

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 12 April 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Nearburg Producing Comp-
10 any for directional drilling and an un-
11 orthodox oil well location, Lea County,
12 New Mexico.

CASE
9644

13 BEFORE: Michael E. Stogner, Examiner
14
15

16 TRANSCRIPT OF HEARING
17

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

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22 For Nearburg Producing
23 Company:

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I N D E X

MARK K. NEARBURG

Direct Examination by Mr. Carr	4
Cross Examination by Mr. Stogner	10

LOUIS J. MAZZULLO

Direct Examination by Mr. Carr	12
Cross Examination by Mr. Stogner	24

E X H I B I T S

Nearburg Exhibit One, Plats	5
Nearburg Exhibit Two, C-101 and C-102	8
Nearburg Exhibit Three, Structural Map	14
Nearburg Exhibit Four, Cross Section D-D'	17
Nearburg Exhibit Five, Mud Log	21

1 MR. STOGNER: Okay, we'll call
2 next Case Number 9644.

3 MR. STOVALL: Application of
4 Nearburg Producing Company for directional drilling and an
5 unorthodox oil well location, Lea County, New Mexico.

6 MR. STOGNER: Call for ap-
7 pearances.

8 MR. CARR: May it please the
9 Examiner, my name is William F. Carr with the law firm
10 Campbell & Black, P. A., of Santa Fe. We represent Near-
11 burg Producing Company and I have two witnesses.

12 MR. STOGNER: Are there any
13 other appearances? Will the witnesses please stand to be
14 sworn?

15
16 (Witnesses sworn.)

17
18 MR. STOGNER: Mr. Carr.

19
20 MARK K. NEARBURG,
21 being called as a witness and being duly sworn upon his
22 oath, testified as follows, to-wit:
23
24
25

DIRECT EXAMINATION

BY MR. CARR:

Q State your full name for the record, please.

A Mark Nearburg.

Q Mr. Nearburg, where do you reside?

A Midland, Texas.

Q By whom are you employed and in what capacity?

A Nearburg Producing Company, Land Manager.

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

A Yes, I have.

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

A Yes.

Q Are you familiar with the subject area?

A Yes.

MR. CARR: Are the witness' qualifications acceptable?

MR. STOGNER: They are.

Q Mr. Nearburg, would you briefly state what you seek with this application?

1 A We seek approval of directional drill-
2 ing and unorthodox bottom hole location to test the De-
3 vonian formation in Section 10, Township 12 South, Range 38
4 East, Lea County, New Mexico.

5 Q Are you re-entering an existing wellbore
6 or drilling a new hole?

7 A We are re-entering a previously drilled
8 Devonian dry hole and sidetracking it to try to find the
9 Devonian formation.

10 Q Would you refer to what has been marked
11 for identification as Nearburg Exhibit One, identify this
12 exhibit and review the information contained thereon for
13 the examiner?

14 A Okay. This exhibit is a land map. In
15 green is shown the Federal lease that Nearburg owns. Pink
16 are fee leases owned by Nearburg and yellow is one State
17 lease which Nearburg has obtained assignment of.

18 Q The two 40-acre tracts that are indi-
19 cated in the north half of the yellow lease, those are just
20 spacing units, they don't indicate different lease owner-
21 ship?

22 A That's right. Cross hatched in red is
23 the unit that would be dedicated to the bottom hole loca-
24 tion if we make a well in the Devonian.

25 Q When was this first well on the lease

1 originally drilled?

2 A The dry hole shown in the northeast
3 quarter northwest quarter was permitted in December of 1981
4 and after drilling to the Devonian formation it was plug-
5 ged in March of 1982.

6 Q And the 40-acre tract consisting of the
7 northeast quarter of the northwest quarter was dedicated to
8 that well?

9 A That's right.

10 Q And you're now proposing to direction-
11 ally drill it to a bottom hole location under the north-
12 west of the northwest?

13 A That's right.

14 Q And what acreage do you propose to dedi-
15 cate to the well?

16 A The northwest quarter northwest quarter.

17 Q Is this a standard spacing or proration
18 unit in the Devonian?

19 A It's a standard unit, yes.

20 Q Is the bottom hole location going to be
21 at an orthodox or an unorthodox location?

22 A The bottom hole will be located 1000
23 feet from the north line and 1100 feet from the west line,
24 which is a nonstandard location.

25 Q And will you present a geological wit-

1 ness who will explain the reason for that location?

