STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCE DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF:
APPLICATION OF NEARBURG PRODUCING COMPANY FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO.

CASE NO. 10297

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Examiner

May 2, 1991
9:57 a.m.
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on May 2, 1991, at 9:57 a.m. at the Oil Conservation Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Susan G. Ptacek, a Certified Court Reporter No. 124, State of New Mexico.

FOR: OIL CONSERVATION DIVISION

BY: SUSAN G. PTACEK
Certified Court Reporter
CCR No. 124

I N D E X

May 2, 1991
Examiner Hearing
Case No. 10272

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E X H I B I T S

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL, ESQ. General Counsel Oil Conservation Division State Land Office Building Santa Fe, New Mexico 87504
FOR NEARBURG PRODUCTION COMPANY:	CAMPBELL & BLACK, P.A. Attorneys at Law BY: WILLIAM F. CARR, ESQ. 110 N. Guadalupe Santa Fe, New Mexico 87501

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EXAMINER STOGNER: At this time we will call case 10297.

MR. STOVALL: Application of Nearburg Producing Company for an unorthodox gas well location, Eddy County, New Mexico.

MR. CARR: May it please the examiner, my name is William F. Carr with the law firm of Campbell & Black, P.A. I represent Nearburg Producing Company, and I have two witnesses.

EXAMINER STOGNER: Are there any other appearances? Will both witnesses please stand to be sworn?

(Whereupon the witnesses were duly sworn.)

MARK NEARBURG,

the Witness herein, having been first duly sworn by the Notary Public, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your full name for the record, please?

A. Mark Nearburg.

Q. By whom are you employed?

A. Nearburg Producing Company.

Q. In what capacity?

A. Land manager.

Q. Mr. Nearburg, have you previously testified before this division and had your credentials as a petroleum landman accepted and made a matter of record?

A. Yes.

Q. Are you familiar with the application filed in this case?

A. Yes.

Q. Are you familiar with the subject proration unit and the proposed well?

A. Yes.

MR. CARR: Are the witness' qualifications acceptable?

EXAMINER STOGNER: Mr. Nearburg is so qualified.

Q. (By Mr. Carr) Mr. Nearburg, would you briefly state what you seek with this application?

A. Seek an unorthodox gas well location in Eddy County, New Mexico, located 2500 feet from the north line and 330 feet from the west line in Unit E of Section 15, 22 South, 27 East to test the undesignated Carlsbad Strawn gas pool and the undesignated South Carlsbad Morrow gas pool dedicating the west half of Section 15 to a standard 320-acre gas proration unit for both pools.

Q. What are the well location requirements for each of these pools?

A. 1980 feet from the end line and 660 from the sideline on 320-acre spacing unit.

Q. Would you refer to what has been marked for identification as Nearburg Exhibit No. 1. Identify that that and review it for Mr. Stogner.

A. It's a land plat showing the proration unit in yellow and the location of the test well in an orange arrow.

Q. You will be dedicating the --

A. West half.

Q. -- west half of 15. What is the status of the east half of Section 16?

A. That east half is owned by Kerr-McGee, Texaco and Hallwood Energy Company, and the state has made demand on those companies to develop the east half of Section 16 on the state leases. Hallwood Energy owns approximately 84 percent of the interest in the east half of Section 16, and they have agreed to a working interest unit under an operating agreement. They will be participating in our test well in the west half of Section 15. Kerr-McGee and Texaco have not responded to requests with a decision for a request to participate in our working interest unit. That's the current status.

Q. Will the development of the Morrow and Strawn formations in the west half of 15 enable you to obtain information that will then permit you to make an informed decision as to further development plans for the east half

of Section 16?

A. Yes, sir. Our geologic testimony will show why we're drilling the west half of 15 first to provide information to develop the east half of Section 16.

