

1 STATE OF NEW MEXICO  
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
3 OIL CONSERVATION DIVISION  
4 STATE LAND OFFICE BUILDING  
5 SANTA FE, NEW MEXICO

6 17 August 1988

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Nearburg Producing CASE  
10 Company for a non-standard gas pro- 9466  
11 ration unit and an unorthodox gas  
12 well location, Eddy County, New  
13 Mexico.

14 BEFORE: David R. Catanach, Examiner

15  
16 TRANSCRIPT OF HEARING

17  
18 A P P E A R A N C E S

19 For the Division: Robert G. Stovall  
20 Attorney at Law  
21 Legal Counsel to the Division  
22 State Land Office Bldg.  
Santa Fe, New Mexico

23 For the Applicant: Scott Hall  
24 Attorney at Law  
25 CAMPBELL and BLACK, P.A.  
P.O. Box 2208  
Santa Fe, New Mexico 87501

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1 MR. CATANACH: Call next Case  
2 Number 9466. Application of Nearburg Producing Company for  
3 a nonstandard gas proration unit and an unorthodox gas well  
4 location, Eddy County, New Mexico.

5 Are there appearances in this  
6 case?

7 MR. HALL: Mr. Examiner, Scott  
8 Hall from the Campbell & Black law firm, and I do have  
9 witnesses this morning.

10 MR. CATANACH: Any other ap-  
11 pearances this morning?

12 Will the witnesses please  
13 stand and be sworn in?

14  
15 (Witnesses sworn.)

16  
17 MARK NEARBURG,  
18 being called as witness and being duly sworn upon his oath,  
19 testified as follows, to-wit:

20  
21 DIRECT EXAMINATION

22 BY MR. HALL:

23 Q For the record please state your name  
24 and by whom you are employed and in what capacity?

25 A Mark Nearburg. Nearburg Producing Com-

1 pany, Land Manager.

2 Q And, Mr. Nearburg, have you previously  
3 testified before the Division, one of its examiners, and  
4 had your credentials accepted of record?

5 A Yes.

6 MR. HALL: Are the witness'  
7 qualifications acceptable today?

8 MR. CATANACH: They are.

9 Q Mr. Nearburg, what is it that you seek  
10 by your application here today?

11 A We seek a nonstandard gas proration unit  
12 and unorthodox gas well location in Eddy County, New Mexico  
13 for a Morrow test well located 990 feet from the north and  
14 east lines of Section 12, Township 19 South, Range 25 East.

15 We propose to dedicate either the north  
16 half 320-acre unit or a northeast quarter 160-acre unit for  
17 the drilling of this well.

18 Q All right. Have you prepared certain  
19 exhibits in connection with your testimony today?

20 A Yes, I have.

21 Q Let's look at Exhibit Three, if you  
22 would explain that to the Examiner.

23 A Exhibit Three is a land map showing pro-  
24 ducing proration units in the dotted lines; those are Mor-  
25 row producing units; the proposed well with a red dot; and

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development in the area?

2 A Not at this time, other than the Glass  
3 7-E.

4 Q All right.

5                   A                   And I would also like to point out that  
6 the east half northeast quarter of Section 12 is on common  
7 mineral working interest ownership with the north half of  
8 Section 7.

9 Q All right. Getting back to the 320  
10 unit, if the application for that well is granted, do you  
11 believe that a production penalty is appropriate?

12                   A                   In this case we do not because of the  
13 production from -- legally correlative rights are being  
14 protected by the production on Anadarko, Damson and the  
15 Nearburg offsets.

16 Q All right.

17 Q What does your economic data show is  
18 necessary to have a successful well in this area?

19                   A                   We believe that a cumulative production  
20 of at least 1 BCF will pay out the well and provide some  
21 return.

22 Q All right. Let's -- do you have any-  
23 thing further to add?

24 A I would point out that on Exhibit Three,  
25 in the northeast quarter Nearburg has 100 percent working

1 interest. Do you have reference to Exhibit Four or do you  
2 want to reference that?

3 Q Yes, please go ahead and explain it.

4 A On the 320-acre unit Nearburg would have  
5 84 percent working interest and Yates would have 16 percent  
6 working interest. The Yates interest is by virtue of a  
7 well located in another section other than Section 12,  
8 which held by production certain leases in the west half  
9 northwest quarter of Section 12.