2 A Yes, I will.

3 Q Would you explain to the Examiner the
4 reasoning for directionally drilling instead of locating
5 the well in the northwest quarter of the northwest quarter
6 of Section 10?

7 A Okay. As the geology will show, the
8 feature is pretty small and it's frankly not economical to
9 drill a well from scratch to test this small a feature.
10 The well located in the northeast quarter northwest quar-
11 ter was the UNC State No. 1 and when it was plugged in
12 March of 1982, they ran no DST's, encountered no shows any-
13 where in the wellbore and ran no tests, and we'll elaborate
14 on that.

15 The reason we're sidetracking the well
16 is that we can re-enter and clean out the existing hole to
17 about 8,250 feet and kick off at that point. This old dry
18 hole has the surface and intermediate pipe in the wellbore
19 and it should be in good shape since the well was drilled
20 in 1982.

21 This should save approximately \$155,000
22 to casing point.

23 Q Without this savings would it be econo-
24 mically justifiable for you to drill a well to test the
25 Devonian on this lease?

1 A No. When we first purchased the ac-
2 reage in yellow, the reason we purchased it was the econo-
3 mics of the prospect from the start dictated re-entering
4 and deviating this dry hole.

5 Q Now, Mr. Nearburg, would you refer to
6 what has been marked as Nearburg Exhibit Number Two and
7 first identify that exhibit for Mr. Stogner?

8 A Okay, these are the forms C-101 and 102
9 turned in to the State.

10 Q Would you review the information con-
11 tained on those forms that relate to this application?

12 A Okay. The last page has a blow up
13 (unclear) sketch. The next page forward from that is UNC
14 Texas, Inc.'s permit for a wildcat Devonian location filed
15 in December of 1981, showing their location 660 from the
16 north line and 1980 feet from the west line on a northeast
17 quarter northwest quarter proration unit.

18 The next page forward from that is Near-
19 burg's application dated March 17, 1989, to re-enter the
20 old Devonian dry hole and permit the deviated wellbore
21 which is also a wildcat for the Devonian.

22 Then Form C-101 just stating the proce-
23 dure we intend to use and a letter to the State.

24 Q Does Nearburg control all acreage off-
25 setting the spacing or proration unit on which this well

1 will be located?

2 A Yes. Going back to Exhibit Number One,
3 the red cross hatched area is the proration unit that will
4 be dedicated to a well, so all ownership offsetting is
5 owned by Nearburg.

6 Q The bottom hole location is actually
7 too close to the south line of that 40-acre tract, isn't
8 that correct?

9 A That's correct.

10 Q And you're encroaching, therefor, only
11 on acreage which is included within that, the same lease on
12 which the well is drilled.

13 A That's correct, that's a State -- every-
14 thing in yellow is a State lease.

15 Q And the ownership, working as well as
16 royalty, is common through out that tract?

17 A Yes.

18 Q Is Nearburg prepared to run a direction-
19 al survey on this well as required by Oil Conservation Div-
20 ision Rule 111?

21 A Yes. As a matter of fact, with the
22 directional drilling that's being done by Scientific Drill-
23 ing International, and they take a directional survey every
24 500 feet.

25 Q In your opinion will granting this ap-

1 plication be in the best interest of conservation, the
2 prevention of waste, and the protection of correlative
3 rights?

4 A Yes.

5 Q Were Exhibits One and Two prepared by
6 you?

7 A Yes.

8 MR. CARR: At this time, Mr.
9 Stogner, we would move the admission of Nearburg Exhibits
10 One and Two.

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

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

15
16 CROSS EXAMINATION

17 BY MR. STOGNER:

18 Q Mr. Nearburg, you said that Scientific
19 Drilling was going to take a survey point every 500 feet,
20 is that right?

21 A That's correct.

22 Q Now is that during their actual drill-
23 ing operation or after they --

24 A No, that's every time we drill 500 feet
25 or in between time if we need to, they'll come out of the

1 hole and take a directional survey, and they've assured us
2 that they will be within 100 feet of the bottom hole, pro-
3 jected bottom hole location.

4 Q And we were advertising today and what
5 you're requesting is within 100 feet of this point, so in
6 actuality, you could be 1100 feet from the north line with
7 this application, is that correct?

