

CASE 4585: Application of PENNZOIL
UNITED FOR AN UNORTHODOX GAS WELL
LOCATION, EDDY COUNTY, N. MEX.

4585

Application
Transcripts.

Small Exhibits

ETC.

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Examiner Hearing
September 1, 1971

IN THE MATTER OF:)
)
)

Application of Pennzoil)
United, Inc. for an)
unorthodox gas well location,)
Eddy County, New Mexico.)
-----)

Case No. 4585

BEFORE: ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING



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1 MR. UTZ: Case 4585.

2 MR. HATCH: Case 4585. This is the application
3 of Pennzoil United, Inc. for an unauthorized gas well
4 location, Eddy County, New Mexico.

5 MR. KELLAHIN: If the examiner please, Jason
6 Kellahin, Kellahin and Fox, Santa Fe, appearing for
7 the applicant. We have two witnesses I would like to
8 have sworn.

9 (Witnesses sworn)

10 MR. KELLY: Do you want other appearances?

11 MR. UTZ: We will ask for other appearances at
12 this time.

13 MR. KELLY: Booker Kelly of the firm of White,
14 Gilbert, Koch, Kelly & McCarthy, Santa Fe, appearing on
15 behalf of the Superior Oil Company in opposition to the
16 application. Mr. Philip Patman, a member of the Texas
17 bar, is associated with me, and we will have a witness.

18 (Witness sworn)

19 MR. UTZ: Other appearances?

20 MR. STEVENS: Don Stevens, with McDermott, Connelly &
21 Stevens, representing Alan Antweil, an overriding royalty
22 owner under this lease. No witnesses.

23 MR. BOND: I am A. B. Bond with Mobile Oil Corporation.
24 We are appearing here as a working interest owner in
25 the proposed well.

1 MR. HATCH: You do not have a witness?

2 MR. BOND: No.

3 MR. UTZ: You may proceed.

4
5
6 CHARLES A. BROWN:

7 a witness, having been first duly sworn according to law,
8 upon his oath, testified as follows:

9 DIRECT EXAMINATION

10 BY MR. KELLAHIN:

11 Q Would you state your name, please?

12 A I am Charles A. Brown.

13 Q By whom are you employed and in what position,
14 Mr. Brown?

15 A I am employed by Pennzoil United, Inc. I am a
16 division manager of production and engineering.

17 Q Have you ever testified before the Oil Conservation
18 Commission?

19 A Yes, sir, I have.

20 Q And have you made your qualifications a matter of
21 record?

22 A Yes, sir.

23 MR. KELLAHIN: Are the witness's qualifications
24 acceptable?

25 MR. UTZ: Yes, sir.

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1 Q (Mr. Kellahin continuing) Mr. Brown, are you familiar
2 with the application of Pennzoil United in Case
3 No. 4585?

4 A Yes, sir, I am.

5 Q Briefly, what is proposed by the applicants in this
6 case?

7 A We are applying for an unorthodox gas well location
8 for the South Carlsbad Straun Pool.

9 Q As a preface to your testimony, you are asking for
10 a dual completion in the Morrow and the Straun; is
11 that correct?

12 A It is our intention to ask for a dual completion.

13 Q Well, now, actually there are other pay horizons in
14 this area, are there not?

15 A Yes, sir.

16 Q What are they?

17 A There is an Upper Penn Zone which we refer to as a
18 Canyon Cisco. Then we have the Straun, the Atoka
19 and the Morrow.

20 Q If any of these zones prove to be productive, would
21 you complete in those well zones?

22 A It is quite possible that we might complete in one
23 or more of these zones, depending, of course, on
24 the quality of the zone at the time that we can drill
25 a well and evaluate each of the zones.

- 1 Q Now, the well located as you proposed in this
2 application, would that be a standard well location
3 for all of the zones or only the Straun?
- 4 A It would be a standard location for all of the other
5 zones with the exception of the Straun.
- 6 Q So it is only the Straun that you are concerned with,
7 then, insofar as the well location is concerned?
- 8 A Right.
- 9 Q Yes. And insofar as the Straun is concerned, do you
10 propose to dedicate to that well the south half of
11 the section?
- 12 A Yes, sir.
- 13 Q Now, if you had the west half of the section, would
14 that be an orthodox location for the Straun?
- 15 A Well, that would be a standard or an orthodox location.
- 16 Q For the Straun?
- 17 A For the Straun.
- 18 Q So the only factor that really is involved here is
19 the acreage available to you to dedicate to the well;
20 is that correct?
- 21 A Right.
- 22 Q Now, referring to what has been marked as the Applicant's
23 Exhibit number one, would you identify that exhibit?
- 24 A Exhibit number one --
- 25 MR. UTZ: Just a minute. I am confused here.

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1 Pardon me. Is this well in Section 6?

2 MR. KELLAHIN: Yes, sir.

3 THE WITNESS: Yes, sir.

4 MR. UTZ: 2327?

5 MR. KELLAHIN: Right.

6 MR. UTZ: In the north southwest?

7 THE WITNESS: It will be in the southwest
8 quarter.

9 MR. KELLAHIN: Southwest quarter. If the
10 examiner please, I probably should have made a statement
11 at the outset. There is pending before the commission
12 at the present time an application for a hearing De Novo
13 which affects this same section in which Pennzoil United
14 sought a hearing De Novo, a forced pooling application
15 well, and I have been authorized to dismiss that case,
16 and I will submit a letter to the commissioner shortly
17 dismissing it.

18 MR. UTZ: Okay.

19 MR. KELLAHIN: So if that is what you had in
20 mind --

21 MR. UTZ: Well, I had that in mind, too. I
22 am all right now. Go right ahead.

23 MR. KELLAHIN: Yes, sir.

24 Q (Mr. Kellahin continuing) Now, referring back to
25 Exhibit No. 1, Mr. Brown, would you identify that

1 exhibit?

2 A Exhibit No. 1 is a map of the south -- the multi-pay
3 South Carlsbad area. It contains certain geological
4 data which will be covered in some later testimony.

5 I am using it simply to point out all of the
6 wells in the field that are relative position in
7 regarding each other, and to show the position of our
8 proposed location in the southwest quarter of
9 Section 6, which will be 1990 from the west line
10 and -- I mean, excuse me, 990 from the west line
11 and 1980 from the south line, and the south half of
12 Section 6 will be dedicated to that well as a proration
13 unit for the Straun on there.

14 Q Now, why is it necessary to dedicate the south half
15 rather than the west half of the section?

16 A We do not own the Straun rights in the northwest
17 quarter of Section 6.

18 Q Has that acreage already been dedicated to another
19 well?

20 A It has been dedicated to a well drilled in that
21 quarter section to which the north half of the section
22 has been dedicated as a proration unit.

23 Q Now, insofar as the west half of the section is
24 concerned, is that available to you to dedicate to
25 the Morrow?

1 A Yes. It is available to us.

2 Q And there is no dedication due the Morrow in that
3 half section? Is the east half dedicated to the
4 Morrow?

5 A The east half is dedicated to a Morrow well, drilled
6 in the southeast quarter of Section 6.

7 Q So that explains the reason you have to have two
8 different units for the --

9 A Right.

10 Q -- horizons?

11 A Right.

12 Q Now, insofar as these other horizons which you
13 mentioned, what acreage could you dedicate to the
14 well in the event you develop them?

15 A We would be at liberty to dedicate the west half of
16 the section to a well completed in any of the other
17 horizons other than the Straun.

18 Q And that would require no approval of the commission?

19 A Right. It would be a standard location for any other
20 horizon.

21 Q Do you have anything to add in connection with
22 Exhibit No. 1?

23 A I might point out that we have referred to the upper
24 Penn or the Cisco Canyon pay, and the Atoka pay.
25 The only well in the field which produces or has

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1 shown potential for production from those, from the
2 Cisco Canyon, is the Pennzoil Mobile federal 12 in
3 the northeast of Section 12. It actually is a dual
4 completion in the Atoka Morrow. It also indicated
5 production in the Straun.

6 Q Reference will be made later to that development by
7 the geological witnesses?

8 A Right.

9 Q Does that complete your discussion of the exhibit?

10 A Yes, sir. I believe it does on this.

11 Q Now, have you made a study of the economics of
12 drilling in this area?

13 A We have. This area, due to the fact that it presents
14 several problems insofar as drilling wells are
15 concerned, results in a rather high well cost, and
16 it is not an area in which, for instance, we feel
17 we could afford to drill a Morrow well on it, and
18 therefore, we feel we would need to combine with
19 the Morrow well, Straun or some other horizon to
20 make the well economic.

21 Q Have you prepared an Exhibit No. 2 showing this
22 information?

23 A Exhibit No. 2 is a computer run out of a cash flow
24 showing the economics of a dual Straun Morrow well.

25 I present this primarily to show that we

1 anticipate a pay out at 1.6 years and it would have
2 a profit ratio of 1.29 with a rate of return at 12.88,
3 and a discounted rate of return of 49.9, and the
4 initials A F I T refers to after federal income tax.

5 Q Now, does that indicate that it would be profitable
6 to drill a dual completion in this?

7 A It would be profitable for a dual well.

8 Q But it would not be profitable for a single completion?

9 A We do not feel it would be profitable. In fact, we
10 had drilled two wells that turned out to be single
11 Morrow completions. Neither of these wells we feel
12 would be economical.

13 Q Now, which wells were those?

14 A Those were our Gulf federal 12, Gulf federal No. 1
15 and our Echol's No. 1.

16 If I might refer back to Exhibit 1, the Gulf
17 federal No. 1 is located in the west half of Section 1,
18 23, 26, and the Echol's is in the south half of
19 Section 12, 23, 26.

20 Q But you don't feel --

21 A We anticipated these wells being dualled at the time
22 we drilled them. Unfortunately, they were only
23 productive in the Morrow.

24 Q Now, have you any information on the pressure data
25 in this area?

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1 A Just referring to Exhibit 3, I have tabulated some
2 bottom hole pressure data in the wells in the area
3 of our proposed location. I show that the initial
4 pressure on drill stem test on our Mobile 12 federal
5 No. 1 was in the Straun, was 5676.

6 In the Superior-Collat well they have actually
7 recorded three different pressures over a period of
8 time since that well was completed.

9 The initial pressure available to us, they
10 reported as 5610 on the second and 9 at 07 and 05,
11 1470, a pressure of 4295, and on 8971 a pressure of
12 2887.

13 The Antweil-Joel No. 1, which would be the
14 nearest well north of our proposed location recorded
15 a drill stem pressure of 5229 in the Morrow and
16 this was both the initial and final shut in pressures
17 on the test, so we feel that it is a rather --

18 Q Have there been large volumes produced from the
19 Superior well?

20 A Not a great deal of gas has been produced from it.

21 Q You got that with another exhibit?

22 A Relatively speaking.--

23 Q Does the pressure in the Superior well indicate that
24 that well would suffer any drainage in the event the
25 commission approved our application?

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1 A We are unable to see how the drainage could take
2 place from the Superior lease to our proposed location
3 since we anticipate the pressure is approaching those
4 in the Antweil well, which would be higher than those
5 recorded in the Superior well.

6 We don't believe the nitro carbons are likely
7 to move from the low pressure area into a high pressure
8 area. In fact, we think that probably the converse
9 is taking place at the present time.

10 Q Now, you testified awhile ago that if you could
11 dedicate the west half of the section to the Straun,
12 the well location would be an orthodox location?

13 Actually, you could move 330 feet closer.

14 A Right. If we were able to dedicate the west half.

15 Q So it is merely the fact that we have to dedicate
16 the south half that causes the problem here?

17 A Right.

18 Q Now, referring to what has been marked as Exhibit
19 No. 4, would you identify that exhibit?

20 A Exhibit No. 4 consists in two pages. The first page,
21 it simply shows the production from the wells in the
22 field for the first six months of 1971 for all zones
23 in the field.

24 On page two we show a cumulative, the first
25 column is cumulative for each of the wells in the

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1 field, from each of the -- are in the pools for each
2 of the wells.

3 I think it is interesting to note that our Mobile
4 12 federal No. 1 has actually produced more gas from
5 the Atoka than the Superior well has produced from
6 the Straun, and we anticipate that the Atoka could be
7 a very good reservoir in our proposed location.

8 Q Now, does the fact that the Atoka may be productive
9 have any bearing on your well location in this case?

10 A Yes, it does.

11 Q And that will be brought out by another witness; is
12 that correct?

13 A Right. Right. The other data there is rather self
14 explanatory. The second column is the June production
15 and then I believe the average and then final
16 calculated absolute open flow reported on each of the
17 wells at the time they were completed.

18 Q Were Exhibits 2, 3 and 4 prepared by you or under
19 your supervision?

20 A Yes, sir, they were.

21 Q And Exhibit 1 was prepared by the other witness?

22 A Right.

23 MR. KELLAHIN: At this time I would like to
24 offer in evidence Exhibits 2, 3 and 4.

25 MR. UTZ: Without objection, Exhibits 2, 3 and 4

1 will be entered into the record of this case.

2 Q (Mr. Kellahin continuing) Do you have anything to add,
3 Mr. Brown?

4 A No, sir.

5 MR. KELLAHIN: That completes the examination of the
6 witness.

7 MR. UTZ: Are there questions of Mr. Brown?

8 MR. PATMAN: Mr. Examiner, if the examiner please,
9 it seems to me it might be a little clearer for the record
10 if we deferred our cross examination of this witness until
11 we have had the entire direct testimony, in order that we
12 don't pose any questions to this witness which are going to
13 be discussed or answered by the second witness, if that
14 would be acceptable to the examiner.

15 MR. UTZ: That will be perfectly in order. We will
16 not excuse the witness, but you can go ahead with your
17 other witness so he will be subject to cross examination.

18 MR. KELLAHIN: Okay.

19 DAVID MILLER

20 a witness, having been first duly sworn according to law,
21 upon his oath, testified as follows:

22 DIRECT EXAMINATION

23 BY MR. KELLAHIN:

24 Q Will you state your name, please?

25 A David Miller.

1 Q By whom are you employed and in what position,
2 Mr. Miller?

3 A I am employed by Pennzoil United as a geologist in
4 Midland, Texas.

5 Q Have you testified before the Oil Conservation
6 Commission or one of its examiners and made your
7 qualifications a matter of record?

8 A Yes, sir.

9 MR. KELLAHIN: Are the witness's qualifications
10 acceptable?

11 MR. UTZ: Yes, sir.

12 Q (Mr. Kellahin continuing) Mr. Miller, have you made
13 a study of the area involved in the application now
14 before the examiner?

15 A Yes, sir, I have.

16 Q Now, referring to Exhibit No. 5, would you identify
17 that exhibit?

18 A Exhibit No. 5 is a cross section, across a portion
19 of the South Carlsbad field.

20 Q Now, referring back to Exhibit No. 1, would you locate
21 that cross section for the examiner?

22 A The line of the cross section is shown on Exhibit
23 No. 1 and is marked A, A Prime. It goes from the
24 Pennzoil Mobile federal 12 No. 1 to the Gulf federal
25 to the Superior-Collat to the proposed location and

1 to the Antweil Missouri New Mexico well.

2 Q Now, referring again to the cross section, would you
3 discuss the information shown there?

4 A The cross section shows structural position of the
5 wells and the four potentially productive pay zones
6 in the Pennzoil Mobile federal 12 No. 1 well. These
7 zones are shown in color on the cross section.

8 Q Is the proposed location an advantageous location for
9 each of the zones involved in that?

10 A It appears to be a very favorable location.

11 Q It is higher on the structure?

12 A It is higher structurally.

13 Q Is there any advantage in regard to the Morrow formation
14 for this location?

15 A Yes, sir. If we could refer to Exhibit 1, to the
16 structure map, it shows that on the Morrow formation
17 that this location would be nearer the crest of the
18 anaclinal feature and be located higher than a
19 1980 location.

20 Q Now, there is offsetting Morrow production in this
21 area, is there not?

22 A There is.

23 Q Would the location give better spacing between wells?

24 A It certainly would be a better spacing than the 1980,
25 1980 which would be quite close to our Missouri

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1 Antweil well.

2 Q Now, referring again to the cross section, is it a
3 better location for the Straun?

4 A It is. Again, it is a higher structural position.

5 Q Have you anything further to add in connection with
6 those two exhibits?

7 A No. I don't believe there is anything else right now
8 that needs to be mentioned.

9 Q Now, referring to what has been marked as Exhibit
10 No. 6, would you identify that exhibit?

11 A Exhibit No. 6 is an isopach map of what we refer to
12 as the B Morrow sand zone. This is a net porosity
13 isopach.

14 The B Morrow sand zone is the main producing
15 Morrow sand in this field. This porosity map shows
16 that our proposed location would be the most favorable
17 location for maximum porosity development, and as we
18 saw on the structure map, which is Exhibit No. 1, it
19 was the highest position which should have caused
20 better winnowing and better porosity development on
21 the crest of the structure.

22 Q Now, referring to what has been marked as Exhibit No. 7,
23 would you identify that exhibit?

24 A Exhibit No. 7 is a structure map on top of the Atoka
25 line, which is one of the producing zones in the

1 Pennzoil Mobile federal No. 12.

2 This map shows that our proposed location is a
3 higher location than 1980, 1980 location.

4 Q Is there any wells producing from the Atoka?

5 A The Pennzoil Mobile federal 12 No. 1 in Section 12.

6 Q And that is the only one?

7 A That is the only one.

8 Q Was there Atoka present in the Superior well, or would
9 you rather discuss that in connection with Exhibit A?

10 A Let us go to Exhibit A and discuss that. Exhibit A
11 is an isopach map of the Atoka porosity. There was
12 porosity in the Superior-Collat well.

13 However, D S T was very -- indicated very low
14 deliverability 20 MCF, whereas the Pennzoil well
15 flowed gas at the rate of approximately 2.9 million
16 cubic feet a day, and our proposed location indicates
17 that we should have nearly as much porosity as in
18 the Mobile federal 12 and would present a good
19 opportunity to have as good a porosity and permeability
20 as the Mobile federal 12, and therefore, could make
21 a commercial gas well from this zone. However, a
22 1980, 1980 location would move us closer to the
23 Antweil Missouri well, which had only four feet of
24 porosity and recovered mud on D S T of this zone.

25 Q Now, that is one reason, although this application

1 is confined to the Morrow and the Straun -- is that
2 one reason you seek the proposed location?

3 A It certainly is. We have made maps on all of the
4 potential pay horizons and have picked a location
5 which would be at an optimum position for all four
6 of these zones.

7 Q Now, referring to Exhibits Nos. 9 & 10, would you
8 discuss the information shown on those exhibits?

9 A Exhibit No. 9 is a Straun line structure map. It
10 indicates that the proposed location should be located
11 approximately on the crest of the Straun structure,
12 and therefore, would have an optimum chance for which
13 no winnowing of the carbonate and best porosity
14 and permeability.

15 And No. 10 is an isopach map of the Straun line.
16 This is from the top of the line to the base of the
17 zone which is colored blue on the cross section.

18 It is not technically the base of the Straun,
19 I suppose, but it is the base of the Straun which
20 produces in any of the nearby fields.

21 There is no production below this point in the
22 Lusk or the Big Eddy field or the Goldenlane field,
23 and it is a time line, so this is a valid isopach
24 map.

25 It indicates the reefing nature of the Straun

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1 in this area, and it indicates by the thinning of the
2 Straun to the south that that is basin-ward direction.

