

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO

20 August 1986

EXAMINER HEARING

IN THE MATTER OF:

Application of Tenneco Oil Company  
for compulsory pooling, San Juan  
County, New Mexico.

CASE  
8979  
8980

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

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## E X H I B I T S

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KEVIN G. HERINGER

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## E X H I B I T S

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CASE 8979

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Tenneco Exhibit One 4

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Tenneco Exhibit One 16

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MR. CATANACH: We'll call Case Number 8979 and Case 8980.

MR. TAYLOR: The application of Tenneco Oil Company for compulsory pooling, San Juan County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of the Santa Fe law firm Kellahin & Kellahin. I'm appearing on behalf of the applicant and I have three witnesses to be sworn.

MR. CATANACH: Are there other appearances in this case?

Will the witnesses please stand and be sworn in?

(Witnesses sworn.)

KEVIN G. HERINGER,  
being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Heringer, for the record would you please state your name and occupation?

1           A           My name is Kevin G. Heringer. I'm a  
2 landman with Tenneco Oil Company from Denver, Colorado.

3           Q           Mr. Heringer, have you previously testi-  
4 fied as a petroleum landman before the Oil Conservation  
5 Division?

6           A           Yes, I have.

7           Q           And have you been employed as a petroleum  
8 landman on behalf of your company with regards to both of  
9 these compulsory pooling applications that are the subject  
10 matter of the cases before this Examiner?

11          A           Yes, I have.

12                           MR. KELLAHIN: We tender Mr.  
13 Heringer as an expert petroleum landman.

14                           MR. CATANACH: Mr. Heringer is  
15 considered qualified.

16          Q           Mr. Heringer, let's open the book of ex-  
17 hibits and describe for the Examiner by using the foldout  
18 plat, which is about the third page of Exhibit One, let's  
19 use this plat to orient the Examiner as to what you propose  
20 to accomplish on behalf of your company.

21                           First of all, would you identify what the  
22 acreage is that is to be the subject of the compulsory pool-  
23 ing application in Case 8979?

24          A           Okay. The acreage shown in yellow, to  
25 start off, this is the east half of Section 10. The acreage

1 shown in yellow are tracts within the east half of Section  
2 10 that Tenneco has been unable to either locate, or in the  
3 case where we have located an individuals who own these  
4 tracts, to get them to lease to Tenneco.

5 Q The proposed well that's to be drilled on  
6 the east half of Section 10 is targeted to what formation?

7 A It is the Dakota formation.

8 Q Would you identify for the Examiner the  
9 proposed drilling tract or island that Tenneco will utilize  
10 for the drilling of this well?

11 A The proposed tract is in the southeast  
12 quarter. It's outlined in red.

13 I'd point out that we have been before  
14 the State before on a directional drilling application that  
15 has been approved by the State.

16 Q That is the drilling island, then, that  
17 was approved for the directional drilling of four Basin  
18 Dakota gas wells.

19 A Yes, sir.

20 Q And this is the application for which  
21 well? Do you remember the name?

22 A This will be the City of Farmington Com  
23 No. 1, which we have a bottom hole location in the southeast  
24 quarter of the section.

25 Q Turn back one page from the plat, if you

1 please, Mr. Heringer. Describe for the Examiner in a sum-  
2 mary fashion in chronological order what the activities have  
3 been on behalf of Tenneco in order to formulate the working  
4 interest owners in this half section for the drilling of the  
5 well.

6 A Okay. What I'd like to do is just give  
7 you a history, and back in early 1984 Tenneco decided that  
8 Section 10 would be a prospective area to drill a gas well.

9 We put brokers in the field to check the  
10 records. It was unknown to us at the beginning of the pro-  
11 ject that each of the individual homeowners would actually  
12 own the minerals underneath their land.

13 After many months of checking title, we  
14 came up with the individual tracts to show who the mineral  
15 owners were.

16 We then employed anywhere from six to  
17 eight different individuals who went out and obtained leases  
18 on each of these individual tracts.

19 Q To give the Examiner a perspective on the  
20 number of individual mineral owners within the east half of  
21 Section 10, approximately how many were involved?