8 A We could be.

9 Q And then again at the same time you can
10 also be 900 feet.

11 A 900. We found the directional drilling
12 to be pretty accurate with those surveys every 500 feet.

13 Q And you're proposing to kick off at 8 --
14 approximately 8250 feet?

15 A We actually will be kicking off at 8250
16 feet.

17 Q Do you propose at that point, at that
18 kick off point, that the location of the well be accurately
19 determined?

20 A I don't follow the question.

21 Q Well, if you kick off from that point,
22 you can't assume the well is vertical. It will be -- it
23 will be off the center somewhere down the line; that will
24 be determined at the time of kickoff.

25 A Oh, yeah, they -- I think there's a de-

1 viation and all that -- the geologist can answer to that,
2 but I believe there's a deviation survey from the previous
3 hole.

4 Q Okay. Do you propose after the well is
5 done to have a survey run of the well?

6 A Yes.

7 Q And will that be at least one -- a sur-
8 vey point every 100 feet?

9 A Yes.

10 MR. STOGNER: Mr. Carr, I have
11 no other questions of this witness at this time but I may
12 --

13 MR. CARR: At this -- we will
14 be here and available and at this time we call Mr. Mazzullo
15 if you're prepared to go now to the geology.

16 MR. STOGNER: Thank you, Mr.
17 Carr.

18
19 LOUIS J. MAZZULLO,
20 being called as a witness and being duly sworn upon his
21 oath, testified as follows, to-wit:

22
23 DIRECT EXAMINATION

24 BY MR. CARR:

25 Q Would you state your full name for the

1 record, please?

2 A Louis Mazzullo.

3 Q Mr. Mazzullo, where do you reside?

4 A Midland, Texas.

5 Q By whom are you employed and in what
6 capacity?

7 A I'm a geologic consultant retained by
8 Nearburg Producing Company.

9 Q Have you previously testified before
10 this Division and had your credentials as a geologist ac-
11 cepted and made a matter of record?

12 A I have.

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

15 A I am.

16 Q And are you familiar with the subject
17 area?

18 A Yes.

19 Q Have you studied the area?

20 A Yes, extensively.

21 MR. CARR: Are the witness'
22 qualifications acceptable?

23 MR. STOGNER: They are.

24 Q Mr. Mazzullo, at this time I'd ask you
25 to go to the Exhibit Number Three, which is -- has been

1 posted on the wall, and I'd ask you first to identify this
2 and then review what it is and how you constructed this
3 exhibit.

4 A Okay. Exhibit Number Three is a struc-
5 ture map drawn at the base of the Woodford and determined
6 by a combination of seismic data and whatever subsurface
7 control is provided by existing wellbores.

8 There are three existing wellbores in
9 this area. The first is designated by the purple dot.
10 That's the wellbore that we are proposing to re-enter.

11 The second one is in the northeast
12 quarter of Section 16 down to the south and west and the
13 third is in the southeast quarter of Section 10. That's
14 the only well control we have in the area.

15 The other control is provided by two CDP
16 or stacked seismic lines which criss-cross the prospect, as
17 well as a number of conventional seismic shot points. All
18 the data points that we used in constructing the map, that
19 is the points that we had subsurface, subsea values on, are
20 designated by the small dots you see throughout the map.

21 So the map is pretty accurately control-
22 led by seismic and well control.

23 The map shows that this area, which is
24 -- as is typical with eastern Lea County, has got a number
25 of faults which criss-cross the area both in a northwester-

1 ly direction, as well as -- a generally northerly direc-
2 tion, I should say, and a series of cross faults in an
3 east/west direction. This is a fairly typical faulting
4 pattern for this part of Lea County. You find it in all
5 the other fields up and down this part of Lea County, like
6 King and to a certain extent Gladiola. Gladiola, by the
7 way, is about a mile and a half to two miles to the west of
8 this field. Bronco Field is down to the south over two
9 miles. And these fields, all of these fields, are charac-
10 terized by these complex, intricate faulting patterns. So
11 faulting, as it exists, creates a number of very small
12 structures throughout the area. Some of the larger struc-
13 tures like -- which are associated with Gladiola Field are
14 huge and they're not as heavily segmented by cross faults,
15 but there are a number of other smaller fields, like Denton
16 South, King South, Fields which are more in line with the
17 types of features we're seeing here, structurally; very
18 small features; very hard to see seismically, but that's
19 not the whole story, and I'll get to the rest of the story
20 when I get to the cross section.

