1 2	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO
3	20 January 1988
4	EXAMINER HEARING
5	
6	
7	IN THE MATTER OF:
8	Application of Nearburg Producing CASE
9	Company for an unorthodox gas well 9294 location and a non-standard gas pro-
10	ration unit, Eddy County, New Mexico.
11	
12	
13	BEFORE: David R. Catanach, Examiner
14	
15	
16 17	TRANSCRIPT OF HEARING
18	
19	APPEARANCES
20	AFFEARANCES
21	For the Division:
22	
23	
24	
25	For the Applicant:

MR. CATANACH: Call next Case

Number 9294, application of Nearburg Producing Company for an unorthodox gas well location and a nonstandard gas proration unit, Eddy County, New Mexico.

Applicant has requested that this case be continued to the Examiner Hearing scheduled for February 3, 1988.

Case Number 9294 will be so

continued.

(Hearing concluded.)

CERTIFICATE

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.

Solly W. Boyd Cosz

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Oil Conservation Division

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1 2	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO
3	3 February 1988
4	EXAMINER HEARING
5	
6	
7	IN THE MATTER OF:
8	Application of Nearburg Producing CASE Company for an unorthodox gas well 9294
9	location and a non-standard gas pro- ration unit, Eddy County, New Mexico.
10	
11	
12	
13	BEFORE: Michael E. Stogner, Examiner
14	
15	
16	TRANSCRIPT OF HEARING
17	
18	
19	APPEARANCES
20	
21	For the Division:
22	
23	
24	
25	For the Applicant:

MR. STOGNER: Call next Case

Number 9294, which is the application of Nearburg Producing Company for an unorthodox gas well location and a nonstandard gas proration unit, Eddy County, New Mexico.

The applicant has requested that this case be continued to the Examiner's hearing scheduled for February 17th, 1988.

(Hearing concluded.)

## CERTIFICATE

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.

Souly W. Boyd CSR

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Oil Conservation Division

1 2	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO
3	17 February 1988
4	EXAMINER HEARING
5	
6 7	IN THE MATTER OF:
8	Application of Nearburg Producing CASE Company for an unorthodox gas well 9294 location and a non-standard gas pro- ration unit, Eddy County, New Mexico.
10	ration unit, Eda, County, New Mexico.
11	
13 14	BEFORE: David R. Catanach, Examiner
15 16	TRANSCRIPT OF HEARING
17	
18	
19	APPEARANCES
20	
21	For the Division:
22	
23 24 25	For the Applicant: William F. Carr Attorney at Law CAMPBELL & BLACK, P.A. P. O. Box 2208
<b>L</b> J	Santa Fe, New Mexico 87501

		2
1	APPEARANCES	
2	For Liberty Nat'l. Bank: W. Thomas Kellahin	
3	Attorney at Law KELLAHIN, KELLAHIN	AUBREY
5	P. O. Box 2265 Santa Fe, New Mexico	87504
6		
7		
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23 24

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MR. CATANACH: Call next Case Number 9294, which is the application of Nearburg Producing Company for compulsory pooling, unorthodox gas well location, and a nonstandard gas proration unit, Eddy County, New Mexico.

Call for appearances.

MR. CARR: Mr. Examiner, I'm

William F. Carr with the law firm Campbell & Black, P. A., appearing on behalf of Nearburg Producing Company and I have

two witnesses.

MR. CATANACH: Are there other

appearances in this case?

MR. KELLAHIN: Yes, Mr. Exa-

miner. I'm Tom Kellahin of the Santa Fe firm of Kellahin,

Kellahin & Aubrey, appearing on behalf of Liberty National

Bank, Trustees for Lynette W. Layton and Patsy Lucille

I do not plan to present a wit-

ness at this time.

Carmoney.

MR. CATANACH: All right. Will

the witnesses please stand and be sworn in?

(Witnesses sworn.)