Q. Could you identify what has been marked as Nearburg Exhibit No. 2, please?

A. Survey plat showing the exact location and the west half proration unit prepared by John West.

Q. Now, let's go to Exhibit No. 3. Would you identify and review that?

A. Exhibit No. 3 is a letter from Nearburg to Kerr-McGee requesting a farmout on the east half of Section 16 and a waiver of objection to our application today. And also a letter from Raynex Resources, Inc., who is working with us on this project, to Texaco USA also requesting a farmout and a waiver of objection to this hearing today.

Q. The only interest owners in Section 16 towards whom you are moving are Texaco, Kerr-McGee and Hallwood; is that correct?

A. Yes. I would say Kerr-McGee and Texaco because Hallwood has waived any objection to this hearing and they're participating in our drilling activity.

Q. Is a copy of that waiver from Hallwood what has been marked as Nearburg Exhibit 3A?

A. Yes.

Q. Mr. Nearburg, would you now go to the last exhibit in the exhibit packet and identify what's been marked as Nearburg Exhibit No. 6.

A. These are the certified notices given to Kerr-McGee and Texaco for this hearing.

Q. Is it the reason for the unorthodox location geological in nature?

A. Yes.

Q. We will call a geologist to explain the reason for this particular location?

A. Yes.

Q. Were Nearburg 1, 2, 3, 3A and 6 prepared by you or compiled under your direction?

A. Yes.

MR. CARR: At this time, Mr. Stogner, we would move the admission of Nearburg Exhibits 1, 2, 3, 3A and 6.

EXAMINER STOGNER: Exhibits 1, 2, 3, 3A and 6 will be admitted into evidence at this time.

(Nearburg Exhibits 1, 2, 3, 3A and 6 were admitted in evidence.)

MR. CARR: That concludes my direct examination of Mr. Nearburg.

EXAMINER STOGNER: I have no questions of -- yes, I do.

EXAMINATION

BY EXAMINER STOGNER:

Q. Section 16 is the state acreage; is that correct?

A. Yes, sir.

Q. All of it, all 640 acres?

A. Let me look. I do not believe that it is -- yes, I do. It has all state acreage. There are certain particular leases that I could reference from a letter from Mr. Prando to Kerr-McGee, Texaco and Hallwood referencing two particular leases that have been developed on the west half of Section 16 with a marginal Morrow well, and the state has requested development in the east half of Section 16 for drainage reasons.

Q. In Section 15, is that classified as fee, all of it, 640?

A. Yes, sir.

Q. Do you know, perhaps, what the land office's deadline is for the east half of section 16 to be developed?

A. From the correspondence I've seen there was no deadline. They just requested that action be initiated to develop the east half of Section 16. I've not seen anything with a deadline in it.

Q. Are you familiar with that process when the land

office requests action to be done on a lease or an area?

A. Not intimately, no.

EXAMINER STOGNER: I have no further questions of Mr. Nearburg at this time.

MR. STOVALL: Let me ask a couple.

EXAMINATION

BY MR. STOVALL:

Q. I assume -- what well has initiated the drainage demand letter from the state land office, do you know? Where is it? Not the name of the well but where is it?

A. It's the inner North Carlsbad State Com Well No. 1. The communitization on that was approved that -- state communitization was approved August 13, 1980, affecting leases LG 6632, with Enron Corporation as the lessee of record, and L 6381, Kerr-McGee lessee of record.

Q. That's the west half of 16, did you say?

A. These leases also cover portions of the east half of 16. That letter was written September 28, 1990, by Floyd Prando.

Q. From the standpoint of royalty drainage protection, what is this well going -- you say it's a working interest unit with the west half of 15 and east half of 16; is that correct?

A. That's the current proposal to facilitate development of the east half of 16. Currently there is no

working interest unit covering the west half of 16.

Q. Just a communitization agreement?

A. Right.

Q. So you are forming a -- essentially a 640 working interest unit?

A. It will be done under an operating agreement. It will cover the east half of 16, the west half of 15 and the north half of Section 21, all in 22 South, 27 East.