3 It also shows either of the locations in the
4 southwest quarter of Section 6 would be approximately
5 equal in thickness of the Straun carbonate.

6 Q Now, referring to what has been marked as Exhibit
7 No. 11, would you identify that exhibit?

8 A Exhibit 11 is an isopach of the upper Penn line which
9 is found in the Pennzoil Mobile federal 12 again.
10 This zone flowed approximately 10 million cubic feet
11 of gas per day on drill stem test, is not producing
12 anywhere in the field.

13 There was 46 feet of carbonates in this well,
14 and as our map indicates, we have or hope to have an
15 excess of 30 feet of carbonates in our proposed
16 location, which may be sufficient to be productive
17 from this horizon.

18 Q Now, is that the most favorable location for the Cisco?

19 A It is.

20 Q That is what you call the Cisco Canyon, is it not?

21 A Cisco Canyon, yes, sir.

22 Q Now, you have discussed four different zones. Are
23 these all Pennsylvania?

24 A They are all Pennsylvania.

25 Q But they are designated by the commission as a

1 separate source of supply?

2 A Yes, sir.

3 Q So you could make completions in each interval?

4 A That's correct, Fred.

5 Q Are you familiar with the ownership of the Superior well?

6 A No, sir. I believe Mr. Brown would be more familiar
7 with that.

8 Q In your opinion, would the approval of this location
9 cause any adverse effect on any other operators?

10 A I do not think it would.

11 Q Bearing in mind that we are applying for a dual
12 completion in the Morrow and the Straun?

13 A That's correct.

14 Q Were Exhibits 1 & 5 through 11 prepared by you or
15 under your supervision?

16 A Yes, sir.

17 MR. KELLAHIN: At this time I would like to offer
18 Exhibit 1 and Exhibits 5 through 11.

19 MR. UTZ: Without objection, Exhibits 1 and 5 through
20 11 will be entered into the record of this case.

21 Q (Mr. Kellahin continuing) Do you have anything further
22 to add?

23 A No, sir.

24 MR. KELLAHIN: That completes the examination of the
25 witness.

1 MR. UTZ: Questions?

2 MR. PATMAN: Mr. Kellahin, could I have a place at
3 the table, perhaps? With the examiner's permission, I
4 might question Mr. Brown first, unless someone else would
5 prefer to question Mr. Miller first.

6 MR. UTZ: Well, both are open for questions. Neither
7 witness has been excused. You may proceed, but point your
8 question to whoever you want to answer them.

9 CHARLES A. BROWN

10 called as a witness, having been first duly sworn, testified
11 as follows:

12 CROSS EXAMINATION

13 BY MR. PATMAN:

14 Q May I direct your attention, Mr. Brown, to your
15 Exhibit No. 2, which I believe is a cash flow analysis.
16 You have entitled it a dual completion in the Straun
17 and Morrow?

18 A Yes.

19 Q Do I read these figures correctly that you would
20 estimate that a dual completion in these two zones
21 would recover only six million cubic feet of gas and
22 eighty-nine thousand, approximately, barrels of
23 condensate?

24 A That is correct.

25 Q Could you break those down for us between the two

1 zones?

2 A I don't have a breakdown at my fingertips. I think
3 that they would be very similar, probably close to
4 a fifty-fifty relationship.

5 Q Both are --

6 A On gas, discounting any liquids that might be produced.

7 Q Well, with respect, you have said they would be equal
8 with respect to gas?

9 A To the gas.

10 Q How about with respect to liquids?

11 A The Morrow does not produce any liquids. All the
12 liquids would originate from the Straun.

13 Q All right, sir. You also testified, I believe, and
14 if I understood Mr. Miller's testimony correctly,
15 you would expect, or Pennzoil would expect that the
16 Atoka zone would be productive at the location which
17 you have requested here in this hearing.

18 Did I understand your testimony correctly in
19 that regard?

20 A We feel that that is a very distinct possibility.

21 Q Well, let me ask you this: How would you compare
22 the economics of a dual completion in the Morrow
23 and Atoka zones with your Exhibit No. 2?

24 A I think it would be rather similar to these.

25 Q In other words, insofar as the economics are concerned,

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- 1 a dual completion at your requested location in the
- 2 Morrow and Atoka would yield approximately the same
- 3 economic return as a dual completion in the Morrow
- 4 and Straun?
- 5 A Yes.
- 6 Q All right, sir. Now, let me --
- 7 A I might clarify that a little by saying that the
- 8 Atoka produces dry gas only, and we would have to
- 9 assume that our production would be on the same
- 10 level as that we are not getting from our Mobile
- 11 to our federal No. 1.
- 12 Q But I believe you did indicate you wouldn't expect
- 13 any substantial difference.
- 14 A Right.
- 15 Q All right, sir. Now, let me ask you, have you had
- 16 occasion to make any analysis of the economics of
- 17 recovery from a dual completion in the Morrow and
- 18 Straun at a standard location in the south half
- 19 of Section -- what is it, Section 6?
- 20 A Well, we have not done that, although I think that
- 21 there would be very little difficulty, because the
- 22 standard location would only be 330 feet from this
- 23 location.
- 24 Q I don't understand that. It would seem to me it would
- 25 be 990. Would you clarify that for me?

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1 A I'm sorry. You are correct. It would be 990 since
2 the Straun would consist of the south half of the
3 section.

4 Q Yes, sir. Mr. Brown, I believe your Exhibit No. 2
5 does indicate that it is limited to the economic
6 benefits which you would expect to accrue from the
7 dual completions in the Straun and Morrow, but let
8 me ask you this, sir: I believe your exhibits presented
9 by Mr. Miller and you, yourself, testified with
10 respect to the Atoka, that it would be productive in
11 this area, and I don't know about the Canyon, but
12 I think Mr. Miller may have indicated -- the record
13 will show what it did indicate, that there is a
14 possibility of completing in that zone.

15 Wouldn't your economics really be substantially
16 more favorable if you took into account recoveries
17 from all these zones out of a single bore hole?

18 A If we chose to complete a well in that manner, which
19 we did not, it has been our policy to confine our
20 wells to duals, and not go beyond that as far as
21 multi-completions are concerned.

22 Q Well, if you completely recovered the recoverable gas
23 from the two zones in which you originally completed
24 and the other zones were not depleted, presumably,
25 you would consider --

- 1 A Certainly.
- 2 Q -- completing in those zones?
- 3 A Yes.
- 4 Q So, in fact, Exhibit 2 does not present an accurate
5 picture of the economic benefits that you would
6 expect to accrue to Pennzoil if this location is
7 granted; is that right?
- 8 A We confined this cash flow to a dual in the Morrow
9 Straun only.
- 10 Q And you are not asking the Oil Conservation
11 Commission --
- 12 A We don't anticipate completing in anything other
13 than that at the present time.
- 14 Q You are not asking the commission to limit your
15 authority in this hole to a dual completion, are you?
- 16 A At the present time, yes.
- 17 Q Now, you would be willing to accept a permit which
18 would permit you to complete this bore hole only
19 in those two zones and in no others?
- 20 A Right, right.
- 21 Q But just to make sure there is no question in the
22 record, you would agree that if so far as the total
23 benefits that might be expected to accrue to Pennzoil
24 from this well, should it be completed in other zones
25 at a future time, the numbers on this exhibit would be

1 substantially lower than the actual facts.

2 A Would you state that question again.

3 Q I might not have stated it very clearly. I will have
4 another try at it.

5 I believe that you and I agreed a minute ago
6 that these other two zones, the Atoka and the Canyon
7 may well be productive in this well bore, and I
8 believe you further stated that Pennzoil would
9 consider completing in those zones if there were
10 reserves left in those zones, at such time as the
11 two zones, the Morrow and the Straun, were depleted,
12 and --

13 A Yes.

14 Q I believe that we did then agree that actually when
15 you consider the reserves that would be available in
16 the Atoka and the Canyon, particularly the Atoka in
17 this bore hole, that your Exhibit No. 2 is way low,
18 insofar as the return that could be expected to accrue
19 to Pennzoil from the drilling of this well.

20 A That's correct. If we are able to produce the other
21 zones at some later date --

22 Q All right.

23 A -- certainly there would be some additional revenue.

24 Q All right, sir. Thank you. Now, let me direct your
25 attention to Exhibit No. 3, please, sir, and I guess

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1 first I will ask you what is the source of the pressure
 2 data that we see depicted on this exhibit?

3 A Well, obviously, we have our own data on our Mobile
 4 12 federal No. 1.

5 Since we are a working interest owner in the
 6 Superior-Collat No. 1, we were provided by Superior
 7 their pressure data, and that is the basis for the
 8 data presented there.

9 We also had an interest in the Antweil-Joel
 10 No. 1, and they provided us that data.

11 Q With respect to the Antweil-Joel and the Pennzoil
 12 Mobile 12, neither of those wells has ever been
 13 produced, have they, Mr. Brown?

14 A Oh, yes. The Mobile 12 was the discovery well in
 15 the area.

16 Q In the Straun, neither of them have ever been produced
 17 in the Straun, have they?

18 A Not in the Straun, no.

19 Q That is what I am trying to establish.

20 A These are virgin pressures in the Straun.

21 Q And so the three 5,610 that you have depicted under
 22 the Superior-Collat would be the virgin pressure
 23 in that well?

24 A I am assuming that will be correct.

25 Q To the best of your knowledge?

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- 1 A Right.
- 2 Q All right. Now, let me ask you this: Do you have
- 3 information with respect to the shut in periods on
- 4 these five pressure tests?
- 5 A I think I do. I don't have it presented or prepared
- 6 in the form to present as an exhibit, but I have the
- 7 data in my brief case.
- 8 Q Well, if it is not too much trouble, would you look
- 9 that up and provide us with it, please, sir?
- 10 A All right. The pressure of 5,610 reported on 2-9-70
- 11 was a result of a shut in of fifty-six days.
- 12 At that time obviously Superior was attempting
- 13 to develop a maximum build up, a stabilized --
- 14 MR. UTZ: Fifty-six days?
- 15 THE WITNESS: Fifty-six days.
- 16 (Mr. Patman continuing) Now, how about the other two
- 17 virgin pressures that you have depicted on this
- 18 exhibit?
- 19 A The Pennzoil pressure of 5,676 was the initial shut in
- 20 on drill stem test, which we feel is valid representation
- 21 of formation pressure.
- 22 Q How about the Antweil well?
- 23 A The Antweil well pressure, 5,229, was both their initial
- 24 and shut in pressures, so we feel that that also is
- 25 a valid pressure.

1 Q Now, how about the other two Superior pressures that
2 you have shown on this exhibit?

3 A All right. The one on eight and fourteen of seventy
4 was taken after a shut in of forty-six hours.

5 Q And the other one?

6 A The other one on the eighth and ninth was taken after
7 a shut in of seventy-two hours.

8 Q What, if anything, do you know about the permeability
9 in this Superior-Collat well?

10 A I don't know, I don't pretend to know a great deal
11 about it. Based on the original build up taken on
12 on the well, I would say that the permeability is
13 somewhat limited in nature since -- I believe that
14 there was some slight build up still taking place
15 at the end of the fifty-six day period, but very
16 small amounts.

17 Q If, as you have just testified there is a build up
18 continuing after fifty-six days, how can you tell
19 the commission that a pressure taken after forty-six
20 hours is in any way representative of the actual
21 pressure that would be built up in the bore hole
22 after a longer period of time?

23 A I believe that in that fifty-six day period that
24 most of the pressure build up occurred within the
25 first few hours that the well was shut in.

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1 Q Now, Mr. Brown, I am going to have to ask you to be
2 specific about that.

3 A All right. I have got a break down on your lessee --
4 excuse me. I may have the wrong one. This is a
5 fifth and fourteenth. I have a build up here on it
6 for the fifth and fourteenth, in which the maximum
7 pressure was 4,295, and at the end of -- yes.

8 At the time that this pressure build up
9 commenced on the fifth and the twelfth, the bottom
10 hole pressure was 4,124, and it reached 4,295 in
11 the forty-eight hour -- forty-six hour period, so I
12 feel that that pressure is not going to build much
13 beyond that point.

14 Q Now, if you extrapolated that pressure over a long
15 period of time, would you agree that it would reach
16 significantly higher number?

17 A I'm sure it would. I don't think it would reach a
18 significantly higher pressure. I am sure it would
19 reach a higher pressure.

20 Q As much as three or four hundred pounds?

21 A It could go that far.

22 Q Let me ask you this. I thought I had your build up
23 data for the fifty-six days. I don't have. Let me
24 ask you this, Mr. Brown. Since as you have indicated
25 on this exhibit there was a rather substantial pressure

1 decline in the Superior well after it was placed on
2 production, would you not anticipate that equivalent
3 rapid declines in pressure would be experienced by
4 the other two wells, and indeed, by other wells
5 completed in the Straun once those wells were placed
6 on production?

7 A It is entirely possible. We don't have any Straun
8 history with the exception of your well in the area.

9 Q Then there is absolutely no basis for your testimony
10 on your direct examination that the pressure
11 differential in the Superior well would prevent it
12 from being drained by a well completed at the location
13 that you have requested?

14 A You will have to assume that our well had a much greater
15 order porosity and permeability than your's, and
16 whether or not that would be true, we have no way
17 of knowing.

18 Q So your testimony was simply based on assumption for
19 which there is no basis?

20 A No. I disagree. I think there is some basis for
21 that.

22 Q What is that basis?

23 A The pressure recorded in the Antweil-Joel.

24 Q I believe they were below the pressure originally
25 recorded in the Superior well; is that correct?

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- 1 A It was slightly lower. We, frankly, are unable to
 2 explain that pressure, the fact that it is a little
 3 lower than --
- 4 Q If it fell as rapidly as the pressure in the Superior
 5 well fell it would actually be the flow on it after
 6 it had been a production for a reasonable period
 7 of time, it would actually be below the pressure
 8 of the Superior well; is that correct?
- 9 A I can't answer that. I don't know what the well
 10 might do.
- 11 Q Well, you have about as much factual basis for
 12 answering that question as you do for your direct
 13 testimony that there would be a pressure differential
 14 in favor of the well that Pennzoil is seeking to
 15 drill in it from the Missouri.
- 16 A I think taking into account all the factors we can
 17 assume reasonably that the pressure at our proposed
 18 location would be higher initially than your pressure
 19 is at the present time.
- 20 Q What factors are you taking into account?
- 21 A The fact that the virgin pressures in the area were
 22 in the range of 5,600, or at least in excess of 5,000
 23 pounds.
- 24 Q To what wells do you refer, specifically, when you
 25 say in the area?

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- 1 A Okay. Our Mobile 12, your well, the Antweil well.
- 2 Q You have shown on your exhibit that the Antweil well
- 3 is 5,229?
- 4 A I said in excess of 5,000 pounds.
- 5 Q I'm sorry. I understood you to say in excess of 5,600.
- 6 A Well, then, I will correct that to 5,000 pounds, if
- 7 I made that statement.
- 8 Q Thank you. I am not sure that I am right. The record
- 9 will show whatever the facts are.
- 10 Mr. Brown, I believe you have indicated in the
- 11 course of your testimony and also the testimony of
- 12 Mr. Miller that essentially Pennzoil is seeking this
- 13 unorthodox location, not on the base of any surface
- 14 property or topographical difficulties but simply
- 15 in order to make a better well geologically; is that
- 16 correct?
- 17 A Well, that's correct. Not in just the Straun, but
- 18 in all horizons. Well, there are -- there are no
- 19 topographic problems related to a location in this
- 20 area.
- 21 Q Are you familiar with whether there have been other
- 22 unorthodox locations permitted by the Oil Conservation
- 23 Commission in the South Carlsbad field?
- 24 A Yes. Not for the Straun, but for the Morrow and
- 25 the Antweil Missouri New Mexico Land Company well

1 is an unorthodox location.

2 Q How about the two --

3 MR. UTZ: What zone, sir?

4 THE WITNESS: It is in the Morrow. Also Grace has
5 drilled a well in Section 2 at an unorthodox location.

6 (Mr. Patman continuing) And that well is --

7 A And the commission has approved a second well for them
8 at an unorthodox location.

9 Q And both of those wells are permeated through the
10 Straun?

11 A Well, they are just permeated.

12 Q All right. And so how about the City Service Merland A
13 well in Section 19?

14 A I am not familiar with that well. It is a little
15 out of our area, and I don't know whether or not that
16 is an unorthodox location.

17 Q Well, if I tell you it is, subject to your checking
18 on it, would you believe me, and would you then
19 accept the statement that there already exist four
20 unorthodox locations in the South Carlsbad field
21 and that if your application is granted, that would
22 mean five unorthodox locations?

23 Subject to your verification of my statement
24 with respect to the City Service well --

25 A Well, obviously, yes.

- 1 Q All right. How many wells are there, to your knowledge,
- 2 Mr. Brown, in the South Carlsbad field?
- 3 A You are referring to all horizons, now, I presume?
- 4 Q Yes, sir, I believe so.
- 5 A I haven't counted them. We have them tabulated on
- 6 Exhibit No. 4, I believe.
- 7 Q All right. Why don't we just take a moment here and
- 8 calculate that? Did we put all of those on there?
- 9 MR. MILLER: No.
- 10 A Our exhibits did not take into account some of the
- 11 City Service wells for the north, so I am unable to
- 12 answer that question.
- 13 Q Well, I believe on your Exhibit No. -- well, on various
- 14 of your exhibits you would have that information.
- 15 Could I ask you to refer to whatever exhibits are
- 16 necessary and furnish that information for the record,
- 17 please, sir?
- 18 A There are thirteen wells shown on our Exhibit No. 1
- 19 and shown as completions, in addition to that, the
- 20 Grace Panagra in Section 11, I believe, has completed,
- 21 which would make fourteen, and I believe there is a
- 22 City Service well off of the map which would be
- 23 fifteen.
- 24 Q So out of sixteen wells, counting the one that you
- 25 are seeking to obtain permission to drill here, there

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1 would be a total of five unorthodox locations if your
2 application is granted today?

3 A If you are correct about the City Service location well.

4 Q All right. I will just ask you to assume that and
5 we may have some testimony on that.

6 A All right.

7 Q Let me ask you this, Mr. Brown, is the general function
8 of spacing rules to achieve orderly development?

9 A Yes. That is one of the responsibilities of the
10 commission.

11 Q Is orderly development served if a substantial number
12 of wells in a particular field are permitted to be
13 drilled at nonstandard locations?

14 A As a general rule, no. There are some extenuating
15 circumstances relating to this area. First of all,
16 the two Grace wells were located adjacent to an
17 existing airport, and it would have been difficult
18 for them to drill standard location wells.

19 Q Now, let me just ask you a question in reference to
20 that particular statement before it goes by.

21 Is it not true that Pennzoil protested both
22 of those?

23 A We did.

24 Q And the Pennzoil witnesses, including yourself,
25 appeared to testify that standard locations would be

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1 available to Grace in both of those instances?

2 A They would have been available to them had they
3 chosen to drill at some locations for a removal
4 from existing production.

5 Q But you appeared, in fact, you, yourself, appeared
6 in Case No. 4398, I believe, and you recommended
7 to the commission under oath that the commission
8 deny the Grace application and require them to drill
9 at a nonstandard location; is that correct?

10 A That's correct.

11 Q Now, why is it fair or equitable for Pennzoil now
12 to come in and to seek to obtain an advantage
13 against their offset operator superior by themselves,
14 themselves drilling a nonstandard location.