	5
1	MR. CATANACH: Mr. Carr.
2	
3	(Thereupon Mr. Carr presented his opening statement.)
4	
5	MARK NEARBURG,
6	being called as a witness and having been duly sworn upon
7	his oath, testified as follows, to-wit:
8	
9	DIRECT EXAMINATION
10	BY MR. CARR:
11	Q Will you state your name and place of
12	residence?
13	A Mark Nearburg, Dallas, Texas.
14	Q Mr. Nearburg, by whom are you employed
15	and in what capacity?
16	A Nearburg Producing Company, Vice Presi-
17	dent.
18	Q Have you previously testified before the
19	Commission or one of its examiners and had your credentials
20	accepted and made a matter of record?
21	A Yes.
22	Q And how were you qualified at that time,
23	as a landman?
24	A Landman. Landman.
25	Q Are you familiar with the application

```
1
   filed on behalf of Nearburg in this case?
2
                      Yes.
3
                      Are you familiar with the subject area?
            Α
                      Yes.
5
                                 MR. CARR:
                                             Are the witness'
6
   qualifications acceptable?
7
                                 MR. CATANACH: They are.
8
                       Would you briefly state what Nearburg
9
   seeks with this application?
10
                      Nearburg seeks compulsory pooling, unor-
11
   thodox gas well location, and approval of a nonstandard gas
12
   proration unit in Eddy County, New Mexico, to test the Mor-
13
   row formation.
14
                       Have you prepared certain exhibits
                                                             for
15
   introduction in this case?
16
            Α
                      Yes.
17
                       Would you refer to what has been marked
18
   for identification as Nearburg Exhibit Number One, identify
19
   this, and review the information on that exhibit for
20
   Catanach?
21
                       This is a copy of the C-101 and 102 forms
22
   submitted to Artesia. It was submitted pending a final or-
23
   der in this case for approval.
24
            Q
                        Has it been approved by the District of-
25
   fice subject to receipt of an order in this case?
```

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```
Α
                        This
1
                             is a land map of the area showing
   the proration unit in yellow and the test well location with
2
   the red dot. It also shows offset ownership in the surroun-
3
   ding acreage.
5
            Q
                      Now, the well is -- has been moved toward
   the west, is that correct?
6
            Α
                      Yes.
                      Who owns the tract to the west?
            0
8
                       Nearburg has that tract under lease
   it's common mineral ownership with the north half of Section
10
   7.
11
            0
                        So that we are actually moving toward a
12
13
   tract that has common ownership with the tract on which the
   well is located.
14
15
            Α
                      Yes.
            0
                      What is the primary objective in the pro-
16
   posed well?
17
18
            Α
                      The Morrow formation.
                       Could you review for Mr. Catanach
19
            Q
   status of the ownership in the subject tract, and here
20
                                                             I'd
   like you to identify those interests which have not volun-
21
22
   tarily joined in the well?
                               There are in excess of 60 mineral
23
                      Okay.
   owners in this tract. At this point it's necessary to force
24
   pool Mr. Fred Bohannon, with -- and these net acre figures
```

