STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 1 OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING 2 SANTA FE, NEW MEXICO 3 4 January 1989 4 EXAMINER HEARING 5 6 IN THE MATTER OF: 7 Application of Nearburg Producing CASE Company for compulsory pooling and 9570 8 an unorthodox oil well location, Lea County, New Mexico. 9 10 BEFORE: David R. Catanach, Examiner 11 12 13 TRANSCRIPT OF HEARING 14 15 APPEARANCES 16 17 For the Division: Robert G. Stovall Attorney at Law 18 Legal Counsel to the Division State Land Office Bldg. 19 Santa Fe, New Mexico 20 For Nearburg Producing Scott Hall Attorney at Law Company: 21 CAMPBELL and BLACK, P. A. P. O. Box 2208 22 Santa Fe, New Mexico 87501 23 24 25

INDEX CHARLES E. NEARBURG Direct Examination by Mr. Hall Cross Examination by Mr. Stovall Cross Examination by Mr. Catanach BILL OWEN Direct Examination by Mr. Hall Cross Examination by Mr. Catanach LOUIS J. MAZZULLO Direct Examination by Mr. Hall Cross Examination by Mr. Catanach EXHIBITS Nearburg Exhibit One, AFE Nearburg Exhibit Two, Map Nearburg Exhibit Three, Plat and List Nearburg Exhibit Four, Letter Nearburg Exhibit Five, Structural Map Nearburg Exhibit Six, Isopach Nearburg Exhibit Seven, Affidavit

3 1 MR. CATANACH: Call Case 9570. 2 MR. STOVALL: Application of 3 Nearburg Producing Company for compulsory pooling and an 4 unorthodox oil well location, Lea County, New Mexico. 5 MR. CATANACH: Are there ap-6 pearances in this case? 7 MR. HALL: Mr. Examiner, Scott 8 Hall from the Campbell & Black law firm, on behalf of the 9 applicant, with two witnesses today, both of whom who have 10 been -- three witnesses --11 MR. STOVALL: Two of whom who 12 have been sworn. 13 MR. HALL: Something like 14 that. 15 And one we're MR. STOVALL: 16 going to swear in. 17 MR. HALL: We'll swear the 18 third. 19 MR. CATANACH: Let me get the 20 third witness to stand up and be sworn in at this time. 21 22 (Mr. Bill Owen sworn.) 23 24 MR. STOVALL: Do you want the 25 record to reflect that the other two witnesses have been

4 1 sworn and gualified, Mr. Hall? 2 MR. HALL: Thank you, I wasn't 3 able to reflect that myself. 4 5 CHARLES E. NEARBURG, 6 being called as a witness and being previously sworn and 7 remaining under oath, testified as follows, to-wit: 8 9 DIRECT EXAMINATION 10 BY MR. HALL: 11 Mr. Nearburg, would you please state 0 12 what it is that Nearburg Producing Company seeks in this 13 particular application? 14 А Yes. Nearburg Producing Company seeks 15 an unorthodox location for a Strawn test well in what we 16 would believe would be the Undesignated Shipp Strawn Pool 17 or the Undesignated South Humble City Strawn Pool, at a 18 location 2310 from the south line and 600 feet from the 19 east line of Section 1, Township 17 South, Range 37 East, 20 Lea County, New Mexico, on a proration unit consisting of 21 the east half of the southeast quarter, and we further seek 22 an order pooling the uncommitted interests. 23 Q All right. Have you prepared certain 24 exhibits in conjunction with your testimony today? 25 А Yes, we have.

5 1 Q Let's look at Exhibit One, if you'd 2 identify that, please, sir. 3 А Exhibit One is an AFE for the drilling 4 of the Price No. 1. 5 0 All right, would you review the totals 6 on the AFE for the well? 7 А The total cost to casing point is pro-8 jected at \$395,865 with total completion cost estimated at 9 \$247,655, for a total completed and equipped well of 10 \$643,520. 11 To your knowledge are these costs in 0 12 line with what's being charged by other operators in the 13 area for similar wells? 14 I think they're very much in line. Α Yes, 15 We've recently participated with Pennzoil in one of their 16 wells and have seen submittals from other operators and 17 these costs are very much in keeping with those costs. 18 Has Nearburg drilled other Strawn wells 0 19 in the immediate area, and if so, how many? 20 Yes, we've drilled approximately eight А 21 wells in this immediate area to the Strawn formation. 22 Q Is Nearburg seeking a risk penalty 23 against the unjoined interest today? 24 А Yes, we are seeking a 200 percent risk 25 penalty.

