

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
7
8 17 August 1988

9 EXAMINER HEARING

10 IN THE MATTER OF:

11 Application of Nearburg Producing CASE
12 Company for an unorthodox gas well 9436
13 location, Eddy County, New Mexico.

14 BEFORE: David R. Catanach, Examiner

15 TRANSCRIPT OF HEARING

16
17 A P P E A R A N C E S

18
19 For the Division: Robert G. Stovall
20 Attorney at Law
21 Legal Counsel to the Division
22 State Land Office Bldg.
23 Santa Fe, New Mexico

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

1 MR. CATANACH: Call next Case
2 9436. The application of Nearburg Producing Company for an
3 unorthodox gas well location, Eddy County, New Mexico.

4 This case was heard July 20th,
5 1988. It had to be readvertised.

6 Is there any additional evi-
7 dence or testimony to be presented at this time?

8 MR. NEARBURG: No.

9 MR. CATANACH: If not the case
10 will be taken under advisement.

11

12 (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. 943, heard by me on August 17 19 88.
David R. Catamb, Examiner
Oil Conservation Division

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 20 July 1988

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Nearburg Producing Company for an unorthodox gas well location, Eddy County, New Mexico. CASE 9436

10
11 BEFORE: Michael E. Stogner, Examiner

12
13 TRANSCRIPT OF HEARING

14
15 A P P E A R A N C E S

16
17 For the Division: Robert G. Stovall
18 Attorney at Law
19 Legal Counsel to the Division
20 State Land Office Bldg.
21 Santa Fe, New Mexico

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

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I N D E X

MARK NEARBURG

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1 MR. STOGNER: Call next Case
2 Number 9436, which is the application of Nearburg Producing
3 Company for an unorthodox gas well location, Eddy County,
4 New Mexico.

5 I'll now call for appearances.

6 MR. CARR: May it please the
7 Examiner, my name is William F. Carr, with the law firm
8 Campbell & Black, P. A. of Santa Fe. We represent Nearburg
9 Producing Company. I have two witness and would request
10 that the record reflect that they have previously been
11 sworn in a prior case and remain under oath.

12 MR. STOGNER: Let the record
13 so show the two witnesses were previously -- their creden-
14 tials were accepted and sworn in in Cases Numbers 9425
15 through 9427.

16 Continue, Mr. Carr.

17 MR. CARR: Mr. Stogner, there
18 is an error in the advertisement. It is our error, not
19 yours, or the Commission's, I mean. It says Range 25 in
20 the application as well as in the ad, and it should be
21 Range 26.

22 We, since we are here with
23 witnesses and exhibits, we would request permission to move
24 forward with the hearing. We will request that it be read-
25 vertised and we will submit additional notice to the off-

1 setting owners correcting the error.

2 But with your permission we
3 would like to present the case at this time and then clear
4 it up.

5 MR. STOGNER: Very well, Mr.
6 Carr, this case will be heard today but, however, will have
7 to be readvertised and continued to the Examiner's Hearing
8 scheduled for August 17th.

9 Please continue.

10 MR. CARR: At this time I'd
11 call Mr. Nearburg.

12
13 MARK NEARBURG,
14 being called as a witness and having been previously sworn
15 and remaining under oath, testified as follows, to-wit:

16
17 DIRECT EXAMINATION

18 BY MR. CARR:

19 Q Mr. Nearburg, are you familiar with the
20 application filed in Case 9436?

21 A Yes.

22 Q Are you familiar with the subject area?

23 A Yes,

24 Q Would you state briefly what Nearburg
25 seeks with this application?

1 A Nearburg seeks approval of an unorthodox
2 gas well location to test the Morrow formation, located
3 1340 feet from the south line and 660 feet from the west
4 line of Section 8, Township 19 South, Range 26 East, Unde-
5 signated Four Mile Draw Morrow Pool, Eddy County, New
6 Mexico.