```
are as to the 318.85 unit. Mr. Bohannon has 2.53 net acres.
2
                      Gail McClease has --
3
            0
                      How do you spell McClease?
            Α
                       I'11
                             spell all these names
                                                      for
5
   Would you like me to do that in the testimony or afterward?
6
                                MR. CATANACH: You can do it in
7
   the testimony.
8
            Α
                              Fred Bohannon is spelled B-O-H-A-
                      Okay.
9
   N-N-O-N.
                      Gail McClease, G-A-I-L M-c-C-L-E-A-S-E,
10
11
                      Liberty National Bank, Trustee, 14.493
   net acres.
12
13
                      That's a total in the proration unit of
   17.77 net acres, which is a rounded 5.5 percent of the unit,
14
15
   which nears Nearburg controls 94.43 percent of the unit.
16
                       What is the status of the negotiation
17
   with the Liberty National group?
18
            Α
                       We've been trying to reach agreement
19
   intensely the last several weeks on a lease form.
                                                      I'm going
20
   to see them on Friday, if I can make arrangements. We think
21
   we can arrange a lease with them; that they've agreed to be
22
   represented by Mr. Kellahin at the hearing and we'll
23
   continue to force pool them at this point.
24
                      If we reach agreement on a lease, we will
25
   remove them from the forced pooling.
```

	10
1	Q Have you prepared an AFE for this pros-
2	pect?
3	A Yes, we have.
4	Q Could you review the dry hole and com-
5	pleted well totals?
6	A The dry hole cost is estimated as
7	\$333,585 and a completed well is estimated at \$550,620.
8	Q Does Nearburg operate, or has Nearburg
9	drilled other Morrow wells in this same general area?
10	A Yes, we have.
11	Q And where are those located?
12	A They're located in approximately 2-1/2
13	miles to the southwest in Township 19 South, Range 25 East.
14	Q Are these AFE totals that you've reviewed
15	in line with what has been charged for these other Morrow
16	wells that you operate?
17	A Yes, adjusted to current costs.
18	Q Are there other Morrow wells in the im-
19	mediate area of the proposed well?
20	A Yes.
21	Q And are these costs in line with what
22	other operators charge?
23	A Yes.
24	Q Now you have mentioned your efforts to
25	obtain voluntary joinder of the Liberty National interests.

A Yes.

Q Could you basically review the efforts you've made to obtain the joinder of the other interest owners who are going to be pooled?

A We originally -- this applies to all the interest owners in this tract.

We began leasing in 1985. In 1987 we approached all of these people again. They refused to lease.

In early 1988 we approached them a third time and they still have not returned the leases. We've been in contact with them. They just don't return the paperwork.

Q In your opinion have you made a good faith effort to not only locate but obtain voluntary joinder from all interest owners in this -- in the dedicated acreage?

A Yes. In addition to the leasing approximately forty days prior to the hearing we sent AFE's, operating agreements, and letters asking for these interest owners, if they were not going to lease to please participate, sign the AFE and return the operating agreement, which they have not done.

Q Mr. Nearburg, would you just identify for the record what has been marked as Nearburg Exhibit Number Three?

Exhibit Number Three are the letters sent 1 Α to offset owners, mineral owners, in the east half, south-2 east quarter of Section 12. 3 Additionally notices were sent to owners in the northeast quarter northeast quarter of Section 13 but 5 they no longer apply. 0 And was this notice provided in accord-7 ance with Oil Conservation Division rules? 8 Α Yes. By the way, Sections 12 and 13 that 9 immediately referenced are in Township 19 just 10 Range 25 East. 11 Mr. Nearburg, have you made an estimate 12 of the overhead and administrative costs while drilling this 13 well and also while producing the well if in fact it is suc-14 cessful? 15 Α Yes, \$5500 per month drilling and 16 per month overhead. 17 Are these the figures that have 18 agreed to by the other interest owners who voluntarily 19 joined in the well? 20 Α Yes. 21 22 0 Are they in line with the wells to the southeast, or southwest that you previously referenced? 23 They've been increased slightly Α Yes. 24 to

reflect the increased cost of overhead on gas wells.

be

Do you recommend that these figures

Does Nearburg Producing Company seek

incorporated into order which results from the hearing?

Yes.

be designated operator of the proposed well?

1

2

3

5

Α

## CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Nearburg, in the north half of Section 7 you've mentioned the fact that there are some 60 mineral owners, approximately. Are any of those mineral owners the federal government or the State of New Mexico?

A No. This is all fee ownership.

Q Have any of those owners agreed to execute the operating agreement and participate in the drilling of the well?

A Yes. Mr. Fred Bohannon has indicated that he wants to participate. We contacted him again yesterday because he has not returned the operating agreement or the AFE. He stated that he would return that immediately and if we receive that, we will drop him from the forced pooling, also.

Q Other than Mr. Bohannon, do you have the other interest committed to you by way of lease as opposed to having executed the operating agreement?

A Yes, all leases.

Q So the only parties that potentially could execute the proposed operating agreement are those listed to be pooled?

A Yes, and any of those that would like to participate are welcome to.

25

Α

Oh,

sure of the exact article and subparagraph, but as to

1 In the event Liberty National Bank is un-2 able to reach a voluntary agreement with you for a lease, do 3 you propose to have the terms of the operating agreement apply to the force pooling parties, force pooled parties? 5 Well, let me make myself clear. 6 Ã Yes. 7 Obviously, from the look on your face you 8 hadn't a clue as to what I was asking you. Never had that question asked. Α 10 0 All right. Typically the forced pooling 11 order does not tell you a great many things about your oper-12 ation. 13 Α Uh-huh. 14 Because we don't have other mineral 15 terest owners that will execute the operating agreement, I'm 16 interested in whether or not in the absence of Mr. Bohannon 17 executing the operating agreement, and the fact that 18 forced pooling order is -- is -- doesn't speak to many 19 the procedures and operations on the well, --20 I'm with you now. Α 21 -- will you apply the terms of that oper-22 ating agreement for your accounting procedures, and every-23 thing else for the drilling of the well?

yes. Yes, subject to the -- I'm not

royalties payable in the operating agreement, as long as that does not interfere with what the Commission sets in the forced pooling for a royalty to penalty and payout, yes, we would operate under the operating agreement in COPAS.

Q One of the issues of concern to the bank was the operator's insurance coverage in terms of insurance and the liability to third parties that might occur. What is your arrangement or your proposed arrangement on insurance liability, Mr. Nearburg?

A Mr. Bohannon has discussed this with me and we checked, we have an umbrella policy that covers all interest owners under our operating agreement.

Q And would that also --

A That covers anyone who signs the operating agreement.

Q All right. Would -- do you know whether or not that coverage extends to those working interest owners or mineral owners involuntarily committed to the well by forced pooling?

A No, I don't know. It would after they came in as a working interest owner but I'm not sure about the interval. I can check on that.

As you may know, Mr. Nearburg, the Commission's compulsory pooling orders when they're entered give a party only two choices. One is to within the elec-

tion period prepay their proportionate share of the cost of the well or the other election is simply to go nonconsent.

In your direct testimony you said you would continue your efforts to reach a voluntary agreement with Liberty Bank on a lease terms.

A Uh-huh.

Q Will you agree to allow them the opportunity within that election period to execute the lease form that you're proposing to them?

A Certainly. I'll make one more trip to see them.

Q Let's talk about the area that is still being negotiated with the bank. There is an agreement on the bonus and on the royalty, is there not?

A Yes, there is.

Q And the issue unresolved is whether or not transportation costs will be deducted from the calculation of the royalty to be paid to the bank.

A Yes. Their lease differs from all of our other leases in how their royalty is delivered. It's outdated given the current gas marketing situation.

Q Are all the lease forms that you've obtained from these other mineral owners in the spacing unit on your lease form?

A I'm sorry, question again?

25

0

Α