21 Right now I'd like to point out that the
22 red area on this map, or the area that's shaded red, is the
23 area of closure which I feel is most probably going to be
24 productive in the Devonian.

25 The red dot on the map is the proposed

1 bottom hole location. The reason why I suggested that the
2 well, the original UNC Well, be sidetracked off in that
3 direction was to enable us to cross this bounding fault
4 which comes between the re-entry well and the bottom hole
5 location and gets sufficiently away from the fault and
6 sufficiently up the structural closure to maximize our
7 chances of getting oil or getting into the oil leg of the
8 Devonian reservoir.

9 You may ask why stop there. Why not go
10 a little bit further to the west? Well, the technology is
11 there to do so but if we -- if we wanted to do that, we'd
12 have to start -- we'd have to kick off higher up in the
13 hole, in the existing wellbore; we'd have to build an angle
14 from way up in the hole. The cost differential because of
15 the increased amount of drilling that we'd have to do on
16 day work and the amount of time it would take to get down
17 to build our angle, get down to the target, the cost dif-
18 ferential between re-entering the well and drilling a well
19 from scratch would be greatly diminished and it wouldn't be
20 economical for us to re-enter that well at that point.

21 The most economical, as well as the most
22 practical way of attaining the -- of reaching our target,
23 would be to sidetrack from the position at about 8,250 feet
24 in the original wellbore, kick off at that point, build a
25 smaller angle, which will enable us better control on our

1 drill string to get down to target within that 100 foot
2 radius that we're talking about, so that's the reason why
3 we only -- we don't want to sidetrack that well any fur-
4 ther. It's an economic and logistical consideration that
5 we have to make.

6 Q Mr. Mazzullo, does this exhibit also
7 contain a trace for the cross section?

8 A Yes, the cross section that we're going
9 to be addressing runs from the well in Section 16 north-
10 eastward to the well in the southeast quarter of Section
11 10, across our proposed location, and then crossing the
12 fault to the original wellbore.

13 Q Are you ready to go to the cross section
14 at this time?

15 A Yeah.

16 Q All right, if you would go to that and
17 then explain what this is designed to show and note the
18 area that you've shaded on the bottom part of the cross
19 section.

20 A This is Exhibit Number Four and Exhibit
21 Number Four is a structural cross section that I just in-
22 dexed on Exhibit Number Three.

23 It starts from the southwest and heads
24 to the northeast and to the southeast quarter of Section
25 10, across our proposed location, our proposed bottom hole

1 location, and then to the well that we are going to re-
2 enter, the UNC State 10 No. 1.

3 This is the well that we're actually
4 going to kick off into. That well was drilled in 1982. It
5 encountered a porosity section which I indicate in green
6 here, approximately 50 feet below the base of the Woodford.
7 The base of the Woodford is in brown and that is the unit
8 that's mapped on the structure map. Okay. The structure
9 that we show there is basal Woodford structure.

10 The porosity zone encountered in the
11 original wellbore was at approximately 50 feet below the
12 base of the Woodford. It was never tested. There were no
13 shows recorded, I'll bring up an exhibit here in a minute
14 which will show that there was nothing in it to encourage
15 any testing of the formation. The well was plugged and
16 abandoned.

17 If we go over to the southeast quarter
18 of Section 10 we again see a porosity zone but this time
19 the porosity zone is immediately beneath the base of the
20 Woodford. You go directly from Woodford into porosity.
21 That porosity was tested down here in this position on the
22 downthrown side of this bounding fault and recovered 3319
23 feet of salt water.

24 Now, right here I note that the shut in
25 pressures, which were the same at the beginning of the test

1 as they were at the end of the test at approximately 3880
2 pounds of bottom hole pressure, formation pressure.

3 MR. STOGNER: And what well
4 are you pointing at, Mr. Mazzullo?

5 A This well right here.

6 MR. STOGNER: Which well is
7 that?

8 A It's the Chambers and Kennedy State
9 Field No. 1-10.

10 MR. STOGNER: And that's in
11 Section 10 in the south --

12 A It's in the southeast quarter of Section
13 10.

14 MR. STOGNER: Thank you, Mr.
15 Mazzullo.

16 A Okay. We go over a couple of other
17 faults and we proceed southwestward. We come to this well
18 in Section 16, which is the Union Oil Company Huber State
19 No. 1. That well also encountered porosity immediately be-
20 neath the base of the Woodford. It's subsea value is only
21 8 feet lower than the subsea of the proceeding well and yet
22 its recovery of salt water on the DST was under a bottom
23 hole pressure of 4,220 pounds, which is a full 400 pounds
24 over the pressure obtained at the Chambers and Kennedy
25 Well. The implication here is that the well, each one of