15 MR. KELLAHIN: If the examiner please, I object to
16 the form of the question. It infers that Pennzoil is
17 getting an advantage, and our testimony shows that it is
18 not.

19 MR. UTZ: Sustained.

20 MR. PATMAN: Mr. Examiner, may I be heard on that?
21 I do hope to go into this at greater length in my cross
22 examination of the other witness, but I believe it is
23 quite evident from all of the exhibits, structural exhibits
24 that have been presented that the reason that they are
25 seeking this location is that it would be higher

1 structurally and that quite plainly constitutes competitive
2 advantage, and I think that my question is perfectly proper.

3 MR. KELLAHIN: If the examiner please, the testimony
4 shows that it would be more advantageous to Pennzoil to
5 drill at that location.

6 There is nothing in the record to show that
7 it would in any way impair the rights of Superior Oil Co.,
8 and as a matter of fact the testimony shows that it will
9 not.

10 MR. PATMAN: Well, we expect to present evidence
11 through our witnesses that there will be a competitive
12 disadvantage, an adverse effect on Superior's correlative
13 rights, and I am precluded from cross examining these
14 people after I have put on my direct case, and it seems
15 to me I ought to be permitted in the course of my cross
16 examination of them to ask them a question predicated on
17 what we expect to show with respect to advantage and
18 disadvantage.

19 MR. UTZ: You will be permitted after your direct
20 examination to re-examine these witnesses if you so
21 desire.

22 MR. PATMAN: All right, sir.

23 MR. UTZ: And I would request that you change your
24 line of questioning until you have developed this point.

25 MR. PATMAN: All right. Thank you, Mr. Examiner.

1 I will certainly do that. What is the practice with
2 respect to a noon recess, Mr. Examiner?

3 MR. UTZ: Well, I had hoped maybe we could go a
4 little overtime and finish this case, but I think it is
5 pretty obvious that we can't.

6 MR. PATMAN: I don't believe it will be possible from
7 my point of view.

8 MR. UTZ: So I think that if you are at a good stopping
9 point -- are you?

10 MR. PATMAN: Yes, sir. Yes, sir.

11 MR. UTZ: Well let's recess for the noon hour and
12 come back about one thirty.

13 MR. PATMAN: Thank you sir.

14 (Whereupon the noon recess was held)

15 MR. UTZ: The hearing will come to order. Mr. Patman,
16 I believe you were in the process of cross examination.

17 MR. PATMAN: Yes, sir. I am prepared to proceed.

18 MR. UTZ: You may go ahead.

19 MR. PATMAN: Thank you, sir.

20 Q (Mr. Patman continuing) Mr. Brown, let me just ask
21 you one more question. I think you testified at
22 some length on direct examination and also earlier
23 on cross examination about pressures, and I think
24 you indicated on your direct examination that pressure
25 was a reason that you believed there would not be

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1 any crossline drainage, net uncompensated crossline
2 drainage resulting from the requested nonstandard
3 location.

4 Was that the stand of your testimony?

5 A Right.

6 Q All right. Let me just ask you, then, this one
7 question. Can you advance any reason other than
8 what you have already told the commission with
9 respect to pressures why there would not be any such
10 drainage, or is that the only reason that you have to
11 tell the commission?

12 A Well, I believe that I have in effect answered that
13 question once, but we anticipate having our purchase
14 and our well by our -- higher pressure than your
15 well at the present time.

16 Q I didn't want you to repeat your testimony.

17 MR. KELLAHIN: If the examiner please, let the
18 witness answer the question.

19 MR. PATMAN: I don't believe his answer was responsive.
20 I didn't want him to repeat any of his testimony about
21 pressures. I don't want to clutter up the record or take
22 the examiner's time. I simply want to know if he can
23 advance any reasons other than what he has already said
24 about pressure for there to be no net uncompensated
25 crossline drainage.

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1 It seems to me it is a perfectly simple question,
2 doesn't require an involved answer, but anything to
3 do with pressures.

4 A I will give you a simple answer. Fluid is not going
5 to move from a low pressure into a high pressure area.

6 Q You did not answer my question. Would you please
7 answer my question, Mr. Brown. Is there any reason
8 other than pressures why you believe there would be
9 no net uncompensated crossline drainage?

10 A No.

11 Q Thank you.

12 MR. PATMAN: Now, if the examiner please, I would
13 like to turn to some questions for Mr. Miller. I believe
14 in accordance with the examiner's previous ruling I will
15 have the opportunity to recall Mr. Brown at the conclusion
16 of our direct case.

17 MR. UTZ: They will both be available.

18 MR. PATMAN: All right. Thank you, Mr. Examiner.

19 MR. KELLAHIN: If the examiner please, I would
20 prefer that he complete the cross examination of Mr. Brown
21 at this time. If he is recalled later why, he may be his
22 own witness. He is not going to be our witness if he
23 recalls him, but I would like to see the cross examination
24 of Mr. Brown be completed now.

25 MR. PATMAN: I don't have any objection to completing

1 it now, Mr. Examiner, but I was simply trying to abide
2 by your ruling when you ruled certain of my questions
3 out of order at this time and said that I could ask them
4 later.

5 MR. HATCH: I think Mr. Patman has quoted you correctly,
6 and I think that you ruled that if certain testimony
7 appeared on direct that he would be allowed to cross
8 examine Mr. Brown and he would allow it.

9 MR. UTZ: Well, ordinarily, this is the thing we
10 do here, we don't close cross examination. If they have
11 a question before the hearing is over we recall them and
12 let them answer the question.

13 MR. PATMAN: I just want to comply with the examiner's
14 desire in it. I have no desire one way or the other.

15 MR. KELLAHIN: If the examiner please, I object.
16 My objection is being misunderstood. I have no objection
17 to Mr. Brown being recalled if he wants to make him his
18 own witness, welcome to do that.

19 Now, if he wants to call him for the purpose
20 of re-examination he can't cross examine Mr. Brown on
21 his witness's testimony, and this is ridiculous.

22 If he has got anything to put directly in
23 the record he puts it in with his own witness.

24 MR. UTZ: Well, I think that is fair enough. If
25 Mr. Brown didn't testify to it in his direct, I don't

1 believe he can answer in cross examination.

2 MR. KELLAHIN: This is exactly my position.

3 MR. HATCH: It would still be improper cross examination
4 just because he allows him to recall him.

5 MR. KELLAHIN: This is correct.

6 MR. HATCH: So I don't think we have a problem there.

7 MR. KELLAHIN: I don't think we do either, except
8 we will have another argument at the time, and I would
9 rather dispose of it now and get the examination of
10 Mr. Brown completed.

11 If the staff or anybody else has any questions
12 with Mr. Brown and then include the whole thing and then
13 go to the next witness.

14 MR. UTZ: Well, I think Mr. Patman, you are going
15 to examine these as far as you can go in regard to their
16 direct testimony, isn't that correct?

17 MR. PATMAN: Yes, sir. But I believe I tried to pose
18 a line of cross examination to this witness having to do
19 with crossline drainage and counsel objected.

20 It had to do generally with crossline drainage.
21 I think the specific reference was the question of whether
22 or not there would be an advantage or disadvantage to
23 Pennzoil from the granting of this request, and counsel
24 for Pennzoil objected that the witness had testified
25 that there would not be any advantage accruing to Pennzoil

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1 from this granting of this application.

2 I submitted to your honor that there would
3 be an advantage, even in terms of their own exhibits in
4 the sense that they would be moving up structure and
5 obtaining a greater net porosity thickness at the nonstandard
6 location, and I further submitted that we intended to show
7 that there was drainage, and I attempted to cross examine
8 the witness about the question of there being an advantage
9 accruing to Pennzoil from a granting of this application,
10 and, Mr. Examiner, as I understand your ruling, you
11 overruled my line of cross examination and said that it
12 was not proper at that point but that I could -- that if
13 we presented any evidence to show there was going to be
14 drainage, then I could recall Mr. Brown and cross examine
15 him further with respect to advantage or disadvantage to
16 Pennzoil, and I would like to pursue that line of cross
17 examination.

18 I will do it now if you will permit, or I will
19 do it later, but I believe I do have a right to cross
20 examine him about that matter, and I would hope that I
21 would have an opportunity to do it, and I will be glad
22 to do it at whatever time you think most appropriate.

23 MR. UTZ: Mr. Kellahin? Would you like for Mr. Kellahin
24 to restate his objection that I ruled on, or would you like
25 it to be read back off the record?

1 MR. KELLAHIN: Well, of course, Mr. Patman has
2 misstated the entire thing. He has examined this witness
3 at great length about whether there is any advantage or
4 disadvantage to Pennzoil.

5 The question he posed to the witness to which
6 I objected was based upon the assumption that there would
7 be a disadvantage to Superior, and there is no testimony
8 in the record to show there will be any disadvantage.

9 There is positive testimony in the record that
10 there would not, and this is what I objected to, because
11 this witness didn't testify to any such thing, and still
12 hasn't.

13 Now, there may be an advantage to Pennzoil,
14 but it doesn't follow as a corollary of that, that there
15 is a disadvantage to Superior or our witnesses say there
16 isn't any, and if he has any testimony to put on to that
17 effect, we will let him put it on with his own witnesses.
18 This is my objection.

19 MR. UTZ: Well, I still think --

20 MR. KELLY: Mr. Examiner, this is the issue in the
21 case. Every case that I have ever been involved in where
22 you are talking about trying to get into better location,
23 one side is saying, "We would like to move a little closer
24 to your well or get a better location," the other side, "And
25 if you do, you are going to hurt us."

1 I can't imagine that we cannot go into this
2 question with this witness. The fact that they are saying
3 there is no drainage doesn't preclude us from interrogating
4 him on that position.

5 He has stated a professional opinion. His
6 professional opinion is subject to attack. This happens
7 in every case that comes before this commission, and that
8 is what is involved here.

9 We want to test his professional opinion with
10 this hypothesis.

11 MR. UTZ: Well, what was the question that you wanted
12 to ask him again? Did it have to do with the question of
13 what he had testified to previously?

14 MR. PATMAN: I thought it did, Mr. Examiner.

15 MR. UTZ: Well, all right. State your question again,
16 and I will rule on it again.

17 MR. PATMAN: All right. I'm not sure that I can
18 restate the question that I stated this morning, but
19 let me try to pursue another cross examination and we'll
20 see where we get.

21 Q (Mr. Patman continuing) I'll try to get at it this
22 way, Mr. Brown. I am going to ask you to assume
23 for purposes of my question that there would be
24 net uncompensated crossline drainage away from
25 the Superior well to the Pennzoil well at the requested

1 location.

2 Now, I am not asking you to admit that. I
3 am asking you to assume for the purpose of my question.

4 Now, my question is: if that be the case,
5 would Pennzoil be prepared to accept a penalty in
6 its allowable, and if so, how much?

7 A We would not be willing to accept a penalty, because
8 I don't agree with your assumption.

9 MR. PATMAN: Mr. Examiner, I ask that you direct
10 him to answer my question. Now, it is a perfectly proper
11 question, and in all fairness --

12 A You are posing a hypothetical question?

13 Q Yes, sir. And I am asking you to make that assumption
14 and then look -- I'm sorry.

15 MR. PATMAN: Let me say this, Mr. Examiner. As
16 Mr. Kelly has very correctly pointed out, the issue of
17 drainage is a very poor one. We will put on testimony
18 to show that there will be drainage.

19 Now, the commission will then be faced with
20 the duty of determining whether our evidence is more
21 persuasive than the evidence presented by Pennzoil, and
22 if the commission does in its wisdom determine that our
23 evidence is more persuasive and they find that there would
24 be crossline drainage, I think that I am entitled to have
25 in this record the position that Pennzoil would take with

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1 respect to that situation.
2 MR. UTZ: Can't you put that testimony in the record
3 directly?
4 MR. PATMAN: I can't put Pennzoil's position in the
5 record.
6 MR. UTZ: No. But you can put your position in the
7 record.
8 MR. PATMAN: I think I am entitled to ask what
9 Pennzoil's position is.
10 MR. UTZ: Well, we will let the witness assume. I will
11 ask you the question.
12 THE WITNESS: All right, sir.
13 MR. UTZ: Assuming that there will be drainage, now
14 this is an assumption, you haven't admitted this.
15 MR. PATMAN: That is what I say.
16 MR. UTZ: Would you think a penalty would be in order?
17 THE WITNESS: I would think that under conditions
18 where there was crossline drainage that a penalty would
19 be in order, right.
20 MR. PATMAN: How much?
21 MR. KELLAHIN: Now, if the examiner please, that
22 question we would object to, because there is no basis.
23 MR. PATMAN: That is a matter for the commission
24 to decide.
25 MR. KELLAHIN: There is nothing in the record, and

1 this witness has already testified he doesn't believe
2 there will be, so he has no basis on which he can make
3 such an assumption, I don't believe.

4 MR. UTZ: I don't think you have to answer the last
5 question. You are agreeing with him that you are taking
6 his --

7 THE WITNESS: Under a hypothetical situation.

8 MR. UTZ: You are saying that if it was drained a
9 penalty would be in order, and since it was a hypothetical
10 question to begin with, I don't think you need to answer
11 how much.

12 MR. PATMAN: All right. Let me see if I can get
13 at it this way.

14 Q (Mr. Patman continuing) Mr. Brown, did you testify
15 before this commission in Case No. 4398, the application
16 of Michael T. Grace and Corrine Grace for an unorthodox
17 gas well location in Eddy County?

18 A I did.

19 Q And in behalf of Pennzoil, did you take a position
20 in that case with respect to the penalty that would
21 be appropriate to apply to the Graces if their
22 unorthodox location were granted?

23 A I did take a position, yes.

24 Q All right, sir. And what was the position that you
25 took in that case?

1 A Frankly, I don't remember. I did recommend a rather
2 severe penalty.

3 MR. PATMAN: Mr. Examiner, let me ask that the record
4 show that I am reading from a copy of this transcript in
5 the Case No. 4398, which copy was furnished me by Mr. Kelly,
6 and which I admit it is not the commission's copy.

7 I have every reason to believe that it is a
8 true and correct copy, and I would like to read from it,
9 subject to it being shown that a copy is a true and correct
10 copy.

11 MR. KELLAHIN: If the examiner please, I am assuming
12 that this counsel is going to read a statement as to what
13 this witness said, which should be the penalty in the
14 Grace case, and we object to that as being immaterial,
15 in that there is nothing in the Grace case which has any
16 bearing on this case, and in addition to that, the witness's
17 testimony was based on a geological engineering test which
18 is in that record, and is not in the record in this case.
19 It has no bearing on this case.

20 MR. PATMAN: Excuse me, Mr. Examiner. May I be
21 heard on that?

22 MR. UTZ: Sure. You have the right to argue.

23 MR. PATMAN: If I am permitted to read this, the
24 testimony of the witness was so that he did not take
25 account of the things which counsel has just mentioned,

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1 that he took the position that there was an arithmetical
2 way of arriving at an appropriate penalty, and I expect
3 that I am entitled to show that he took that position,
4 and I think -- I would hope to be given the opportunity
5 of further showing that in a previous case, also involving
6 Pennzoil, a Pennzoil witness, Mr. B. C. Sinclair, in
7 testifying before this commission, recommended exactly
8 the same arithmetical penalty, and I would like to submit
9 to the commission and for the record that it is obviously
10 the position of Pennzoil United that this is a way of
11 arriving at an appropriate penalty, and it seems to me
12 I am entitled to do that.

13 These are records that are in cases that were
14 decided before this commission, indeed recently, and I
15 might say both cases involved this specific gas field,
16 the South Carlsbad field --

17 MR. UTZ: You want him to tell you how, what formula
18 he used to arrive at this penalty?

19 MR. PATMAN: Yes, sir. It is very simple.

20 MR. UTZ: Does that have any pertinence in this case?

21 MR. HATCH: I think it does, because it certainly --
22 this involves this pool, and this witness has testified
23 as to prior cases as to methods of penalty, assuming
24 there was drainage.

25 There is one problem here. The Superior has

1 not established that that was used in arriving at the
2 penalty in prior cases. I think that should be brought
3 to the examiner's attention.

4 MR. STAMETS: George, the penalty there was not
5 in the Morrow formation.

6 MR. HATCH: Excuse me.

7 MR. STAMETS: In this case there would be no penalty
8 in the Morrow, and so --

9 MR. HATCH: Mr. Stamets pointed out that in the prior
10 case -- I said it was the same pool. It is not the same
11 pool. Those cases involved the Morrow pool, and this one
12 involves a Straun pool. There is a --

13 MR. STAMETS: Was there any testimony in the original
14 hearing concerning the penalty in the Straun formation?

15 MR. HATCH: Those included I believe more than one
16 formation.

17 MR. PATMAN: Yes, sir. They did. They included all
18 four, Mr. Hatch. That is my understanding, so I believe
19 they -- they did include the Straun pool.

20 MR. HATCH: I mean from the surface down to --

21 MR. PATMAN: Yes, sir. That is my understanding.

22 MR. UTZ: That's right.

23 MR. HATCH: I will retract another statement.

24 MR. UTZ: Do you think this issue is in order?

25 MR. HATCH: Yes, it is. I think that it has limited

1 value in that it should be pointed out that he has not
2 established that this formula was used.

3 MR. PATMAN: I certainly didn't mean to suggest that,
4 Mr. Hatch. I think I am entitled to show that that appears
5 to be what Pennzoil, when it is faced with protesting an
6 unorthodox location, has recommended to the commission
7 in similar circumstances.

8 The fact whether or not it was used is certainly
9 within the purview of the commission to determine.

10 MR. HATCH: Yes, sir.

11 MR. PATMAN: May I proceed, Mr. Examiner?

12 MR. UTZ: You may proceed.

13 MR. PATMAN: Thank you, sir. I would like to read
14 into the record testimony that was given by Mr. Joel Brown,
15 who is the witness here appearing.

16 THE WITNESS: Charles Brown.

17 Q (Mr. Patman continuing) I beg your pardon. Well,
18 are you the same gentleman who testified in Case
19 No. 4398?

20 A I don't recall the case number, but we have no one
21 by the name of Joel Brown in our employment.

22 Q You have a Joel Brown in your employment?

23 A We do not have.

24 Q You do not have? Well, let me see just a minute.

25 A But I am Charles Brown, and I did appear as a witness

1 involving the Graces' application for some unorthodox
2 locations.

3 Q I don't want to appear -- there to be any confusion
4 about this. Maybe I can just locate the point at
5 which you first testified or -- the copy that I am
6 reading from says, or reads, on page fifty-two,
7 that this following testimony was given:

8 "My name is Joel J. Brown, production manager
9 for Pennzoil United Incorporated in Midland, and I
10 have -- " Is it your recollection and your testimony,
11 Mr. Brown, that you are the person who testified
12 in Case 4398, the application --

13 A I have already stated that I do not recall the
14 case number, but I do -- I was a witness in the
15 hearing involving the case -- the case involving
16 the Graces' application for two nonstandard or
17 unorthodox locations.

18 Q Well --

19 MR. UTZ: I think it might be an error in the transcript,
20 so I think we can just pass it up, and we will assume he
21 was the person that testified in that case.

22 MR. PATMAN: Thank you, sir.

23 Q (Mr. Patman continuing) Mr. Brown, testifying in this
24 matter, testified as follows: "I agree that there
25 is no absolute scientific way in which we can at

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1 this time determine the basis for penalizing an
2 unorthodox location.