Q. If you drill this well, does that not further impact potential drainage of the state land royalty interest?

A. Yes, it does.

Q. What are the plans for protecting that acreage?

A. As you will see the geologic testimony, we feel it's much better to start in the west half of 15 due to the information we have. We have proposed to Kerr-McGee and Texaco that within one year of drilling our well in the west half of 15, we would move to the east half of 16. Frankly, the development in the east half of 16 is not my concern, since I do not own any interest in the east half of 16. That is Kerr-McGee, Texaco and Hallwood's problem, and Hallwood agreed to the working interest unit to obtain geologic information to develop the east half of 16 in a prudent manner.

Q. I understand that you're not obligated --

A. In other words --

Q. -- to do anything in 16, but you are, in fact, encroaching on 16, which would exacerbate any drainage situation in that?

A. That's true. If we drill a dry hole in the west half of 15, that would also affect our position on the east half of 16. I would think that once the well on the west half of 15 is completed and data is presented, at that time the -- Mr. Prando may make a deadline demand. But at this time he is not. I'm not familiar with how that process actually works.

Q. The BLM has got more rigid process, perhaps, than the state land, but that is not a matter in this case.

MR. STOVALL: I have no further questions.

EXAMINER STOGNER: I have no other questions of Mr. Nearburg at this time, but we may wish to recall him at a later time. Mr. Carr, you may continue.

MR. CARR: At this time I would call Jerry Elger.

JERRY ELGER,

the Witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your name for the record, please?

A. Jerry Elger.

Q. Mr. Elger, by whom are you employed?

A. By Nearburg Producing Company.

Q. Have you previously testified before this division?

A. Yes, I have.

Q. Were you qualified as an expert witness at that time?

A. Yes, I was.

Q. In what field of expertise were you qualified?

A. In geology.

Q. Are you familiar with the application filed in this case on behalf of Nearburg Producing Company?

A. Yes, I am.

Q. Have you performed a geological study of the area that is the subject of this application?

A. Yes, I have.

Q. Are you familiar with Nearburg's proposed well?

A. Yes, I am.

MR. CARR: Mr. Stogner, are Mr. Elger's qualifications acceptable?

EXAMINER STOGNER: Mr. Elger is so qualified.

Q. (By Mr. Carr) Have you prepared certain exhibits for presentation in this case?

A. Yes.

Q. Would you refer to what has been marked as Nearburg Exhibit No. 4, identify that exhibit and then review the information on this exhibit for the examiner.

A. This is an isopach map of the critical Strawn zone which is the -- as the legend refers to down in the lower left-hand corner, and all the producing wells in the vicinity of the prospect are color-coded, and I would point out that the Strawn formation is indicated by a blue shade of color, and the well in the north half of Section 21 has three different colors denoted, of which one is blue.

That well was a Strawn producer but was not -- was not a commercial objective having produced less than half of a BCF of gas from the Strawn. And it's the only Strawn producer in the area outside of the wells down in the southeast part of Section 22 and then south half of 23 and the blue wells to the southeast of the prospect area.

This map is an isopach map of the key clean carbonate buildup that's indicated on Exhibit 5, which is a two-well cross section of the Strawn, which includes wells both to the east of the proposed drill site and to the southwest, including the perforations in the Coquina Nichols which is the productive interval in the well in the north half of Section 21.

As you can see on the isopach map, the Coquina Nichols well has 186 feet of clean carbonate section of

which the porosity has been shaded red, and it represents the thickest Strawn section of any wells surrounding the proposed drill site.

Now, Nearburg in compiling this map, both well log information and one seismic line were utilized. The seismic line is not proprietary to Nearburg but was -- which did have access and a geophysicist was allowed to work the data, and that line extended through this key well, which is the Coquina Nichols well in the north half of 21 and diagonally to the northeast across the proposed -- or just south of the proposed drill site in the east half of Section 15, extended on into Section 11.