22 A There would be greater than 440 mineral  
23 owners within the east half of Section 10.

24 Q Based upon your information, Mr. Herin-  
25 ger, do you believe that the plat shown as the east half of

1 Section 10 is reasonably accurate and reliable?

2 A Yes, I do.

3 Q And has Tenneco relied upon that plat in  
4 the efforts to formulate a voluntary unit?

5 A Yes, we have.

6 Q Summarize for the Examiner what the cur-  
7 rent status is in terms of percentage of interest now volun-  
8 tarily committed and what percentage interest you're requir-  
9 ing a forced pooling order in order to drill the well.

10 A Okay. If we can turn back to page two,  
11 it is a summary.

12 Tenneco has taken over 410 leases in the  
13 east half of Section 10, and that accounts for 267.746 acres  
14 which gives us 83.67 percnet lease.

15 Fossil, Associates, an independent based  
16 in Farmington has leased 16.6 acres, accounts for 5 percent.

17 Q Have they -- has Fossil, Associates,  
18 agreed to participate in the well?

19 A Yes, Fossil, Associates will join in the  
20 well.

21 Q All right.

22 A Parties to lease or participate, which we  
23 do not have under lease, which has been a result of our ef-  
24 forts as we get into the back of the book, has accounted for  
25 another 2-1/2 acres.

1                   The State of New Mexico, there has been a  
2 tract that just two weeks ago escheated into the State be-  
3 cause of the mineral owners had died without a will, no  
4 heirs, no one, and we have nominated it for the September  
5 oral bid.

6                   Unknown acres is a loose number. These  
7 are acres that right now we can't account for and it's a  
8 very small percent. It's five percent, five acres, 1.79  
9 percent. We are going back through trying to resolve the  
10 unknown acres. It may come out that the acreage discrepan-  
11 cies as to the calculations could account for this. Tenneco  
12 may already have these under lease. It's just unknown at  
13 this time.

14                   The acres that we are aware of who the  
15 owners are and that we have tried to contact if they are  
16 contactable come up to 22.54 acres, or seven percent of the  
17 (inaudible) and it's this 22 acres that we appear before you  
18 today.

19                   Q                   In terms of identifying the owners that  
20 go with the corresponding tract numbers that are identified  
21 on the plat and colored in yellow, have you made a tabula-  
22 tion of those owners?

23                   A                   Yes, I have.

24                   Q                   And where do we find that?

25                   A                   That is right behind the foldout map

1 listed on Exhibit A.

2 Q Describe how that tabulation of owners  
3 was prepared or compiled.

4 A Okay. What -- we had a map that showed  
5 who everybody was and as we would lease an individual we  
6 would just eliminate their name off the list. These are the  
7 tracts that we show as unleased. Well, Exhibit A is the  
8 name of the person, an awful lot of addresses unknown. The  
9 tract is shown in the lefthand column.

10 If we go to the end you'll see that the  
11 CONT is contacted, yes or no. And for all the addresses un-  
12 known they are no -- there's been -- this is a summary of  
13 quite a bit of work on our part from checking the county re-  
14 cords as to see where they're at, we had brokers in the  
15 field trying to contact these people, and then a final ef-  
16 fort by Tenneco back in July to try to tie up these inter-  
17 ests.

18 Q Would you describe the effort that was  
19 made in order to locate the addresses for individuals iden-  
20 tified or for which you do not have an address?

21 A It would have been county records, tax  
22 records, word of mouth, this is very well known in Farming-  
23 ton that this well is going to be drilled. It's a subject  
24 that is known by quite a few people. Telephone books.

25 Q And as of today the parties identified

1 but with which you do not have an address, or for whom you  
2 do not have an address, represent your best effort and that  
3 of your company to locate these people.

4 A Yes, it is.

5 Q I noticed, and this may be an error,  
6 would you go down to the number 9 entry -- I'm sorry, I mis-  
7 sed one, number 6 entry, James Bray, it says there was no  
8 contact made with Mr. and Mrs. Bray.