7 Q Would you refer to what has been marked
8 Nearburg Exhibit Number One and identify that, please?

9 A This is a land plat showing ownership
10 in acreage affected by the unorthodox location request.

11 Q Would you explain what the area outlined
12 in green indicates?

13 A The area outlined in green is common
14 mineral ownership which has been leased 100 percent by
15 Nearburg. These leases are all held by production by the
16 well indicated with the green dot, which is the Glass --
17 Nearburg Glass 7E Well No. 1. This is a producing Morrow
18 well completed earlier, in May or June of this year.

19 The point of this is that the immediate
20 acreage affected by this nonstandard location is currently
21 producing; that the mineral owners are the same; and that
22 they will not be affected by this well.

23 Q Is the north half of Section 7 the acre-
24 age that is dedicated to the Glass Well?

25 A Yes.

1 Q What is outlined in yellow?

2 A Outlined in yellow is the proration
3 unit, 320 acres in the south half of Section 8, which will
4 be dedicated to the proposed well.

5 Q And is Yates participating with you in
6 the development of this property?

7 A Yes, they are.

8 Q To whom -- toward whom are you moving
9 from a standard location with the proposed well?

10 A We are moving toward leaseholds that we
11 own that are held by production.

12 Q What is Yates interest in the offsetting
13 property?

14 A As indicated, they own 100 percent of
15 the west half southwest quarter of Section 7 and they own
16 100 percent of the southwest quarter southeast quarter of
17 Section 7. Otherwise, Nearburg owns 100 percent of the
18 acreage.

19 Q What interest does Ralph Nix have in
20 this acreage?

21 A Mr. Nix has leased his interest to Yates
22 and Yates controls all of Nix' interest.

23 Q So at the time notice was given in this
24 case Mr. Nix had an ownership interest but that subsequent-
25 ly has been given to Yates.

1 A Yes.

2 Q And would you just identify Exhibit
3 Number Two?

4 A These are affidavits of notice for the
5 hearing mailed by your office.

6 Q These, however, do reflect an incorrect
7 range number, is that true?

8 A That's correct; however, I'd point out
9 that Yates is very well aware of this location, and we do
10 not see any problem with readvertising.

11 Q Do you have anything further to present
12 in this case?

13 A No.

14 MR. CARR: At this time, Mr.
15 Stogner, I would move the admission of Nearburg Exhibits
16 One and Two.

17 MR. STOGNER: Exhibits One and
18 Two will be admitted into evidence at this time.

19 MR. CARR: That concludes my
20 examination of this witness.

21

22 CROSS EXAMINATION

23 BY MR. STOGNER:

24 Q Mr. Nearburg, as a matter of record, the
25 green dot depicts which particular well?

1 A The Glass 7E, like Ed --

2 Q Okay.

3 A -- Well No. 1.

4 Q Is that presently drilling, has been
5 drilled or --

6 A No, that was drilled in March and April
7 of 1988, and was put on line in July of 1988, from the Mor-
8 row formation.

9 Q And again the green line depicts what?

10 A The green area is common mineral owner-
11 ship. Within the green area the people that own the miner-
12 als that lease to Nearburg, their lease covers all the
13 acreage outlined in green.

14 MR. STOGNER: I have no fur-
15 ther questions of Mr. Nearburg.

16 Mr. Carr?

17 MR. CARR: At this time we
18 call Mr. Mazzullo.

19
20 LOUIS J. MAZZULLO,
21 being called as a witness and being previously sworn and
22 remaining under oath, testified as follows, to-wit:

23

24

DIRECT EXAMINATION

25

BY MR. CARR:

1 Q Mr. Mazzullo, are you familiar with the
2 application filed in Case 9436?

3 A Yes, I am.

4 Q And have you studied this area?

5 A Yes.

6 Q Have you prepared certain exhibits in
7 conjunction with that study?

8 A Yes, I have.

9 Q Would you refer to what has been marked
10 Nearburg Exhibit Number Three and identify that for Mr.
11 Stogner, please?