Just to summarize what that seismic line showed was -- and it was very difficult to determine. The quality of the line was fairly poor. But there was evidence that a thickening in the Strawn was occurring in the northwest quarter of Section 15. The maximum thickness being very close to the proposed location. So the combination of well site -- the combination of well evidence and the geophysical line supports this interpretation that the Strawn is -- the isopach interval builds up to potentially over 200 feet in an area extending from near the Coquina Nichols well across the south -- or the east half of Section 16 and on into the northwest quarter of Section 15.

Q. Now, Mr. Elger, the primary objective in the

well is going to be the Strawn; is that correct?

A. That's correct.

Q. What you are hoping to hit here is one of these Strawn pods of a limited aerial extent; is that correct?

A. That's correct.

Q. Why couldn't you move the well to a standard location?

A. Well, the Strawn -- the nature of the Strawn out here which is carbonate buildups associated with a shelf margin that runs from the northwest -- or northeast to the southwest includes production in fields such as Lusk and Golden Lane and Big Eddy Strawn field and on down to the southwest of this area in the Frontier Hills is such that the carbonate builds up at a very -- in very localized areas and very rapid fashion. In other words, offset locations can build up from any where from 50 feet to 2 to 300 feet or greater thicknesses in very short distances. For that reason, with the seismic evidence and the geological evidence suggested by this map, the proposed location has been put at an optimum -- has been located to optimize the probability of encountering a thick Strawn interval.

Q. If you move 330 feet to the east, do you have an opinion as to whether or not you would still be in the Strawn?

A. There would be a probability that would be much thinner or noncommercial.

Q. In your opinion, will developing this Strawn pod with the well located as proposed by Nearburg enable you to best produce the reserves that you are hoping are in the Strawn at this location?

A. That's correct.

Q. In this pod?

A. Yes.

Q. You are sharing the information with the offsetting operator to the west?

A. Yes.

Q. Do you have anything further to add to your testimony?

A. No.

MR. CARR: At this time, Mr. Stogner, we would move admission of Nearburg Exhibits 4 and 5.

EXAMINER STOGNER: Exhibits 4 and a will be admitted into evidence.

(Nearburg Exhibits 4 and 5 were admitted in evidence.)

MR. CARR: One final question.

Q. (By Mr. Carr) Mr. Elger, in your opinion, will approval of this application be in the best interest of conservation and prevention of waste and the protection of

correlative rights?

A. Yes.

MR. CARR: That's all I have, Mr. Stogner.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Elger, did you prepare Exhibit No. 4?

A. It was prepared under my supervision, both exhibits.

Q. Mr. Carr asked you if moving 330 feet to the east would affect this well, and you replied that it could possibly be thinner. Let me stretch this out a little bit. How about if you move about 400-foot to the north and east? We're looking at your map here, Exhibit 4. Why couldn't you move in that direction to a standard location?

A. Well, we're a little bit concerned both about the quality of the seismic data from which this interpretation was derived, and the fact that by moving that direction you would be moving in essence closer to the well in the south half of Section 10 which was obviously dry in the Strawn, having encountered only 87 feet of carbonate -- clean carbonate section with no apparent porosity.

If you refer back to Exhibit 5, you will see that the main porosity unit in the Strawn and the Coquina Nichols well is roughly from 10410 to 10490. It's roughly

a 90-foot porosity unit. That's probably where most of the reserves came from in that well, the half of BCF. You will see by the little dashed line at the top of that porosity unit that corresponding to the thickness, the increase of thickness of Strawn, we're hoping to and as a general rule you can also thicken that porosity unit.

And that's, of course, what we're trying to do; and we're using a little bit of -- we're a little bit hesitant to move either to the east towards -- the well up in the east half of Section 15 that was dry in the Strawn and also to the north to that well that was dry in the Strawn in the south half of 10. I mean that's the basic reason. We would be moving away from a key show well, is the Coquina Nichols well.