9 What's the explanation?

10 A Well, there's no contact and this is the  
11 last known address that we had for them, and so we went  
12 ahead and included the address and --

13 Q But you could not find them.

14 A We could not find them.

15 Q All right.

16 A The letter was mailed out. We have a  
17 stack of envelopes in my office that were undeliverable.

18 Q Let's turn, then, after the tabulation to  
19 the correspondence beginning with a letter under Tenneco's  
20 letterhead of July 31st, '86.

21 Is this a letter that you have written?

22 A Yes, it is.

23 Q And what's the purpose of this letter?

24 A This is to notify the State and all non-  
25 consenting mineral owners that we were coming here today to

1 seek a forced pooling order.

2 Q In terms of sending that notice out, what  
3 address listing was used?

4 A The address listing was used, if you'll  
5 flip back behind the application, and anybody that we have  
6 these addresses for they were mailed to.

7 Q All right. And for the addresses you had  
8 you sent those applications and notice letters out certified  
9 mail, return receipt?

10 A Yes, I did.

11 Q Let's turn to your July 9th, 1986 letter,  
12 Mr. Heringer, and have you describe what you had proposed to  
13 accomplish with this letter.

14 A Well, the letter starts off with the  
15 first paragraph, because we felt we were dealing with un-  
16 sophisticated owners it's very detailed.

17 The first paragraph basically says what  
18 Tenneco plans to do and that we've obtained a lot within the  
19 City of Farmington to drill this well.

20 Q Where do you find this letter in the  
21 package? It's after the application and the index of owners  
22 to be notified?

23 A Yes.

24 Q And this is the July 9th letter? All  
25 right. Describe again for us what was your intent and pur-

1 pose in writing the letter.

2           A           The intent was to try to make a last con-  
3 tact for these people. This was not the only contact that  
4 we made with them. Our broker had been out and talked to  
5 some of these people and for various reasons they had re-  
6 fused to lease.

7                       But what the letter is, it's our last at-  
8 tempt and, as I said, the first paragraph of the letter  
9 states what Tenneco plans to do.

10                      The second would be that we are making an  
11 offer to lease these people and the terms discussed in the  
12 letter are identical to what Tenneco took over, 1100 leases  
13 in Section 10.

14                      Secondly, in the third paragraph at the  
15 top of the page, is an offer to the people to farmout to  
16 Tenneco. It explains what a farmout is. It says that what  
17 we've done is we've enclosed a copy of Tenneco's standard  
18 farmout agreement with it.

19                      As a third alternative we gave each of  
20 the people the option to participate in the well and we went  
21 so far as to break out their net acres to the 320-acre pro-  
22 ration unit and tell them an estimate cost of what it would  
23 be for them to participate in the well.

24                      Finally we state that if we cannot come  
25 to an agreement, we let them know beforehand that we may

1 have to go to the State for relief.

2                   Lastly, asking them if they have any  
3 questions to give me a collect call and we can discuss any  
4 topics that they would like to.

5                   Q           Did this last effort and attempt to get  
6 leases or agreements from these owners result in Tenneco ac-  
7 quiring any further leases?

8                   A           Yes, it did. Flipping back to the first  
9 page, those would be the tracts that parties to lease or  
10 participate and we are in the process of obtaining signa-  
11 tures.

12                   Q           So that effort realized approximately 2-  
13 1/2 more acres of interest being committed to the well.

14                   A           Yes, and at this time there are addition-  
15 al parties that would add to that total that are thinking  
16 about it and have been in contact with and ongoing dialogue  
17 with them.

18                   Q           Let's turn to the documents attached to  
19 the letter. The first one was a proposed oil and gas lease.  
20 Is this Tenneco's standard oil and gas leases utilized for  
21 this purpose?

22                   A           Yes, it is.

23                   Q           And it's the same form that you were able  
24 to successfully obtain leases from other working interest  
25 owners or minerals owners?

1           A           Yes, that's right. It is identical with  
2 the exception on Exhibit A. Before we were taking paid up  
3 oil and gas leases and felt -- we knew that we would be get-  
4 ting in there and drill prior to a one year anniversary, so  
5 that is excluded.