10 Q All right. Let's look at Exhibit Five,  
11 if you would, please.

12 Is Exhibit Five an affidavit showing  
13 that you've directed your counsel to notify all offset  
14 interest owners and ownership interest affected by the ap-  
15 plication?

16 A Yes, it is, and we took care in our  
17 notice that if the Commission decides 160-acre spacing is  
18 appropriate, we did notify the owners in the northwest  
19 quarter of Section 12 of the option given to the Commission  
20 to approve the 160-acre spacing. So not only did we notice  
21 the people offsetting in the direction of our nonstandard  
22 location, we also notified people within Section 12 in the  
23 northwest quarter.

24 Q All right. Mr. Nearburg, in your opin-  
25 ion would the granting of your applications be in the in-



1 terest of conservation, the prevention of waste, and pro-  
2 tection of correlative rights?

3 A Yes.

4 Q And were Exhibits Three, Four and Five  
5 prepared by you or at your direction?

6 A Yes.

7 MR. HALL: At this time we'd  
8 move admission of Three, Four and Five.

9 Q Do you have anything further you wish to  
10 add?

11 A No.

12 MR. HALL: That concludes our  
13 direct of this witness.

14 MR. CATANACH: Exhibits Three,  
15 Four and Five will be admitted into evidence.

16  
17 CROSS EXAMINATION

18 BY MR. CATANACH:

19 Q Mr. Nearburg, if we could go over the  
20 ownership of the offset acreage, in Section 1 is that all  
21 Anadarko?

22 A The west half of Section 1, there is a  
23 well in the southwest quarter northwest quarter which is  
24 operated by Amoco and I'm not certain is it a Morrow well?  
25 It's an extremely marginal well.

1 Q Which one?

2 A That's a Morrow well operated by Amoco.

3 MR. MAZZULLO: That's a good  
4 one.

5 A Our geologist says that's a good well  
6 operated by Amoco, a good Morrow well in the southwest  
7 northwest of 1.

8 Q So they've got the east -- or the west  
9 half dedicated to that well?

10 A Yes.

11 Q Okay, over in Section --

12 A Okay, Section 6?

13 Q 6.

14 A The north half is very broken up and  
15 does not necessarily apply to this case. There is no pro-  
16 duction there now.

17 Q Okay.

18 A The Damson Well in the south half of  
19 Section 6 is a Morrow producer. Do you have any other  
20 questions about that well?

21 Q No, I don't.

22 A And then in the north half of 7 the well  
23 is the Glass 7-E, which was just recently drilled, and  
24 which gave us a definition to pick the location we're ap-  
25 plying for.

1 Q Okay, down south in 12 and 7, what's the  
2 ownership status of that?

3 A The south half of 12 is owned by Near-  
4 burg and Yates. It's Fairchild Farms tracts. There are  
5 several hundred leases in there. The ownership is about 60  
6 percent Nearburg and 40 percent Yates. That's a very rough  
7 guess. I'd prefer to send you a letter stating the owner-  
8 ship, if you want.

9 Q All right.

10 A (Not understood). The south half of  
11 Section 7, the west half southwest quarter is owned by  
12 Yates Petroleum. It's held by production from a well not  
13 in Section -- not anywhere on this map.

14 The southwest quarter southeast quarter  
15 is leased to Yates Petroleum Company and all of the lands  
16 in the south half of Section 7 are leased to Nearburg.

17 Q Okay. You made a statement to the  
18 effect that the northwest quarter of Section 4 was condem-  
19 ned. Is that condemned from geology?

20 A Yes. I think that will be shown in our  
21 geologic presentation.

22 MR. CATANACH: That's all I  
23 have for the witness. He may be excused.

24  
25

1                   LOUIS J. MAZZULLO,  
2 being called as a witness and being duly sworn upon his  
3 oath, testified as follows, to-wit:  
4

5                   DIRECT EXAMINATION

6 BY MR. HALL:

7                   Q           For the record please state your name,  
8 by whom you're employed and in what capacity.

9                   A           My name is Louis Mazzullo. I'm a geolo-  
10 gical consultant on retainer to Nearburg Producing Company  
11 in Midland.

12                  Q           All right. Mr. Mazzullo, are you fami-  
13 liar with the application here today and the subject lands?