Q. That's the well in the north half of Section 21 --

A. Yes.

Q. -- you are referring to? There is a well in the extreme southeast southeast quarter of Section 16 with no footage denoted. It's not denoted nor is there a --

A. That well is not deep enough.

Q. Okay. How does this pod in this area differ from the one down into the south and east of this area that you show in Sections 26, 23 and 27?

A. Well, they could be -- a lot of times the

geometry of these pods is not regular. It's not -- and the pods themselves, the better production comes out of the main carbonate masses themselves, and some of the wells that are fringe wells around -- that are of lesser thickness than the wells that are developed in the main part of the masses are really producing probably from carbonate detrital aprons that are shed off of the main carbonate pinnacles, if you want to call them that.

The well in Section 26, in the northwest quarter of 26, has an extreme thickness of carbonate. Probably penetrated one of the pinnacles rather than the carbonate aprons. Of course, you can see the relationship of that well to the other well drilled in Section 26, where 120 feet of carbonate was encountered, clean carbonate section, and was probably not productive in the Strawn.

So it's -- the predictability of the porosity is -- the predictability of the pinnacles is -- porosity in the pinnacles is much greater than the predictability of the porosity in the carbon aprons surrounding them. We're hoping to at the proposed drill site in 15 encounter one of the main pinacle masses.

Q. When I look at the blue wells, showing Strawn production on there Exhibit No. 4, I show some here that have production and they're 75 feet in Section 33, and Section 17 I show a 56-foot.

A. Here, again, most of those are producing just from just thin detrital sequences, you know, where you develop the 5 or 10 feet of porosity within that clean section that's indicated by the number by the well symbol. In most instances they're not really commercial to drill for. The main commercial production from the Strawn is again from the main pinacle masses, such as that well in Section 26, northwest of 26, where I believe was an excellent well.

Q. If this well was approved, you would essentially have two producing well pods at this time. How would the reservoir be affected with a third well drilled at a standard location in the west half of -- I mean the east half of Section 16? How would that affect the overall production and reservoir energy use of this particular pod, if it does indeed show to be as you have indicated on Exhibit 4?

A. How would it affect the --

Q. The producability of the reservoir?

A. Producability of it?

Q. Yes.

A. I imagine -- it would probably be -- they probably would be in communication. I would think, based on the size of the interpretation of this mass, that both of those wells would share in -- be commercial Strawn

producers. We would hope they would be. Obviously, if the well in 15 is not clear commerical, you know, what we do in 16 -- the information gained on 15 will be a great determining factor on what the development of the east half of 16.

Q. Wouldn't a well drilled at a standard location in the west half of 15 give you the same information?

A. Here, again, it's kind of a judgment based on both -- on the subsurface geology and the seismic interpretation as to where the maximum potential for encountering commercial reserves would be, and that's related to -- related to risk and we feel like the proposed location is less a risky location for the Strawn, for commerical reserves in the Strawn, than a standard location would be.

Q. Have you done any geology in the Morrow formation in this area? How a well at an unorthodox location would affect the drainage of the Morrow?

A. I have not.

Q. But you are asking for a Morrow nonstandard location; is that true?

A. Yes.

Q. Why didn't you do any geological look at that?

A. Well, because the Strawn is the main objective. The Morrow, the accuracy -- we're at least half a mile

distancewise in any direction to the closest Morrow penetration. I believe the well in the south half of 10 has 87 feet. Most of the wells that you see numerical values for the Strawn are also Morrow penetrations. The well to the north -- in the southwest of 10 with 87 feet was dry in the Morrow also. The well in Section 22, west half of 22, the closest well to the south other than the Nichols well, was also dry in the Strawn. And the well in the east half of 15 was also dry -- I mean the Morrow, in the Morrow formation.

Therefore, we didn't feel it was -- of a great value. We didn't think we could make any great determination as to the value of the Morrow other than the serendipity or luck factor in encountering some gas-bearing sand within what section. The accuracy of the geology would be greatly diminished by the distance to all these other wellbores.