3 Certainly it seems to me that the penalties
4 should be far in excess of twenty-five percent
5 recommended by Mr. LeMay.

6 I would favor using a fraction, the numerator
7 of which would be the distance the well was actually
8 drilled from the line, the denominator of which would
9 be the distance to a standard location, so referring
10 to their proposed location in the north half of the
11 section, that factor would be 330 divided by 1,980."

12 That is the way the testimony reads. I think
13 perhaps there is a word intermitted. There, let
14 me ask you, Mr. Brown, if that arithmetical testimony
15 was used in this case, what would be the penalty
16 that would apply to the Pennzoil well?

17 A It would be fifty percent on that basis.

18 Q All right, sir.

19 MR. PATMAN: Without burdening the record with reading
20 testimony, Mr. Examiner, I would like to ask that the
21 commission take note of the transcript in its Case 4316,
22 the application of Pan American Petroleum Corporation for
23 an unorthodox gas well location in Eddy County, New Mexico,
24 which case also involved the South Carlsbad field, and
25 ask that the commission take note of the fact that on

1 page forty-seven of said transcript a Mr. B. C. Sinclair,
2 testifying for Pennzoil United Corporation recommended to
3 the commission the exact same arithmetical determination
4 insofar as the penalty is concerned.

5 I see no need to read his testimony into the
6 record, but I believe it is appropriate for the commission
7 to take account of it.

8 MR. UTZ: What was the case number on the Pan American
9 case?

10 MR. PATMAN: 4316.

11 MR. UTZ: Is that in this pool, in this area?

12 MR. PATMAN: Yes, sir. In the South Carlsbad field.

13 MR. UTZ: Pan American has a well there?

14 MR. PATMAN: They applied for a nonstandard location,
15 and Superior and Pennzoil protested. Mr. Clay and I
16 were both present at that hearing, and the commission
17 in its wisdom denied the application, or it was withdrawn,
18 excuse me.

19 I believe the application was withdrawn before
20 it was ever acted on.

21 MR. KELLY: That was one of those airport cases, I
22 think.

23 MR. UTZ: Yes. I recall. We will take administrative
24 notice of those cases concerning the same --

25 MR. KELLAHIN: If the examiner please, I would also

1 ask that you take administrative notice of the order in
2 those two cases.

3 MR. PATMAN: I have no objection of that.

4 MR. UTZ: Certainly will, and, of course, in that
5 respect the order -- then the recommendation -- the order
6 didn't resemble the recommendation as to the formula for
7 penalizing.

8 Q (Mr. Patman continuing) Let me ask you this, Mr. Brown.
9 You have taken the position, I believe, that it is
10 fair and equitable for Pennzoil to drill a well in
11 accordance with its request before this commission
12 which is being heard today at the requested location.

13 Do you believe that other operators in the
14 field ought to have the same right to drill at
15 nonstandard locations if it could be shown to improve
16 the possibilities of making a completion in these
17 areas zones in the field?

18 A I don't think that operators in any field should have
19 the right to choose locations at random. In fact,
20 we do not approve of that sort of thing, and that
21 is why we have appeared to object to these other
22 cases.

23 We feel that in this particular case where we
24 are talking about more than one zone, that we are
25 justified in our application for an unorthodox

1 location.

2 Q Well, if another operator were to file a similar
3 application for a completion in more than one zone
4 and he could show that his prospects for making a
5 producing well were better in both zones at the
6 requested location rather than an irregular location,
7 would you object to that?

8 MR. KELLAHIN: If the examiner please, this question
9 is so full of imponderables that nobody could answer that
10 question. If you were going to say to approve of an
11 unorthodox location you have to say what the location is,
12 what the formation is, what the structure is, who the
13 offsets are, where they are located.

14 There are so many factors involved that nobody
15 can answer that question, and I object to it.

16 THE WITNESS: Mr. Examiner, I would like to make a
17 point, if I may. We have appeared on two other occasions
18 and opposed unorthodox locations.

19 On the other hand, we have approved one unorthodox
20 location, so we have not taken a hard stand.

21 We consider each well or location by its own
22 merits.

23 MR. UTZ: In other words, if I understand you correctly,
24 Mr. Brown, what your attitude or Pennzoil's attitude is in
25 this pool is that each case should stand on its own,

1 correct?

2 THE WITNESS: Yes, sir. We generally favor --

3 MR. UTZ: Engineering and reservoir data available
4 for that particular area?

5 THE WITNESS: Yes, sir.

6 MR. UTZ: Now, is that what your argument is?

7 MR. BROWN: Yes, sir.

8 MR. PATMAN: Are you ready for me to pose another
9 question? Has he ruled on his objection of --

10 MR. UTZ: He had an objection, didn't he?

11 MR. KELLAHIN: Yes, sir.

12 MR. HATCH: I think the question has been answered
13 by the witness.

14 MR. KELLAHIN: I think it has, too.

15 MR. PATMAN: I am willing to accept that.

16 MR. UTZ: Okay.

17 MR. PATMAN: I have no further questions of Mr. Brown,
18 Mr. Examiner.

19 MR. UTZ: Are there other questions? You are through?

20 MR. PATMAN: Oh, with Mr. Brown. I have a number of
21 questions for Mr. Miller.

22 MR. UTZ: Okay. Go ahead.

23 MR. KELLAHIN: I have a couple of questions of Mr.
24 Brown. Do you want to have them now or later?

25 MR. UTZ: Well, why don't we let Mr. Patman finish

1 with both witnesses and then --

2 MR. KELLAHIN: If you prefer, all right.

3 DAVID MILLER

4 called as a witness, having been first duly sworn, testified
5 as follows:

6 CROSS-EXAMINATION

7 BY MR. PATMAN:

8 Q I would like to draw your attention to your Exhibit No. 1,
9 which I believe you prepared or was prepared under your
10 supervision; is that correct?

11 A That's correct.

12 Q Now, sir, I would like you to take the copy of this
13 exhibit that you have presented to the commission for its
14 official files.

15 I guess that is the copy in the possession of the
16 Examiner, and place on that exhibit some mark which would
17 show the location of a regular location in Section 6.

18 MR. UTZ: Which exhibit?

19 MR. PATMAN: No. 1, Mr. Examiner. I'll tell you
20 what. I'll say that I am going to ask him to do this on each
21 and everyone of his exhibits, because I want to ask him about
22 a regular location on each and everyone of his exhibits, and it
23 may save some time if he did that.

24 MR. UTZ: What is it exactly that you are asking him
25 to do, now?

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1 MR. PATMAN: Place on each of his exhibits a circle
2 or X mark or other indication of the location of a regular
3 location or a standard location in the south half of Section 6.

4 That is to say, one which would be 990 feet
5 immediately due east of the requested location.

6 MR. UTZ: On each exhibit?

7 MR. PATMAN: Yes, sir.

8 MR. HATCH: Excuse me just a moment. There would be
9 four standard locations or areas in the south half. Do you
10 want only one of those marked on each of these or all four?

11 MR. PATMAN: I don't think it is necessary to mark,
12 but I think it is only necessary to mark one, and that would be
13 the one that would be 660 feet south of the north line and
14 1980 feet east of the west line of the south half. Would that
15 be correct?

16 MR. HATCH: Yes.

17 MR. UTZ: Well, it is the east-west location that you
18 are bothered about, isn't it?

19 MR. PATMAN: Well, Mr. Examiner, what there are --
20 yes. The nearest east-west location, what they are seeking to
21 do here. It is quite plain to see move 990 feet closer to
22 Superior offset well than they are entitled to do under the
23 statewide rule, and I am -- I think I am entitled to examine
24 him.

25 MR. UTZ: In the Straun formation?

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1 MR. PATMAN: In the Straun formation, yes, sir. I am
2 entitled to examine him on what advantages are --

3 A (Drawing) This will just approximate. I assume you only
4 need this for the Straun formation since this is standard
5 for all other formations.

6 Q I would like to have it -- you have presented evidence to
7 the commission about these other formations, and I would
8 like you to put on all of your exhibits, if you would,
9 please.

10 MR. UTZ: You mean all of the exhibits?

11 MR. PATMAN: Yes, sir.

12 MR. UTZ: Well, sir, this is only, as I understand
13 the case -- now, you correct me if I'm wrong. This is the only
14 nonstandard location in the Straun formation.

15 MR. PATMAN: Yes, sir. I certainly agree with that,
16 Mr. Examiner. In fact, I believe all his exhibits with respect
17 to the Atoka and Morrow and Canyon, to be wholly and completely
18 irrelevant and immaterial to this entire proceeding, and at
19 this time I move that they all be stricken from the record.

20 MR. UTZ: They have already been accepted.

21 MR. PATMAN: Well, I can move for them to be stricken,
22 I believe.

23 MR. HATCH: I would not strike them. They are in,
24 and there has been testimony concerning them, and he has not
25 developed that they are not relevant.

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1 MR. UTZ: Well, there are nonstandard locations, but
2 they are a part of his case to justify a nonstandard location.

3 MR. PATMAN: Well, then I am entitled to have him
4 put the locations on all of them.

5 MR. HATCH: I agree with you there.

6 MR. PATMAN: Thank you, Mr. Hatch.

7 MR. HATCH: Mr. Patman, it is understood that this
8 is an approximate location.

9 MR. PATMAN: Yes, sir. I might say I think that the
10 commission on reflection will find that this one point that I
11 have asked him to place on there is the only standard location
12 in the Straun, which would also be a standard location in all
13 these other zones in the north-south proration units and which
14 would then permit him to accomplish the end that he seeks of
15 dually or multiply completing in these various zones, and that
16 is the reason I have asked him to place this mark on these,
17 and I would like to examine him about that. All right.

18 Q (Mr. Patman continuing) Now, Mr. Miller, would you tell
19 me, please, sir, how much higher structurally the standard
20 location which you have marked on this map on Exhibit No. 1
21 would be than the Antweil well, Antweil-Missouri-New Mexico
22 Land Company well.

23 A Be approximately 150 feet higher.

24 Q All right, sir. And how much higher would it be than the
25 Superior-Collat well?

1 A It would be approximately 90 feet higher.

2 Q All right, sir. And would the requested location and the
3 standard location which I have asked you to place on this
4 exhibit be approximately flat one to the other?

5 A Would you please restate that question?

6 Q Would the requested locations which you have indicated
7 about the No. 4 --

8 A Yes.

9 Q -- on your Exhibit 1 and the standard location which I
10 have asked you to place on the map --

11 A Yes.

12 Q -- be approximately flat structurally, one to the other?

13 A No. I don't believe so.

14 Q Would you explain why not?

15 A If you placed another contour in here at the regular
16 contour spacing, this proposed location should be
17 approaching a minus 1800 feet.

18 Q But you didn't choose to place such a contour, and that
19 has just occurred to you in the course of this testimony?

20 A It is a customary policy of mine in contouring maps to
21 not put contours that are uncontrolled on the map.

22 MR. UTZ: Unless they are dashed?

23 Q (Mr. Patman continuing) Well, would you tell the
24 commission how this map shows -- and this is your map you
25 prepared and brought it here to the commission and you

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1 have sworn to it.

2 Would you tell the commission now how this map shows
3 that your requested location No. 4 would be a better
4 location than the standard location which you have placed
5 on the map?

6 A It shows that we should be at a higher structural position,
7 and this, in turn, could help the porosity development
8 in the Morrow sand.

9 It is generally accepted opinion that a shallower or
10 a formation of sand or carbonate development on top of the
11 structural high would be subjected to better winnowing
12 action by waves, therefore winnowing out the finer
13 material, leaving better porosity.

14 Q You did say, I believe, however, that this standard
15 location would be quite substantially higher than the two
16 immediate offsets, the Collat and the Antweil?

17 A It appears that it should be.

18 Q All right, sir. Now, directing your attention to Exhibit
19 No. 5, I don't know whether I included this in my previous
20 request, but would you place a line on the commission's
21 copy of the exhibit which would denote a regular location
22 as in the same legal locations that I have asked you to
23 place on the other exhibits?

24 A It is this cross-section. It appears that it would be
25 about there. (Drawing)

1 Q You have placed a pencil mark on that exhibit. Maybe the
2 Examiner would make that a little clearer so that there
3 wouldn't be any question about that.

4 All right. Let me ask you, Mr. Miller, would the
5 regular location which you have marked on Exhibit 5 be
6 higher in the Straun zone than the Superior-Collat well?

7 A It should.

8 Q Would it be higher than the Atoka zone?

9 A You are talking about a regular location, now?

10 Q What you have placed on the map.

11 A Yes, sir. On the exhibit. Excuse me. I would prefer to
12 talk from structure maps than from cross-sections if you
13 want to get to structural position. This is merely to
14 show continuity of pay zones, and so forth, and is not
15 necessarily accurate as to the anticipated structural
16 position.

17 I have no idea how the tops of these formations on
18 the cross-sections would compare to what would be
19 projected from the structure maps. The structure maps
20 would be the thing that I would prefer to consider as a
21 most reliable structure position indicator.

22 Q Well, just let me ask you the general question, though.

23 A All right.

24 Q Generally speaking, would you consider a regular location
25 such as you have marked on this exhibit to be higher or

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1 lower or relatively flat as compared with the Superior-
2 Collat?

3 A Well, it appears that I have drawn it to be higher.

4 Q And that is in the Straun?

5 A That is in the Straun.

6 Q That is a regular location?

7 A Regular location.

8 Q Okay. And how about the Antweil, with respect to the
9 Antweil well?

10 A Well, that should definitely be higher than the Antweil
11 well.

12 Q Regular locations would be definitely higher in the
13 Straun? Would it also be higher than both the Superior-
14 Collat and the Antweil-Missouri-New Mexico Land Company
15 wells in the Atoka zone?

16 A It should be higher.

17 Q Now, in the Straun zone, would that regular location,
18 which you have marked on the exhibit, be about the same
19 structural position as the Pennzoil -- the Well No. 2,
20 Gulf Federal No. 1, what you have marked as Well No. 2 on
21 your exhibit?

22 A It should be the standard location, should be higher than
23 it.

24 Q Higher than that well which you have previously testified
25 was a very good well?

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1 A No. I don't recall testifying anything of the sort.
 2 Q All right, sir. Thank you for the correction. Let me
 3 ask you this about this, Mr. Miller, you have placed on
 4 this exhibit information with respect to drill-stem tests,
 5 and I note in looking at the Pennzoil Gulf Federal Well
 6 No. 1, Gulf Federal No. 1, it is your well No. 2 on the --
 7 I note that that drill-stem test appears to be favorable.

8 Can you tell the commission why this well wasn't
 9 completed in the Straun reservoir?

10 A From the Straun?

11 Q Yes.

12 A I wouldn't consider it extremely favorable. It only
 13 flowed 340 mcf of gas and decreased to 245.

14 Q 340,000?

15 A 340 mcf.

16 Q All right. Thank you. 245 mcf at the end of the test?

17 A Yes.

18 Q I believe I did make an error in my identification of the
 19 well just a minute ago, and you quite properly corrected
 20 me.

21 What I intended to ask you what is to compare the
 22 structural position of a regular location with the Pennzoil
 23 Mobil Federal 12 No. 1 which I believe you did testify
 24 was a very good well, and I misidentified that earlier
 25 as the Gulf Federal No. 1.

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1 Let me ask you now to compare the structural position
2 as shown on your exhibit of a regular location in Section
3 6 as compared with the Straun reservoir as you have
4 depicted it in your Well No. 1 on this exhibit.

5 A It would be a little bit higher. I believe you are in --
6 as to my testimony on that well, though, I do not recall
7 any testifying at all about the Straun -- potential of
8 that well. I did speak of the Cisco Canyon at ten
9 million cubic feet a day.

10 Q Well, on a drill-stem test, did this Mobil Federal 12 No. 1,
11 in fact, produce five and a half million?

12 A It did.

13 Q And that is quite a bit of gas, isn't it, Mr. Miller?

14 A That is a good test.

15 Q A good test? All right, sir. Let's move on to No. 6,
16 please, sir. Now, in accordance with my request, you have
17 placed on the commission's copy of this exhibit a regular
18 location in Section 6, and directing your attention to that
19 marking that you have made, would you -- let's see, this
20 is a net porosity map of the Morrow sand; is that correct?

21 A That's correct. Of the one particular sand, I know.

22 Q And do you, in fact, on this map show approximately the
23 same net thickness of pay as between a standard location
24 and your requested nonstandard location?

25 A No, sir. And if you would interpret a -- say a one foot

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1 contour interval and continued contouring the top of the
2 structure you would come up with approximately forty feet
3 net pay at the proposed location.

4 Q How many feet net thickness according to your map with the
5 standard location that we have been referring to have --

6 A It would have approximately thirty-two feet.

7 Q And would that be a pretty good well in this reservoir,
8 Mr. Miller?

9 A It depends on permeability.

10 Q Is that about the same number of net of thickness in the
11 Antweil Little Jewel well? And about the same as in the
12 Antweil and Allen well?

13 A It is.

14 Q All right, sir. Let's turn to Exhibit No. 7, Mr. Miller.
15 Now, this exhibit concerns the Atoka reservoir; is that
16 correct?

17 A It is correct.

18 Q Well, now, as I understand it, Mr. Miller, what Pennzoil
19 is seeking to do in this proceeding is obtain authority to
20 make a dual completion at the requested location in the
21 Straun and the Morrow, so tell me, sir, what relevancy to
22 this issue before the commission does the Atoka have?

23 A Pennzoil is interested in drilling a well at the most
24 economically favorable location to them.

25 Therefore, it is important to know if this location

1 would be penalized in the Straun and how much, or this is
2 my interpretation, at least, of the problem here, so that
3 they can decide whether they want to go ahead with this
4 location or consider moving it over and weigh the risk of
5 losing the Atoka and the Cisco Canyon for non-penalized
6 Straun location if there should be a penalty imposed.

7 Q You are not asking the commission in this proceeding, and
8 indeed, in your notice of hearing does not refer to the
9 Atoka in any way, does it?

10 A That's right.

11 Q All right, sir. There is only one Atoka producing well
12 in the south Carlsbad field; is that correct?

13 A That's correct.

14 Q And which one is that?

15 A That is the Mobil Federal 12, Pennzoil Federal 12 well.

16 Q All right, sir. You have placed on this exhibit, I believe
17 a regular location in Section 6, as I requested you to.

18 How would you compare the structural position of the
19 only producing well with the standard location?

20 A It would be approximately ten feet lower, probably, than
21 the producing well.

22 Q All right, sir. Thank you. And let's turn to Exhibit
23 No. 8. Again, this is a map presenting information with
24 respect to the Atoka zone; is that right?

25 A That's correct.

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- 1 Q According to this map, and even though you are not
- 2 requesting this commission to give you authority to
- 3 complete in this zone, tell me, please, sir, how many
- 4 feet of net porosity thickness would you have at the
- 5 standard location which I asked you to place on this
- 6 exhibit?
- 7 A It is like -- it would probably be about sixteen feet.
- 8 Q Would that be about the same thickness that you show for
- 9 the Superior-Collat well?
- 10 A It would.
- 11 Q So that a well completed at a regular location would be
- 12 insofar as this map is concerned, at least, as good a
- 13 well as the Superior-Collat?
- 14 A It would, and the Superior-Collat was not a produceable
- 15 well. It flowed 20 mcf, which is extremely poor dst.
- 16 Q It is not very good. All right, sir. Turning to Exhibit
- 17 No. 9, if you would, how would you compare the structural
- 18 position as depicted on your Exhibit No. 9 of your
- 19 requested location with the regular location which I have
- 20 asked you to place on this map?
- 21 A It would be approximately fifty feet higher.
- 22 Q Which is the --
- 23 A Excuse me. It would be fifty feet lower, the standard
- 24 location would be fifty feet lower than the proposed
- 25 location.