1 these wells tested a different porosity zone and perhaps
2 the Union Oil Well in Section 16 encountered a deeper
3 stratigraphic horizon than the well in the southeast quar-
4 ter of Section 10. Now this is significant only because
5 Basal Woodford structure is not only -- is not the only
6 story that we look for here. The Basal Woodford behaves
7 structurally in one manner but the section beneath it in
8 the Devonian can do something altogether different. What
9 I'm hoping it will do, and which the way the porosity zones
10 are changing regionally through here, I'm hoping that this
11 deeper horizon that we see here will rise up stratigraphi-
12 cally in the section by pre-Woodford erosion and folding,
13 and be the zone that we're targeting in our bottom hole
14 location.

15 Why that is significant is because that
16 would imply that there's greater structural relief on the
17 Devonian than there is at the base of the Woodford, in the
18 Woodford, rather, so I'm looking for greater structural re-
19 lief, greater reservoir enhancement sub-Woodford than I am
20 in the Woodford itself. We're mapping only about a 75 foot
21 closure here on the Woodford but I'm hoping to get far more
22 -- to exceed that significantly in the Devonian. It's a
23 very risky type of play. It's something that I see happen-
24 ing in other fields and I can only imply it's happening
25 over here.

1 I don't want to go too far -- this
2 structure is an awfully small feature to target and I'd
3 rather hit it. If we hit the edge of the structure here,
4 we're just as likely to get enough relief to -- to provide
5 reservoir conditions as we would if we tried to target the
6 crest of the structure. There's no need to target the
7 crest of the structure because the structure in the Devon-
8 ian internally can be great, can be great enough to provide
9 us a reservoir even at this flank position.

10 So the combination of economics, logis-
11 tics and geology requires that we try not to -- we try to
12 limit the amount of kickoff that we're going to have on
13 this original wellbore. We don't want to go too far for a
14 variety of reasons.

15 Q All right, would you return to your seat
16 and identify what has been marked for identification as
17 Nearburg Exhibit Number Five?

18 A Nearburg Exhibit Number Five is a seg-
19 ment of the mud log, the hydrocarbon log, from the original
20 UNC Texas State No. 1 Well. It goes from a depth of appro-
21 ximately 11,700 through 12,100 plus feet, which covers the
22 top of the Devonian section in green on that cross section.

23 On the lefthand side of the mud log is a
24 chart of the drilling rate.

25 On the righthand, the far righthand side

1 is the chart of the gas readings that they obtained from
2 the mud, the drilling mud, as they penetrated the various
3 formations.

4 The mud log shows no gas shows whatso-
5 ever when they hit the Devonian formation at about 12,100
6 feet. There's absolutely no indication of any show. Con-
7 sequently the well was never tested in the Devonian, so we
8 feel that this is a conclusive -- the mud log and the --
9 and the lack of any test data is conclusive evidence that
10 we did not have a reservoir, an oil reservoir at this
11 location. It requires us to move to -- southwest to try to
12 gain structural advantage on the Devonian.

13 Q Was a deviation survey run on this well
14 when it was originally drilled?

15 A It was -- I'm not sure it was run when
16 it was originally drilled but we ran one -- we are going
17 to, you know, we intend to run one prior to drilling the
18 re-entry in order to gauge -- in order to tie in precisely
19 to the kickoff point.

20 Q So you will know the exact location --

21 A We will know the location of the kick-
22 off.

23 Q How do you propose to drill this and
24 control the well as it is drilled?

25 A Okay. First of all, we are going to

1 re-enter the well and drill out approximately four plugs, I
2 believe it is, before we get to 8250 feet.

3 At 8250 feet or thereabouts they are
4 going to set a kickoff plug, a cement plug of -- I think
5 it's greater than 50-foot thickness. They'll allow it to
6 set; they will dress it off, and then from then on they'll
7 go in with a downhole motor and sidetrack. They'll kick
8 off southwesterly, build an angle of approximately 12-1/2
9 degrees in order to kick off to the southwest in the
10 direction that we so specify, which I believe is south 71
11 degrees west, and from then on they will be controlling the
12 angle until they reach the target radius and at which time
13 they will then -- they will then proceed to drill in a
14 vertical position until they get to target. If they need
15 to make any corrections, they go in periodically with their
16 downhole motor and make the necessary corrections.

