NEW MEXICO OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

STATE OF NEW MEXICO

CASE NO. 10429

IN THE MATTER OF:

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

BEFORE:

MICHAEL E. STOGNER

Hearing Examiner

State Land Office Building

December 19, 1991

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

ORIGINAL

A P P E A R A N C E S

FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.
General Counsel
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

SANDERS, BRUIN, COLL & WORLEY, P.A.
600 United Bank Plaza
400 North Pennsylvania Avenue
Roswell, New Mexico 88202-0550
BY: **DAMON RICHARDS, ESQ.**

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EXAMINER STOGNER: Call the next case, No. 10429.

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

EXAMINER STOGNER: Call for appearances.

MR. RICHARDS: Damon Richards, Sanders, Bruin, Coll & Worley, P.A., Roswell, New Mexico, on behalf of Yates Petroleum Corporation. We have two witnesses.

EXAMINER STOGNER: Any other appearances?

Will the witnesses, please, stand to be sworn.

(The witnesses were duly sworn.)

ROBERT H. BULLOCK

Having been duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. RICHARDS:

Q. Would you state your name and address.

A. My name is Robert Bullock, and I work for Yates Petroleum Corporation in Artesia, New Mexico, as a petroleum landman.

Q. How long have you worked there?
A. For 12 years.
Q. Have you previously testified before the OCD, and have your credentials been approved and made a matter of record?
A. Yes.
MR. RICHARDS: We submit Mr. Bullock as a qualified expert landman.
EXAMINER STOGNER: Mr. Bullock is so qualified.
Q. (BY MR. RICHARDS) Are you familiar with the Yates Albert AJA No. 1 well?
A. Yes.
Q. Where is it located?
A. It's located in Section 21 of Township 20 South, Range 24 East. The footage is 660 north and east.
Q. This well is located 660 from the east line and 660 from the north line. Is that an orthodox well location for a Canyon well?
A. For a Canyon well, yes, it is.
Q. Now, you started drilling this well and as you went through the Canyon formation, you only achieved about nine foot of pay. So you decided to go on down to the Morrow formation; is

that correct?

A. That's correct.

Q. Do you think that you can make a well in the Morrow formation?

A. Yes.

Q. Explain the reason for your application here.

A. The application is to be able to produce our orthodox gas well in an unorthodox location.

Q. In the Morrow formation what are the standard setbacks?

A. It would be 660 from the sideline, 1980 from the end zone.

Q. And this one is not 1980?

A. That's correct.

Q. That's the reason we're before the Commission today?

A. Yes.

Q. Have you examined the county, federal, and state records to determine the offset operators and the offset ownership?

A. Yes, I have.

Q. I refer you to Exhibit No. 1. Can you describe that exhibit?

A. We have color-coded it. The orange color denotes the proration unit for the Albert AJA No. 1, being the east half of 21. The yellow color indicates Yates Company's ownership in the offset sections -- yellow being Yates Company owns 100 percent of that acreage in yellow.

The blue color denotes Santa Fe Energy and Yates Petroleum Corporation owning that acreage fifty-fifty. The green color denotes Santa Fe Energy Resources owning two-thirds, Yates Petroleum Corporation owning one-third of that acreage down to -- from surface to 9440.

Q. It's my understanding that Yates is the operator of all the offset locations?

A. That's correct.

Q. I refer you to Exhibit No. 2, which appears to be a notice sent to Santa Fe Energy Resources, Inc., along with the return receipt certificate; is that what that is?

A. Yes, that's correct.

Q. Showing that they did receive notice of the application today?

A. Yes.

Q. Did you receive a response from them?

A. Yes, we did. That would be Exhibit 3,

response noted from them.

Q. What does that say?

A. They agreed to allowing us to produce the well at the unorthodox location subject to a condition. That condition is noted there with the asterisk. It says essentially that Santa Fe agrees to this unorthodox location and in turn Yates will consent and waiver on any unorthodox location that they might propose on the west half of Section 15, which is an offset.

Q. And the second page of Exhibit 3 states the same thing; is that correct?

A. That's correct.

Q. Has Yates agreed to those conditions?

A. Yes, they have.

Q. Were there any other working interest owners after your examination of county records that should have received notice other than Santa Fe Energy Resources, Inc.?

A. No. We think that covered who should have been notified.

Q. And there's nobody here to oppose this application?

A. No.

Q. In your opinion will approval of this

application be in the best interests of conservation and the prevention of waste?

A. Yes.

MR. RICHARDS: Do you have any questions of this witness?

EXAMINER STOGNER: I don't have any questions of Mr. Bullock at this time. I may after the next witness however.

MR. RICHARDS: That will be fine.

EXAMINER STOGNER: Do you have any questions?