1 Q And upon what are you basing that 200
2 percent recommendation?

3 Α We're basing this based on looking at 4 the general success rate in the area, which is -- which is 5 even for a so-called -- well, the success rate runs any-6 where from 50 to 60 percent, depending upon whose statis-7 tics you look at and exactly how you add them up, but basi-8 cally you've got about a 50/50 shot on any well you drill 9 out here, even after you do all of your seismic, so we feel 10 that -- and there's very little bail out potential in this 11 area. There's very few up-hole zones that in this imme-12 area have been shown to be productive in any kind of diate 13 commercial quantity. So it's pretty much a one shot propo-14 sition.

15 Q All right, so you believe that there is 16 a chance you could drill a well at this location that would 17 not be a commercial well.

18 A Well, we like to think that with all the
19 seismic we've got better than a 50/50 chance, but we all
20 know that it's still about a 50/50 chance.

21 Q All right. Have you made an estimate of 22 the overhead and administrative costs while drilling the 23 well and also while producing the well, if it's a success-24 ful well?

25

А

Yes. We've projected a drilling over-

6

7 1 head of \$5760 per month and a producing overhead rate of 2 \$576 per month. We find these figures to be in line with 3 what other operators are charging and also to be in line 4 with industry surveys that have been done by the accounting 5 firm that does our tax accounting for us. 6 All right. Are you recommending that Q 7 these figures be incorporated into any order that results 8 from this hearing? 9 Yes, we are. А 10 Q And does Nearburg Producing Company seek 11 to be designated operator of the proposed well? 12 Yes, we do. А 13 Q Are you familiar with the pool rules for 14 the subject pool here? 15 А Well, I guess there is some question in 16 our minds which pool this well would be placed in, but I 17 believe that the Undesignated Shipp Strawn and the Undesig-18 nated South Humble City Strawn are similar in that wells 19 are spaced on 80-acre proration units with wellbores to be 20 located within 150 feet of the governmental quarter quarter 21 section. 22 right. Are there other unorthodox 0 All 23 locations in the immediate area? 24 А Yes. The two immediate offset wells in 25 the west half of this same section, I believe, are non-

8 ۱ I'm -- I have a case, an order on the closest standard. 2 offset well, which is a nonstandard well just recently 3 drilled by Pennzoil, which was Case Number 9522 and Order 4 No. R-8716-A. 5 Q Will further geologic testimony be pre-6 sented today? 7 Yes, it will. А 8 Mr. Nearburg, do you believe that pro-0 9 duction from the subject well should be restricted or pen-10 alized due to its unorthodox location? 11 А No, we don't. We feel that the nature 12 of these build-ups is such that their areal extent is fair-13 ly limited and as the offset nonstandard wells do not ap-14 pear to have been penalized, we would request that our well 15 not be penalized. 16 Q Ιf the well is in fact penalized, are 17 you requesting that a minimum allowable be set for the 18 well? 19 Well, we would like a minimum allowable Α 20 of basically 456 barrels of oil per day, which is what the 21 offset wells are, I believe, allowed to produce. 22 If production is penalized, will this Q 23 have any bearing on your plans to go forward with the well? 24 Α We would have to get together with our 25 partners and seriously reconsider whether we can justify

9 1 the risk and expense of drilling the well at this time. 2 And in your view what affect would this Q 3 have on your correlative rights? 4 Well, we feel it would damage our cor-А 5 relative rights, and it would deny us the opportunity to 6 produce our just and fair share of the reserves under our 7 tract in the reservoir. 8 Let me refer you to Exhibit Seven. Does Q 9 Exhibit Seven consist of an affidavit whereby you've 10 directed your counsel to send notice of this application 11 and hearing to all interest owners entitled to notice? 12 Yes, we have. А 13 Mr. Nearburg, in your opinion do you be-Q 14 lieve that granting your application will be in the best 15 interest of conservation, the prevention of waste, and the 16 protection of correlative rights? 17 Yes, I do. А 18 Were Exhibits One and Seven prepared by Q 19 you or at your direction? 20 Yes, they were. А 21 MR. HALL: We'd move the --22 Q And are you requesting an expedited or-23 der in this case and if so, for what reason? 24 Yes, in this case we are. We have in А 25 lease expiration of February the 10th, 1989. this case a