17 They take a survey every 5 -- at least
18 every 500 feet, a directional survey, but they -- they com-
19 monly do it a lot more often than that, particularly in the
20 first stages of the operation when they're building their
21 angle. They take them every 100 feet. It's a slow and
22 it's a tedious process at first but if they're able to
23 build their angle in a reasonable time frame, then they
24 will proceed by taking 500 foot surveys after that and at
25 the end they'll run a complete downhole survey again and

1 get an accurate deviation survey. I think they take
2 readings every -- it's more than every 100 feet. I mean
3 it's more often than that; it's every couple of feet.

4 Q Were Exhibits Three, Four and Five pre-
5 pared by you or compiled under your direction and super-
6 vision?

7 A Yes, they were.

8 Q Do you have anything further to add to
9 your testimony?

10 A No, I don't.

11 Q In your opinion will granting this ap-
12 plication be in the best interest of conservation, the pre-
13 vention of waste and the protection of correlative rights?

14 A Yes.

15 MR. CARR: At this time, Mr.
16 Stogner, I would move the admission of Nearburg Exhibits
17 Four -- Three, Four and Five.

18 MR. STOGNER: Exhibits Three,
19 Four and Five will be admitted into evidence.

20 MR. CARR: And that concludes
21 my direct examination of Mr. Mazzullo.

22

23 CROSS EXAMINATION

24 BY MR. STOGNER:

25 Q Mr. Nearburg, let's refer to Exhibit

1 Number Three.

2 A Mr. Mazzullo.

3 Q I'm sorry.

4 A For the record.

5 Q Mr. Mazzullo. The shaded in red area is
6 the what again?

7 A That is the -- that is the area of clo-
8 sure on the base of the Woodford, area of structural clo-
9 sure on the base of the Woodford, which I believe offers
10 the greatest potential for oil reservoir development on
11 this prospect.

12 In other words, it gets -- the potential
13 for reservoir development off of this area of closure is a
14 lot riskier.

15 Q Now, from the seismic how accurate is
16 this description of that shaded area as far as the posi-
17 tioning of that what shall we call it, a dome?

18 A A dome, closure.

19 Q Yes.

20 A Any seismic, conventional or when it's
21 used in conjunction with more modern stacked data, is ac-
22 curate plus or minus 50 to 75 feet, depending upon the
23 various parameters that the seismic is run on. We happen
24 to be working with very high resolution seismic data, which
25 makes it a little bit more accurate than -- than some of

1 the older data that you're able to purchase.

2 So I feel that we are probably within a
3 range of about plus or minus 50 feet of closure and we have
4 a total closure here of about more than 75 feet or 75 to 90
5 feet of closure.

6 It's a subtle feature. I mean these are
7 admittedly subtle features and oftentimes that's what they
8 are on these smaller Devonian fields, very subtle. The
9 base of the Woodford, the Woodford structure is a lot more
10 subtle than the Devonian itself would be.

11 Q Now you testified that the reason you
12 weren't going any further into the dome was due to several
13 reasons, logistics, --

14 A Right.

15 Q -- economics and geology. With this in
16 mind, why couldn't a well be placed 990/990 and was this
17 discussed at you alls (sic) meetings?

18 A Yes. As Mr. Nearburg previously testi-
19 fied, the decision to pick up the acreage that we picked up
20 was based on the presumption that we were going to re-enter
21 the UNC wellbore. The feature was so small, this closure
22 is so small it takes up less than a quarter section, that
23 we felt drilling a new wellbore at a standard location with
24 the extra added expenses that would entail, would not make
25 this an economical prospect; that drilling a re-entry and

1 kicking off from the existing wellbore, and kicking off
2 1000 or 1100 feet to the southwest with the cost savings
3 from not having to buy surface and intermediate casing and
4 the added costs that are involved in drill time, or less
5 drill time, would make it more economically attractive.

6 I also felt that knowing that the
7 Devonian commonly behaves as an independent structural en-
8 tity from the base of the Woodford that's commonly mapped,
9 that we commonly map, that we didn't need to go all the way
10 to the crest of the structure to find the reservoir; that
11 if we didn't find it here at the flank of the structure at
12 the proposed bottom hole location, we're not going to have
13 a reservoir there.