1 Q That information is not depicted on your map, as I read it,
2 is it, Mr. Miller? Isn't that something you just came up
3 with at the moment?

4 A I am interpreting contouring.

5 Q Well, you contour the Antweil well at minus 7000, and
6 you contour -- actually, minus 693, you draw the 7000 foot
7 contour around that well, and you contour the Antweil-Joel
8 at minus 7037, and approximately what would you -- well,
9 let's see, the standard location would be just about due
10 south of the Antweil-Joel well, would it not?

11 A Yes.

12 Q What approximate figure -- you have testified that there is
13 fifty foot difference. Let's find out approximately what
14 figure you would assign to a standard location.

15 A A standard location, I would assume from the contouring
16 here, would be approximately a minus 7050.

17 Q And approximately what contour would you assign to the
18 requested location?

19 A Approximately a minus 7000.

20 Q Well, why didn't you put a 7000 contour line around it if
21 that is your view?

22 A I stated earlier I did not put contour lines in that are
23 not controlled on my maps.

24 Q All right. Let me ask you a couple of more questions
25 about this exhibit. Would the regular location which I

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1 have asked you to put on the map there --- how would that
2 compare structurally to the Antweil- Missouri Land Company
3 well?
4 A Well, let's see.
5 Q Just approximately.
6 A Well, it would be approximately what, fifteen feet, I
7 believe, higher than the Antweil well.
8 Q All right, sir. And how would it be with respect to the
9 Superior-Collat?
10 A It would be approximately sixty-five feet higher.
11 Q Higher?
12 A Yes.
13 Q How would it be with respect to this Mobil Federal well?
14 A It would be about thirty feet higher.
15 Q And how much did the Mobil Federal well test in this
16 Straun zone?
17 A Five and a half million, as I recall.
18 Q All right. And how would it be structurally with respect
19 to the Antweil-Joel?
20 A You asked that.
21 Q Oh.
22 A Antweil-Joel.
23 Q Antweil-Joel?
24 A I'm sorry. It would be fifteen feet lower.
25 Q The Antweil-Joel is a good well?

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1 A It hasn't been produced, but I would assume it is a good
2 well.

3 Q Based on the drill-stem tests?

4 A Yes.

5 Q Do you happen to recall off-hand what it tested in the
6 Straun?

7 A No, I don't recall.

8 Q All right. Turning to Exhibit No. 10, let's see, this
9 is an isopach of the Straun.

10 What is indicated by your exhibit with respect to
11 the gross thickness of the requested location as compared
12 with the standard location which you have placed on the
13 map at my request?

14 A It should be essentially the same.

15 Q Let me ask you this, Mr. Miller. Why did you choose to
16 present a gross thickness isopach map rather than a net
17 thickness?

18 A A net thickness, there is essentially no difference between
19 a gross thickness and a net thickness in this case.

20 Q I should have said perhaps net pay isopach.

21 A Time, primarily. There is a -- we were running quite
22 short on time in preparing this.

23 Q You are not telling the commission that all the property
24 that has a gross interval porosity thickness would be
25 productive, are you?

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1 A Certainly not.

2 Q All right, sir. Exhibit 11, please, sir. This refers to
3 the Cisco lime reservoir zone, does it not?

4 A It does.

5 Q If I asked you the same question that I asked you a minute
6 ago about the Atoka as to why you brought to the
7 commission exhibits involving the Cisco lime, when all
8 you were seeking was permission to complete in the Morrow
9 and Straun, would your answer be the same as for the
10 one that you gave me with respect to the Atoka?

11 A It would.

12 Q All right, sir. According to your map, your Exhibit No. 11,
13 Mr. Miller, how many feet of pay in the Cisco Canyon zone
14 would there be at the standard location which you have
15 marked on this exhibit at my request?

16 A Well, this is not intended to be a map of the net feet of
17 pay. This is a carbonate isopach which may not all be
18 porous. It indicated approximately twenty feet of
19 carbonate that could be anticipated at that location.

20 Q If I recall your testimony correctly, Mr. Miller, you
21 testified with respect to the pay, net pay -- gross pay
22 in the Straun zone, that there would be about the same
23 amount at the requested location and at the regular
24 location which I asked you to place on that exhibit. Was
25 that your testimony?

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1 A Gross carbonate thickness, I said. No. I didn't say
2 anything about pay.

3 Q In the Straun zone?

4 A Yes. I said there would be approximately 200 feet of
5 carbonate lime anticipated there.

6 Q Well, if you believe that you do have approximately the
7 same amount of carbonate lime thickness at these two
8 locations, why have you come here to ask for a special
9 permission from this commission to move from a regular
10 location to an irregular location?

11 A I think we brought out that this proposed location is the
12 most desirable for the other three zones, and it is
13 equally as desirable for the Straun as the standard
14 locations.

15 Q But the only permission that you are asking from this
16 commission with respect to irregularity of locations is
17 with respect to the Straun zone; is that correct?

18 A That's correct. We do not have to ask for permission for
19 the other location, because it is a standard location.

20 MR. PATMAN: I believe I have no further questions
21 of Mr. Miller.

22 MR. UTZ: Mr. Kellahin?

23 MR. KELLAHIN: Could I have a couple of minutes?

24 MR. UTZ: Yes.

25 (Whereupon, a brief recess was held.)

1 MR. UTZ: The hearing will come to order.

2 MR. KELLAHIN: I just had a couple of questions,
3 Mr. Utz. I would like first to ask Mr. Brown.

4 CHARLES A. BROWN

5 called as a witness, having been first duly sworn, testified
6 as follows:

7 REDIRECT EXAMINATION

8 BY MR. KELLAHIN:

9 Q Mr. Brown, throughout the testimony there has been
10 discussion of the Superior-Collat well, and I believe
11 you testified that you were part owner in that well?

12 A Yes, sir. That's correct.

13 Q What is the other ownership?

14 A Superior owns approximately fifty percent of the well,
15 and the remaining fifty percent is owned by Pennzoil
16 Petroleum Corporation, Gulf and Mobil.

17 MR. KELLAHIN: That's all the questions I have of
18 Mr. Brown.

19 MR. UTZ: Are there other questions of the witness?

20 MR. KELLAHIN: I have another question of the
21 other witness.

22 MR. UTZ: Okay.

23 DAVID MILLER

24 called as a witness, having been first duly sworn, testified
25 as follows:

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REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Miller, Mr. Patman asked you, I think, as to each formation to compare the standard location with other wells in this area. Is there valid basis for making that type of a comparison in these wells?

A I don't believe so.

Q And why do you say that?

A Well, some of these other wells around here are rather poor wells, particularly the Antweil well to the west or to the -- excuse me, to the east. There is a poor Morrow well.

Q Well, you wouldn't want to compare your Morrow structural position or the type of formation with a standard location on this unit?

A That's right.

Q Are there comparable -- I mean can you make that type of comparison?

A No, I don't think so.

Q Now, how about the other wells in the area?

A Well, the Mobil Federal 12 to the south is the Atoka well, which is producing more gas than the Superior-Collat well at the present time.

Q Now, the Superior-Collat well is a Straun well?

A It is a Straun well.

1 Q And if I understand you correctly, you want the type of
2 location in the Atoka that would be comparable to the
3 Mobil Federal No. 1?

4 A That's right.

5 MR. KELLAHIN: That's all I have of the witness.

6 MR. UTZ: Are there other questions? Witnesses may
7 be excused.

8 (Witnesses excused)

9 MR. UTZ: That completes your case?

10 MR. KELLAHIN: Yes, sir.

11 MR. UTZ: And your cross-examination -- do you have
12 a witness to put on, Mr. Patman?

13 MR. PATMAN: Yes, I do, Mr. Utz. With your
14 permission, sir, I would like to call as a Superior witness
15 Mr. Terry Clay. I believe Mr. Clay has been sworn, but I will
16 ask him that.

17 MR. UTZ: Yes. He has been sworn.

18 TERRY CLAY

19 having been first duly sworn, according to law, upon his oath
20 testified as follows:

21 DIRECT EXAMINATION

22 BY MR. PATMAN:

23 Q Mr. Clay, I will ask you to state your name, address, and
24 your employment position for the record, please, sir.

25 A I am Terry Clay, and I work for Superior Oil Company in the

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1 capacity of a petroleum engineer, title of senior
2 petroleum engineer, and my primary responsibility is in
3 the southeast New Mexico area as well as portions of
4 West Texas.

5 Q Is the south Carlsbad field within your area of
6 jurisdiction?

7 A Yes, it is.

8 Q Mr. Clay, have you testified before the New Mexico Oil
9 Conservation Commission previously, and have you been
10 accepted as an expert for purposes of testimony?

11 A Yes, I have.

12 MR. PATMAN: Are there any questions about his
13 expertise, Mr. Examiner?

14 MR. UTZ: He has qualified previously.

15 MR. PATMAN: Thank you, sir.

16 Q (Mr. Patman continuing) I would like to ask you a couple
17 of other questions about your background and qualifications
18 with particular reference to the exhibits that you are
19 going to present, Mr. Clay.

20 I believe you are educated as both a geologist and
21 an engineer; is that correct?

22 A Yes, that's correct. And I worked five years as a
23 geologist after getting out of school in '57, and then
24 went back to school to receive a Master of Engineering
25 degree and have worked since '65 in the engineering

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1 capacity.

2 However, in our company on development well locations
3 I handle and do the geology too -- as well as the
4 reservoir engineering, pointing toward the objective of
5 drilling or not drilling a particular well location.

6 Q You are really what might be called a development
7 engineer, Mr. Clay, are you not, with responsibilities as
8 you indicated in the fields of development geology
9 reservoir engineering and the economics of particular
10 well locations?

11 A That's correct. That's correct.

12 Q Mr. Clay, was the Superior-Collat well which was the
13 first well completed in the Straun zone in this field
14 drilled on a base of your geology?

15 A Yes, it was. Of course, the discovery well in the field
16 was the Mobil Federal 12 No. 1 which was completed in the
17 Morrow and Atoka, and then the first completed well in
18 the Straun reservoir was Superior's Collat No. 1 well in
19 the south Carlsbad field.

20 Q I believe that you have worked in the south Carlsbad field
21 area since the discovery well came in in January of '69;
22 is that correct?

23 A That's correct.

24 Q All right, Mr. Clay, I will ask you if you have prepared
25 or have had prepared under your supervision a structure map

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1 contoured on the top of the Straun zone in the south
2 Carlsbad field.
3 A Yes, I have.
4 MR. KELLAHIN: Could we have copies of the exhibit?
5 MR. PATMAN: Indeed, sir. I will ask that we
6 distribute copies, maybe, at this time.
7 MR. UTZ: Have these been marked?
8 MR. HATCH: Is this No. 1?
9 MR. PATMAN: Yes. I don't believe these other copies
10 have a mark on them.
11 (Whereupon, Superior's Exhibits 1 through 5 were
12 marked for identification.)
13 Q (Mr. Patman continuing) Okay, Mr. Clay, I ask you to draw
14 your attention to what has been marked for identification
15 as Superior's Exhibit No. 1 and ask you first of all to
16 indicate what the yellow color is on the map.
17 A The yellow color on the map is Superior's acreage in the
18 immediate area of the Carlsbad field area.
19 Q And you might mention the color code on the wells.
20 A Right. Down in the bottom left hand corner are the four
21 zones that have been discussed previously with the primary
22 zone here being the Straun which is colored in red and the
23 blue coloring representing the Morrow zone, and it would be
24 noted that there are some four wells in the field proper
25 that are dual completed which through here in the Straun-

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1 Morrow zone also the color coding in Section 31 in the
2 immediate area of the Antweil well Little Jewel, Antweil-
3 Allen wells, represents Superior's acreage that was farmed
4 out and with the overriding royalties represented there in
5 those particular proration units.

6 The red outline represents the Straun proration units
7 of the wells that have currently been completed to date in
8 the Straun reservoir.

9 Q In preparing this structure map, Mr. Clay, did you rely on
10 copies of all the well locations that were available to
11 you, and approximately how many were those?

12 A Yes, I did. There were some twelve wells in here that I
13 had access to the electric log data, and in preparing this
14 structure map some twelve wells that did, in fact,
15 penetrate the Straun and the Straun zone.

16 Q All right, sir. I will ask you, Mr. Clay, if your map
17 doesn't indicate -- I will ask you what your map
18 indicates with respect to the relative structural
19 position of the -- what you have marked here with a red
20 arrow as a standard location.

21 And you might just explain what is meant by that
22 arrow and that circle.

23 A The standard location there is an arrow pointing to that
24 well is a well location that would be standard for the
25 south half of Section 6, being located 1980 from the west

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1 line and 1980 from the south line of Section 6 in 23 South,
2 27 East, and at that particular location this well, and
3 based on the log data, well drilled at that position is
4 indicated to be approximately 100 feet high to the Antweil-
5 Missouri-New Mexico Land well, approximately flat
6 structurally flat Antweil's Joel No. 1 well.

7 Q And was that a good well, Mr. Clay?

8 A Yes, it was. The open flow of that particular well was
9 8445 mcf a day.

10 Q I might just interrupt you at this point and ask you if
11 you haven't also placed on this exhibit drill-stem test
12 data, certain data by each of the wells or by a number of
13 wells, and we won't go over that in detail, but it is
14 provided here, and you will be discussing certain relevant
15 parts of it as your testimony proceeds; is that correct?

16 A Yes. The drill-stem test data and the test data on this
17 map applies to the Straun zone only. That includes the
18 open flow data, the test data of the only well that is
19 currently producing gas in the Straun, and also well,
20 primarily those three.

21 The drill-stem tests, flow data, which includes open
22 flow data as well as test data or in arriving at
23 deliverabilities.

24 Q Mr. Clay, is the location that you have denoted on your
25 exhibit as standard locations and indicated by that red

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1 arrow the same locations that I asked Mr. Miller to place
2 on each copy of the exhibits which he presented to the
3 commission and about which I examined him on cross-
4 examination?

5 A It should be approximately the same location.

6 Q Well, it was intended to be the same location; is that
7 correct?

8 A That's correct.

9 Q All right, sir. And unless there is some error in
10 measuring, it would be the same location? Did you
11 comment on the relative structural position of the
12 standard location as compared with the Superior-Collat
13 well?

14 A The standard location as shown on this structure map should
15 encounter the Straun at a minus 7050, and that would be
16 approximately eighty feet high to the Superior-Collat well,
17 which is currently producing from the Straun reservoir.

18 Q How would the structural position compare with the
19 Pennzoil Mobil No. 2 Federal Well?

20 A The standard location should be also slightly high to the
21 Mobil Federal well, the Pennzoil Mobil Federal in Section
22 12, it should be approximately thirty feet high.

23 Q And was that a very good well, Mr. Clay?

24 A Well, the well tested five and a half million on drill-
25 stem tests, and appears to be a well of commercial worth.

1 That is correct.

2 Q So it is quite plain from your exhibit, is it not, that a
3 standard location such as you have indicated by your red
4 arrow would be commercially productive in the Straun zone?

5 A In my opinion, and based on the surrounding wells, a
6 standard location would be productive in the Straun zone.

7 Q Is there anything more you want to add about this exhibit,
8 Mr. Clay?

9 A I believe not.

10 Q All right. Let's turn to Exhibit No. 2, please, sir.
11 First of all I will ask you if this exhibit was prepared by
12 you or under your supervision.

13 A Yes, it was.

14 Q And what is the exhibit, just to generally explain?

15 A Exhibit 2 is a net pay isopach of the Straun zone, and this
16 is a net pay that is determined from log analyses and
17 test data to be productive of gas.

18 Q I will ask you if the yellow coloring, the well color code
19 and the test data are the same as those which appear on
20 Exhibit No. 1.

21 A Yes, it is.

22 Q All right, sir. Did you indicate what source you used to
23 pick the net pay in each instance?

24 A Well, the sources of net pay are primarily from gamma ray
25 sonic logs that were run through the Straun interval.

1 However, also, the drill-stem test and the test data from
2 these wells were taken into account, arrived at the net
3 pay in that well bore in the Straun reservoir.

4 Q I will ask you approximately how many feet of net pay does
5 your exhibit indicate would exist other than what you have
6 marked with a red arrow as a standard location.

7 A The standard location, and based on the surrounding well
8 control, in my opinion, the well should penetrate
9 approximately twenty-eight feet of net pay in the Straun
10 zone at this standard location.

11 Q Now, how would that compare with the net pay penetrated
12 in the Straun zone by the Superior-Collat well?

13 A In the Superior-Collat well, it is believed that there is
14 thirty-four feet of pay.

15 Q How would this compare with the Pennzoil Mobil No. 2 Federal
16 Well in the Pennzoil Mobil's 12 No. 2?

17 A 12 No. 1. Pennzoil 12 No. 1, located in Section 12 has
18 nineteen feet of net pay.

19 Q Is there anything you want to add about this, Mr. Clay?

20 A I would like to point out that around the edge of the
21 field or around the edge of this isopach map it would be
22 noted that in most all cases there have been drill-stem
23 tests conducted in the Straun reservoir at these
24 particular wells, and this test data is noted on here, and
25 in addition to that, there is, as mentioned previously, the

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1 Collat well has been on the line for over a year, and this
2 well has produced approximately one million cubic feet of
3 gas, along with 22,000 barrels of condensate.

4 This data is also noted on the map.

5 Q All right. Shall we turn to Exhibit No. 3, Mr. Clay?
6 Was this exhibit also prepared by you or under your
7 supervision, Mr. Clay?

8 A Yes, it was.

9 Q And is that structure map contoured on the Morrow zone;
10 is that correct?

11 A That's correct.

12 Q And are the yellow colorings, the well color codes and the
13 test information on this exhibit the same as those matters
14 that were on Exhibits Nos. 1 and 2?

15 A Yes. The yellow coloring, as well as the purple outline
16 represents the acreage in which Superior has an interest
17 in. However, the red outlines are proration unit outlines
18 for the Morrow zone in lieu of the Straun zone that was
19 shaded on the other maps.

20 Q But you didn't have an opportunity to indicate those on
21 your exhibit, did you?

22 MR. HATCH: They are not indicated on this exhibit.

23 MR. PATMAN: Mr. Examiner, may we withdraw that copy
24 that we gave you and ask you to substitute this other copy?

25 I think we didn't have time to put those unit outlines on all

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1 the copies of our exhibit.

2 MR. UTZ: Oh, the red lines?

3 MR. PATMAN: Yes, sir.

4 THE WITNESS: Right. The proration units.

5 MR. PATMAN: That would be the difference.

6 MR. UTZ: It is No. 3?

7 MR. PATMAN: Yes, sir, it is.

8 MR. UTZ: You may proceed.

9 MR. PATMAN: Thank you, sir.

10 Q (Mr. Patman continuing) Mr. Clay, would you just comment
11 briefly on the structural position of what you have
12 indicated as a standard location by your red arrow with
13 respect to other wells that have been completed in the
14 Morrow zone?

15 A At a standard location in Section 6 and based on the same
16 data, similar data that was used, the Straun reservoir,
17 it appears that the standard location will be twelve to
18 thirty feet high, structurally high to the Antweil-Missouri-
19 New Mexico Land well.