10 1 We are going to file the application to drill today and we 2 have a drilling rig under contract ready to begin the well. 3 This, the reason for this timing was that the immediate 4 offset well to the west was just completed within the last 5 two weeks and we felt it was prudent to see the results of 6 that well prior to trying to schedule the drilling of this 7 well, and the completion of our seismic evaluation was at 8 data point. So we were somewhat bound to see that well 9 down before committing ourselves to this particular loca-10 tion. 11 Is there anything further you wish to Q 12 add? 13 А Nope, I don't think so. 14 MR. HALL: All right, we'd 15 move the admission of Exhibits One and Seven and that con-16 cludes our direct of this witness. 17 MR. CATANACH: Exhibits One 18 and Seven will be admitted as evidence. 19 MR. STOVALL: I've got one 20 question, if I might. **21** А Yes, sir. 22 23 CROSS EXAMINATION 24 BY MR. STOVALL: 25 Q Is this an OCD permitted or BLM permit-

11 1 ted well? 2 This will be OCD permitted. Yeah, this, А 3 really the reason for the forced pooling is that tremen-4 dous numbers of minute interests, as you can see from the 5 affidavit that's Scott and them filed, basically all of the 6 large interest owners have committed to drill this well at 7 this location. 8 9 CROSS EXAMINATION 10 BY MR. CATANACH: 11 Q Mr. Nearburg, the parties shown on 12 Exhibit Seven, are those interest owners in the proposed 13 proration unit? 14 Which one is Exhibit Seven? Oh, maybe I Α 15 should defer to another witness on this. 16 MR. HALL: We have a land wit-17 ness that will sort all these things out, but Exhibit Seven 18 consists of both pooled interests and offset interests. 19 MR. CATANACH: Okay, but will 20 you sort it out later? 21 MR. HALL: Yes, we will. 22 MR. CATANACH: Okay. 23 Q Mr. Nearburg, your overhead rates appear 24 to be slightly high. You said that these were based on 25 what, now?

12 1 А Well, they're based on what we've been 2 charging for all of the other wells that we've drilled in 3 the area and based on what we've seen other -- I'm sure 4 that there's going to be some variance but there's no real 5 -- we regularly review the Ernst and Whinney Operators 6 Survey and we find our rates to be in the median of their 7 I mean if we're a little higher, we feel we're ranges. 8 worth it. We try to do a really good job. 9 Q I never heard that before. 10 А Well, I don't know. 11 MR. CATANACH: No further 12 questions. 13 14 BILL OWEN, 15 being called as a witness and being duly sworn upon his 16 oath, testified as follows, to-wit: 17 18 DIRECT EXAMINATION 19 BY MR. HALL: 20 Will you please state your name? Q 21 Bill Owen. Α 22 Mr. Owen, by whom are you employed? Q 23 David (sic) Petroleum Corp. А 24 And what is your relationship to Near-0 25 burg Producing Company?

13 1 We are a small exploration company in А 2 Roswell and are partners with Nearburg Producing in this 3 particular area. 4 Q Right. How are you employed by David 5 Petroleum? 6 А I'm a land man with them. 7 Q Have you previously testified before the 8 Division? 9 А No, I have not. 10 Would you please give the Examiner a Q 11 brief summary of your educational background and work ex-12 perience? 13 А Grew in Roswell; graduated high up 14 school there; BS degree from the University of Maryland in 15 1976; worked for David Petroleum for approximately 7 years. 16 Q And in what capacity? 17 Α As a landman. 18 And what was your geographic area of 0 19 responsibility for them? 20 А Southeast New Mexico with some into west 21 Texas. 22 Q And are you familiar with the 23 application in this case and the subject lands? 24 А Yes. 25 MR. HALL: Mr. Examiner we