6           Q           Exhibit B represents the farm-in agree-  
7 ment that you proposed to these people?

8           A           Yes, it is.

9           Q           All right. Let's turn to the AFE, Exhi-  
10 bit C to the letter. How was the AFE prepared, Mr. Herin-  
11 ger?

12          A           The AFE was prepared from our Drilling  
13 Department. It is in line with what a Dakota well costs to  
14 drill it out here. Tenneco drills a number of wells. It's  
15 pretty standard.

16          Q           And then after the AFE is a photocopy of  
17 return receipt cards?

18          A           Yes.

19          Q           And what does that represent?

20          A           This would represent an example of our  
21 certified mail to people of our letter dated July 9th and  
22 also of our notice of our application to the State.

23          Q           Following that is the COPAS accounting  
24 attachments normally attached onto an operating agreement?

25          A           Yes, that's correct.

1 Q Would you turn to the third page of the  
2 COPAS attachment and identify for us the overhead charges?

3 A The overhead charges for a drilling well  
4 rate, \$4000, and a producing well rate, \$400.

5 Q Are those the proposed rates that Tenneco  
6 will utilize or request that the Examiner utilize in the  
7 forced pooling order?

8 A Yes, and they are in line with what Tenne-  
9 co is charging other parties in the basin.

10 Q After that is a letter dated August 8th  
11 of 1986. Would you identify that for us?

12 A This is a letter from the City of Farm-  
13 ington acknowledging to Tenneco that our special use permit  
14 has been approved, basically Tenneco's go-ahead to drill  
15 these wells.

16 Q And finally, the copy of the Division or-  
17 der approving the directional drilling?

18 A We were down here in June for the direc-  
19 tional drilling, the State granting us permission to drill  
20 these wells directionally.

21 Q If you turn to Exhibit A to the order,  
22 would you identify for us which of the four wells in invol-  
23 ved in this forced pooling case?

24 A It would be the City of Farmington No. 1  
25 and the City of Farmington No. 2.

1 Q The City of Farmington No. 1 is for the  
2 east half --

3 A East half.

4 Q -- so that will be Case 8979, and the No.  
5 2 is going to be Case 8980.

6 All right. Does that complete your pre-  
7 sentation with regards to the east half of Section 2?

8 A Yes, it does.

9 Q Let's turn your attention now to the ef-  
10 forts that you have conducted on behalf of your company for  
11 the west half of Section 2.

12 If you'll turn to that exhibit book,  
13 let's use that foldout. This will be Case Number 8980 and  
14 the third page is the plat identified as the west half of  
15 Section 10.

16 A Yes, that's correct.

17 Q All right, sir, would you identify and  
18 describe what is depicted on this exhibit?

19 A The west half map was prepared within the  
20 same guidelines as the east half. Again the yellow with the  
21 numbers are tracts that are uncommitted to the drilling of  
22 this well.

23 Q Turn back a page to the summary and iden-  
24 tify for the Examiner the number of mineral owners that were  
25 involved in the west half of the section.

1           A           Okay. To date Tenneco has taken greater  
2 than 780 leases. You can see by the map that there's not as  
3 many large tracts, a little bit -- quite a bit more broken  
4 up.

5                       Tenneco Oil Company to date has taken 244  
6 acres worth of leases; that accounts for 76 percent.

7                       Because of our mailings, parties to lease  
8 or participate in the west half has been a greater number;  
9 it comes to 9.119 acres.

10                      The unknown acres, as in the east half,  
11 is a number that Tenneco is trying to resolve at this time.  
12 We feel as though our acreage calculations may change this  
13 number and some of these tracts we believe are already under  
14 lease to Tenneco.

15                      There are some tracts within that 25 that  
16 were not given the proper notice of our forced pooling and  
17 so we could not keep them in the -- include them in this --  
18 in our forced pooling.

19                      Our force pooled acreage comes to 41.1294  
20 acres. Those acres are broken down on Exhibit A of the  
21 tract -- of the map.

22                      Q           Let's go to the Exhibit A which follows  
23 the map and have you generally describe how you have satis-  
24 fied yourself and your company that the list of names and  
25 the addresses as known are the best effort that you can make

1 to find these people.

