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. 10,997
APPLICATION OF NEARBURG EXPLORATION COMPANY	)	

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

November 10th, 1994

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on Thursday, November 10th, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

November 10th, 1994
Examiner Hearing
CASE NO. 10,997

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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

FOR THE DIVISION:

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By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 10:20.m.:

EXAMINER CATANACH: At this time we'll call Case 10,997, reopened.

MR. CARROLL: Application of Nearburg Exploration Company to reopen Case 10,997 and to amend Division Order No. R-10,150, Eddy County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

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

I have two witnesses to be sworn.

EXAMINER CATANACH: Any additional appearances?

Will the witnesses please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, back in July 14th of this year the Division granted Nearburg's Application for a compulsory pooling order that included an unorthodox gas well location. It's Case Number 10,997, it's Order Number R-1015 [*sic*].

We are back before you today because the geologic data has been reanalyzed, and we are requesting permission

to amend our location. We're moving from the original unorthodox location; the replacement location is still unorthodox. That's the only change.

Procedurally, what we have done is, we have notified all those interest owners that would have been affected by the pooling order of the change in location and have given them all new election opportunities and new notices of this hearing.

And if the Division grants our amendments and modification, then we will go through the process of providing those parties with additional elections.

The modification of this Order, if you desire to do it, will require some adjustment of the time sequences involved so that we'll have time to send out the AFEs and do the rest of the sequence on elections.

But the principal reason is a geologic re-examination of this.

The principal witness back in June, when this case was heard by Examiner Morrow, was Terry Durham. Mr. Durham is a geophysicist. He's before you today as the first witness.

To set the stage for the change, I'm going to hand you what I have extracted from the case file, which was Nearburg's Exhibit 7 in the original case, and Mr. Durham and I are going to start with the old exhibit.

TERRY DURHAM,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, Mr. Durham, would you please state your name and occupation?

A. Terry Durham, senior geophysicist with Nearburg Producing Company in Dallas, Texas.

Q. Mr. Durham, did you testify as an expert witness in that professional capacity before the Division Examiner back in the original hearing of this case on June 9th?

A. Yes, I did.

Q. As part of your professional duties, have you continued to examine the geologic information and the geophysical data with regards to this project?

A. Yes, we've been re-examining the data and trying to assure ourselves that the locations are the best possible ones for drilling Morrow wells.

Q. Based upon that additional study, do you now have a revised opinion about the optimum location in which to place the well to be drilled in the north half of Section 26?

A. Yes, we have made a change in that location, and that's the one that's shown on the subsequent exhibits

here.

MR. KELLAHIN: All right, sir. We tender Mr. Durham as an expert geophysicist.

EXAMINER CATANACH: Mr. Durham is so qualified.

Q. (By Mr. Kellahin) This Examiner did not hear the original case, so let's go back and if you'll look at what I have handed to you as Exhibit 7, I think it is, Exhibit 7 in the case presented back on June 9th, identify that display for us.

A. It's an early Morrow -- early middle Morrow sand isopach map, and it also shows the seismic amplitude anomaly outline, which was extracted from the two seismic lines that are shown on the map.

Q. You're soft-spoken, Terry. If you'll try to amplify your voice so that we don't misunderstand you.

Describe for us what you as a geophysicist mean when you are trying to define seismically an amplitude anomaly in the Morrow.

A. Okay, from my regional work of the area, we have some Morrow production in the township to the south of this, and we have recorded a seismic line through that Morrow production, and it shows an amplitude change in the seismic event consistent with the Morrow gas production.

In other words, whenever the gas is present in the sand, you'll see an increase in the amplitude

indicative of that gas sand, the gas being present in the reservoir.

Q. Contrast that with what we typically see in these hearing procedures as the more conventional use of seismic technology to help us find structural position.

A. Well, typically, in seismic information, we're -- primarily we look for structural information, we look for the location of faults, the orientation of faults, and we try to get -- to achieve a position that's structurally high to nearby wells. That's the primary purpose for seismic information.

Our other exhibit, which we'll show in a minute here, shows that in the Morrow play, there is virtually no structural information that can help you delineate where these sand channels are located. The structures do not play any bearing in the location of these wells.

So we have to examine the seismic data to try to extract some different information to help us locate these wells, and looking at the amplitudes is one of the techniques that we're trying to do.

The --

Q. Your control well was substantially to the south of this particular area, was it not?

A. Yes, it was three miles to the south.

Q. All right. And that was a producing Morrow well?

A. Yes, it was.

Q. And you had seismic data of sufficient relevance that you could look at that seismic data in relation to that producing well and see if you could, with your expertise, detect how the gas-producing zone of the Morrow reflected itself on the seismic data?

A. Yes, that's right.

Q. All right. Now, you're going to take that signature, and you're going to look at other seismic data -- for example, in this project area -- and see if you can see the same signature, footprint, indication to you of the presence of gas?

A. Uh-huh.

Q. And that's what we're doing, right?

A. That's right. We used the seismic data from that well three miles to the south as a model, so to speak, of what to look for in this particular area.