14 1 would offer Mr. Owen as a qualified petroleum landman. 2 MR. CATANACH: He is so qual-3 ified. 4 Mr. Owen, have you prepared certain Q 5 exhibits in conjunction with your testimony today? 6 А Yes. 7 Let's refer to Exhibit Two. Would you Q 8 please identify that and explain that to the Examiner? 9 А This is a land plat of the area that's 10 involved in this particular case; specifically the east 11 half of the southeast quarter of Section 1, Township 17 12 South, Range 37 East, which is the recommended dedicated 13 proration unit for the Nearburg Price Family Trust No. 1 14 Well. 15 All right, let's look at Exhibit Three, Q 16 if you would identify that and explain it. 17 А This is a enlarged ownership plat of 18 Sections 1 and 12 of 17, 37, and 6 and 7 of 17, 38, showing 19 the working interest owners in that -- in this area; speci-20 fically in the proration -- recommended proration unit and 21 in the offsetting tracts. 22 0 What percentage of the acreage in the 23 proration unit is voluntarily committed to the well at this 24 point? 25 MR. CATANACH: Just a minute,

15 1 Mr. Hall. We don't appear to have Exhibit Number Three. 2 Sorry. The -- is this Exhibit Three? А 3 0 This is Exhibit Three and the question 4 was what percentage of the acreage, the proration unit, is 5 dedicated to the well at this point? 6 At this point approximately 97 percent, А 7 97.02 percent. 8 Q All right, let's review Exhibit Three 9 and its attachments. If you would explain to the Examiner 10 which pages reflect the identity of the parties to be 11 pooled? 12 Exhibit A of Exhibit Three would show А 13 the -- the currently uncommitted interests for the upcoming 14 well; however, it's not totally up to date. We have worked 15 out an agreement with Standard Oil, who's listed as Number 16 13 of Exhibit A. Their interest is, oh, approximately --17 well. let's see what we've got over here on page -- their 18 interest is 1.46 percent. They own two leasehold interests 19 in the tract and they have indicated through my conversa-20 tions with them as late as yesterday, that they would do 21 one of, probably, three things: They would either join in 22 the well; they would farm their interest out to us; or they 23 would simply sell the interest to us. They have said under 24 to circumstances, because they're active in the area and 25 they know what it's -- what they're up against, what we're

up against when you start working land in an area, but they
have said that they will not do anything to hold us up in
drilling the well.

4 Also we have also reached verbal agree-5 ments with four other entities listed on Exhibit A, Number 6 1, Number 3, Number 8, and Number 10. All of these are 7 individuals or their assigns in the event that, like in the 8 case of Number 1, Elmer Wahl is no longer the -- that 9 interest has been sold to Beams Mineral Company and they 10 have agreed to grant us a lease, as has entries 3, 8 and 11 10, which leaves the balance of the interest still current-12 ly unleased, the majority of these, all of them, have been 13 -- have been -- we've attempted to contact beginning as of 14 a couple of years ago when the majority of this leasing 15 took place because at that time we anticipated proceeding 16 through the area and continue to put the acreage block to-17 gether. All of these interests, as you can tell, are from 18 the previous page, are extremely small. I can give you the 19 fractional interest if you'd like but what we're talking 20 about total is less than an acre out of the proration unit. 21 For example, just to give you an idea of 22 size of interest, Number 2, Dr. C. S. Daley, no known the 23 address, his fractional interest is a 1/2410. 24 Number 4, if you want to make note on 25

each of these I'll be glad to go through them, just to give

17 1 you the idea of how small these interests are, but --2 MR. CATANACH: I don't think 3 we need to do that. 4 А Fine. Fine with me, too. 5 Q If you would, please, with respect to 6 the remaining unjoined interest on Exhibit A, summarize the 7 efforts you've undertaken to secure their joinder. 8 Α We've researched the Lea County records 9 especially back at the time back in 1986 when at length. 10 were extremely active in leasing this block. All of these 11 entities have been mailed at least one and most of the time 12 two letters. We've attempted to locate phone numbers for 13 these various people. We currently have a lease broker 14 that's doing extensive work on locating these interests, 15 which is primarily why we've been able to recently reach 16 agreement with -- with the ones that we have, specifically 17 3, 8 and 10. As you see on number 8, we didn't even have 18 an address on that one. 10, the interest has also changed 19 hands to an heir of Beverly Nelson, so we are actively, and 20 continue to as of this date pursue the location of these 21 different individuals. 22 Let's look at Exhibit Four. Q Would you 23 identify that, please? 24 А This is a sample of the letter that we 25 sent out back in July of 1986, that was sent to all of the

