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. 11,393

APPLICATION OF NEARBURG PRODUCING)
COMPANY FOR AN UNORTHODOX GAS WELL)
LOCATION, LEA COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examine RECEIVED

October 5th, 1995

DCT 1 9 1995

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, October 5th, 1995, 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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* * *

APPEARANCES

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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 1 9:05 a.m.: 2 EXAMINER STOGNER: At this time I'll call Case 3 4 Number 11,393. MR. CARROLL: Application of Nearburg Producing 5 Company for an unorthodox gas well location, Lea County, 6 7 New Mexico. EXAMINER STOGNER: At this time I'll call for 8 9 appearances. MR. CARR: May it please the Examiner, my name is 10 William F. Carr with the Santa Fe law firm Campbell, Carr 11 and Berge. We represent Nearburg Exploration Company in 12 13 this matter. I have two witnesses, Mr. Michael Gray and Mr. 14 Jerry Elger. I would request that the record reflect that 15 both witnesses testified in the previous case, remain under 16 oath and that their qualifications in the field of 17 petroleum land matters and petroleum geology have been 18 19 accepted and made a matter of record. EXAMINER STOGNER: Thank you, Mr. Carr. Let the 20 record so show that Mr. Gray and Mr. Elger have been 21 previously qualified and sworn in the previous case, Number 2.2 23 11.360. MR. CARROLL: Mr. Carr, I have a question. 24 This is the Application of Nearburg Producing 25

Company in the ad, and it's Nearburg Exploration Company 1 that's --2 MR. CARR: I will ask Mr. Gray just to explain 3 the relationship between those two entities. 4 MR. CARROLL: Okay. 5 MICHAEL M. GRAY, 6 the witness herein, after having been first duly sworn upon 7 his oath, was examined and testified as follows: 8 9 DIRECT EXAMINATION BY MR. CARR: 10 Will you state your name for the record? 11 Q. 12 Α. Michael M. Gray. By whom are you employed? 13 0. I'm a consulting landman for Nearburg Producing Α. 14 15 Company. Can you explain to the Examiner the relationship 0. 16 between Nearburg Producing Company and Nearburg Exploration 17 18 Company? Nearburg Exploration Company is a sole 19 Α. proprietorship owned by Charles Nearburg of Dallas, Texas, 20 and is the owner of leases in the Nearburg operation. 21 22 Nearburg Producing Company is a corporation, the sole stockholder of which is Charles Nearburg of Dallas, 23 Texas, and Nearburg Producing Company functions as the 24 operator in the Nearburg group of companies in their oil 25

and gas business.

- Q. Mr. Gray, if this Application is granted and the unorthodox well location approved, who will actually be operating the proposed well?
 - A. Nearburg Producing Company.
 - Q. What is your title with Nearburg?
 - A. I'm a consulting landman.
- Q. Have you previously testified before this Division?
 - A. Yes.
- Q. And you are familiar with the Application filed in this case on behalf of Nearburg?
- A. Yes.
- Q. Are you familiar with the status of the lands in the area surrounding the proposed well location?
- A. Yes, I am.
 - Q. Could you briefly summarize what Nearburg seeks with this Application?
 - A. Nearburg seeks an unorthodox location in the -for a unit consisting of the south 320 acres of Section 2,
 21 South -- Excuse me, Section 1, 21 South, Range 32 East,
 in Lea County, New Mexico, the location being 1980 feet
 from the south line and 660 feet from the west line of the
 section.
 - Q. And in what pool will this well in fact be

completed?

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- A. The Hat-Morrow Gas Pool [sic].
- Q. And what are the well location requirements for this pool?
- A. The well location requirements for this pool, I believe, are -- the standard location window would be 1980 -- for this particular unit, 1980 from the west line and 1980 feet from the south line.
- Q. It would be under statewide rules; is that correct?
 - A. Yes, that's correct.
- Q. And a 1980 location from the end line would be appropriate and a 660 from the side boundary; is that right?
 - A. Yes, that's correct.
- Q. And this well is unorthodox because a south-half spacing unit has been dedicated to the well instead of a standup unit; is that right?
 - A. That's correct.
- Q. All right. Let's go to what has been marked as Nearburg Exhibit Number 1.
- Can you identify this exhibit and review it for Mr. Stogner?
 - A. Yes, this is a locator map depicting the south half of Section -- or excuse me, the south 320 acres of

Section 1 and the surrounding acreage on the land map.