14                  A           I am.

15                  Q           Have you previously testified before  
16 the Division or one of its examiners and had your  
17 credentials accepted of record?

18                  A           I have.

19                               MR. CARR: Mr. Examiner, are  
20 the witness' credentials accepted?

21                  Q           Mr. Mazzullo, have you prepared certain  
22 exhibits in conjunction with your testimony today?

23                  A           Yes. I have two, marked Exhibits One  
24 and Two.

25                  Q           Please refer to Exhibit One. Would you

1 please explain what that's intended to reflect?

2                   A                   Okay. Exhibit One, on the right side of  
3 Exhibit One is a net sand isopach or thickness map of the  
4 Morrow interval which contains the sandstone reservoirs  
5 that we're looking for.

6                    On the lefthand side is a diagram -- is  
7 a type log taken from the newly completed Nearburg No. 7-E  
8 Glass, adjacent to the proposed location, showing how I  
9 arrived at the criteria that used in making the isopach map  
10 on the right side.

Looking at the type log, I utilized a gamma ray API unit cutoff of 50 units as clean sand. What I qualify clean sand is anything under 50 units API, and these are indicated in yellow on the gamma ray track.

ON the CNL/FDC density track I've indicated a density cutoff, sandstone cutoff, of 80 percent porosity as productive, being a productive Morrow porosity cutoff in this particular area. (Not clearly understood) sands that -- that have greater than or equal to 8 percent density porosity indicated by red on the density track.

21                   The isopach map on the righthand side is  
22   an isopach of total net sandstone in the interval between  
23   the top of the Morrow, the Middle Morrow indicated on the  
24   type log, and the top of the Barnett Shale. It's a total of  
25   all the yellow sands on the gamma ray track. The dotted



1 particular proposed location we come up with.

2                   So, for example, at the proposed loca-  
3 tion in Section 12, as indicated by the red dot and the red  
4 arrow, we see several sands, or I anticipate there being  
5 several sands there, one of which shows a sweep meander, a  
6 very sharp meander. Another one, which is coming in from  
7 the northwest; and perhaps another one that's almost flow-  
8 ing due southeast. So there are at least three major sand  
9 bodies that I might anticipate at that particular location,  
10 which cumulatively produce greater than 10 feet of what I  
11 hope to be productive porosity.

12                   If we move off to the west towards the  
13 well that has the value of 22 feet of net sand, that is the  
14 well that was completed in the Atoka. It did not make a  
15 Morrow well even though it had 22 feet of sand in it. It  
16 condemns virtually the entire west half of Section 12 as we  
17 now see it.

18                   If we were to move the proposed location  
19 any further to the west we run the risk of running of the  
20 productive fairway and closer to that dry Morrow well.

21                   Q           All right, let's refer to Exhibit Two.  
22 What is this exhibit intended to show?

23                   A           I might add in terms of Exhibit Number  
24 One, the flow directions that we -- that I'm indicated by  
25 the bold arrows were determined by dipmeter interpretation

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1 producing out of the two up dip wells.

2 So what I'm saying here is that I anti-  
3 cipate that we will intersect perhaps one zone in common to  
4 7-E Glass and two, maybe more, zones that are probably not  
5 going to be in common to the up dip producers, which are at  
6 least a half a mile away from us.

7 Q Anything further to add with respect to  
8 Exhibit Two?

9 A No, I don't.

10 Q Mr. Mazzullo, in your opinion will the  
11 granting of the applications be in the interest of conser-  
12 vation, the prevention of waste, and protection of correla-  
13 tive rights?

14 A Yes, it will.

15 Q Were Exhibits One and Two prepared by  
16 you or at your direction?

17 A Yes, they were.

18 MR. HALL: We'd move the ad-  
19 mission of Exhibits One and Two, and that concludes our  
20 direct.

21 MR. CATANACH: Exhibits One  
22 and Two will be admitted into evidence.

23

24 CROSS EXAMINATION

25 BY MR. CATANACH:

1                   Q           Mr. Mazzullo, the well in Section 12  
2 that's been plugged --

3                   A           Uh-huh.

4                   Q           -- that was tested in the Morrow?

5                   A           I believe it was tested. I'd have to  
6 check and get -- I believe it was tested tight in the Mor-  
7 row.