20 It would be approximately seventy-five feet high to
21 the Superior-Collat well, and slightly low to Pennzoil's
22 Mobil Federal No. 12, 12 No. 1, excuse me.

23 Q How would it compare to the Antweil-Allen well? Did you
24 mention that?

25 A The Antweil-Allen well, it would be approximately flat with

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1 the Antweil-Allen well in this Morrow horizon.

2 Q And what was the calculated open flow capacity on the
3 Allen well?

4 A The Allen well was 3468 mcf a day.

5 Q That is three and a half million cubic feet?

6 A That's correct.

7 Q Would this standard location be a productive in the
8 Morrow zone, reasonably productive in the Morrow zone, Mr.
9 Clay?

10 A In my opinion, in view of the offset productions standard
11 locations would encounter productive pay in the Morrow
12 zone.

13 MR. PATMAN: Excuse me just a moment, Mr. Examiner.

14 (Whereupon, a discussion was held off the record.)

15 MR. PATMAN: Thank you, Mr. Examiner. May I proceed?

16 MR. UTZ: Yes.

17 Q (Mr. Patman continuing) Mr. Clay, I will ask you to direct
18 your attention, please, sir, to Exhibit No. 2 of Pennzoil
19 United. That was the calculations placed in the record by
20 Mr. Brown concerning the economics of a dual completion
21 in the Straun and Morrow zones at the location that has
22 been requested by Pennzoil.

23 Is it your opinion that the reserves in these two
24 zones at that location would be substantially higher than
25 are shown on Pennzoil's Exhibit No. 2?

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1 A In my opinion, the reserves in the Morrow and the Straun
2 together are somewhat higher than the six bay that has
3 been purported in this Exhibit No. 2.

4 Now, the Straun reservoirs, it was pointed out there
5 have been three pressures taken in Superior's Collat well,
6 in the Straun.

7 The original pressure was 5610 after 56 days shut-in
8 period. The second pressure taken in May of 1970 was 4295
9 after 46 hours. However, this was a build-up test, and an
10 extrapolation of the build-up indicates that had the well
11 been shut-in a sufficient period of time that the reservoir
12 pressure at that time would have been 4590.

13 Q Is that shown on one of your exhibits, Mr. Clay?

14 A That is shown on Exhibit 5, which is the next exhibit.

15 Q All right. We may just be taking that a little out of
16 order, but we will ask the Examiner to refer to Exhibit
17 No. 5 in connection with your testimony.

18 A And again, in August of this year another shut-in was
19 taken on the same well which indicated 2887 psi after 72
20 hours shut-in, and in view of the lack of build-up based
21 on the previous build-up testimony, it is believed that the
22 last test pressure test is conservative, although the
23 other four exhibits, material balance are a pressure --
24 what is commonly referred to as a pressure divided by the
25 super compressibility plot against a cumulative.

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1 It indicates that in the Straun reservoir only that
2 the Collat should recover four and a half billion cubic
3 feet of gas down to a pressure of approximately 500 pounds,
4 and I might add that also the Straun reservoir produces
5 eighteen to twenty barrels of condensate per million cubic
6 feet of gas, and it will be noted that on this pressure
7 curve that it is not a straight line like you often see in
8 a dry gas reservoir, and it is believed that the reason
9 for this is this condensation that is taking place in the
10 reservoir.

11 Q You would compare that four and a half billion cubic feet
12 ultimate recovery which you just mentioned with a total of
13 six billion which was used by Mr. Brown on his Exhibit
14 No. 2? And that is, you are referring only to the Straun
15 zone; is that correct?

16 A That's correct. In other words, it is four and a half
17 billion -- would be a substantial part of this six billion
18 that have been purported from two zones, the Straun and
19 the Morrow, and therefore, I believe that the reserves in
20 Exhibit 2 are quite conservative.

21 Q And let me ask you, if you will, just do a little
22 arithmetic for us, Mr. Clay. You indicated that there would
23 be twenty-two barrels of condensate or twenty barrels,
24 maybe is what you said, to use a round number, per million
25 cubic feet.

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1 I will ask you to multiply that by the four and a half
2 that you indicate four and a half billion cubic feet of
3 gas recovery, that you indicated and tell us approximately
4 how many thousand barrels of condensate would be
5 recovered.

6 A Well, it is approximately 90,000, and it compares favorably
7 with the 90,000 or 89,000 that they have shown on this
8 Exhibit 2.

9 Q Mr. Clay, taking into account your testimony with respect
10 to the four and a half billion cubic feet ultimate
11 recovery of gas and the 90,000 barrels recovery of
12 condensate, would you have an opinion with respect to what
13 single completion in the Straun at this location would
14 return a profit to the persons who drilled it?

15 A In my opinion, a well similar to the Collat well will
16 definitely return a profit. I will leave it at that.

17 Q Well, let me ask you this. I believe you have indicated in
18 your previous testimony that a well located in the Straun
19 at what we have heretofore been describing as a standard
20 location in Section 6 would be at least as productive as
21 the Superior-Collat.

22 Would you therefore conclude that such a well would
23 also pay out and return a reasonable profit to the
24 operator?

25 A In my opinion, it would. It would pay out and also make a

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1 profit in the Straun zone only.

2 Q Do you recall Mr. Brown's testimony that he said that the

3 recoveries at a standard location would not be substantially

4 different from the recovery at the requested location, and

5 would that seem to be in accordance with the conclusions

6 that you have just stated?

7 A Would you restate the question?

8 Q Do you recall that Mr. Brown testified that the economic

9 return on a dual completion at a standard location in

10 Section 6 would be approximately the same as the economic

11 recovery at the requested location, and does that

12 conclusion support the testimony which you have given?

13 Would that be in accordance with your testimony?

14 A Well, I don't -- I don't know how the record reads, but in

15 my opinion, a well located at the unorthodox location in

16 the Straun should recover more gas than the well located

17 at the standard location. Be noted from Exhibit 2 in

18 particular that the well at the unorthodox well location

19 should have a higher net pay and consequently a higher

20 producing capacity, and consequently a newer -- that well

21 to recover larger quantities of gas as compared to

22 unorthodox locations -- or the orthodox, excuse me.

23 Q But a completion at the orthodox location would be as

24 economically favorable a site, in your opinion, as the

25 Superior-Collat well which is the medial offset?

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- 1 A A well located at the orthodox location would, in my
- 2 opinion, be similar to the Superior-Collat well, that's
- 3 correct.
- 4 Q Let me ask you just a couple of questions about pressures,
- 5 Mr. Clay. If the pressure draw-down in a well which
- 6 might be drilled at the requested location, here in this
- 7 hearing, were the same as the pressure decline
- 8 demonstrated in the Collat well, then in your opinion,
- 9 would there be net uncompensated drainage from the
- 10 Superior-Collat well to the Pennzoil well in Section 6?
- 11 A Well, if the -- the pressure in the offset Pennzoil well
- 12 at an unorthodox well location follows the pattern of a
- 13 Collat well in that the pressure draws down and reaches
- 14 a comparable pressure to the Collat well, then it is
- 15 reasonable that the interference or the drainage area
- 16 between these two wells will be at the midpoint between
- 17 the wells, which would be all in Superior's acreage and
- 18 would result in a drainage from Superior's -- underneath
- 19 Superior's acreage.
- 20 Q And the Superior-Collat well is the only well in the
- 21 Straun which has been produced and is the only well on
- 22 which you have information with respect to pressure
- 23 declines?
- 24 A That's correct.
- 25 Q Is there anything you wanted to add, Mr. Clay?

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1 A No.

2 MR. PATMAN: I believe, Mr. Examiner, that completes
3 my direct examination of Mr. Clay.

4 MR. UTZ: Any questions of Mr. Clay?

5 MR. TRAYWICK: I would like to ask a question, if I
6 may, Mr. Examiner. I am Carl Traywick with the U. S. G. S. We
7 are involved here with cross-southwest federal land. May I
8 see Exhibit 1, please?

9 CROSS-EXAMINATION

10 BY MR. TRAYWICK:

11 Q Mr. Clay, on this structure map on top of the Straun there
12 is no type reference indicated here, no reference point.
13 The top of the Straun marker that you picked is the top
14 of the porosity in the Straun for this interval?

15 A The subsea elevation is the top of the porosity. It will
16 be noted in this Antweil-Allen well some of these wells
17 have porosity immediately in the top, some of them ten
18 or fifteen feet below the top, but in the particular case
19 of the Antweil-Allen well, it has a porosity two to four
20 feet below that subsea point of 7028, and so this is
21 what I intended to do was to contour the map on the
22 productive zone.

23 Q Yes.

24 A Which also is the zone in which the net pay was taken from.

25 Q Okay. On Exhibit 2, your isopach which is called the net

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1 pay isopach, what you picked this control point from sonic
2 logs, what porosity cutoffs did you use for net pay
3 determination?
4 A The porosity cutoffs that I used from sonic were -- are
5 four percent, and the four percent by checking some of
6 these wells in the area and checking the porosity versus
7 the drill-stem tests, it is believed that four percent is
8 probably a pretty reasonable cutoff.
9 Q Did you say you used a core analysis?
10 A No, I did not.
11 Q You didn't have any control between --
12 A I used the sonic log.
13 Q -- the core and the sonic velocity?
14 A And the drill-stem data to provide this.
15 Q What velocity did you use on interpreting the sonic?
16 A I would have to look in a log. I think it is 22,000.
17 Q 22,000?
18 A Let me look at a log and be sure on that. It may be
19 21,055 or -- I'm sorry for the delay. I don't seem to have
20 it written on there. I am going to get it for you, because
21 I have got a porosity scale here.
22 Q It is not really important.
23 A The answer is 22,000.
24 Q 22,000?
25 A Right.

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- 1 Q What is standard for a lime carbonate type faces reservoir,
- 2 about 21,000 or --
- 3 A Yes.
- 4 Q Is it a judgment of sort of a --
- 5 A Any carbonate with inner granular porosity only a lot of
- 6 times 215 is --
- 7 Q Is pretty well accepted?
- 8 A But in a vugular where you have got any vugs --
- 9 Q Or fractures?
- 10 A 22,000 is pretty reasonable.
- 11 Q Is it not hard to establish this without correlation of
- 12 core analysis to back into a figure to use for
- 13 interpretation without correlation of the sonic logs and
- 14 core analyses?
- 15 A Well, that would be -- of course that would be the ideal
- 16 thing, that you had cores to plot core porosity versus
- 17 sonic porosity.
- 18 Q Right.
- 19 A In the innersection to determine that.
- 20 Q Is any core analysis available in the field?
- 21 A There is -- there isn't any available to me. I understand
- 22 that there was one well in there that had attempted to
- 23 core.
- 24 Q The Federal well was cored?
- 25 A Attempted.

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- 1 Q Partially or mostly? Was it analyzed?
- 2 A Yes, sir. But I'm not sure that is the well. We have
- 3 one core.
- 4 Q Okay. The exhibit indicates this net pay isopach. Does
- 5 that take into consideration water content on the net pay
- 6 connotation?
- 7 A The net pay is simply going down one of these sonic logs
- 8 and taking it.
- 9 Q Just a thickness?
- 10 A It cores interval in excess of four percent.
- 11 Q No consideration for water content?
- 12 A Well, there has been no apparent water, at least water in
- 13 the Straun. Now, if you are -- are you referring to
- 14 connate water?
- 15 Q Yes, sir.
- 16 A Now, not on the net pay. Now, of course, I have used this
- 17 map and perimetered this net pay isopach to come up with
- 18 reserves, and you have to use connate water then.
- 19 Q Right. Did you work the -- was this a heavy location when
- 20 you worked the sonic logs?
- 21 A In some cases I did, because there were a couple of cases
- 22 where I didn't have drill-stem test data in that particular
- 23 zone.
- 24 Q Did you find quite a range of water saturation from one
- 25 control point to the next within the four porosity above

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1 four percent?

2 A Off hand, I just don't remember whether it was varied from
3 a hundred to forty holes or whether it varied from eighty
4 to a hundred. I'm sorry. I --

5 Q Well, would you characterize this reservoir as a low
6 porosity, high water saturation type reservoir --

7 A No, I wouldn't.

8 Q -- that doesn't produce water because the permeability is
9 slow?

10 A The average porosity has determined from log data and
11 Straun reservoir is eight percent and --

12 Q Average porosity is eight percent?

13 A Yes. And so in view of that, I wouldn't consider the low
14 porosity. Now, certainly there are exceptances.

15 Q Yes. That is a question of relativity.

16 A This is a porosity of feet in some -- an average or taken
17 the porosity of feet from some eight or ten wells, and
18 averaging it and come out with about eight percent, and
19 it is pretty representative of the reservoir.

20 Q Well, would you think that to evaluate the reservoir
21 quality as we are attempting to do here that some
22 cognizance should be taken of the quality of the pay
23 within the thickness limits above four percent in terms of
24 water saturation and --

25 A I'm sorry. I'm trying to locate some of this data here.

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- 1 Q The reason I ask is the data that is available to us shows
- 2 there is quite a range of water saturation and that the
- 3 average water saturation for the productive part of the
- 4 reservoir is pretty high, and that there is quite a range
- 5 from one zone -- one well to the other.
- 6 A Well, I would have to say that right now that we have got
- 7 producing history on one well and that is the Collat well
- 8 has not exhibited any water production. Occasionally it
- 9 will make a barrel of water.
- 10 Q Right.
- 11 A Which is indicative of low to medium low water
- 12 resistivity or water saturation.
- 13 Q But with eight percent average porosity and associated low
- 14 permeability you could have high water saturation, which
- 15 wouldn't produce -- produce water because of the relative
- 16 water permeability, well, relative permeability to water,
- 17 or would you?
- 18 A Yes. Generally -- as a general rule, the lower the
- 19 permeability, the higher the water saturation.
- 20 Q Yes.
- 21 A But there is no definite correlation between porosity and
- 22 permeability a lot of times, and so I don't know about the
- 23 third perimeter.
- 24 Q Well, my only point is that perhaps we should have made
- 25 some quality sophistication of the net pay isopach to back

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1 into the issue that is at stake here.

2 I think probably we have belabored that enough. One
3 more question, Mr. Clay. On your Exhibit 4 you get quite
4 a change of slope there which you attribute to possible
5 retrograde, pull behavior. Do you have any reservoir
6 samples that show that this is a retrograde condensation
7 type reservoir or any recombined laboratory samples?

8 A I haven't seen the data. Now, I understand that there may
9 have been some recombined for this purpose, for the
10 purpose of determining separate conditions and so forth
11 and so on, and so I would have to say that all I -- what
12 I am basing this on primarily is the performance of a well
13 out there.

14 Q Yes.

15 A And also I have seen surface samples separate as opposed
16 to liquid samples and the analysis on those, but I -- it
17 recombined back to reservoir pressure.

18 Q Well, my point --

19 A I don't --

20 Q Well, I guess I really didn't make my point clear. What I
21 am trying to say is do you have any evidence of retrograde
22 behavior rather than the assumption on the pressure,
23 superior compressibility versus cumulative curve?

24 I was wondering what you based that --

25 A Are you talking about retrograde reservoir or retrograde

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1 coming up the tubing? There is quite a difference, as you
2 are aware --
3 Q Yes.
4 A -- of what is taking place.
5 Q Well, what I don't quite understand, we predict reserves
6 from this coordinate paper pressure curve for your Collat
7 well by your Exhibit No. 4 --
8 A Right.
9 Q -- the slope of the line which should be linear changes
10 from point no. 2 to point no. 3.
11 A That's correct.
12 Q And in your testimony you attributed this, as I understand
13 it, to retrograde condensation reservoir conditions.
14 A I suggested that this is a possibility in that there -- as
15 we all know --
16 Q Right.
17 A And an oil reservoir, we go through the bubble point.
18 Q Yes.
19 A We see this behavior, a change of slope.
20 Q Yes.
21 A And from this the pressure data that has been run on this
22 well after a billion cubic feet of gas has been taken out
23 of it and 22,000 barrels of condensate, it also is
24 suggesting that this may be a possibility that we are --
25 that we have gone through the critical point here, and do

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1 have some retrograding taking place, and we suspect this
2 further from some of the bottom hole pressure, the gradient
3 from the bottom hole pressures that we have run, and we
4 are seeing essentially gas, a gas column as we run a
5 gradient, yet the well produces condensate.

6 Q Well, would you describe this as evidence of efficiency
7 on which to base your conclusions that the slope changed
8 because of retrograde situation within accepted
9 engineering limitations?

10 A Right now I would have to say that I lean in favor of this
11 possibility. From other fields that I have read about we
12 know that in retrograde reservoirs that early in the life
13 of that field that we get a pressure draw-down that is
14 greater and at later producing periods in that field and I
15 am relating to technical data that has been published.

16 Q Yes.

17 A As well as what I am saying here in the field.

18 Q Yes. But there is nothing in your testimony that indicates
19 that there is any data that supports your assumption other
20 than analogy and judgment and experience. Let me --

21 A Well, if you take this net pay isopach and take the net
22 pay or the porosity in that well, you will arrive at a
23 close figure to this p over c .

24 This is a power volume determination of what -- how
25 much gas is in that reservoir. When you take this net pay

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1 times porosity times one saturation times best of gas the
2 gas in place is what you come up with.

3 Q So volumetric --

4 A So volumetrically there is a relationship so that it is
5 going to zero in on this exactly, but this is pretty close
6 surprisingly.

7 Of course, volumetrics many times do not match or have
8 to be revised to match actual performance data.

9 Q If you would assume that this was not a retrograde
10 situation would it make you suspect the magnitude of the
11 measurement of point no. 3 since it changed slope or would
12 you attribute it perhaps to changed permeability of local
13 condition?

14 A Well, as I pointed out in point 2 was a buildup, 46 hour
15 buildup, so I know that from Exhibit 5 that it wasn't
16 completely built up.

17 Q But it was extrapolated to --

18 A Two or three hundred pounds above it, and also from this
19 data which was pressure versus time I made a test to
20 determine how long -- approximately how long it would take
21 for that well to come to static conditions, and point no. 3
22 is a lesser period of time than is required for it to come
23 to static conditions, and so I am -- I believe that point
24 no. 3 is probably conservative.

25 Q But there is some uncertainty as to the accuracy of the

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- 1 points since they don't line up as they theoretically
- 2 should?
- 3 A It is the best data that is available right now.
- 4 Q Right. But with such uncertainties possible, maybe even
- 5 probable, do you think that the reserves are accurate
- 6 within pretty close limits?
- 7 A Yes. I think they are, because as I mentioned before, I
- 8 tackled it from poor volume standpoint and took the
- 9 porosity feet in every well.
- 10 Q Yes, but --
- 11 A And took the best water saturation that I could get, which
- 12 was from a synergetic log that has been run.
- 13 Q From the one well?
- 14 A Well, it was that one well, and then plus I have
- 15 calculated water from other wells and arrived at a
- 16 reasonable connate water saturation.
- 17 Q But you never did say what that range of water saturation
- 18 that you used was.
- 19 A Right.
- 20 Q Or the magnitude of the average reservoir water saturation.
- 21 A Well, to get at poor volume you have got to arrive at an
- 22 average water saturation, right?
- 23 Q Yes.
- 24 A Unless you want to do it foot by foot.
- 25 Q Of course, our acre-feet map is based on many control points?

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1 A Right.