- Q. The well is also indicated; is that correct?
- A. Yes, that's correct.
- Q. Is there also a well that previously produced from the Morrow in this south-half unit?
- A. Yes, there's a dryhole -- excuse me, an abandoned well in the -- what would amount to the -- normally be described as the southeast quarter of the southwest quarter.
 - Q. And that well is plugged and abandoned?
- A. Yes, it is.

- Q. Is any acreage in Section 1 currently dedicated to a well?
- A. Yes, the well that you see in the eastern center 160, is dedicated to a unit which would cover lots -- well, again, cover what would, in a normal section, be considered the east half of the section, or the northeast half.
- Q. And so basically what we've got is an irregular section?
 - A. Yes, it's a long section.
- Q. And you would have a standup 320-acre unit in the northeast portion of that irregular section?
 - A. That's correct.
 - Q. What would be the effect of trying to develop the remaining portion of this unit with a standup location in

the southwest portion of this irregular section?

A. Well, a standup location, the first problem that we have, the 40 acres -- the 40 acres in Unit K, which shows Nearburg Exploration on this map, expiration of 6-1-95, is a BLM acreage that is open and is not leasable at the present time because of Department of Energy restrictions related to the WIPP program. That acreage cannot be purchased right now, or nominated for purchase from the BLM.

In addition, a standup unit would create some 160-acre holes, so to speak, that would be difficult to develop in the future.

- Q. So if you turned this spacing unit, had a standup unit in the southwest corner of this irregular Section 1, in fact, you'd be isolating 160 acres in the southeast portion of the irregular section; is that not right?
 - A. That's correct.
- Q. You'd also be isolating a 160-acre tract in the northwest corner of this irregular unit?
 - A. That's correct.
- Q. So to try and develop this with a standup unit, thereby making the well a standard location, would create subsequent problems for development of this acreage?
 - A. Possibly, yes, sir.
 - Q. Nearburg did approach the BLM about making that

40-acre tract in the center of the section available for 1 fees lease, did it not? 2 We had our agent attempt to nominate the acreage, Α. 3 and we were informed that this acreage could not be 4 nominated and would not be allowed to be sold until an 5 environmental assessment for the Waste Isolation Plant 6 7 program was completed. 0. All right. Let's go to what's been marked as 8 Exhibit Number 2. 9 Would you identify that, please? 10 11 Α. Exhibit Number 2, again, depicts the proposed unit, the location and the acreage and ownership 12 surrounding the proposed location. 13 This does not show the 40-acre unleased tract? 14 0. 15 Α. No, sir, it doesn't. Who are the offsetting owners toward whom the 16 0. well is being moved by virtue of this laydown unit? 17 Α. Phillips Petroleum, Grace Petroleum and Meridian 18 19 Company. Mr. Gray, is Exhibit Number 3 an affidavit with 20 Q. 21 attached letters confirming that notice of this Application and hearing have been provided to Meridian, Phillips and 22 Grace Petroleum Corporation? 23

Will Nearburg also be calling a geological

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Α.

Q.

Yes, sir.

witness to review the technical portions of this case? 1 That's correct. Α. 2 Were Exhibits 1 through 3 either prepared by you Q. 3 or compiled under your direction? 4 Yes, sir. 5 Α. MR. CARR: At this time, Mr. Stogner, we would 6 move the admission into evidence of Nearburg Exhibits 1 7 through 3. 8 EXAMINER STOGNER: Exhibits 1 through 3 will be 9 admitted into evidence at this time. 10 11 MR. CARR: And that concludes my direct 12 examination of Mr. Gray. 13 EXAMINATION 14 BY EXAMINER STOGNER: Mr. Gray, in looking at Exhibit Number 2, in the 15 Q. middle portion of Section 2, you have 160 acres outlined 16 out, given to Grace Petroleum and Meridian Oil, Inc.? 17 Α. Yes, sir. 18 Is that presently or currently in a 320-acre 19 proration unit, that particular acreage, that you know of? 20 Not that I'm aware of. 2.1 Α. If a 320 -- Okay, let's look at the Phillips 22 Q. acreage to the south of that. Is that presently in a 23 24 designated proration unit? Yes, sir, I believe that is. 25 Α.

Q. That is, all right.

Okay, should a 320 acres be dedicated there in that -- to that Grace Petroleum Company and Meridian Oil Company acreage, consisting of 320 acres, that's still open to the north and to the west?

A. Honestly, I'm not sure, sir.

EXAMINER STOGNER: I'm wondering if notification is appropriate, Mr. Carr, in this particular instance, since that's 160 acres that was notified, and that would necessarily be a 320-acre proration unit, if the appropriate parties were notified.