8                   Q           Was that well logged?

9                   A           Yes.

10                  Q           Have you looked at that log?

11                  A           Oh, yes, and I've done the same deter-  
12 mination in terms of net sand and net porosity on that well  
13 as I've done with every other well in this area, and to the  
14 best of my recollection, it had less than 3 feet of what I  
15 would consider to be productive porosity; that is less than  
16 3 feet of 8 percent porosity.

17                               It doesn't even come any -- it doesn't  
18 even come close to the fairway as I've outlined it.

19                  Q           And at your proposed location you have  
20 approximately how many feet of 8 percent (unclear)?

21                  A           I would anticipate -- now, No. 7-E Glass  
22 had approximately 28 feet or so of productive porosity. I  
23 would say that we would be at least -- I anticipate being  
24 at least that, that good, if not a little bit more, because  
25 we have -- I anticipate there being a little bit more sand

1 in the proposed location, total sand.

2 Q Do you have an opinion as to whether the  
3 proposed well will drain any portion of the northwest  
4 quarter?

5                   A            I would defer that to our engineer, who  
6                   can testify on that point, if need be.

7 Q I'd like an opinion, if I could get one.

8 MR. CATANACH: That's all I --  
9 the questions I have for now.

10

12 being called as a witness and being duly sworn upon his  
13 oath, testified as follows, to-wit:

14

16 BY MR. HALL:

17 Q For the record please state your name,  
18 by whom you're employed and in what capacity.

19 A I'm Timothy R. MacDonald. I'm employed  
20 by Nearburg Producing as an Engineering Manager in Dallas,  
21 Texas.

22 Q And, Mr. MacDonald, have you previously  
23 testified before the Division or one of its examiners and  
24 have your qualifications been accepted?

25 A Yes.

1                   Q           Are you familiar with the subject appli-  
2 cation in the well?

3                   A           Yes, I am.

4                               MR. HALL:   Mr. Examiner, are  
5 the witness' qualifications acceptable today?

6                               MR. CATANACH:   They are.

7                   Q           Mr. MacDonald, the question has been  
8 raised about drainage to the northwest in Section 12. Let  
9 me ask you to refer to what's been marked as Exhibit Six.  
10 Will that help to explain the situation with respect to  
11 drainage?

12                   A           Yes, I think it will.

13                   Q           All right, go ahead and explain it, if  
14 you would, please.

15                   A           Exhibit Six shows basically a drainage  
16 radius calculation based on reserves of 2-1/2 BCF, which we  
17 feel like would be a good well in that area, especially the  
18 Amoco Alley Well, and based on the log characteristics  
19 shown or calculated from the No. 1 Glass.

20                               And that drainage rate is up to 1322  
21 feet, which is the area shown in red on the exhibit.

22                   Q           How did you calculate that drainage  
23 radius?

24                   A           Using standard engineering drainage  
25 equations using the 2-1/2 BCF reserves with the 80 percent

1 recovery factor with log calculations of porosity and water  
2 saturation, and initial bottom hole pressures, and using a  
3 41 foot net pay in the No. 1 Glass.

4 Q All right. In your opinion are the cor-  
5 relative rights of interest owners adequately protected by  
6 the well at the proposed unorthodox location?

7 A Yes.

8 Q All right. Was Exhibit Six prepared by  
9 you or at your direction?

10 A Yes.

11 MR. HALL: We move the admis-  
12 sion of Exhibit Six.

13 MR. CATANACH: Exhibit Six  
14 will be admitted into evidence.

15 Q Do you have anything further you wish to  
16 add?

17 A No.

18 MR. HALL: That concludes our  
19 direct of this witness.

20

21 CROSS EXAMINATION

22 BY MR. CATANACH:

23 Q Mr. MacDonald, the radius, as you said,  
24 was 1320 feet?

25 A Right.

1 Q And how many acres does that correspond  
2 to?

3                   A                   That would correspond, we have 126 acres  
4                   and that being at the high side, drainage.

5 Q How did you arrive at your 2.5 BCF?

6                   A                   I based that on the Amoco Alley Well up  
7 in Section 1, that being what we consider one of the better  
8 wells in the area, and to try to show the most, the largest  
9 potential drainage area we felt like we could show, we used  
10 that, that higher -- that higher reserve number.

11                   The Glass has only been on line for a  
12 couple weeks and we don't have enough production data or  
13 pressure data to substantiate any kind of reserve analysis  
14 there yet.