2 Q The thickness, but the water which enters into
3 volumetrics which you match up with performance --

4 A Yes.

5 Q -- is based on two control points?

6 A The water.

7 Q The water?

8 A Well, it is based on a few more than that, actually. If
9 you -- I have calculated water on several of those wells,
10 water saturation, but let's keep in mind that the Straun
11 reservoir was drilled with brine water and anytime you
12 drill a reservoir with brine water you are going to -- the
13 invasion that takes place out in this reservoir is going to
14 affect the resistivity reading on locations, and
15 oftentimes you have a very difficult time coming up with
16 accurate water saturation if that well has been drilled
17 with brine.

18 Now, there are wells in there that have been drilled
19 with mud, fresh mud, and in my opinion, this is the more
20 accurate wells or the wells that are more representative of
21 obtaining these log calculations and we run into this quite
22 often.

23 Q Yes. If you are in an invaded zone, why, then, you are
24 not reading the --

25 A Well, it is in --

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1 MR. KELLY: Mr. Examiner, I would like to make an
2 objection to this line of testimony. I think that we are
3 getting into testimony by a witness who is not sworn, and I
4 think you are also going against the rules of this commission
5 that require an attorney to present questions, and the fact
6 that -- this is certainly being violated in this case, and I
7 think we are going way beyond the issue in this case as
8 whether the unorthodox location of the Straun should be
9 allowed.

10 MR. HATCH: What I think he should do is confine his
11 questions, rather than testifying.

12 MR. TRAYWICK: Let me just put it simply that the
13 uncertainties that I note here which may be based on my
14 inadequate knowledge, although we have looked at this reservoir
15 pretty good, may make it difficult to predict with the known
16 production history on the Collat well the reserves and the
17 extent of reservoir influence which would make it very difficult
18 then projecting that same line of thinking.

19 MR. PATMAN: Mr. Examiner, I am going to ask that this
20 all be stricken. It is nothing but testimony from an unsworn
21 witness.

22 It is not a question, as Mr. Kellahin pointed out. I
23 know that Mr. Traywick is interested in this matter, but I just
24 think that that doesn't authorize him to come here and present
25 the testimony, and that is what he is doing.

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1 MR. HATCH: I think the examiner can certainly tell
2 the difference between testimony by sworn witnesses without
3 striking that part of the questions.

4 MR. UTZ: We will leave it in the record for whatever
5 it is worth.

6 Do you have any further questions?

7 MR. TRAYWICK: No, sir. I would like to finish one
8 sentence I was interrupted on.

9 MR. UTZ: All right, sir.

10 MR. TRAYWICK: That is may be difficult to predict
11 the reserves of a well with the production information we have
12 on the Collat, maybe also much more difficult to predict the
13 reserves of an undeveloped location.

14 Thank you, Mr. Examiner.

15 MR. UTZ: Mr. Kellahin, do you have some questions?

16 MR. KELLAHIN: Yes, sir.

17 CROSS-EXAMINATION

18 BY MR. KELLAHIN:

19 Q Mr. Clay, on your Exhibit No. 1, I didn't quite understand
20 what these figures were by your Superior-Collat well.

21 A On Exhibit 1 the figures there read from top to bottom --
22 there is a legend on the bottom of the exhibit. The minus
23 7131 is the top of the productive Straun zone, and the
24 south Carlsbad field, completion dates -- this well was
25 November 27, 1969, and this well has produced up to August

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- 1 of 1971, 989,000,000 cubic feet of gas plus 22,000 barrels
- 2 of condensate, and the current or the average productions
- 3 during July of '71 was 2.04 million cubic feet a day plus
- 4 43 barrels of condensate per day.
- 5 Q Is that two million -- four million cubic feet about the
- 6 capacity of the well today?
- 7 A Two million is flowing at 1900 pounds of pressure, and
- 8 about the highest rate that we flowed the well at is 4500
- 9 to 4800 mcf a day or about twice that rate so the line
- 10 pressure is at a thousand pounds, and it is flowing at
- 11 1900, so if we drew the well down to line pressure, which
- 12 will be comparable to floodable tests, it would produce in
- 13 excess of this two million a day.
- 14 Q Now, you had an extremely high initial potential in this
- 15 well, did you not?
- 16 A The original filed one or the refiled?
- 17 Q Well, I don't know. You tell me.
- 18 A Well, on the refiled potential it was approximately twenty-
- 19 three million.
- 20 Q Twenty-three million?
- 21 A A day, which if you will note up there, the Antweil-Allen
- 22 is seventeen million open flow, and the Antweil Little
- 23 Jewel is seventeen million, so in relating to what has been
- 24 drilled, I wouldn't say that.
- 25 Q Would you think that initial potential was incorrect, then?

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1 A The initial -- the one that possibly you are referring to
2 that --

3 Q 291 million?

4 A 291 million was not run in accordance with the rules and
5 regulations of the New Mexico Commission conducting open
6 flow tests and was --

7 Q How much time elapsed between the two?

8 A Date of the first test was December 5, 1969, and an
9 absolute open flow of 291,145 mcf a day was reported. It
10 is 291 million approximately.

11 And then by letter of June of 1970 from Mr. Stametts
12 informed us that this open flow test was not conducted by
13 the utilized commission manual for back-pressure testing
14 and so forth, and the well was retested, and then it was
15 repotentialled, test date of July 14, 1970, and on
16 repotential it indicated an open flow of an absolute open
17 flow of 23,012 mcf a day or approximately 23 million cubic
18 feet a day.

19 Q And that is the commission's four-point back-pressure test?

20 A That's correct.

21 Q Have there been quite a little production between those
22 two tests?

23 A First sales, the well was approximately May of 1970 -- let
24 me check that to be sure. First sales -- well, it was
25 April 8, 1970, and then at that period of time, which was

1 July of '70, I would estimate there was 180 million cubic
2 feet of gas that is produced from it.

3 Q That would have some defect on the well, particularly in
4 view of your pressure decline picture in that well, could
5 it not in a month's production?

6 A What could have some? I'm sorry. I don't --

7 Q Well, the volume of production as against your initial
8 potential and this later test and, of course, they are
9 not the same test, as I understand it, but at the same
10 time that volume of production would affect your potential,
11 would it not?

12 A I might say in this particular case the two tests were
13 run under completely different conditions as far as method
14 of testing and this accounts largely for it, and actually,
15 180 million is not a great deal of gas, as we all know.

16 Q Well, I think Mr. Traywick explored this question of
17 porosity and net pay thoroughly. There is one question I
18 would like to ask you, though.

19 Do you have any figures on permeability in this area
20 and in your Collat lease?

21 A We have an indication of the permeability from build-up
22 data. Now, as far as from Collat data, the well was odd
23 core, but as we are all aware, that built-up data does
24 provide a means for determining capacity, capacity being
25 the millidorsy permeability, what is commonly referred

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1 to as a millidorsy feet.

2 Q Well, do you have any figure on that?

3 A The capacity as determined from build-up data, and I
4 admitted that this is the build-up data of -- that was run
5 in May of 1970 with 46 hour build-up, and the capacity is
6 indicated to be around thirty million dorsy feet.

7 Q Thirty million dorsy feet?

8 A Right.

9 Q And to a layman, would you tell me whether that is good,
10 bad or mediocre, or how would you characterize it?

11 A I would say that it is not poor, and it is not as high
12 as you would like to have, but it is certainly not bad.

13 Q It is reasonably good permeability, then?

14 A I would have to say yes.

15 Q Now, the pressure in the Antweil and Joel well, you are
16 familiar with that well, are you not? The pressure there
17 was quite low, was it not?

18 A The Antweil-Joel?

19 Q Yes, sir. And north of Section 6.

20 A Well quite low.

21 Q Yes, sir. As compared to your Collat well.

22 A In the --

23 MR. PATMAN: Mr. Examiner, I believe that information
24 is indicated on Pennzoil's Exhibit No. 3. I don't know whether
25 Mr. Clay has any additional information or not.

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1 MR. UTZ: You are asking about pressures?

2 MR. KELLAHIN: Yes. I am asking him if he is
3 familiar with pressures in the Antweil-Joel well.

4 MR. UTZ: Well, that Exhibit No. 3 is structure,
5 isn't it?

6 MR. PATMAN: Pennzoil, Mr. Examiner.

7 MR. KELLAHIN: Pennzoil No. 3.

8 MR. UTZ: Oh, excuse me.

9 Q (Mr. Kellahin continuing) Well, let me rephrase the
10 question without your searching any further. I believe
11 if you will agree that Pennzoil's Exhibit No. 3 reflects
12 the Antweil-Joel Well No. 1 so the pressure of 5229 as
13 compared with the initial pressure in the Collat well of
14 5610, could you account for the difference in those two
15 pressures?

16 A Well, the pressure that was measured in the Collat well
17 was after a fifty-six day shut-in. It was measured by
18 Amarada, bottom that was run in the well after this period
19 of time, and my information from the Antweil-Joel well
20 indicates that the 5229 pressure was measured from drill-
21 stem tests.

22 Now, oftentimes we do get a -- some discrepancy
23 between bottom readings and drill-stem tests in view of
24 the -- a little bit different --

25 Q As much as four hundred pounds?

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- 1 A I would like to think there is less than that.
- 2 Q You would then on that basis conclude that the pressures
- 3 actually were lower in the dual well?
- 4 A From the information I have, and it indicates that it could
- 5 be a little bit lower.
- 6 Q Could that have been the indication to buy the production
- 7 from the Superior-Collat well?
- 8 A There is a possibility, yes.
- 9 Q And if that is possible, then the Pennzoil acreage has
- 10 been drained by the Collat well; is that correct, surface
- 11 drainage, at least.
- 12 A Well, that -- no, I can't -- I can't say that the Pennzoil
- 13 acreage has been drained, because there are other --
- 14 Q But you do think that possibly the Antweil acreage in the
- 15 Joel well No. 1 has been drained?
- 16 A Well, all I can say is that there are definitely -- there
- 17 is one pressure that is 5610 and pressure taken by a
- 18 drill-stem test at a later period indicated 5229 in this
- 19 Joel well, and as mentioned, there are -- the accuracy of
- 20 this bottom reading, in my opinion, is more accurate than
- 21 this drill-stem test.
- 22 I would like to see a lesser difference in the two
- 23 pressures, and it is suggested that maybe there is a
- 24 little bit lower pressure than the Antweil well.
- 25 However, there are other pressures in there that

1 indicate that it is twice the original pressure, so it is
2 pretty hard to account for that Joel pressure.

3 Q Mr. Clay, I have one further question with regard to your
4 exhibits showing that the Morrow location would be a very
5 favorable location, and I understand that is what it shows,
6 how can you arrive at that when the Antweil well is
7 probably the lowest Morrow producer in the field?

8 A Which --

9 MR. PATMAN: Morrow No. 3?

10 MR. KELLAHIN: No. 3, I believe it is.

11 A Would you restate the question please?

12 Q On your Exhibit No. 3 you show a standard location in the
13 Morrow would be a very favorable location for Morrow
14 production on the Pennzoil acreage, and yet, the Antweil
15 well, which offsets it to the east is probably the lowest
16 producer in the Morrow field. No, Morrow pool, isn't that
17 correct?

18 A No. I wouldn't agree with that.

19 Q You wouldn't?

20 A No.

21 Q Well, do you know what the production from the Antweil-
22 Missouri-New Mexico Land Company well is?

23 A Yes, sir.

24 Q It is pretty low as compared to the other Morrow producers,
25 is it not?

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1 A Yes, sir, but it is not the lowest well in that field.

2 Q Well, it is quite low as compared to the others, then,
3 isn't that right?

4 A Well, it is -- well, what I am talking about particular
5 wells, it is higher than the Pennzoil-Gulf-Federal which
6 is a minus 8386.

7 It is slightly low to Pennzoil's Echls well, which is
8 a minus 8241. Excuse me. That well -- that is about
9 ninety feet low.

10 Q I think you are talking about structure. I am talking
11 about production.

12 A I guess you had better restate the question. I --

13 Q All right. On your Exhibit No. 4, for example, it would
14 show the Missouri-New Mexico Land Company Antweil well
15 produced for -- it only produced four months. It has
16 produced -- well, let's just say for the month of June it
17 produced 8,066 mcf as compared to Pennzoil's United Echols
18 communitized well, 65,939.

19 A You are talking about low production?

20 Q Yes. I am talking about low production.

21 A And not low structure?

22 Q I'm not talking about low production.

23 A I'm sorry. My mistake.

24 Q That is certainly an indication of whether a well is good
25 or not, isn't it?

1 A Yes. In my opinion it is. However, I think it should be
2 pointed out, and then the Antweil well Missouri-New Mexico
3 Land well that there appears to be seventeen feet of pay
4 in that well as compared to the Pennzoil Echols well which
5 has twenty-three feet, and there is also a strong
6 possibility that the Antweil-New Mexico Land well has
7 some reservoir damage accounting for that low production.

8 Q What type of reservoir damage?

9 A As the well was being drilled.

10 Q In the completion?

11 A Right. In the drilling flood.

12 MR. KELLAHIN: That's all. Thank you, Mr. Clay.

13 MR. UTZ: Are there other questions?

14 MR. PATMAN: Mr. Examiner, could I just confer with
15 Mr. Clay very briefly while we see whether we are through?

16 MR. UTZ: Yes.

17 MR. PATMAN: Mr. Examiner, excuse me, sir. I believe
18 I actually neglected to ask that all our exhibits be received
19 in evidence. May I do that at this point?

20 MR. UTZ: Well, I don't recall. I think you did
21 enter some of them, but at any rate --

22 MR. PATMAN: May I at this time enter all those that
23 haven't been heretofore entered?

24 MR. UTZ: All of your exhibits -- what are the
25 numbers?

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1 MR. PATMAN: 1 through 5, Mr. Examiner, three maps
2 and two small pressure graphs.

3 MR. UTZ: Okay. Superior's Exhibits 1 through 5
4 will be entered into the record.

5 MR. PATMAN: Thank you, sir.

6 (Whereupon, a brief recess was held.)

7 MR. UTZ: We will recall Mr. Brown.

8 CHARLES A. BROWN

9 having been previously sworn, according to law, upon his oath
10 testified as follows:

11 CROSS-EXAMINATION

12 BY MR. UTZ:

13 Q Mr. Brown, I don't recall that much stress was put on how
14 productive the Straun was in the Antweil-Missouri well.

15 A The Straun does not produce in that well.

16 Q Well, now, in your opinion, does your Exhibit No. 5
17 indicate this well is capable of producing in a Straun?

18 A Well, we have an independent report by a consulting firm
19 that prepared the report for us on the basis of which we
20 feel that that well is capable of producing from the
21 Straun.

22 Q Therefore, I presume it will be your testimony in answer
23 to that question that the southwest quarter of Section 6
24 is productive in the Straun?

25 A Yes, sir.

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1 Q Now, I believe it was Mr. Miller that offered the pressure
2 exhibit, is that correct?

3 A I offered them, yes.

4 Q Did you? Okay. Now, we have had some discussion here
5 of the pressure of the Collat well in regard to the
6 pressure of the Jewel well of some 400 pounds difference
7 in pressure.

8 Do you know when the Jewel well was completed with
9 relation to when the Collat well was completed?

10 A The Jewel well was completed shortly after that drill-
11 stem test was taken on 1/11/71. I don't have the exact
12 date, but it was taken within a matter of a very short
13 time.

14 Q Well, I don't seem to be able to put my eye on the date
15 here of that test.

16 A It is the fourth -- it is on Exhibit No. 3, the pressures
17 that I am -- on your Exhibit No. 3.

18 Q Oh. 1/11/71. It is on it. I just can't read.

19 A Yes, sir.

20 Q And the Collat pressure was 297? Almost a year's
21 difference in pressure; is that correct?

22 A Well, no, not the last pressures. The last pressures
23 recorded on the Collat was on 8/9/71.

24 Q Well, I am trying to establish how much pressure drop there
25 was between the date of completion on the initial pressure.

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1 A Oh, yes, sir. That's correct. Their first pressure was
2 on 2/9/70, as I understand.
3 Q Okay. Now, how much production, do you know?
4 A On our Exhibit No. 4 through June, now, they had produced
5 924,000 mcf of gas, and 22,071 barrels of condensate.
6 Q On the second page of your Exhibit No. 4 the first column
7 shows cumulative production.
8 A May I show you what I am referring to here?
9 Q Here we are. This is in this column.
10 A That is an mcf, although we failed to put the mcf on there.
11 That is a cumulative.
12 Q Well, 924, then?
13 A Yes, sir. Through August 1.
14 MR. PATMAN: Mr. Examiner, I understand that the
15 question was how much cumulative production had there been
16 between the --
17 MR. UTZ: That is exactly what the question was.
18 MR. PATMAN: -- the two pressures.
19 MR. UTZ: Right.
20 MR. PATMAN: Oh, I'm sorry.
21 A I do not have that information, but I can say this, the
22 Antweil-Joel has not been produced and is still shut-in,
23 so I feel that it would be reasonable to assume that their
24 pressure is still approximately the same.
25 Q Well, now, how much production is the Collat well at

1 between these two periods? Is one of the --
2 approximately one year's period? Do you have that figure?

3 A I don't have their production for the last couple of
4 months, but based on their numbers of about two million
5 a day, that would be about sixty million.

6 MR. KELLY: Mr. Examiner, we may be able to furnish
7 this information if I can make sure I know what you want. Is
8 it the production figures on the Collat well from 2/9/70 to
9 1/11/71?

10 MR. UTZ: Yes. The production between these two
11 initial pressure dates we have got here. In other words, I am
12 trying to establish whether or not this four hundred pounds of
13 drawdown could have been from production from a Collat lease.

14 MR. KELLY: Can you give us --

15 MR. CLAY: I can give some rough figures. The Collat
16 well went on in April of 1970, and up to that January date when
17 the pressure was measured in the Antweil-Joel in January of '71,
18 the Collat well had produced approximately 480 million cubic
19 feet of gas and 10,000 barrels of condensate.

20 It was after an eight month producing period, and
21 that compares with cumulative to August of this year, of 989
22 million, so it would be noted that it is approximately half of
23 what the cumulative production is up to August of this year.

24 MR. UTZ: Okay.

25 MR. BROWN: I'm sorry, Mr. Examiner. I wasn't

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1 following your question, your line of reasoning.

2 MR. UTZ: Has there been any recent tests taken on
3 the Jewel well?

4 MR. KELLAHIN: I have no knowledge of any recent
5 tests. I believe perhaps they have recorded a surface pressure,
6 and perhaps admitted to the commission, but I don't have that
7 data.

8 MR. UTZ: Well, check your files for it.

9 Q (Mr. Utz continuing) Now, we have done a little talking
10 here from time to time about the possibility of penalty,
11 and nobody has made any recommendations as far as penalty
12 is concerned, either from Superior or from Pennzoil.

13 Obviously, this well has moved 990 feet off pattern
14 to structural advantage. I will ask you, Mr. Brown, what
15 is your attitude as far as penalty is concerned on this
16 well because of the 990 feet off location for structural
17 advantage?

18 A I feel that in view of the production which has already
19 taken place from the Collat well that our well should not
20 be penalized.

21 Had we started these wells essentially at the same
22 time, had they gone on the line at the same time, I would
23 have honestly said that I thought -- I would think we
24 should be penalized.