```
sir.
1
            0
                      Yes,
                                   I want to know the types of
   lease forms utilized by you or obtained by you in putting
2
   together the spacing unit.
3
            Α
                      Hall Poorbaugh from Roswell, Form 342P.
         Poorbaugh Printers, Form 342P. I'm not sure of
5
   Hall
   year of revision.
                     I believe it was '81.
7
                      Have you obtained any leases from mineral
   owners in the spacing unit on forms other than the Poorbaugh
8
   form?
                      No.
            A
10
            0
                       Describe for us briefly, Mr.
11
                                                      Nearburg,
   what the provisions are in that lease form for handling the
12
   calculation of royalty insofar as it deals with transporta-
13
   tion costs.
14
                      I do not have the lease form in front of
15
   me but it speaks of the price at the wellhead, which is ab-
   sent -- the two leases read similar with the exception that
17
   the leases we use refer to the wellhead.
18
19
                      The Oklahoma -- the Libert National
                                                            Bank
   lease has no reference point as to where the price has
20
                                                             the
   deductions made or the additions made for marketing
21
                                                             and
   transportation, treating compression.
22
                      It's a very --
23
```

Your lease form --

-- fine line.

Α

1 Your lease form, your interpretation of 0 2 your lease form is that it is a price calculated based upon 3 the wellhead price? Yes. 5 And what would be the impact as best you 0 6 quantify it of charging back against the royalty trans-7 portation costs? 8 If you assume the price you're receiving 9 for the gas is \$1.50 per MCF in the area where we're lo-10 cated, if you were taking the gas to California the -- to 11 get to the California border the transportation would add up 12 to somewhere between 50 and 60 cents per MCF or roughly a 13 third of the price of the gas at the wellhead. 14 Do you have a gas contract for the gas to 15 be produced from this well if it is able to produce gas? 16 No, we do not, but we have an agreement 17 with Gas Company of New Mexico to utilize an existing meter 18 that we're producing through to sell the gas. 19 Do your existing contracts with the pur-20 chaser provide to add this well to that contract? 21 No, they do not, but before production is 22 obtained it's hard to reach a commitment with the gas com-23 pany. 24 You don't have --Q

We have had detailed discussions, though,

or tomorrow?