2 A Yes. It is identical to the east half as  
3 to efforts by Tenneco to lease these parties.

4 Q Let's take for example, there's at least  
5 one large tract depicted on the west half of 10, Tract No.  
6 45. Let's turn to the tabulation and find in the index the  
7 owners that go with 45 and what owner is that?

8 A That is Miss Edith Rowland, Care of  
9 Howell W. Cobb.

10 Q All right, what effort -- would you iden-  
11 tify for us what efforts Tenneco has made to contact Miss  
12 Rowland and to lease or obtain her joinder in the well?

13 A All right. Howell Cobb, we were infor-  
14 med, handles all of Edith Rowland's dealings.

15 We had on three different occasions, we  
16 sent a broker up the first time. Then we sent our head guy  
17 up a second time to Durango. And a third time three of us  
18 from Tenneco went up and tried to talk to Howell Cobb, ex-  
19 plain the situation to him; decided that he did not want to  
20 advise his sister to lease.

21 Lastly, we have mailed the July 9th let-  
22 ter to him and also a copy of our application.

23 Q When the tabulatin indicates on the far  
24 right margin that a contact was made, can you generally de-  
25 scribe to us the type and nature of that contact?

1           A           This is a summary of our contacts. In  
2 the last -- in this case it's the last, is that they had re-  
3 ceived this letter of July 9th and a copy of our applica-  
4 tion.

5                       In addition we have talked ot these  
6 people prior to our July letter. It was not the only con-  
7 tact that we had with the people.

8           Q           And if the contact says yes, did they  
9 also receive the detailed letter that you submitted to them  
10 dated July 10th, '86 giving forth several options by which  
11 they could participate, farmout, or lease?

12          A           Yes. That is correct.

13          Q           Have you gone through a similar process  
14 with regards to your land efforts for the west half of 10 as  
15 you did for the east half of 10?

16          A           Yes, I have.

17          Q           The surface location for this well is  
18 located in the east half of 10?

19          A           Yes, sir, to be drilled -- all wells will  
20 be drilled from a 4.680 tract, as outlined in this  
21 (unclear).

22                       MR. KELLAHIN: That concludes  
23 my examination of Mr. Heringer.

24

25

## CROSS EXAMINATION

1  
2 BY MR. CATANACH:

3 Q Mr. Heringer, who holds the mineral in-  
4 terests underneath the streets in that section? Is it --  
5 it's not the city, is it?

6 A The city owns some of the minerals under  
7 the streets, which we have obtained leases on.

8 It varies. Back when the streets were  
9 dedicated to the subdivision the language used was dedicated  
10 for public use and it is our opinion that the minerals were  
11 then retained by whoever broke up the subdivision and that's  
12 why in here you have a number of roads that are unleased or  
13 uncommitted, and if you go back to our tract, say, in the --  
14 on the west half, you have number nine, which is leased up  
15 in the north -- north half of the section and we show James  
16 Cooper. James Cooper is passed away, it would be his heirs  
17 and they are unlocated yet at this time.

18 So the streets do vary. It's not one  
19 person and we have obtained leases from some of the people  
20 that have dedicated the streets for public use.

21 Q And some of the interest is owned by the  
22 city, you said that, and that has been leased?

23 A Yes, it has.

24 Q Okay.

25 MR. CATANACH: I have no fur-  
ther questions of Mr. Heringer.

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MICHAEL K. DECKER,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, sir, would you please state your name and occupation?

A My name is Michael K. Decker. I'm a Project Geological Engineer with Tenneco Oil Company.

Q Mr. Decker, have you previously testified as a geologist before the Oil Conservation Division?

A Yes, I have.

Q And have you made a review of the geology that is the subject matter of both the forced pooling application in Case 8979 and in Case 8980?

A Yes, I have.

MR. KELLAHIN: We tender Mr. Becker as an expert petroleum geologist.

MR. CATANACH: Is it Becker or Decker?

A With a "D".

MR. KELLAHIN: Decker, I'm sorry. I misspoke, Mr. Decker.

1 MR. CATANACH: Mr. Decker is  
2 considered qualified.

3 Q Mr. Decker, let me have you turn in the  
4 exhibit book to the geologic exhibit that follows the direc-  
5 tional drilling order and we'll commence looking at the last  
6 three pages in the book.