18 1 at that time unleased mineral owners. When we were not 2 able to locate any kind of a phone number, we simply 3 drafted a letter, tried to explain to them who we were, 4 what we were doing, and made an offer of them to lease the 5 interest to us; if they didn't want to lease, would they at 6 least contact us to let us know their whereabouts. Most of 7 the letters came back from the post office "unable to 8 deliver" and some of them never did and we just never heard 9 from any of these various entities. 10 Did you send additional letters? 0 11 А Yes. 12 Did Exhibit Four have con-Q All right. 13 tained with them when they were sent out copies of leases 14 to be --15 А Yes. 16 Q -- executed? 17 А Yes. We sent a copy of a lease and a 18 draft with each of these letters. 19 Q All right, in your opinion have you made 20 a good faith effort to locate all the individuals and ob-21 tain their voluntary joinder? 22 А Yes, we have. 23 Were Exhibits Two, Three and Four pre-Q 24 pared by you or at your direction? 25 Α Yes.

19 1 Q Do you have anything further you wish to 2 add? 3 No. А 4 MR. HALL: All right. That 5 concludes our direct of this witness. We'd move the ad-6 mission of Exhibits Two, Three and Four. 7 MR. CATANACH: Exhibits Two, 8 Three and Four will be admitted as evidence. 9 Q Oh, let me ask one clean-up question. 10 If you would refer back to Exhibit Three, the Exhibit B to 11 Exhibit Three, does that consist of a list of offsetting 12 interest owners? 13 А Yes. 14 HALL: Okay, that's all I MR. 15 have. 16 17 CROSS EXAMINATION 18 BY MR. CATANACH: 19 Mr. Owen, on your Exhibit A you list two Q 20 (unclear) owners with no none address. Have you not been 21 able to come up with an address for those two at this 22 point? 23 А That's correct. Well, except for, I 24 think, are you speaking of Number 2 and 4? 25 Q 2 and 4, right.

20 1 Okay, correct. А 2 But you did find Number 8. Q 3 А Right. 4 Audrey Curry. What does Exhibit B Q 5 indicate? 6 А Exhibit B indicates a number of -- well, 7 it's a landman's nightmare is what it is, for you all, too, 8 most of the time. It's a list of the various mineral own-9 ers in Section 6, which is an offset tract to our location, 10 Section 6 of 17, 38. 11 And you also have a list of the opera-0 12 tors, of interest owners in the northeast quarter of Sec-13 tion 1, Section 1? 14 А Ownership throughout the east half of 15 Section 1 is uniform so we -- we own also the -- approxi-16 mately 97 percent in the northeast quarter, as well. 17 CATANACH: No further MR. 18 questions. 19 20 LOUIS J. MAZZULLO, 21 being called as a witness having previously been sworn and 22 remaining under oath, testified as follows, to-wit: 23 24 DIRECT EXAMINATION 25 BY MR. HALL:

21 ł Q Please state your name. 2 Α My name is Louis Mazzullo. 3 Mr. Mazzullo, you've previously been 0 4 sworn today and qualified as a geologist, have you not? 5 А Yes, I have. 6 Q All right, in connection with this 7 application do you have certain exhibits you prepared? 8 А I have two exhibits. 9 Q Let's refer to Exhibit Five and if you'd 10 explain that, please. 11 А principal target horizon, or I The 12 should say probably the only target horizon at the proposed 13 location here is the Strawn Limestone, which is at a depth 14 of approximately 11,400 feet. 15 Exhibit Number Five is a structure map 16 drawn on top of the Strawn Limestone. Now this map was 17 generated by a combination of subsurface data provided by 18 the various wells in the area and also by a series of north 19 -- a series of seismic lines which criss-crossed the area 20 fairly extensively, which I don't show on the map. 21 The proposed location is in the north-22 east quarter of the southeast quarter of Section 1 and it's 23 shown by the red dot and red arrow. 24 I'd like to reference first of all a 25 couple of key wells in the area, the first of which is the