```
of the arrangements that we know there's capacity and we
1
   know that physically it's very possible. Administratively
2
   it's --
3
                       What's your estimate of the probable
            Q
4
   range of gas price for production from the well? Do you
5
   have a range of probability?
6
                      How big a shell did you load in that gun?
7
    I have no idea. I -- I don't know. That's an impossible
8
   question.
                       Do you have a commencement date for the
10
   well, Mr. Nearburg?
11
                      Yes, by tomorrow midnight.
            Α
12
            Q
                      And if you don't commence it by then, if
13
   you don't commence it by tomorrow at midnight, do you have
14
    any leases that expire?
15
                        Several.
            Α
                                    Probably between midnight
16
    tomorrow night and the end of March all of the leases. They
17
   occur in stages.
18
                      Your soonest expiring leases, though, are
19
    as soon as tomorrow?
20
            Α
                       Midnight.
                                   The date on the
                                                      lease
                                                             is
21
    February 19th, so it would expire at midnight the 18th of
22
    February, which would be midnight tomorrow.
23
            0
                       Are you prepared to spud the well today
24
```

Α Yes, the location is built; everything is 1 ready. We'll move the spudder on tomorrow morning. 2 Thank you. Q 3 CROSS EXAMINATION 5 BY MR. CATANACH: I just need to get your drilling costs 7 again, if I could. 8 Α Sure. Dry hole cost, \$333,585; 9 pleted, \$550,620. 10 Q Can we get a copy of that AFE? 11 Yes. 12 How long do you think it will take to 13 finish drilling the well? 14 Α Approximately 35 days. 15 MR. CATANACH: That's all 16 have. You may be excused. 17 18 REDIRECT EXAMINATION 19 BY MR. CARR: 20 Mr. Nearburg, is the District Office of 21 the Oil Conservation Division aware of your plans to go for-22 ward and put the spudder on the location? 23 Yes, they are. The spudder has been con-24 tracted and we've contracted a rotary rig to follow up im-25