MR. STOVALL: No.

MR. RICHARDS: D'Nese.

D'NESE FLY

Having been duly sworn upon her oath, was examined and testified as follows:

EXAMINATION

BY MR. RICHARDS:

Q. Will you state your name and address, please.

A. My name is D'Nese Fly. I live in Artesia, New Mexico.

Q. What is your present employment and position?

A. I work for Yates Petroleum as a

petroleum geologist.

Q. How long have you been a geologist?

A. For ten years.

Q. Have you previously testified and been qualified as an expert witness before the OCD?

A. Yes, I have.

Q. Are you familiar with the geology in connection with this application?

A. Yes, sir.

MR. RICHARDS: We submit D'Nese Fly as an expert geologist.

EXAMINER STOGNER: Ms. Fly is so qualified.

Q. (BY MR. RICHARDS) As part of your duties at Yates, have you mapped the geological structures of the South Dagger Draw Upper Pennsylvanian Pool?

A. Yes.

Q. Would you refer to Exhibit 4, identify it, and describe it, please. And while you're doing that, describe the characteristics of the Canyon formation for us.

A. Well, the Dagger -- South Dagger Draw Pool produces out of a dolomite with floccular and fractured porosity, which produces oil, sour

gas, and a brackish water.

Exhibit 4 here is the first exhibit that I'm going to submit in showing that the Albert AJH No. 1 and why it was set up to be drilled as a Canyon Upper Pennsylvanian reservoir -- excuse me, why it was proposed to be drilled as a Canyon well in the South Dagger Draw Field.

This exhibit is an isopach map done up before the Albert was drilled. And we were hoping to encounter about 40 feet or so of the dolomite reservoir itself. These contour intervals here are on 50-foot intervals.

Q. Now, this map was prepared before the well was drilled; is that correct, or this is to show the --

A. That's correct.

Q. -- Canyon formation before?

A. Uh-huh.

Q. Okay. When you actually drilled into the Canyon formation, what did you discover?

A. Well, while drilling through the Canyon, we did a mud-logging analysis, which is shown here in Exhibit No. 5. And as we drilled through here, we analyzed the drill time, the

samples, and the gas shows. And we came to the conclusion since there was just not enough here to produce an economic Canyon dolomite well.

Q. Okay. And then what's the second page of Exhibit 5?

A. The second page is a portion of the neutron density curve, which proved also. We did not stop and log the well. This was done later. We made our decision off the mud log, but it also shows that we have just stringers of dolomite and not a very large reservoir.

Q. About how much pay did you have there?

A. Oh, I estimated about nine feet of clean pay.

Q. Have you attempted completions in the Canyon that had approximately nine to ten feet of pay?

A. Yes. To the north of this well, about a mile-and-a-half in Section 4, I think it's in Unit I of 20-24, we encountered nine feet of dolomite in the Canyon. The name of this well is the Mimosa AHS Fed. No. 1. And we perforated it and stimulated it, but it only gave up 17 Mcf per day and just was not considered economic. This well tended to even look a little more

pessimistic than the Mimosa well.

Q. Okay. Would you, please, describe Exhibit No. 6 then.

A. Let's see, Exhibit 6, this is the same map as Exhibit No. 4 except it is done after the Canyon well was drilled, the Albert was drilled. And it shows that the feathered edge of the dolomite reservoir has been pulled back to the east. My contours in the previous map were a little more optimistic without having the control there.

Q. After reviewing this information, was it your expert opinion that you should not complete in the Canyon formation?

A. Yes, sir.

Q. And you drilled on down to the Morrow formation?

A. That's right.

Q. Can you go over Exhibit No. 7 with us?

A. Okay. Exhibit 7 here is a combined isopach map and structure of the Albert AJH No. 1 before it was drilled.

The solid lines are the isopach contours showing the varying thicknesses of the Morrow clastics with the contour interval being

20 feet. The dotted lines are the structural contours on the top of the Morrow clastics with the interval set at 100 feet.

And experience in northern Eddy County has shown that wells along the nose, or the axis, of these Morrow clastic thicks have a better chance of encountering Morrow sand bodies, which are capable of producing an economic volume of gas.

Q. Would there have been actually a better location to drill a Morrow well?

A. Yes. If you note the small dot to the south of the Albert location, which would be 1980 from the north, 660 from the east in Unit H there, this would have been an orthodox location for the Morrow and a better location, a better potential for hydrocarbons had this been our main objective.

Q. What was your main objective?

A. The main objective was the Canyon dolomite.

Q. You did drill on down to the Morrow. And looking at Exhibit 8 -- is a log -- can you describe that log.

A. Uh-huh. Exhibit 8 here is a portion of

the neutron density log covering the Morrow clastics. The correlated log shows the Morrow clastics interval and the top of the Morrow clastics used on the previous two maps.