22 1 Nearburg Producing Company No. 1 Wright, which is in the 2 northeast guarter of the southeast guarter of Section 12, 3 to the south. 4 I'd also like to reference the newly 5 completed Pennzoil No. 2 Price in the southwest quarter of 6 the subject section. 7 The Nearburg No. 1 Wright is located on 8 a structurally defined closure or a high, I should say, a 9 nosing of closure, and the No. 2 Wright immediately to the 10 south is off on the flank of this closure. 11 If you note, the No. 2 Price is off the 12 flank of a fairly -- of a somewhat larger closure that 13 straddles Section 1 and Section 12. 14 Now the -- the way these Strawn lime-15 zones are commonly defined in this area by most stone pay 16 operators, is by seismic evaluation. Seismic evaluation 17 identifies both structural feature at the top of the 18 Strawn, as well as amplitude anomalies which conventionally 19 are used to define the development of porosity in these 20 limestones. 21 The structural anomalies are used to 22 identify areas where the Strawn section is possibly thick-23 ening as a result of the formation of porous reefs. These 24 porous reefs are the pay zone in the area. They're comm-25 only one to two well features. There are very few in this immediate area that are more than two wells in size, and they commonly occur at different levels within the Strawn section. The Strawn section is somewhere in the vicinity of 200 feet thick. Within that 200 feet section the porosity zones can develop any- where and they're very sporadic and unpredictable.

7 So we use seismic first to define struc-8 tural enhanced areas and the proposed location is shown to 9 be at the crest of a small closure which extends just a 10 little bit further off the scale -- off the view of this 11 map. I would have included a little bit more area but I 12 constrained by time and didn't get a chance to finish was 13 but that closure that that location is located on is it, 14 small. It doesn't extend very much further to the north.

15 Contrast that to the No. 1 Wright down 16 to the south, that sits on the top of a closure. The No. 2 17 Wright sits off the flank of the closure, and the No. 2 18 Price sits off the flank of a larger closure.

Now, the completion of the No. 2 Price Now, the completion of the No. 2 Price is significant in this respect. It is currently producing a high volume of water, somewhere in the vicinity of 100 to 150 barrels of water a day in addition to the oil that it's producing. I'm not sure if it's producing top allowable oil or not.

25

It's on the flank of a structure and one

۱ of the unpredictable factors in this area is whether or not 2 the Strawn reefs, as they're called, are water-bearing or 3 Some of them, a lot of them are not, they never pronot. 4 duce any water, and some of them, like the No. 2 Price Unit 5 produce water and we can't tell why, but we do know that in 6 structurally more enhanced positions on the -- particularly 7 units that do contain water, the higher you go structural-8 ly, the better your chances of not producing substantial 9 amounts of water. 10 So our proposed location in light of the

new well, the No. 2 Price, is at an optimum structural position. We don't know whether or not we will hit any water in there, but we can't take that chance, so therefore, structurally we'd like to get as high was possible.

15 Q Let's look at Exhibit Six, if you would
16 explain that, please.

17 A Exhibit Six now is an isopach of the
18 thickness of the total Strawn Limestone section from top to
19 bottom, regardless of the presence or absence of any reef
20 porosity.

The isopach map was also drawn through a combination of subsurface control and seismic control.
Seismically the thickness of the unit is a little bit harder to define than its structure but we do have a number of data points made available by the various wells here 1 that enable us to tie the seismic into the subsurface data
2 quite well.

3 The areas that are shown by the dotted 4 patterns are those areas that may or -- either have proven 5 inferred development of porosity within the Strawn, or 6 somewhere within the Strawn section. This porosity can be 7 defined on logs very easily where we have control. Where 8 we don't have control, it's presence is inferred by cer-9 tain amplitude anomalies that we see on the seismic sec-10 tions across this area.

11 First of all I'd like to draw your 12 attention to the No. 1 Wright in Section 12. It's sitting 13 off the -- off the -- within a small body of porosity de-14 velopment that's separated from the body of porosity devel-15 opment in the No. 2 Wright down to the south. The reason 16 for this separation is because the No. 2 -- the No. 1 17 Wright is producing 100 feet lower stratigraphically in the 18 section than the No. 1 Wright, I believe from two separate 19 reef developments within the section. So you can see that 20 the porosity development that we anticipate around either 21 one of those wells, and either one of those zones, is very 22 small, limited in areal extent.