14 So, yes, a 990/990, while it may --
15 well, it may come dangerously close to this fault over
16 here, while it may have been structurally on the Woodford
17 structurally higher than our proposed bottom hole location,
18 would have been more expensive to drill either way, either
19 as a new hole or re-entering this one and trying to kick it
20 off that far. It would have -- it would have just elimin-
21 ated the economic advantage that we have and there was no
22 need geologically to have to go to the top of the structure
23 at this point.

24 Q You also testified that kicking off at
25 8250, I believe it was your testimony and Mr. Nearburg's,

1 both, of the reason why kicking off at the vertical point
2 of 8250, other than, say, a shallower zone, there again the
3 expenses came into play on that, is that correct?

4 A Expenses and logistics. It's -- it's --
5 well, it was an economic decision to. It would take -- I
6 asked, I went through this with our drilling engineer. I
7 said, you know, what would it take to kick off, say, at,
8 well, even to kick off as shallow as 7000 feet, and I think
9 the quote there was an additional eight to ten days of
10 drilling time. This is day work now, it's not footage, of
11 day work time and -- and building our -- building a shall-
12 lower angle, it's actually easier to build a steeper angle
13 than it is to build a shallower angle. 8250 seemed to be
14 an optimum depth at which to kick off in order to build the
15 right angle that we needed to get to our target position.
16 So I understand. I'm not a drilling engineer, but that's
17 what they tell me. It's easier to go steeper than it is to
18 go shallower.

19 Q Now this wellbore as it's planned today,
20 what is the time in which directional work will be on it?

21 A Directional work as planned now, it will
22 probably take something in the order of three days to enter
23 the well, clean out the plugs; another day to set a kick
24 off plug and dress the plug, in other words, to clean it
25 off; and then another day and a half to two days to actual-

1 ly sidetrack out into new formation and begin to build the
2 angle.

3 After that point, assuming that there
4 are no major problems, we can probably have the well down
5 to target within two and a half weeks.

6 Now that's -- that's opposed to some-
7 where in the order of 42 days I think it would take to
8 drill the well from scratch out here.

9 Q But you mentioned a kick off point of
10 7000 feet where it would take 8 to 10 days and how many
11 days would this take?

12 A But it's the expense of day work, the
13 extra expense of day work, you know, we're saving --

14 Q How many days --

15 A All right.

16 Q -- are you expecting from 8250?

17 A From 8250 on down?

18 Q Yeah.

19 A We're talking two and a half weeks plus
20 3, plus 4 --

21 Q That's 14 days as opposed to 8 to 10.
22 Something's not making sense here, Mr. Mazzullo.

23 A Let's start all over again.

24 Q Okay. Is that 8 to 10 additional days?

25 A That's 8 to 10 additional days.

1 Q Okay, and --

2 A I'm sorry, additional days.

3 Q Okay. Mr. Mazzullo, I'll ask you this
4 question and, Mr. Nearburg, you may step down.

5 On the Exhibit Number One, that is the
6 map here and the yellow is one lease, is that correct?

7 MR. NEARBURG: Yes.

8 MR. STOGNER: Okay, and now
9 the pink and the green is two separate leases owned by
10 Nearburg?

11 MR. NEARBURG: Right.

12 MR. STOGNER: So essentially
13 what we're going into is somewhat of a wildcat area as far
14 as well control is involved, since most of the wells, or
15 all of the wells that are in existence is in the outer
16 portions of the faults.

17 MR. NEARBURG: Yes, right.

18 Q And you're relying on seismic data only
19 and interpretation within an area structurally small --

20 A Uh-huh.

21 Q -- and which is controlled and operated
22 by -- Nearburg is the operator --

23 A Right.

24 Q -- under one single lease from the
25 State. single lease from the State.

1 A Right. We're just going toward
2 ourselves in the sidetract on this well.

3 Q So the term closeology does not come
4 into play in this particular case?

5 MR. STOGNER: I have no other
6 questions of Mr. Mazzullo or Mr. Nearburg.

7 Are there any other questions
8 of this witness?

9 If not, he may be excused.

10 Mr. Carr, do you have anything
11 further in this case?

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

14 MR. STOGNER: Does anybody
15 else have anything further in Case Number 9644?

16 This case will be taken under
17 advisement.

18
19 (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. 9644
heard by me on 12 April 1957.

Michael E. Hooper Examiner
Oil Conservation Division