MR. CARR: Well, no matter how you turn the 320acre unit, it appears to me that the parties that you would
be notifying immediately affected would be Phillips in the
southern 320 of 2 and the Grace and Meridian interest,
which is, I guess, the center 160 on the side of Section 2.
Those would be the only parties toward whom the well is
actually being moved.

EXAMINER STOGNER: Yeah, but a 320-acre proration unit would be affected, and wouldn't those parties either owning some portion of the northern portion or the western portion be affected?

MR. CARR: Well, I guess that would depend on how you orient the unit, and if in fact -- Because, you know, depending on how they even orient the unit, the question

comes up of whether or not you're really encroaching on 1 them. 2 EXAMINER STOGNER: I understand this question was 3 kicked around at the Commission hearing last week --4 MR. CARR: Yes. 5 EXAMINER STOGNER: -- on notification on --6 MR. CARR: Yes. 7 EXAMINER STOGNER: -- unorthodox locations. And 8 I know it's still been up in the air. 9 (By Examiner Stogner) Do you know who owns that 10 0. property in the remainder of Section 2, other than Phillips 11 and Grace or Meridian? 12 I don't know off the top of my head, sir. Α. 13 EXAMINER STOGNER: I'll tell you what, let's --14 Mr. Carr, let's go ahead and continue with your other 15 witness, with this question in mind, and we may come back 16 to it. 17 18 MR. CARR: Okay. So with that, I have no other 19 EXAMINER STOGNER: 20 questions of this witness, or for Mr. Gray at this time, 21 but we should -- may need to call him, but let's go ahead 22 and hear what your --23 MR. CARR: All right. 24 EXAMINER STOGNER: -- geologist has to say. 25 MR. CARR: Mr. Stogner, at this time we call

Jerry Elger. 1 JERRY B. ELGER, 2 the witness herein, after having been first duly sworn upon 3 his oath, was examined and testified as follows: 4 DIRECT EXAMINATION 5 BY MR. CARR: 6 Mr. Elger, have you made a geological study of 7 the area surrounding the proposed Minis "1" Federal Number 8 2 well? 9 Yes, I have. Α. 10 And have you prepared exhibits for presentation 11 Q. 12 in this hearing today concerning the proposed unorthodox well location? 13 Yes, I have. Α. 14 Would you refer to what has been marked for 15 identification as Nearburg Exhibit Number 4, your structure 16 map, and review the information on that exhibit for Mr. 17 Stogner? 18 Α. Exhibit Number 4 is a structure map on top of the 19 -- grid on top of the lower Morrow. It incorporates all of 20 21 the well control that penetrated the Morrow. And in fact, the majority of those wells have been displayed as orange 22 23 circle, because -- designating that they are Morrow 24 producers.

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There are also, incorporated into this display,

are two seismic lines, an east-west seismic line across the top of Sections 13, 14, 15, 18 and a north-south seismic line that runs along the west boundary of Sections 1, 12 and 13. That data was interpreted by Nearburg's geophysicist and again incorporated in with the actual well tops from the well logs, to create this map.

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- Q. Generally describe the structure in the area of the proposed location.
- A. What's long been called and referred to as the
 Hat Mesa anticline is apparent running diagonally from
 northwest to southeast across the south portion of Sections
 3, the northeast portion of Section 10 and into Section 11.

The combination of seismic and subsurface well control indicates that there's an extension of this nose that runs across a portion of Section -- the south two-thirds of Section 1.

- Q. And what is the significance of the structure as it relates to drilling a well at this location?
- A. As with other cases that we've testified to, the structure is apparent because -- For one reason, you can get enhancement of the porosity within any of the particular Morrow systems, and -- plus there's a higher probability of those particular Morrow units containing -- being hydrocarbon-bearing rather than water-bearing.
 - Q. On this exhibit you also have a trace for a

cross-section, do you not?

A. Yes.

- Q. Let's go out of order at this time, Mr. Elger, and let's go to Nearburg Exhibit Number 8, which is the cross-section, and I would ask you to review, starting on the left-hand side of that exhibit, the various Morrow intervals that are of interest in this case, and then generally review the information on the whole exhibit.
- A. This is a stratigraphic cross-section through the Morrow of the offset wells to the -- offsetting both to the east and north and west of the proposed Minis "1" Federal Number 2 well.