Q. With that thinking, there are more Morrow wells than there are Strawn, so the accuracy in which you just alluded to in the Morrow also goes for the Strawn; is that correct?

A. Other than the value of the seismic line, which was supplied here, the value of that seismic line of no value in determining the presence or absence of hydrocarbons in the Morrow. But it is in determining the

thickness value for the potential build up of the Strawn mass. Therefore, it had -- it had value for one section but not the other.

EXAMINER STOGNER: Are there any other questions of this witness?

MR. STOVALL: Yes.

EXAMINATION

BY MR. STOVALL:

Q. This isopach map is just your interpretation of some very limited data, is it not?

A. Well, again, it's a combination of interpretation of the seismic -- the seismic data and what was gleaned from the seismic line, the information gleaned from it.

Q. Is it possible that that pod could be oriented slightly differently or be different size or somewhat different shape?

A. There is definitely -- you know, it could have some variations to it, yes.

Q. Conceivably, say that thick section, the section within your 200-foot circle, could that possibly be wider or oriented a little more to the east or bring you -- in such a way to bring it further south?

A. I don't think it could be oriented anymore to the east. It could possibly be oriented in one direction

north or south.

Q. But if it were -- if it were, say, slightly wider or conceivably could come to the south, then south and east are a standard location? Is that -- if someone were to make a different -- if you were to make -- you or any other geologist to make a different interpretation is that -- would that be reasonable?

A. They might interpret the data different.

Q. And would not coming further south get you a little bit closer to the good well in Section 21?

A. To the south?

Q. To the south, bringing the location south.

A. Based on seismic line I would say -- I would hesitate to move south anymore than what we already have. Again, these pods are developed -- the whole Strawn carbonate shelf -- shelf margin along which these carbonate mounds are developed is oriented northeast southwest strike, again from Lusk to Golden Lane and Big Eddy and doiwn to Frontier Hills, and that's the direction of elongati0n of these pinnacles also. That's why a lot of the interpretation that you see before you is oriented to the northeast from that Coquina Nichols well.

Q. Was I correct in hearing you say the seismic was not one of the better seismic lines you have seen?

A. It was not useful for picking the top of the Strawn. As you can see in the cross section, the top of the Strawn is indicated by a -- by a facies change from -- not a facies change, but a vertical change from shale into a clean carbonate section. That reflection surface was very difficult to pick. But there was -- you were able to see evidence that there was a sort of a drape, if you'd call it, as -- similar to what's displayed on the cross section between the Coquina Nichols and off to the northwest quarter of Section 15. That drape infers to be reflecting a thicker carbonate massive line unit down below the top of the Strawn, which is the major isopach -- or the isopach interval that's utilized to build this map.

Q. You don't have that seismic with you?

A. No.

MR. STOVALL: No further questions.

EXAMINER STOGNER: Are there any other questions of this witness?

MR. CARR: No questions.

EXAMINER STOGNER: He may be excused. Anything further?

MR. CARR: Nothing further, Mr. Stogner.

EXAMINER STOGNER: Anybody else have anything further in case 10297? If not, this case will be taken under

advisement.

(Whereupon, the hearing was concluded at the approximate hour of 10:30 a.m.)

* * *

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

REPORTER'S CERTIFICATE

I, Susan G. Ptacek, a Certified Court Reporter and Notary Public, do HEREBY CERTIFY that I stenographically reported the proceedings before the Oil Conservation Division, and that the foregoing is a true, complete and accurate transcript of the proceedings of said hearing as appears from my stenographic notes so taken and transcribed under my personal supervision.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto, and have no interest in the outcome thereof.

DATED at Santa Fe, New Mexico, this 7th day of June, 1991.

Susan G. Ptacek

SUSAN G. PTACEK
Certified Court Reporter
Notary Public

My Commission Expires:
December 10, 1993

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10292 heard by me on 2 May 1991.

Examiner
Oil Conservation Division