7 Let's start off with the west half of  
8 Section 10 and we're looking in the exhibit book for 8980,  
9 and would you first of all, sir, identify that exhibit for  
10 us?

11 A Yes. This is a net pay Isopach on the  
12 Dakota B-1 Sand.

13 Q Mr. Decker, did you participate in the  
14 preparation of this exhibit or the evaluation of information  
15 that is depicted on the exhibit?

16 A Yes, I did.

17 Q With regards to the geologic risk invol-  
18 ved in drilling this well, do you have an opinion as to what  
19 percentage risk you would recommend to the Examiner so that  
20 he may include that that percentage in the forced pooling  
21 order?

22 A Yes, I would recommend that a 200 percent  
23 risk factor be applied in this case.

24 Q What the basis and reasons upon which you  
25 assess that percentage risk to the geology found for this

1 prospect?

2           A           This is based on the geologic risk that  
3 is being taken in drilling these development wells.

4           Q           Let's take the exhibit and have you identify  
5 an explain the information on the exhibit and then let  
6 me ask you some questions about the basis for your opinion.

7           A           Okay. This net pay Isopach has a contour  
8 interval of four feet. The scale is one inch equals 4000  
9 feet.

10                    The wells with circles are data point  
11 wells. These are wells that have penetrated the Dakota for-  
12 mation. From those wells we have evaluated the electric  
13 logs, porosity logs, and so on of these wells and used our  
14 net pay criteria and tied this back to production character-  
15 istics.

16                    This or these values were then contoured  
17 using a fluvial, deltaic environment of deposition and the  
18 contouring represents that type of model that you see in  
19 this map.

20           Q           Mr. Decker, would you describe for us the  
21 relationship to the geology as determined by actual geologic  
22 information to the specifics of this section in terms of the  
23 risk?

24                    For example, can you draw any correlation  
25 or conclusion in the terms of the thickness of the Dakota B-

1 1 sand as depicted on the Isopach?

2 A Okay, the way this is contoured is hypo-  
3 thesized, because as you can see in Section 10 and Section  
4 9, we have no data point wells, and this is where the risk  
5 enters in.

6 We are anticipating 20 or approximately  
7 20 feet of net pay; however, because of the lack of control,  
8 as you head towards the west from our original Irvin Com No.  
9 1-E, which is in Section 11, you can see that we are losing  
10 thickness, net pay thickness.

11 Q What happens to the Dakota sand interval  
12 as we move from east to west?

13 A The Dakota sand interval deteriorates.  
14 We lose sand thickness.

15 Q Let's turn to the cross section that's  
16 shown on this Isopach. If you'll turn to the next page and  
17 demonstrate to us what's happening with the general thick-  
18 ness of the formation.

19 A Okay. This is, first of all, this is a  
20 stratigraphic cross section on the Dakota formation. Going  
21 from west to east the wells that are on this cross section  
22 are the Tenneco Oil Irvin Com No. 1, Tenneco Oil Irvin Com  
23 No. 1-E, you see a proposed location, and then we also have  
24 the Redfern and Hurd, Incorporated, Airport No. 2.

25 As you go from east to west you can see

1 that the Dakota B interval does decrease in quality sand  
2 thickness.

3 We are getting out of what has been  
4 interpreted as the main channel within the area and you are  
5 stepping out from the known productive limits of the Dakota  
6 B interval within this area.

7 Q Does your assessment of the geologic risk  
8 significantly change in relation between the first and the  
9 second well?

10 In other words, you have reached the  
11 opinion that a 200 percent risk factor penalty is justified  
12 for the well depicted in the west half of Section 10. When  
13 we go to the east half of 10, have you utilized the same  
14 information in that exhibit book?

15 A Yes, I have utilized the same informa-  
16 tion.

17 Q As we move to the second well, which is  
18 the subject of 8980, do your opinions as to the geologic  
19 risk significantly change?

20 A No, they do not. Because of the nature  
21 of environment and deposition of these sands being channels,  
22 we feel that the risk still applies to the No. 1 Well, also.