Q. Having done that back in June, describe for us what your opinion was back in June as we look at Exhibit 7 in terms of placing the Morris well at its optimum location in Section 26.

A. Well, we had the two seismic lines that I show here on the map, lines 31 and 33, and we had -- At the intersection of those two lines, we had an amplitude anomaly which showed up very well on both lines and was

consistent with what we saw on our model case, three miles to the south.

Q. On the display, how have you coded or identified the area identified for the amplitude anomaly?

A. It's color-coded as this stippled area, which extends in Section 26 up through Section 25 and 24.

And I might add that that's based on regional trends in the area.

Q. The proposed location for the well, then, is as identified on this exhibit. It's the well symbol that is colored in red, and it's got the arrow pointing to it?

A. Yes.

Q. All right. And the basis for that location, again, was what, sir?

A. Was the seismic amplitudes that we saw on lines 31 and 33.

Q. All right. Now, let's go to the new display, which is marked as Exhibit 1 for purposes of this hearing.

Let's look at the structure map first on the left portion of the display. You referred to it earlier in your testimony. Now we have it to look at.

Again, it gives you no technical assistance in determining a well location in Section 26, from looking strictly at structure, right?

A. That's correct.

Q. So we go to the right-hand portion of the display. What has happened in terms of data gathering that has caused you to re-examine your conclusions?

A. Well, we reprocessed the first lines, and we noticed some errors in our depth calculations. What we thought was the Morrow zone was actually a zone shallower. So our initial amplitude interpretations were not valid.

That error, in conjunction with the additional two lines that we show on the map, lines 43 and 44, those did show an amplitude anomaly that was south and west from our original location.

Q. These are new seismic data information that you did not have at the time of the earlier hearing?

A. That's right, that and the fact that all four lines were reprocessed with a new technique.

Q. All right. Based upon this new information and the reprocessing of the old data, what is now your professional opinion as to the optimum location in which to place this well in the spacing unit?

A. The optimum location would be 2310 feet from the north and from the east in Section 26, and it would be centrally located on the amplitude anomaly defined by the lines 43 and 44.

Q. To place this well at a standard location, which would be any point within a setback 1980 from the short

ends and 660 from the side boundaries, would do what, sir?

A. It would place us off the amplitude anomaly and, as interpreted, would be out of the sand channel, out of the gas sand channel.

Q. Does this modify or change the risk involved insofar as the pooling order is concerned?

A. This is still a risky technique. It's not been applied -- doesn't have a historical track record, is what I'm trying to get at, in the Morrow play.

Typically, wells have been played -- have been located based on regional subsurface geologic work, and the success record has borne out the fact that you can get dry holes or very marginal production.

Q. The Division Examiner is authorized to award a maximum penalty of cost plus two more times, 200-percent penalty.

Does the change in location, in your opinion, modify the risk?

A. Not, it doesn't. This is still a risky technique and still a risky play.

Q. What's happened in the south half of 26? Is there a well in the south half of 26?

A. Yes, there is. There's a well that's operated by Nearburg Producing Company, the Nearburg South Boyd in the southwest of Section 26.

Q. Okay. Does the presence of that well diminish the risk involved?

A. I'm sorry?

Q. Does the presence of the existing well in the south half reduce or modify the risk involved in the drilling of the well in the north half?

A. No, it doesn't. It's still a very risky location. We located some distance from that well.

MR. KELLAHIN: That concludes my examination of Mr. Durham, Mr. Examiner.

We move the introduction of what we have been discussing as Nearburg's Exhibit 1 to this reopened hearing.

EXAMINER CATANACH: Exhibit Number 1 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Durham, it's my understanding that you're able to utilize this seismic data and not only identify Morrow channel sands but identify gas present in the Morrow channel sands?

A. Yeah, this technique has been used in the Gulf Coast offshore for about the last ten years, using seismic information. The amplitude is extracted from that to detect gas presence.

It's a technique that has not been used very much in New Mexico. And so, as I said, it's a new technique and one we're going to try.

Q. What data did you use to map the thickness of the reservoir?

A. The thickness of the reservoir is based on subsurface information.

So the seismic data was not used to interpret thickness, because the sand channel itself is too thin to resolve on seismic information.

What we're looking for is, when a gas is present you get an amplitude change. It's caused by an extreme velocity difference. The gas is a very low-velocity material, compared to the surrounding shales and sands, and that gives you an amplitude change which we are detecting on seismic data.

Q. When you re-evaluated your seismic -- your initial seismic data, did you find that gas was not present at your original location?

A. When we re-evaluated, yes, when we re-processed the data, it did not look anomalous at all at the original location.

Q. Did that cause you to shoot additional seismic in this section?

A. It caused us to -- you know, re-evaluate the

whole area with data that we had.

Q. When was that well in the south half drilled? Is that a fairly old well or a new well?

A. I do not know the exact date. I think it was in the middle Eighties, about --

Q. It's not a new well?

A. No.

Q. The -- To determine the reservoir thickness, you use the control points, the two other Morrow wells in that section? Is that the only data you used?