The entire Morrow -- the cross-section -- The datum for the cross-section is the top of the Morrow clastics. Sands that have developed above that particular designation of Morrow clastics have been designated as upper Morrow sands. Wells that have been shaded on this display as yellow are wells that comprise what we collectively refer to as the middle Morrow. The top of the lower Morrow is at the base again of the massive shale section that's been shaded brown on this display. And sands of the lower Morrow have been shaded green on this display.

The middle Morrow, which is the primary gas producing horizon for the Hat Mesa field, again, those

sands have shaded yellow on this display, and they have been subdivided further into what I would refer to as a late middle Morrow package and an early middle Morrow package.

The perforations, the producing perforations in each one of these particular well logs, has been indicated by the little red marks within the depth column of each of the individual log sections, so you can see where they've been producing natural gas.

- Q. Mr. Elger, let's now go back to the isopach map, starting with Exhibit Number 5, the isopach on the upper Morrow. I'd ask you to refer to that exhibit and review it for Mr. Stogner.
- A. Exhibit Number 5 is the first upper Morrow sand. It's been identified. It's one of the orange sands in the upper -- above the top of the Morrow clastic sections, and it's actually the basal sand or the first sand that was deposited within the upper portion of the Morrow.

It was perforated -- that well -- This particular sand has been perforated in both of the Phillips wells at A, and the next well in the south half of Section 2, and it also was perforated although it was not colored in red in the Gulf -- or Nearburg Minis Fed Com Number 1 in Section -- in the northern two -- the northern portion of Section 1.

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That is probably the most productive sand within the upper part of the Morrow. Therefore, we isopached that unit to determine where the maximum thickness of this particular sand unit would occur. The interpretation of this -- all of these upper Morrow sands is that they represent offshore/nearshore bar systems, offshore bar systems, which actually are oriented from the northeast to the southwest, across this particular area.

The proposed drill site, 1980 from the north line and 660 from the west line of Section 1, was selected in conjunction with the previous exhibit, structure map, which is Exhibit 4, to coincide with the maximum sand thickness which we expect to occur on this particular location.

- Q. All right, let's go to the isopach on the middle Morrow, Exhibit Number 6.
- A. Exhibit Number 6 represents net sand isopach of the middle Morrow system, which is the upper portion.

 Again, it's been designated on the cross-section or identified on the cross-section, which sand members comprise this particular unit. And again we see a northeast-to-southwest orientation of this particular sand member.

And again, I would refer to the previous well that was drilled in Section 1 in this same proration unit, which is the Kimball Production Company Federal Number 1,

and the fact that the -- not only the late middle Morrow sand package but the early middle Morrow sand package, which is the next exhibit we'll get to, in that wellbore was -- every particular sand -- every one of the sands within that -- the entire middle Morrow section, was perforated and production tested within that particular wellbore.

You notice that the -- each one of the individual packages is very thin, appears to be very thin. And collectively, this well only produced 458 million cubic feet of gas, which we consider to be noncommercial, for the expense of drilling to this depth.

The interpretation of this particular well is that it was situated on the southeast side of each one of these northeast-southwest oriented bar systems within the Middle Morrow. Therefore, in order to drill a well at the maximum thickness within each one of these bar systems, as they've been interpreted across this area, we would have to drill somewhere to the northeast of this particular well, and that again is represented by the proposed drill site.

- Q. Okay, let's go to Exhibit 7.
- A. Exhibit 7, again, is interpretation of the sands comprising the early middle Morrow system. Again, it's the same sort of isopach. It's a net sand isopach. Greater than 8-percent porosity has been plotted in association

with each one of these sand units.

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And again, we see the Kimball well previously drilled in the south third of Section 1, as being located on the southeast portion of this particular bar system, which runs again -- a greater thickness being exposed at the proposed test well location.

- Q. What geological conclusions can you reach concerning the proposed unorthodox well location?
- A. That geologically, the only potential location within Section 1 to maximize the reserve potential which is needed to justify drilling to 14,500 feet, which is the depth of the -- test all of these particular sands in this area, needs to be -- needs to have as much reservoir-quality sand exposed within that wellbore as possible and also have that sand present at the maximum structural position.

We think that the proposed drill site of, again, 1980/660 from the west represents that particular location, based on all of this evidence and testimony.

- Q. Mr. Elger, in your opinion will approval of this Application and drilling of the Minis "1" Federal Number 2 well at the proposed unorthodox location be in the best interest of conservation, the prevention of waste and the protection of correlative rights?
 - A. Yes, it would.