23 Q Regardless of the outcome of the first  
24 well, it will take at least two wells to satisfy you that  
25 the risk involved in this area is less than 200 percent?

1           A           That is correct.

2           Q           Was the cross section depicted in the ex-  
3 hibits books, the stratigraphic cross section, prepared by  
4 you as well as the Isopach?

5           A           They were prepared under my supervision.

6           Q           Have you examined this information and  
7 satisfied yourself that they're true and accurate to the  
8 best of your belief?

9           A           Yes, I have.

10          Q           And have you relied upon these exhibits  
11 in formulating your opinion?

12          A           Yes.

13                           MR. KELLAHIN:   That concludes  
14 my examination of Mr. Decker.

15                           I have a third witness who is  
16 an engineer and will talk about production information.

17

18                           CROSS EXAMINATION

19 BY MR. CATANACH:

20          Q           Mr. Decker, the Dakota B-1 Sand, that 's  
21 the main productive sand in the Dakota Pool?

22          A           Yes, it is.

23          Q           How close are you to known production in  
24 either of these wells?

25          A           Okay. You are within half to three-quar-

1 ter of a mile, approximately, of the Irvin Com 1-E, which is  
2 in Section 11.

3 MR. CATANACH: That's all I  
4 have for Mr. Decker.

5  
6 TIMOTHY L. HOWER,  
7 being called as a witness and being duly sworn upon his  
8 oath, testified as follows, to-wit:

9  
10 DIRECT EXAMINATION

11 BY MR. KELLAHIN:

12 Q All right, sir, would you please state  
13 your name and occupation?

14 A My name is Timothy L. Hower and I'm a  
15 petroleum engineer with Tenneco Oil in Denver.

16 Q Mr. Hower, would you spell your last name  
17 for the record?

18 A H-O-W-E-R.

19 Q Have you previously testified as a petro-  
20 leum engineer before the Division?

21 A No, sir.

22 Q Would you summarize your educational  
23 background by giving the examiner the date at which you  
24 graduated and what degree you obtained?

25 A I received a Bachelor's degree in 1981 in

1 petroleum engineering from Penn State University and then a  
2 Master's degree in 1983, also from Penn State University.

3 Q Subsequent to graduation, would you sum-  
4 marize for us, Mr. Hower, what has been your employment ex-  
5 perience as a petroleum engineer?

6 A I've for the past three years worked as a  
7 petroleum engineer for Tenneco Oil Company in the Willison  
8 Basin and the San Juan Basin.

9 Q All right, sir. Mr. Hower, have you made  
10 a study and have you formulated an opinion about the risk  
11 factor penalty that you're willing to recommend to the exa-  
12 miner to be included in the forced pooling orders involved  
13 in these two wells?

14 A Yes.

15 MR. KELLAHIN: We tender Mr.  
16 Hower as an expert petroleum engineer.

17 MR. CATANACH: Mr. Hower is  
18 considered qualified.

19 Q Let's turn to the last page in either of  
20 the exhibit books. I assume that they're the same?

21 A Yes, sir.

22 Q Have you examined the production informa-  
23 tion tabulated on that exhibit and satisfied yourself that  
24 it's accurate?

25 A Yes.

1           Q           Let's use the exhibit and first of all  
2 have you identify the exhibit for us.

3           A           This is -- this map represents the cumu-  
4 lative production through May 1st of this year in millions  
5 of cubic feet for the Dakota interval.

6                       The Dakota wells are indicated with green  
7 dots.

8           Q           There is next to each of the well symbols  
9 information depicted above and below a horizontal line.  
10 Would you identify what that information is?

11          A           Yes. The number at the top represents  
12 the cumulative production from the Dakota zone in millions  
13 of cubic feet and below it is the date of first production.

14          Q           Have you formulated an opinion, Mr.  
15 Hower, as to the risk factor penalty that you would recom-  
16 mend as a petroleum engineer to be included in the forced  
17 pooling orders?

18          A           Yes. It's my opinion that given this  
19 production information and prevailing economic conditions,  
20 that the 200 percent risk factor is (unclear).