```
22
1
   mediately once they finish drilling a well that they're cur-
   rently drilling for us in this area.
3
                        Do you request that this order be expe-
4
   dited to the fullest extent possible in view of the readver-
5
   tisement and all the other factors?
6
                       Yes, please.
7
                                      CARR: I have nothing fur-
                                 MR.
8
   ther.
                                 At this time we'd call Louis
10
   Mazzullo.
11
12
                          LOUIS MAZZULLO,
13
   being called as a witness and having been duly sworn upon
14
   his oath, testified as follows, to-wit:
15
16
                         DIRECT EXAMINATION
17
   BY MR. CARR:
18
            0
                       Will you state your full name for the re-
19
   cord, please?
20
                       I'm Louis Mazzullo.
21
                       And where do you reside?
            Q
22
                       Midland, Texas.
23
                       Mr. Mazzullo, by whom are you employed
   and in what capacity?
25
                        I am a geological consultant on retainer
            Α
```

by Nearburg Producing Company.

Q Have you previously testified before this Division and had your credentials as a geologist accepted and made a matter of record?

A Yes, I have.

Q Are you familiar with the application filed in this case and the subject area?

A Yes, I am.

MR. CARR: Are the witness' qualifications acceptable?

MR. CATANACH: They are.

Q Mr. Mazzullo, would you refer to what has been marked for identification as Nearburg Exhibit Number Four, identify this, and review it for Mr. Catanach?

A Exhibit Number Four is a map showing the thickness, the total thickness of the Morrow section which constitutes the reservoir section in this particular area of Township 19 South, 26 East.

The numbers you see on each well refer to the thickness between the top of the Morrow Clastics and the top of the Barnett Shale.

The thick areas are indicated by the closed contours and these constitute areas where there are presumed build-ups of sandstone which may constitute reservoir pay in the area.

The hatchured areas or the stippled areas refer to those areas that meet a minimum porosity cutoff, net porosity feet cutoff, which I've established through regional study of the Morrow in the area. Wells that are productive from the Morrow in this area usually meet a certain minimum porosity cutoff and this porosity cutoff is present in the areas that show the stippling.

The regional dip in this area is to the southeast, so the rocks are dipping to the southeast.

The closed areas, there are several closed contour areas that show no porosity build-up. By contrast there are several areas that do not show closed contours that show excellent porosity build-up. So what this document is actually portraying is the stratigraphic rather than structural nature of the Morrow reservoirs in this area, so what it's saying is that it's not necessarily a function of thickness of sand that gives you reservoir. It's the quality of the reservoir itself, the quality of the sand itself that constitute pay in the area.

So they don't always -- the good porosity zones don't always correspond to the thickest sands but in the case of our proposed location there is some correspondence.

Q Now what information did you use in preparing Exhibit Number Four?

A I used all available well control, every well you see on this map and the surrounding area, as well. Well logs, production histories, and -- and production tests.

Q Did you use any seismic information?

A No, seismic wouldn't apply in this case.

Q And what is the particular reason for proposing a well at this location?

A As you see from the map, there is a trend of porosity that leads out of a well in the south half of Section 6 immediately north of our proposed location. That well shows a marginal amount of productive porosity. It was, in fact, productive from the Morrow, although it didn't produce -- it didn't produce up to a BCF of gas, I don't believe. It never made a BCF of gas, but it was a producer.

By contrast the well immediately to the north of it that shows a contour value of 200, was a dry hole because of lack of porosity, and the well in the north-west of the northeast quarter of Section 7, which shows a very, good, thick section of sand, had -- did not meet the minimum porosity cutoff and was in fact a dry hole in the Morrows. As we'll see in a minute, it had reservoir in it but it was wet and tight.

I propose that the porosity that's present in this well is confined to an up-dip position on

this particular build-up of sand; that the up-dip position, regional dip being to the southeast, the optimum location would be achieved in this section by moving as close to the west section line as possible. If we get too close to the -- if we get close to the center of the section we've getting close to that dry hole control that we have in the northwest of the northeast.

Q Was this particular location selected based on your study of the area?

A Yes, it's based on a very extensive study of the Morrow, detailed study of the Morrow in the area.

Q And what role does structure generally play in this area?

A In this particular area the structure -the -- the reservoirs tend to carry some water with them, so
structure in this area is important insofar as it determines
the position of the gas/water contacts in the individual
sandstone build-ups.

Q Would you now refer to what has been marked Nearburg Exhibit Number Five, the cross section which is on the wall --

A Okay, I'll --

Q -- go to that and review the information on that exhibit for Mr. --

A Okay, I'll go over --

\_\_

Q -- Catanach?

A -- to the wall.

The cross section is essentially a dip section. It more or less cuts across -- goes down dip from west to east. It incorporates a well west and north of our section that was productive from the Morrow -- is productive from the Morrow, comes through our proposed location in the northwest quarter of section, and then through the dry hole east of us, northeast of us, and across into Section 8 into a well that's producing from the Strawn.

In an up dip position we can see from the results of production tests in the bottom two zones and from log character that there are several sands in the Morrow section. Oh, by the way, this is — the Isopach zone from the previous exhibit extends from the top of what I've marked as the Middle Morrow to the top of the Barnett. So that's the Isopach interval from Exhibit Number Four.

In up dip position the major sand bodies that are developed in the Morrow are more or less tight except -- with the exception of this upper sand, which is the productive sand in this particular well.