12 A Mr. Stogner, the line of testimony here
13 is similar to what we described in our previous hearings.
14 This area again is in the Morrow in Eddy County. We're
15 dealing in the Morrow formation, dealing with -- primarily
16 with an are that I've mapped in great detail along with the
17 areas that we described in our previous hearings. And this
18 Exhibit Number Three is type log of the Nearburg No. 7E
19 Glass, which offsets the proposed location that's the sub-
20 ject of this particular hearing.

21 Q That's the well indicated by the green
22 dot on Exhibit Number One?

23 A That's -- that's correct, that green dot
24 on Exhibit Number One.

25 The same type of -- I won't go into the

1 great detail on this as I did on the last hearing, but the
2 same type of analysis was done on the wells in this area in
3 that a arbitrary 50 unit API gamma cutoff was used to de-
4 fine the clean Morrow sands here, again indicated by yellow
5 on the gamma ray portion of this exhibit, and a cutoff of 8
6 percent density porosity used to define the minimum cutoff
7 for productive -- gas productive Morrow sand. This is in-
8 dicated by the red coloration on the -- on the CNL/FDC log.
9 In this particular case you'll note that a lot of the clean
10 sand that is present between 9100 and 9150 feet does con-
11 tain what I consider to be productive porosity, as does the
12 little sand stringer down around 9245. So here's a case
13 where -- where a lot of the sand that is present is also
14 porous. Of course, that's not always the case in the Mor-
15 row and you can get a freak section of sand in the Morrow
16 that isn't porous, or that's marginally porous.

17 Q Would you now refer to Exhibit Number
18 Four, your isopach map?

19 A Exhibit Number Four, then, takes this
20 type of net sandstone treatment of each well in this area
21 and assigns an isopach value based on total net clean sand
22 below 50 API gamma for each of the Morrow wells around the
23 subject location.

24 The subject location is indicated by the
25 red arrow and the -- that's pointing to the red dot at the

1 proposed location.

2 The red envelope denotes areas that I
3 expect to see greater than 10 feet of 8 percent porosity
4 within the interval defined on Exhibit Number Three between
5 the top of the Middle Morrow and the top of the Barnett
6 Shale.

7 The heavy blue arrow denotes sediment
8 transport directions as determined from detailed dipmeter
9 data acquired in the No. 7-1 Glass. Now, you'll note the
10 arrows are going off in a lot of different directions. In
11 this particular area the Morrow section between the top of
12 the Middle Morrow and the top of the Barnett is comprised
13 of a number of different sands which each seem to have dif-
14 ferent transport directions. There is one part of the
15 thick sand in the No. 1 Glass that actually shows a mean-
16 dering pattern coming down from the southeast quarter of
17 Section 6. It loops around the northwest of 7 and then
18 loops back into the east half of 12. That's one example of
19 a transport direction in one of the sands.

20 Another sand comes in from the northwest
21 and trends due southeast, whereby another one comes in from
22 the north and trends more or less north to south through
23 the east half of Section 12.

24 So there are a number of different
25 trends established by the dipmeter data, and the Glass, I

1 mean the proposed location for the well in Section 8, hope-
2 fully, will take advantage of maximum development of sands
3 which, hopefully, will coincide with maximum development of
4 productive porosity.

5 Q In your opinion is the proposed location
6 the most efficient place to locate a well to produce the
7 reserves?

8 A Would you now to go Exhibit Five, your
9 structure map? I'm sorry, your cross section.

10 A Okay.

11 Q Will you review this for Mr. Stogner,
12 please?

13 A Exhibit Number Five is a structural dip
14 cross section. In other words, it goes from an up dip lo-
15 cation to the west and more or less follows regional dip in
16 an easterly direction.

17 It also -- it's also drawn more or less
18 across the depositional -- perpendicular to depositional
19 direction, although in this area, as I just said, the
20 streams meander so much you cut across depositional trend
21 quite a bit on this cross section.

22 The cross section is captioned on
23 Exhibit Number Four by the red line that's labeled W on one
24 side and E on the other side, west to east cross section.
25 It starts from an up dip position in the Amoco No. 1 Alley

1 Unit, which is approximately a mile northwest of the No.
2 7-1 Glass. It proceeds into the well in the southeast
3 quarter of Section 1, the Anadarko No. 1 Anderson, and then
4 proceeds over to the nearly completed No. 7-1 Glass, and
5 finally into the northeast quarter of Section 7.