In addition, Dst information is shown along with log calculations. Earlier on the logs and Dst information indicated that the well would probably pay out in the Morrow section.

Q. In your expert geological opinion, should this well be completed in the Morrow?

A. Yes.

Q. Look at Exhibit No. 9, identify it, and describe it for us, please.

A. Okay. This is an after-map, which is similar to the one that was shown in Exhibit No. 7, except now we have the data point from the drilled Albert, and it changed the contours nearby.

The Albert point data point caused the Morrow clastics thick to be moved to the south and slightly to the east, which still would have made that orthodox location for the Morrow in Unit H a better location had it been the main objective.

Q. Okay. Can you summarize the Yates'

request?

A. Uh-huh. To sum this up, the location was originally picked as a standard location based on the conditions believed to be prevailing in the Canyon dolomite.

When no potential for the Canyon production was found in the drilling of this well, the decision was made to deepen it to the Morrow clastics. So the old standard location for the Canyon well then became a nonstandard location for the Morrow clastics gas well.

So it's this nonstandard location that Yates is seeking approval.

Q. In your opinion will the approval of this application be in the best interests of conservation and the prevention of waste?

A. Yes, sir.

MR. RICHARDS: Do you have some questions?

EXAMINER STOGNER: Well, I tell you what, I do have some questions, but I need some -- I think well history data would be in order, Mr. Richards. Should Ms. Fly or Mr. Bullock be better prepared to answer those questions?

MR. RICHARDS: Ms. Fly.

THE WITNESS: If it's on production.

EXAMINATION

BY EXAMINER STOGNER:

Q. Well, when was the well drilled and at what depth was the primary --

A. The well was drilled, the Albert was drilled in October, early November. We probably cut pay in early November of this year.

Q. When you're talking about cutting pay, in the Canyon?

A. In the Canyon, yes, sir. I think it was spudded around the 15th or so of October, maybe a few days later, of 1991.

Q. And when was the decision made to go down deeper into the Morrow?

A. It was made just shortly after we drilled through the Canyon within a few hours.

Q. And what was the Td of this well?

A. We Td'd at, oh, probably 9200. Let's see, I have the exact Td. 9264.

Q. And what is the base of the Canyon?

A. The base of the Canyon would be at a depth of 7468 of what would be the dolomite interval that we call the base of the Canyon.

That would be the base of my dolomite interval.

Q. So as far as completion techniques for the two wells, if they would have been drilled separately, there are no changes in the surface or intermediate casing or any such as that, is there?

A. No, sir.

Q. Also the well No. 1, was that Mark Foster, was it? That shows to be --

A. Saltwater disposal? Oh, the one to the south?

Q. It had produced from the Morrow at one time.

A. Yes, sir, it did. It made about, I think, 130 Mcf is what it cum'd at. 123 Mmcf, I'm sorry. And it was plugged, and I'm not sure of the plugging date on that one.

Q. I believe it was around 82. I'm not sure myself, but --

A. Okay.

Q. -- in looking over the ad for this particular application.

So this well was also further away from that, which made it a good decision at that time to go on down to the Morrow, was it not?

A. Yes, sir.

EXAMINER STOGNER: Okay. I don't have any other questions of Ms. Fly at this time.

BY MR. STOVALL: Basically one minor one.

EXAMINATION

BY MR. STOVALL:

Q. Looking at your later Morrow map, Exhibit 9 --

A. Okay.

Q. -- you moved your contour lines, structure contours, to the east a little bit; is that correct?

A. Yes, sir.

Q. And it looks like the 5300 line got left out or the 52 -- the 100-foot interval, and I don't see the 5300 line. I'm just curious. Does it take a dip down?

A. You're right. No. That should be 5300 in there, and they did not put it. I assume --

Q. In other words, somewhere between 51 and 54, there should be two lines. It's a little shallower than it appears here?

A. That's right. They labeled the 5200 line, which more than likely, should be my 5300 line there. And they forgot to put in the 5200

contour interval.

Q. Does that affect anything?

A. No, sir.

Q. You made your opinions based on what you thought should have been on the map; right?

A. Yes. On my original map they're there.

MR. STOVALL: I see. I was just curious. That's all I've got.

EXAMINER STOGNER: If there's nothing else, I'll take this case under advisement.

(The proceedings were concluded.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10429, heard by me on 19 December 1991.

Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Debbie Vestal, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I caused my notes to be transcribed under my personal supervision; 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 DECEMBER 27, 1991.

Debbie Vestal

DEBBIE VESTAL, RPR
NEW MEXICO CSR NO. 3