Q Now the tight stringers are indicated in brown?

A These are indicated in brown; tight rocks are indicated in brown.

.

 There are two production tests in these two lower sands that substantiate the fact that these -- these sands are tight and in the case of these top two sands I've determined that from the log characters.

As you extend down dip of our proposed location you get sands which are in part correlative to the up dip tight sands, a couple of which were drill stem tested and showed west conditions in the reservoir. So these sands here are wet, shown in blue. There are a couple of sands that may have been marginally productive. They probably would not have made very much by comparison to other productive wells in the area. These are indicated in red, and a couple of tight stringers.

We propose to get up dip of these wet sands and down dip of the correlative tight zones in those same sands to find the gas reservoirs, which are indicated in red. I hope they come out looking like this and I hope we get a stringer of red, but we'll probably in all likelihood find something between a section of sand like this and more -- more probably one or two good, thick sands and develop the porosity in the gas reservoir.

We propose to get up dip from the west zone, down dip from the tight zones, and stay as close to the west section line, to stay away from the waterleg in the -- in these two sands here and to get up dip of any tight

stringers that we might find, which are the marginal sands in some of these better -- from build-ups we presume are there.

Q You may return to your seat.

A Uh-huh.

Q Mr. Mazzullo, are you prepared to make a recommendation to the Examiner as to the risk penalty that should be assessed against any interest owner who does not voluntarily join in the well?

A Yes.

Q And what is that recommendation?

A 200 percent.

Q And upon what do you base that recommendation?

A Well, the risk of drilling a dry hole in the Morrow, as you well know, is high even when you try to pick an optimum location.

In addition to that, we are moving to-wards acreage in Section 12, by staying as close to the west section line, we're only moving closer to acreage which is identical in ownership to that on which the well is located, which in fact is -- is the majority interest being owned by Nearburg.

Q Well, in your opinion is it possible that a well at the proposed location would not be a commercial

It is a possibility, yes. There's always

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success?

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might not be accurate.

1 Q What would be your closest producing 2 well, the closest to your proposed location? 3 That would be the well in the southeast 4 quarter of Section 6, the Dorchester Losee or Liggett, I 5 forget which. MR. NEARBURG: Liggett. 7 Α Is it Liggett? It's the Dorchester No. 1 8 Liggett. 9 0 You said that was a marginal producing --10 I believe it -- I don't have the figures 11 in front of me but I don't think it made more than a half a 12 BCF of gas; probably paid out all right but that's about it. 13 0 How about the well in Section 1. the 14 southeast quarter of Section 1? 15 The southeast quarter of Section 1, 16 implied in my discussion of the cross section, the zone that 17 it's producing from is rather thin and it's tight and so it 18 consequently has not made more than I believe 225 MCF 19 gas, somewhere in that vicinity. 20 Q 225 MCF? 21 Α It was a quarter BCF, quarter BCF. 22 those, these figures are just off the top of my head so they

Q Okay. Your porosity area in Section 7 seems to extend further east. Why do you feel that you have

to drill close to the west line?

A You mean further to the east? Okay, because the dip in this area, if you draw a line of constant dip out of that dry hole, it's going to pass, say, if that dry hole, for example, is at 5700 feet subsea depth, that 5700 foot contour line is going to -- is going to head from that dry hole southwest and come pretty close to the location as it is, so we're only gaining -- we're hoping to gain at least 25 to 50 feet of structure up dip of that proposed -- of that dry hole. If we get any further to the east on the location we're going to be essentially at the same structure as that dry hole, and as I showed you on the cross section, we don't want to do that because we'd probably -- we'd be wet if there were reservoir there.

MR. CATANACH: Tom, do you have any questions you want to ask?

MR. KELLAHIN: Just a few follow-up questions, Mr. Examiner.

## CROSS EXAMINATION

21 BY MR. KELLAHIN:

Q Looking at the well in Section 6, the Dorchester Liggett Well?

A Uh-huh.

Do you have a copy of that log, Mr. Maz-

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No, I don't. No, I don't. Α No, we could 2 get one real easy. 3

O Have you examined it to a sufficient degree to determine how the Morrow sand stringers that you've displayed on Exhibit Five compare to the Dorchester Liggett Well?

There are -- there are some of the sands Α -- some of the sands that are in the Liggett Well correlate to the sands over in Section 1. Excuse me, how they -- how they compare to which, now?

> To the proposed location. Q

Α Okay, yeah. My -- my -- the drawing of these Isopach maps are based on regional studies that I have done and published on in this area, so this is -- this little map I show you is part of a huge study.

The trends of these individual sandstone bodies I show are based on regional study and some of wells -- some of the sands that are present in the are presumed to trend south/southwesterly into the proposed location. Some of them are correlative to wells in Section 1, for example. Some of them are not. But I am implying that a lot of the sands that are present in the Liggett are going to be present at the proposed location; hopefully, 25 better developed.

Q You've identified the lower Middle Morrow 1 on the Isopach and that's the interval shown on Exhibit Five from the Middle Morrow down to the top of the Barnett Shale? 3 Right. That interval there? 0 5 Uh-huh. 6 In looking at display Five, it appears Q 7 that each of the sand stringers is slightly thicker than the corresponding sand interval in each of the adjacent wells. Right. Α 10 Q Am I seeing that correctly? 11 Yeah, you're seeing that correctly. 12 What is the basis for your interpretation 0 13 show those thicker than the corresponding thickness 14 each of the wells on the display? 15 The implication here is that the deposi-16 environment of the Morrow in this immediate area is 17 primarily fluvial, stream-laid deposits. The streams that 18 flowed -- that deposited these sands flowed in essentially a 19 north to south direction, northwest/southeast, northeast/ 20 southwest, but essentially north to south. 21 Because of that we would expect these 22 sands to take on a lenticular type of shape. They would 23 thicken from the flanks out into the core of the channels 24