15 Q So that's about the approximate area you  
16 feel the proposed location will drain?

17 A No, that's the approximate area that I  
18 feel the Glass No. 1 will drain.

19 Q Right, but from that you can -- what  
20 kind of inference can you make from that as to what acreage  
21 the proposed well will drain? Do you think it will be  
22 about the same?

23 A I would say that it would be similar  
24 based on what I've looked at.

25 Q So it is your opinion that you won't get

1 any drainage from the northwest quarter.

2           A           Of Section 12? Probably not; very lit-  
3 tle. There will probably be some but very little. You  
4 know, these drainage calculations, as you know, are basi-  
5 cally a simplified drainage radius circle and the reservoir  
6 not being completely homogeneous and everything else will  
7 influence the exact pattern that will be drained but -- but  
8 with the data available this is the best kind of calcula-  
9 tions I can do.

10           Q           Does that, does the Glass No. 7 Well,  
11 does that have a standard proration unit, do you know?

12                       MR. NEARBURG: 300 north. That  
13 whole north half is common ownership.

14                       MR. CATANACH: That's all the  
15 questions I have of this witness.

16                       He may be excused.

17                       MR. HALL: Nothing further in  
18 the case.

19                       MR. CATANACH: I have a couple  
20 for Mr. Nearburg.

21

22                       MARK NEARBURG,

23 being recalled as a witness and remaining under oath, tes-  
24 tified as follows, to-wit:

25

RECROSS EXAMINATION

BY MR. CATANACH:

Q           Mr. Nearburg, do you know if all of the Morrow wells in this area have standard 320's?

A                    It's a 320-acre field. Well, the Boyd Morrow is 320 acres, and then as you move over into 19 South, 26 East, where the Glass 7-E is, at some point in there you get into the -- I think it's on over into Section 8 of 19, 26, you get into the undesignated Four Mile Draw Morrow Pool.

And that also has 320-acre spacing.

Q Okay.

A                    And rather than ask for special pool rules and new pool, you know, all that, with all the other operators in here, and because of the lack of data in other areas of the pool, like we have here, we thought it would be more appropriate to just ask for an exception if you feel it's appropriate, to the pool rules rather than trying to change the entire pool rules, because we do feel that there are some places in these pools where 320-acre spacing is justified.

Q So you feel that some of the wells are draining 320's but some are not?

A Well, I think you can find -- I can't give you a specific example of that and I don't think I'm



1 really qualified to say that. We just felt that from the  
2 standpoint of administration, and it was just not appro-  
3 priate to ask that the pool rules, you know, be adjusted,  
4 because I think to do that you'd have to take a look at  
5 every well in the pool and we just didn't think it was  
6 appropriate.

7 The difference here is all the control  
8 you have, you know, to be able to pinpoint like this.

9 As I say, it's hard to say in the  
10 absence of control, you know, where the reservoir is. I  
11 think we'd rather leave that to the Commission.

12 Q And you stated that you didn't think  
13 that the well should be given a penalty.

14 A Right.

15 Q If you should go with a 160-acre prora-  
16 tion unit, won't that -- doesn't that justify a penalty?

17 A I think that justifies no penalty be-  
18 cause it's at a standard location on a 160-acre unit, and  
19 furthermore, you are protecting the correlative rights from  
20 the Glass and the Anadarko Well and the ownership between  
21 half of the proration unit in 12 and under the Glass 7-1 is  
22 common.

23 So especially on a 160-acre unit we do  
24 not feel a penalty is appropriate.

25 We feel the penalty would be more appro-

1 priate on a 320-acre unit. you know, if at all, you know,  
2 because basically you've got, if anything, the northeast of  
3 12 is probably being drained by the other wells that are in  
4 existence right now.

5 Q Okay.

6 MR. CATANACH: No further  
7 questions. The witness may be excused.

8 Is there anything further in  
9 this case?

10 MR. HALL: No, sir.

11 MR. CATANACH: If not, it will  
12 be taken under advisement.

13  
14 (Hearing concluded.)

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## C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY  
CERTIFY that the foregoing Transcript of Hearing before the  
Oil Conservation Division (Commission) was reported by me;  
that the said transcript is a full, true and correct record  
of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 9466,  
heard by me on August 17 1988.  
Daniel R. Calumet, Examiner  
Oil Conservation Division