one or more of those sands, because the further you get away from the thick, the less chances there are of hitting one of those sands.

You can look down -- Example, look in Section 32 of 16 South, 27 East, the well that has a value of 143 beside it. That well did penetrate the Morrow, did go through this lower clastics interval, did hit a lower clastics sand, but it was poor quality. In fact, there was never any sales made out of the Morrow.

And so you can see moving away, they did not encounter any productive sands out of this lower Morrow clastics interval, and that's a good -- that is something that's showing us when you move away from the thicks you're decreasing your chances.

And you go down to the well in Section 8, the Riverside well, 193 feet, getting closer to the thick, not quite in the center of it but getting closer, that did

encounter a very nice sand, and had in excess of 50 feet of thickness.

So we feel it's very important to get as close to the thick as possible.

EXAMINER CATANACH: Okay. Mr. Kellahin, did you have any questions?

MR. KELLAHIN: No, sir.

EXAMINER CATANACH: Okay, I have nothing further.

MR. OWEN: I do have one follow-up question.

FURTHER EXAMINATION

BY MR. OWEN:

Q. Mr. May, during OXY's presentation they referenced a Yates well in the north half of Section 8 there, the Concho ACT State Number 1. Do you know what the status of that well is?

A. Yes, and that's not shown on my exhibit because it was a proposed location. We have just started drilling that well in the north half of Section 8. We spudded it, I believe, about five or six days ago.

MR. OWEN: Okay. Mr. Examiner, I'll note for the record that that well is the subject of Administrative Order NSL-4295. It was issued on June 1st, 1999, in which order the unorthodox location of the Yates Concho ACT State Number 1 was approved by Lori Wrotenbery.

That concludes -- I'm sorry, Mr. May?

THE WITNESS: Could I make one more statement?

MR. OWEN: Sure.

THE WITNESS: In relation to that, the Riverside was unorthodox too, the one in the south half of 8, and it was approved also.

MR. OWEN: Mr. Examiner, that concludes my presentation in this case.

EXAMINER CATANACH: Let me ask you just one more question, Mr. May.

FURTHER EXAMINATION

BY EXAMINER CATANACH:

Q. What is the potential for some uphole production from the Morrow in this area?

A. You can always -- In what I'm showing in Exhibit 6, in the Morrow clastics, you can sometimes encounter some sands in there. So that's a possible secondary target.

Also on the same exhibit, look at the OXY LD "4" Federal Number 1. They have an Atoka sand possible.

So there are probably the upper part of the Morrow, the Atoka, there could be some secondary targets there. And then I mentioned some of those shallow San Andres wells. And in southeastern New Mexico you can also stumble across almost anything on the way down, and we will -- we always keep our eyes open for anything on the way down, because there's lots of fields that have been

discovered when you're drilling for a deeper target, stumbling into something else shallow.

EXAMINER CATANACH: Okay, I have nothing further.

There being nothing further in this case, Case 12,185 will be taken under advisement.

MR. OWEN: Thank you, Mr. Examiner.

EXAMINER CATANACH: Thank you.

(Thereupon, these proceedings were concluded at 10:28 a.m.)

* * *

I hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12185, heard by me on June 10, 1999.

David Catanach, 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 June 12th, 1999.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002