and then thin again on the other flank and that's part of

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what we're implying here on this figure.
                      Looking to the west in Section 12 there's
2
   a dry hole gas symbol in 12.
3
                      That's a gas well symbol.
            Α
                       Yeah. Did it penetrate the Morrow?
            Q
5
                       It did.
                                 It's producing from the Strawn.
            Α
6
         a Strawn well.
                          The Morrow was tight.
                                                   There was
                                                              no
7
   porosity.
8
                       And the Dorchester Well immediately
   the east, I see a drill stem test. Did it ever produce?
10
                       No, they never produced anything out of
            Ά
11
   that well.
12
                       And then the last well on the cross sec-
            0
13
   tion going to the east is the --
14
                       Uh-huh.
                                 That's a well that is currently
15
   operated by Nearburg, called the Crusader Rabbit.
16
               dry hole in the Morrow when it was originally
   it was a
17
   drilled and Nearburg re-entered it and completed it in the
18
   Strawn, a Strawn gas producer.
19
                       There were two drill stem tests and then
20
   it was plugged and abandoned August of '78?
21
            Α
                       Right.
22
            0
                        The Dorchester Liggett Well no
                                                          longer
23
   produces from the Morrow?
24
            Α
                        I believe it's shut-in. It's so dark I
25
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1
   can't tell but I think it's got a shut-in symbol on it.
                       And then the last well on the east of the
2
3
   cross section, I've lost track of the name of that one.
            Α
                       Well, that's the Crusader and that's the
   one that we're --
5
6
            Q
                       All right, when we go to the west of the
7
   Dorchester Well, to the far west in Section 1 --
                       Uh-huh.
                       -- that one is still producing, is it?
10
                        As far as I could tell from the record.
            Α
   As of the first of the year they were.
11
                       Your latest information --
12
13
                       I mean the first of last year, I'm sorry.
   I don't have the --
                       January of '87?
15
                       '87, right.
16
            Α
17
            Q
                       And what was your last information on its
   producing rates?
18
19
            Α
                        I didn't have a producing rate. I just
20
   had a cumulative production figure --
21
                       As of that time.
            0
22
                       -- which I think was a quarter BCF.
23
                                 MR.
                                      KELLAHIN:
                                                   Thank you, I
24
   have nothing further.
25
                                      CATANACH:
                                                   I have no fur-
                                 MR.
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1
   ther questions of the witness.
2
                                He may be excused.
3
                                MR. CARR: We have nothing fur-
   ther, Mr. Catanach.
5
                                MR.
                                     CATANACH:
                                                 Mr. Carr, were
6
   all the parties that we just listed sent this notification
   again to the parties to make sure that the -- for the unor-
   thodox location?
                                             For the unorthodox
                                MR.
                                     CARR:
   location notice was given to the west and the southwest.
10
11
   Those are the only tracts toward whom the well is being
12
   moved.
13
                                    to the compulsory pooling,
14
   we gave notice to the interest owners who had not voluntar-
15
   ily joined within the dedicated acreage. The reason there
16
   are so many of them is to the southwest in that tract we may
17
   have as many as 65 interest owners down there in that, very,
18
   very, small, fractional interests in the acreage south and
19
   west of the well.
20
                                MR.
                                     CATANACH:
                                                 If we do
                                                          find
21
   that we have to proceed with a nonstandard proration unit,
22
23
                                MR. CARR: We will have to give
24
   them additional notice, and that is the reason we need to
25
   resolve that with you as quickly as possible. That notice
```

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38
  would have to go out by Wednesday of next week.
                                  We also will provide a copy of
2
   the AFE for the well.
3
                                  MR.
                                       CATANACH:
                                                    Okay.
                                                           In that
   case we'll leave the record open in this case and readver-
5
   tise it for March 16th.
7
                         (Hearing concluded.)
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DO

HEREBY

CERTIFICATE

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.

Sway W. Boyd CSTZ

BOYD, C.S.R.,

I do hereby co tilly that the foregoing is a comple e record of the proceedings in the Examiner hearing of Case No. 2014.

Examiner

Oil Conservation Division

MR. CATANACH: Call next Case

9294, application of Nearburg Production Company for compulsory pooling, unorthodox gas well location and a nonstandard

5 gas proration unit, Eddy County, New Mexico.

This case was heard on February

17th and had to be readvertised.

Are there any appearance in

9 this case?

There being none, this case

11 will be taken under advisement.

(Hearing concluded.)

Habrerity College Ats

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CERTIFICATE

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 CSE

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9890. heard by me on March 1988.

Dil Conservation Division, Examiner