6 The intent of this cross section again
7 was merely to show the lateral discontinuity of the various
8 sands which make up the interval that I've isopached in the
9 Exhibit Number Four, and Exhibit Number Four is actually a
10 composite of the various sand packages that we see on the
11 cross section.

12 Again in an up dip position the Amoco
13 No. 1 Alley is producing from a sand which to the untrained
14 eye or if you were to try to correlate very quickly, may
15 appear to be correlative to the pay zone in the No. 1
16 Glass, but in fact, chances are that it's not correlative
17 at all if there's no stratigraphic equivalents between the
18 pay in the Alley and the pay in the No. 1 Glass. This
19 again is substantiated by virgin formation pressures that
20 we've required out of the producing zone in the No. 1
21 Glass, compared to the fact that the No. 1 Alley, which
22 is -- which is up dip, has produced nearly 2 BCF of gas
23 since 1980, and the RFT pressures that we've gotten in the
24 No. 1 Glass are similar to virgin pressures, in fact higher
25 than virgin pressures, of 3670 pounds acquired in the down

1 dip well, the No. 1 Secrest.

2 So again we're dealing with laterally
3 discontinuous reservoirs which internally have -- internal-
4 ly permeability barriers, as well as vertical permeability
5 barriers. They're not only separated from each other lat-
6 erally but vertically through shales and other tight sands.

7 Q Mr. Mazzullo, in your opinion based on
8 your study of this area, will a well located at the propos-
9 ed unorthodox location result in the recovery of hydrocar-
10 bons that otherwise would not be produced?

11 A Yes. If we were to locate the well any
12 further to the east, we would be in a perilously down dip
13 position and run the risk of producing water instead.

14 Q Do you believe that development of this
15 acreage with the proposed well will be in the best interest
16 of conservation, the prevention of waste, and the protec-
17 tion of corrective rights?

18 A I do.

19 Q Were Exhibits Three, Four and Five pre-
20 pared by you?

21 A Yes, they were.

22 MR. CARR: At this time, Mr.
23 Stogner, I move the admission of Nearburg Exhibits Three,
24 Four and Five.

25 MR. STOGNER: Exhibits Three,

1 Four and Five will be admitted into evidence at this time.

2 MR. CARR: That concludes my
3 direct examination of Mr. Mazzullo.

4
5 CROSS EXAMINATION

6 BY MR. STOGNER:

7 Q Mr. Mazzullo, is there any reason why
8 you didn't continue your cross section over and include
9 that well in the north half of Section 8?

10 A In the north half of Section 8?

11 Q Yes.

12 A No. I was just trying to make the
13 point, Mr. Stogner, that -- just to show the lateral dis-
14 continuity of the sands, as well as showing that between
15 the No. 1 Glass 7E and the No. 1 Secret, as you get down
16 dip you begin to pick up water as shown when you go to that
17 drill stem test in the No. 1 Secret.

18 I could have -- if I were extending it
19 over to Section 8, you would have seen the sand -- the sand
20 quality deteriorate. As you can see, there's only 5 feet
21 of sand in the No. 1 -- in that well in Section 8.

22 You would have sand deteriorate to next
23 to nothing on the cross section, and they would have
24 (unclear) been tight. That well did have tight sand in it.

25 Q And what zone is this zone producing

1 from?

2 A The Section 8? That's producing --
3 that's a Strawn well that Nearburg Producing operates.

4 MR. STOGNER: I have no other
5 questions of this witness.

6 Are there any other questions
7 of this witness?

8 He may be excused.

9 Anything further in this case.

10 Mr. Carr?

11 MR. CARR: Nothing further,
12 Mr. Stogner.

13 MR. STOGNER: Does anybody
14 else have anything further in Case Number 9436?

15 The case will be taken under
16 advisement.

17

18 (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
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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. 9436
heard by me on 26 July 1988
Michael S. [Signature], Examiner
Oil Conservation Division