Were Exhibits 4 through 8 prepared by you? Q. 1 Yes, they were. 2 Α. MR. CARR: At this time, Mr. Stogner, we would 3 move the admission into evidence of Nearburg Exhibits 4 4 through 8. 5 EXAMINER STOGNER: Exhibits 4 through 8 will be admitted at this time. 7 MR. CARR: And that concludes my direct 8 examination of Mr. Elger. 10 EXAMINATION BY EXAMINER STOGNER: 11 Mr. Elger, in referring to Exhibit Number 4, are 12 these the Morrow wells that you reviewed in coming up with 13 your geologic conclusions? 14 15 Yes, they are. I have two wells over in Section 2; is that what 16 17 you have? Morrow --18 Α. Yes. 19 Ο. -- producers? Do you know what the dedicated acreage to those 20 wells are? 21 I do not know that. 22 Α. What are they spaced on? 23 If I had to quess, I would say the well that's 24 included on the cross-section, which is the Phillips Hat 25

Mesa "A" Number 1, would be -- a comparable units, a laydown south one-third of Section 2, and that the other well over in the west portion of Section 2 would be a standup 320 -- in the remaining 640 of that section, would be a standup 320.

- Q. Do you know who operates that well?
- A. I know Phillips operates the well, the Hat Mesa
 "A" Number 1. I would think Kaiser-Francis may operate it,
 although they probably did not originally drill the well.
 That would be a guess.
- Q. And you're just speculating that that's a standup proration unit?
 - A. Yes, I'm just speculating on that.

EXAMINER STOGNER: Mr. Carr --

MR. CARR: Yes, sir.

EXAMINER STOGNER: -- this issue is still bugging me a little bit, especially if that be a laydown proration unit, since that information is available here in our office.

Why don't we, during our recess -- We'll take a recess at this point and let you look that up, or let you and the witnesses look that up, and make sure that that's the case.

More than likely I share with Mr. Elger that that is the proration unit. However, that could have been at an

unorthodox location also. 1 MR. CARR: All right. 2 (By Examiner Stogner) Okay. The well that's in 3 Q. the southernmost portion of Section 1, or the old well, the 4 5 abandoned Morrow producer? Α. Yes. 6 How long did that well produce? 7 Ο. I don't know the date of last production, but I 8 -- looking at the heading on the log, it was run number 9 three, which was -- the final log pass occurred in the 10 11 middle portion of 1973. And my -- If I had to guess, I would say it 12 13 lasted for three or four years, maybe five. This middle Morrow is typical of your channel 14 sands in the Morrow? 15 Α. Bar sands. 16 Bar sands? 17 0. 18 Α. Uh-huh. 19 When I look at your other exhibits, 5, 6 and 7, Q. 20 and the other Morrow producers outside of the yellow-shaded area, am I to assume that that's -- that Morrow production 21 is from another sand or another bar or separated channel? 22 Separated bar systems, yes, sir. 23 Α. 24 EXAMINER STOGNER: Okay, Mr. Carr, I'm going to

leave the record open and continue with the case. We'll be

right back up, and after our recess we'll just call on you 1 to take it under advisement or ... 2 All right, do you have anything further at this 3 time? 4 MR. CARR: We have nothing further in this case 5 at this time, Mr. Stogner. 6 EXAMINER STOGNER: All right. 7 (Thereupon, a recess was taken at 9:35 a.m.) 8 (The following proceedings had at 10:03 a.m.) 9 EXAMINER STOGNER: Go back on the record. We'll 10 review or return to Case Number 11,393. 11 Mr. Carr? 12 Mr. Stogner, during the recess we have 13 MR. CARR: been able to confirm that the Phillips well in the south 14 320 acres of Section 2 has the south-half unit dedicated to 15 it, that the well in the west of Section 2 is operated by 16 Sampson Resources Company. There's a standup 320-acre unit 17 dedicated to that well in the northern portion of the west 18 19 half of Section 2. EXAMINER STOGNER: And it is your opinion, 2.0 pursuant to the rules that are current --21 MR. CARR: -- that notice has been given to those 22 23 parties who are adversely -- could be adversely affected by 24 the location. EXAMINER STOGNER: Or at least complies with what 25

1	is stated in the
2	MR. CARR: Yes, sir, in the OCD rules.
3	EXAMINER STOGNER: Okay. Then this case will be
4	taken under advisement.
5	Thank you, sir.
6	(Thereupon, these proceedings were concluded at
7	10:04 a.m.)
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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 October 12th, 1995.

STEVEN T. BRENNER

CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing it a complete record of the proceedings in

the Examiner hearing of Case No. 1/393.

neard by me on 5 October 13 95.

_, Examinar

Oil Conservation Division