21          Q           Can you give us an example of the basis  
22 upon which you have reached that opinion by looking at the  
23 information depicted on this exhibit?

24          A           Yes. Similar to the net pay map that you  
25 indicated earlier, the production quality tends to deter-

1 iorate in an east to west fashion, as evidenced by the two  
2 plugged and abandoned wells in Section 8, as well as some of  
3 the production in the directly adjacent sections, Section 3,  
4 for example, and it is this deterioration of production from  
5 east to west along with the prevailing economic conditions  
6 in the San Juan Basin with regards to the gas market.

7 Q I was looking for the AFE. We're looking  
8 at, I believe, a completed well costing just a few thousand  
9 dollars under half a million.

10 A That's correct. That's for the City of  
11 Farmington No. 2. The City of Farmington Well No. 1 is  
12 right around \$450,000.

13 Q When we talk about wells of that cost  
14 range, approximately what cumulative quantity of gas must  
15 you recover in order to pay for the well one time?

16 A The wells of that cost, you're talking  
17 around 500-to-600 million cubic feet.

18 Q When we look in the immediate area, how  
19 would you quantify the risk in terms of the cumulative pro-  
20 duction you are beginning to see on areas involved as shown  
21 on the exhibit?

22 A Well, for example, if you look -- if you  
23 take the adjacent -- sections adjacent to Section 10, Sec-  
24 tion 3 to the north and Section 15 to the south, there's two  
25 -- two wells there. Both have current cumulatives of around

1 600,000, and those wells will, you know, based on that  
2 they're just around payout, so they will not -- they are not  
3 what would be considered economic ventures.

4 Q All right.

5 A As well as the wells that have been plug-  
6 ged and abandoned in Section 8 and in Section 4.

7 Q Well, let's look at the Section 3 to the  
8 north, the immediate offset to this section is the well that  
9 was apparently drilled in February, or completed in February  
10 of '65, is that correct?

11 A Yes, sir.

12 Q And it's total cumulative production is  
13 only 643,000 cubic feet, or MCF?

14 A Yes.

15 Q All right. Under your economic condi-  
16 tions, then that well over twenty years has only recovered  
17 the cost of a current well one time.

18 A That's correct, under -- under current  
19 conditions.

20 Q Under current conditions. Does the risk  
21 involved insofar as you've assessed it as a petroleum en-  
22 gineer, does it change materially between the first and  
23 second wells that are proposed for this section?

24 A No, sir, in my opinion it would not  
25 change at all.

1 Q Why not?

2 A On top of the geologic reasons that Mr.  
3 Decker spoke about, the current economic conditions, mainly  
4 those -- those are not expected to change, we at this time  
5 do not have a gas contract for either of the two wells. So  
6 that certainly presents a problem in itself.

7 Q Do you find wells depicted on the exhibit  
8 in the same section for which one well has produced a suffi-  
9 cient quantity of gas to be economic while the other well on  
10 that section has not?

11 A Yeah, yes, I think Section 3 that we  
12 just looked at is a good example of that. You have the well  
13 we talked about with 600-million and then in the northeast  
14 quarter over a BCF.

15 Q So the fact that there would be two wells  
16 in the same section and be in proximity to each other does  
17 not insure that both of them are going to be economic.

18 A That's correct.

19 Q And you took those factors into consid-  
20 eration in formulating your opinion of risk?

21 A Yes, sir.

22 MR. KELLAHIN: That concludes  
23 my examination of Mr. Hower.

24 We now move the introduction of  
25 our exhibit booklets, marked as Exhibit One for Case 8979

1 and marked as Exhibit One for Case 8980.

2 MR. CATANACH: Exhibit One for  
3 Case 8979 and Exhibit One for Case 8980 would be admitted  
4 into evidence at this time.

5 And I have no questions for Mr.  
6 Hower.

7 Is there anything further in  
8 Case 8979 or in Case 8980?

9 MR. KELLAHIN: No, sir.

10 MR. CATANACH: If not, they  
11 will be taken under advisement.

12

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(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 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. 8977 8980  
heard by me on August 20, 1986

David R. Catanzano, Examiner  
Oil Conservation Division