The No. 2 Price is sitting as far as we
can tell on the flank of a porosity development that may or
may not be better developed away from the well to the

25

southwest. The proposed location indicated by the red dot,
is located as to take advantage of maximum thickness
development in the Strawn, which we hope reflects maximum
development of productive porosity in the Strawn.

5 Comparing this map to Section 5, the 6 location also ties in to maximum structural closure. So 7 if we were to move the location away from the proposed 8 location as we have it, we would run the risk of first of 9 all getting into a minimum porosity development situation 10 or perhaps no porosity at all because it's fairly clear in 11 this area that you don't have to move very far from a 12 producing well to get a dry hole. I think we've proven 13 that around the No. 1 Wright Well, it's got two dry holes. 14 The second consideration of putting the

15 location where it's at is to take advantage of a maximum
16 structural development as to avoid the possible influx of
17 any water that may be present in the reservoir.

18 Q Do you have anything further you wish to
19 add with respect to these exhibits?

20 A No, I don't.

21 Q In your opinion will granting the appli22 cation be in the interest of conservation, the prevention
23 of waste, and protection of correlative rights?

Yes.

А

Q

24

25

Were Exhibits Five and Six prepared by

27 1 you? 2 Α Yes. 3 MR. HALL: We'd move the 4 admission of Exhibits Five and Six and that completes our 5 direct. 6 MR. CATANACH: Exhibits Five 7 and Six will be admitted as evidence. 8 9 CROSS EXAMINATION 10 BY MR. CATANACH: 11 Q Mr. Mazzullo, do you know how many 12 seismic lines you've had in that particular quarter sec-13 tion? 14 А How many have we got? 15 MR. NEARBURG: At least three, 16 maybe four or five. 17 A Yes, they're both east/west and north/ 18 south trending seismic lines through the area. 19 MR. NEARBURG: I guess we have 20 closer to five. 21 А Yeah. It's fairly -- they're fairly 22 evenly spaced throughout the section as to provide a 23 gridwork through the section, and we have one that crosses 24 directly, right along side the proposed location. 25 Q Have you successfully utilized seismic

i in this area before?

A Yes, we have. Where we have believed it
and listened to it, we have been successful in drilling
producing wells, both here and in another area off to the
northwest.

6 Q When you say successful, what in terms
7 of a percentage would you say --

8 A Greater than 50 percent, which in this
9 -- in this area is successful.

10 Q Mr. Mazzullo, are you aware of a natural 11 tendency of these wellbores to drift in a northerly direc-12 tion?

13 А I'm aware that they have a tendency to 14 drift in a northerly direction only as far down the sec-15 tion as to the top of the Wolfcamp. They drift in a nor-16 therly direction commonly in the Permian part of the sec-17 tion, but when they hit the top of the Wolfcamp, which is 18 dipping at a different angle than the upper section, they 19 have a tendency to come right on back.

20 Of the two or three wellbores that I've 21 looked at that have deviation surveys on them, all of them 22 have done the same thing, they've gone up dip on the Per-23 mian horizons, turned around and come right back, landed up 24 within several tens of feet of the original wellbore sur-25 face location.

28

29 1 That includes our No. 1 Howenstein that 2 we ran a dipmeter survey on and the Pennzoil well. 3 You said this was a very -- you felt it Q 4 limited -- that there was -- this mound had limited was a 5 extent to it. How much further north do you think it goes? 6 Α Just -- just barely beyond the -- where 7 It just -- it closes right -- right due north the map is. 8 of that, as far as we can tell. 9 0 Do you have any idea whether this might 10 be a one or two well mound? 11 If size comparisons are any good over Α 12 it's probably no more than a two well feature, if here, 13 it's that much. It might only be a one well feature, and 14 that's the risk you take in drilling these -- these mounds, 15 is that offsetting them is extremely -- offsetting a pro-16 ducing well is extremely risky and we've proven that on the 17 1 Howenstein, dry hole in Section 12; and we've proven No. 18 that trying to offset the No. 2 Wright in the southwest 19 quarter of Section 7, with our No. 1 Baker. Those are both 20 dry hole offsets to producing wells. 21 MR. CATANACH: I have no fur-22 ther questions at this time. 23 The witness may be excused. 24 Is there anything further in 25 this case?

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. Doyd I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9570, heard by me on <u>January</u> 4 19 89 , Examiner **Oil Conservation Division**