A. Yes. We used the two Morrow control points. And if you can follow the yellow outline that's shown on the map, there was a lower amplitude anomaly that showed on the line 44, which goes near the Morris 26 G location. There was a low-level amplitude anomaly that showed up on that.

And that, in conjunction with regional work, allowed us to project this outline of the sand channel in that southwest corner of 26.

Looking at the amplitude anomaly and the wells that have been drilled in that Section 26, we kind of qualitatively drew the isopach as you see on the map here.

So it's not a real quantitative contouring technique, so to speak, because this is, again, qualitatively looking at the amplitudes and surmising from those what the thicknesses could be.

Q. So your location, your current location, is it basically where it is to stay on line with the seismic line?

A. It's on the seismic line, yes.

Q. Right. Is that why it was placed in that location, basically?

A. Yes, it is.

EXAMINER CATANACH: Okay, I have nothing further of the witness, Mr. Kellahin.

MR. KELLAHIN: Mr. Examiner, I've called Joe Fitzgerald to the stand.

Mr. Fitzgerald is a petroleum landman with Nearburg Exploration Company.

JOE FITZGERALD,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, sir, would you please state your name and occupation?

A. Joe Fitzgerald, senior landman, Nearburg Producing Company, Midland, Texas.

Q. Mr. Fitzgerald, did you qualify as an expert petroleum landman before the Division back on June 9th and have those qualifications accepted and made a matter of

record?

A. Yes.

Q. Have you continued to be involved in this project for your company as the petroleum landman?

A. Yes.

MR. KELLAHIN: We tender Mr. Fitzgerald as an expert witness.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Let's turn to Exhibit 2, Mr. Fitzgerald.

Once the technical people involved in the project had recommended a change in location, what did you do?

A. I had to contact Anadarko and let them know of the location change, and I submitted this letter to them so that they could have a new election under the proposal.

Q. All right. Other than Anadarko, were there any other working interest owners that would share in the costs of the well in this spacing unit besides your company?

A. No.

Q. All right. There is an unusual circumstance with regards to the interest owners that share in production, however, is there not?

A. Yes, there are some nonparticipating royalty owners that have not been located since 1948, I believe, and those we had asked the Commission to force pool under

this order also.

Q. Okay. Identify for the record what you mean by nonparticipating royalty interests.

A. An individual or entity that has the right to a percent or a portion of the production but does not have rights to execute leases or participate in wells.

Q. Okay. Because of that unusual circumstance, the previous order talks about pooling that nonparticipating royalty interest in the north-half spacing unit for production from any formation, so long as some portion of that acreage burdened by that interest might share in production?

A. Correct.

Q. And so you would want to continue that kind of phrasing, if the Examiner re-issues the order?

A. Correct.

Q. All right. So that's an unusual circumstance.

Any other unusual circumstance in the order?

A. No.

Q. The other part is Anadarko, and that is -- follows the normal practice of pooling?

A. Right, other than the -- of course, the unorthodox location.

Q. All right, sir. Describe for us what's shown in Exhibit 2, then.

A. It's my letter to Pat Smith of Anadarko, who's their landman handling this area for them, along with the return receipt card attached to the front.

It also has a new AFE giving the new location, and I also -- we had previously negotiated a JOA between the companies, and really the only page that we changed was this page 4, so I submitted a new page 4 to the JOA for their acceptance, if they so desired to.

Q. Other than going through the process of renotification and restarting elections because of a change in location, are there any other changes to be involved in the order?

A. No.

Q. The AFE is the same?

A. (Nods)

Q. Overhead rates are the same?

A. (Nods)

Q. All of the other components that we would present to the Examiner are the same as originally presented?

A. Yes.

MR. KELLAHIN: That concludes my examination of Mr. Fitzgerald.

We move the introduction of his Exhibit Number 2.

EXAMINER CATANACH: Exhibit Number 2 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Fitzgerald, as of this date Anadarko has not agreed to join in the well?

A. We're talking -- We're in discussion with them. I believe they will, but as of -- We were just wanting to make sure they were in the order for the timing consequences.

Q. Mr. Fitzgerald, is it your proposal to -- if we decide to re-issue this order, to treat it as if it were a new order and just allow the same type of election periods?

A. Yes, sir.

EXAMINER CATANACH: Okay. I have nothing further.

MR. KELLAHIN: I have reduced to writing and executed the certificate of mailing of notice to Anadarko.

The other parties with regards to this nonparticipating royalty interest, Mr. Fitzgerald's prior testimony is, despite his best effort, no one can seem to find these people. We know their names, but we can't find the locations, if they are anywhere.

And so that's why this notice only includes Anadarko.

EXAMINER CATANACH: Okay.

MR. KELLAHIN: With the introduction of the

certificate, Mr. Examiner, that concludes our presentation in this case.

EXAMINER CATANACH: Certificate of mailing will be admitted as evidence.

And there being nothing in this case, Case 10,997 (Reopened) will be taken under advisement.

(Thereupon, these proceedings were concluded at 10:45 a.m.)

* * *

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 November 12th, 1994.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10997, heard by me on November 10 1994.

David R. Catanach, Examiner
Oil Conservation Division