25 Q Well, now, that wasn't Superior's fault, of course, that

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1 you didn't drill your wells --

2 A That's correct.

3 MR. UTZ: Mr. Clay?

4 MR. CLAY: Yes, sir.

5 MR. UTZ: You heard my first question, the question
6 I asked Mr. Brown?

7 MR. CLAY: May I respond to that, Mr. Examiner?
8 Superior doesn't have any specific recommendation with respect
9 to penalty. We just -- we hope that we have shown that the
10 application should be denied.

11 MR. PATMAN: All I would say is that I believe I did
12 put in the record this morning the position that has been taken
13 by Pennzoil previously and I would hope that with respect to
14 the arithmetical calculation which would yield a fifty percent
15 penalty in the present case, I believe Mr. Brown testified in
16 response to my cross-examination about that -- we hope the
17 commission would take account of that if they find it necessary
18 to reach that question, but we don't believe it is necessary to
19 reach that question.

20 MR. UTZ: In other words, you don't have a
21 recommendation as far as penalty is concerned?

22 MR. PATMAN: No, sir, I do not.

23 MR. UTZ: You just want the location turned down,
24 moved over 990 feet? Is that your position, sir?

25 MR. PATMAN: That is.

1 MR. UTZ: Are there other questions of the witness?
2 Statements?

3 MR. HATCH: We have some statements.

4 MR. PATMAN: Mr. Hatch, did you want me to make --

5 MR. HATCH: No. I have just started to give this,
6 but I will wait until after --

7 MR. UTZ: Why don't you go ahead with your statements,
8 and he will read those into the record last.

9 MR. PATMAN: Thank you, sir. If the examiner please,
10 we have already been at this quite a while, and I certainly
11 don't want to take up any unnecessary time, but I feel like
12 that this is a rather complex situation, probably much more so
13 than in the instance than most unorthodox locations, and I think
14 that the extent and the quality of the exhibits that have been
15 placed in the record by both the parties is proof of what I
16 have just said.

17 Now, the posture in which Pennzoil has approached the
18 commission is to get an irregular location in the Straun zone so
19 that as they say they can dually complete at that irregular
20 location in the Straun and in the Morrow.

21 They admit that at that location at which they ask
22 for a completion in the Straun they can make a regular
23 completion in the Morrow, a regular completion in the Atoka,
24 and a regular completion in the Canyon.

25 And actually, Mr. Examiner, their posture is to ask

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1 for this irregular location, not on the basis of an advantage
2 to them in the terms of the Straun zone, but solely in terms of
3 an advantage to them with respect to these other zones, with
4 which they would expect to dually or multiply complete.

5 Their evidence, and indeed Superior's evidence, and
6 I think both are in agreement that the structural position and
7 isopach is quality of a regular location which I asked and have
8 placed on all the exhibits of Pennzoil as compared with this
9 irregular location would be the same.

10 That is to say they would get almost approximately
11 the same results, and their tests so indicated by drilling in
12 the Straun at a regular location, to wit 990 feet to the west
13 of where they presently -- to the east, from the location which
14 they request.

15 Further, the evidence of both Superior and Pennzoil
16 indicates that at a regular location to which I have made
17 reference 990 feet further to the east they could complete good
18 quality wells in all these three other zones, the Canyon, the
19 Atoka and the Morrow.

20 Now, Mr. Brown testified that with respect to his
21 Exhibit No. 2, and the record will so indicate, that if the
22 Morrow and Atoka zones were combined at this requested location
23 rather than the Morrow and Straun which a combination of the
24 Morrow and Atoka can be made without asking the commission for
25 this special off-standard location, that that would yield their

1 company approximately the same economic results as they would
2 expect from a dual in the Straun and in the Morrow.

3 Mr. Brown further testified that a dual of the Morrow
4 and the Straun at what I have been referring to as a regular
5 location, that is to say, 990 feet further east, would yield
6 approximately the same economic results to their company as a
7 dual completion at this requested location, and the record will
8 so indicate that he testified in that manner.

9 Mr. Clay testified and showed us there that the "A"
10 well, a single completion drilled by Pennzoil at the -- what I
11 have been referring to as the regular location, would pay out
12 a substantial and acceptable profit to the operator.

13 In other words, they could go ahead and drill multiple
14 completions at the locations which they are asking in the Atoka,
15 Morrow and Canyon without asking the commission for any special
16 action.

17 They can turn around and drill a well at this regular
18 location into the Straun and pay out that well, and Mr. Clay's
19 testimony has so indicated.

20 Now, referring to this issue of pressures, I believe
21 in response to my examination Mr. Brown said that he had no
22 reason to believe or no information to indicate that the
23 drawdown in a well completed by Pennzoil at their requested
24 location would be any different from the drawdown in the Collat
25 well, and Mr. Clay testified that if the pressures in these two

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1 wells -- that is to say, the Collat on the one hand and tha
2 Pennzoil on the other hand, were approximately equal, that the
3 point of interference between the two wells would lie on
4 Superior's property, and the Pennzoil well would, in fact,
5 drain the Superior's acreage, and Superior suffering net
6 uncompensated drainage.

7 I might say with respect to this last questioning
8 by Mr. Kellahin which he put it to Mr. Clay that there was a
9 possibility that the Jewel well had suffered some drainage from
10 the Superior-Collat well. Seems to me that even if that were
11 the case this is not a justification for his coming in and
12 asking for an unorthodox location.

13 If you were to push that logical principle to its
14 extreme you would have -- find yourself in a situation where
15 everyone who had not drilled a well immediately upon the
16 discovery of a reservoir came in two or three years later and
17 said, "Our properties have been drained all this time by those
18 who went out and drilled and completed and have been selling
19 their hydrocarbons in the meantime, and now we want the state
20 to step in and help us recapture some of these hydrocarbons by
21 granting us the advantage of an unorthodox location."

22 It seems to me that that is an untenable position,
23 Mr. Examiner. Finally with respect to the issue of penalty I
24 believe I had stated that the Superior makes no recommendation
25 to the commission with respect to penalty.

1 We recommend strongly and we believe the evidence
2 has shown that this request should be denied.

3 Now, of course, if the commission sees fit to grant
4 it, we assume that the commission, of its own motion, will
5 consider the matter of penalty, but we do not wish to make any
6 recommendation for a specific amount, and we would simply hope
7 the commission would be guided by what has been placed in the
8 record with respect to the matter of penalty.

9 Thank you, Mr. Examiner.

10 MR. UTZ: Mr. Patman, as far as you are concerned
11 about vested rights in the pool prior to putting your straw in,
12 I think that has been pretty well established, and that the
13 commission and our attitude is when you get your straw in the
14 pool that is when your vested rights begin, so Mr. Brown's
15 appearing previous to the time they drill, I'm sure can't be a
16 consideration.

17 MR. PATMAN: Thank you, sir.

18 MR. UTZ: As far as your statement as to penalty is
19 concerned, I am a little curious here. You have made a great
20 deal out of inferring through in cross-examination this morning,
21 Mr. Patman, that maybe a penalty was in order, yet you are very
22 reluctant to put it in direct testimony.

23 MR. PATMAN: Yes, sir, I am, Mr. Examiner, and I will
24 be quite frank with you. Perhaps I should have included this in
25 my statement, and I appreciate your giving me an opportunity to

1 respond to that.

2 We seem to find that this matter of a penalty is a
3 little complex. That is to say, it appears to us from
4 experience that we are familiar with here in this state that
5 in the absence of there being any field rules, and I believe
6 there are none in this reservoir, penalty is not very
7 meaningful.

8 I might add that even if there exists field rules in
9 this time in which there is such a demand for gas, and when
10 one consideration is with respect to purchaser nominations,
11 we find that the effect of a penalty in such circumstances
12 would really be dubious. The pipelines are screaming for gas
13 in one way or another. They are going to get the gas from
14 wells that can produce it.

15 And I do understand that there are some legal
16 questions, though I am not really advised about them, with
17 respect to these penalties, and we just find that -- we feel,
18 I should say, that under circumstances such as those which may
19 exist in this field at the present time it is quite possible
20 that a penalty might not be of much benefit to the Superior
21 Oil Company in terms of our offset well.

22 MR. UTZ: In this presence of proration would you
23 have the same attitude?

24 MR. PATMAN: Well, as I indicated, Mr. Examiner, as I
25 understand it, the way this operates in terms of pipeline

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1 companies' nominations, I fear that the practical effect, even
2 under circumstances of proration, might actually be to
3 substantially mitigate insofar as the Pennzoil is concerned,
4 the effect of any penalty that the commission might decide to
5 apply in this matter, and I just would like to express that
6 that very serious concern, and that is the reason that we have
7 not made any recommendation.

8 MR. UTZ: Mr. Kelly, did you want to add a word?

9 MR. KELLY: I always like to come in at the end, but
10 if I am forced to make remarks before Jason Kellahin, I would
11 just like to point out that the areas of dispute between
12 Pennzoil and Superior -- this is a -- certain things have been
13 established.

14 This is 320 acre spacing. The commission has made a
15 determination by setting up this kind of spacing and this kind
16 of pattern that veins will occur across the lease lines if you
17 put a well too close to the lease line, and I think it is up to
18 Pennzoil in this situation to show that drainage will not occur,
19 and I don't feel that they have shown that.

20 In fact, the only information we have on pressure is
21 that there is a pressure decline between wells that are even
22 farther apart after production.

23 Certainly the presumption and the prima facie situation
24 is that drainage will occur here.

25 Therefore, half of the case that Pennzoil is required

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1 to make is not made. Drainage will occur, correlative rights
2 will be affected adversely as far as Superior is concerned.

3 On the other half of their case is to show their
4 hardship, their particular difficulty in drilling at a standard
5 location, the normal situation where this comes into place is
6 topography or some kind of box-in on a lease pattern.

7 This is in my experience totally unnecessary in that
8 they are not relying on the zone that they are planning --
9 asking for the nonstandard location.

10 There isn't anything about their standard location
11 in the Straun which is adverse to them, and I think they have
12 clearly stated that as far as the Straun, the orthodox
13 location has the same indication and admittedly we have very
14 little to go on, but as far as pay, as far as structure, it is
15 basically the same between the orthodox and the unorthodox, so
16 what we are looking at here and what they are asking for, even
17 though it is not in the advertisement is some consideration for
18 some other zone, and I feel that the commission should not
19 entertain this kind of a case, should not allow nonstandard
20 locations, because some other zone may come through in a more
21 favorable way.

22 Certainly that is not the kind of testimony that the
23 commission has allowed to support these kinds of applications
24 in the past, and I think it would be a very dangerous precedent
25 and possibly one that could not be supported in court to allow

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1 a nonstandard location on this kind of almost ethereal evidence
2 that has nothing to do with the application as published and
3 the rules as stated.

4 And I submit that clearly this is a case for denial
5 rather than the imposition of some sort of penalty.

6 All of the other applications for nonstandard locations
7 that have been granted in this general Carlsbad pool are based
8 on topography with that airport or there was another building
9 in the way, and there was one way out farther north that it came
10 around this problem of getting boxed in on leases and
11 recompleting in a zone, but certainly I have never heard of
12 anyone coming in and asking for a consideration for one zone
13 because another zone may be better.

14 MR. UTZ: Mr. Kellahin?

15 MR. KELLAHIN: If the examiner please, I want to be
16 as brief as I possibly can, and for that purpose, I would like
17 to -- because it will fit in with my statement to know what
18 statements have been received and to what effect.

19 MR. HATCH: The commission has received a telegram
20 from Gulf Oil. I will read that into the record. It is
21 addressed to the commission. "As a working interest owner in
22 the south half of Section 6, 23 South, 27 East, Gulf supports
23 the application of Pennzoil in Case No. 4585, and in our
24 opinion a combined depth of the Straun-Morrow and Atoka Penn
25 would be in the interest and prevention of economic waste."

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1 And then the commission has received a telegram from
2 Atapas Petroleum Incorporated. "Support the application of
3 Pennzoil United Incorporated for unorthodox gas well location
4 1980 feet from the south line and 1990 feet from the west line
5 of Section 6, township 23 South, range 27 East, south Carlsbad
6 Straun gas pool, Eddy County, New Mexico, south half of said
7 Section 6 to be dedicated to the well."

8 MR. KELLAHIN: If the examiner please, there are a
9 couple of matters -- well, there is more than a couple, but I
10 am going to mention two matters which were stated by counsel for
11 Superior which are incorrect.

12 Mr. Brown did not testify that a regular location in
13 the Morrow and the Straun would be as good as at the unorthodox
14 location, and, of course, we can just rely on the record for
15 the purpose of sustaining our statement.

16 Mr. Brown did not testify that the Atoka would
17 produce at the orthodox location of the Straun, and as a matter
18 of fact, Mr. Miller pointed out in response to cross-
19 examination that the so-called orthodox location for a Straun
20 well, the Atoka, would be comparable to that found in the
21 Superior-Collat well which is non-productive in the Atoka.

22 Mr. Kelly has said he has never heard of an
23 application based on consideration of multi-zone pools, but I
24 think if he reflects he will probably remember at least a few.

25 I can name four or five off-hand myself, but I won't

1 do it right now. I would have dug them out had I known the
2 question would have come out.

3 The question of drainage to the Collat acreage is
4 a factor, of course, to be considered in connection with this
5 case, and we will not deny it.

6 The evidence that has been offered so far, however,
7 in this case would indicate that the Collat acreage, which has
8 produced a great deal with the pressure decline, that has just
9 about produced their own reserves anyway there on the downside,
10 and any drainage would be toward their well because of the
11 differential in pressure, so the well location at least for a
12 long period of time would be no advantage to Pennzoil, because
13 of the higher pressures in that area.

14 And as Mr. Brown testified, gas just doesn't move
15 toward higher pressure zones. That's all there is to it, and
16 that is one reason we brought up this pressure information,
17 and if anything, the gas would be moving toward the Joel well,
18 too, which would indicate that the Pennzoil is in a position
19 it must protect itself against this type of drainage and get
20 the pressures down by a production as they can.

21 If they are later than that, of course, it is no
22 fault of the Superior, the commission or anybody else except
23 Pennzoil, and maybe not theirs. I don't know when they get
24 their form out, but the situation being now they have to protect
25 themselves, and that is what they are trying to do, and we

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1 submit there will be no drainage from the Collat acreage simply
2 because of the difference in pressures.

3 I think it is rather significant, too, that Mr. Brown
4 testified Pennzoil owns a twenty-six percent working interest
5 in the Superior well. The statements which have been read by
6 Mr. Hatch from Gulf and Atapas in support of Pennzoil's
7 position are also statements from owners under the Superior-
8 Collat wells.

9 The other owners under the Superior-Collat well are
10 Gulf-Mobil and Atapas and Pennzoil, and those four own fifty
11 percent of that well, and Mobil has a representative here whom
12 I trust will also make a statement in support of Pennzoil, so
13 Superior is the operator of the well, and as such, must perform
14 what it considers to be its duties in protecting its owner,
15 but the owner on this, then Superior, just simply doesn't feel
16 that way, and we submit that there is no basis here for either
17 a penalty or a denial of the application.

18 Basically we must admit that which there will be some
19 structural advantage in both the Morrow and the Straun from the
20 proposed location, the real crux of it is the possibility of
21 completing in the Atoka, and the evidence indicates that at the
22 so-called Straun location, orthodox location, it would not be
23 a good location for that purpose.

24 MR. UTZ: Does Mobil have a statement?

25 MR. BOND: Yes, sir. My name is A. D. Bond. I am

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1 with Mobil Oil Corporation. Mobil Oil Corporation, as a lease
2 owner and working interest owner in the proposed 320 acre gas
3 proration unit, comprising the south half of Section 6, township
4 23 South, 37 East, south Carlsbad Straun gas pool, Eddy County,
5 New Mexico supports Pennzoil's application for an unorthodox
6 location, located 990 feet from the west line and 1980 feet
7 from the south line of said Section 6, and respectfully
8 requests that it be approved.

9 MR. UTZ: Are there other statements? Case will be
10 taken under advisement.

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1 STATE OF NEW MEXICO)
2)
3 COUNTY OF BERNALILLO)

4 I, LINDA MALONE, Court Reporter, do hereby certify that
5 the foregoing and attached Transcript of Hearing before the
6 New Mexico Oil Conservation Commission was reported by me;
7 that the same is a true and correct record of the said
8 proceedings, to the best of my knowledge, skill and ability.
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Linda Malone
Court Reporter

I do hereby certify that the foregoing is
a correct record of the proceedings in
the hearing of Case No. 4585
held by me on 9-1-78 at
New Mexico Oil Conservation Commission

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4585
Order No. R-4205

APPLICATION OF PENNZOIL UNITED,
INC. FOR AN UNORTHODOX GAS WELL
LOCATION, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 1, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 13th day of October, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Pennzoil United, Inc., seeks an exception to Rule 104 C II of the Commission Rules and Regulations to drill a gas well in the South Carlsbad-Strawn Gas Pool at an unorthodox gas well location 1980 feet from the South line and 990 feet from the West line of Section 6, Township 23 South, Range 27 East, NMPM, Eddy County, New Mexico; that the S/2 of said Section 6 would be dedicated to said well.

(3) That a standard location for the subject pool would require the well to be no closer than 660 feet to the nearest side boundary of the dedicated tract nor closer than 1980 feet to the nearest end boundary nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

-2-

CASE NO. 4585

Order No. R-4205

(4) That the evidence indicates that the entire S/2 of said Section 6 is productive of gas from the Strawn formation.

(5) That the entire S/2 of said Section 6 can be efficiently and economically drained and developed by the subject well.

(6) That there is evidence that a well at the proposed unorthodox location would penetrate a thicker pay section and encounter it structurally higher than a well at an orthodox location.

(7) That the evidence indicates that a well at the proposed unorthodox location should recover more gas than a well at an orthodox location.

(8) That due to the unorthodox location of the above-described well, the correlative rights of some offset operators will be impaired if unrestricted production by the subject well is permitted.

(9) That to offset the advantage to be gained over offset operators, the subject well to be drilled in the S/2 of Section 6 should be assigned a ratable-take factor of 82 percent in the South Carlsbad-Strawn Gas Pool.

(10) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the subject South Carlsbad-Strawn Gas Pool, will prevent the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights, provided the above-described ratable-take factor is assigned to the subject well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pennzoil United, Inc., is hereby granted an exception to the well location requirements of Rule 104 C II of the Commission Rules and Regulations and is hereby authorized to drill a gas well in the South Carlsbad-Strawn Gas Pool at an unorthodox gas well location 1980 feet from the South line and 990 feet from the West line of Section 6, Township 23 South, Range 27 East, NMPM, Eddy County, New Mexico, to be dedicated to a standard unit comprising the S/2 of said Section 6.

-3-

CASE NO. 4585
Order No. R-4205

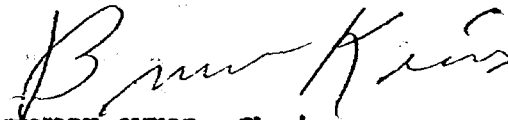
PROVIDED HOWEVER, that said well is assigned a ratable-
take factor of 82% in the subject pool.

PROVIDED FURTHER, that in the event said pool be proxated,
the subject well shall be assigned an acreage factor for pro-
ration purposes of 0.82.


That jurisdiction of this cause is retained for the entry
of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


BRUCE KING, Chairman


ALEX J. ARMIJO, Member


A. L. PORTER, Jr., Member & Secretary


S E A L

dr/

Docket No. 19-71

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 1, 1971

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

- CASE 4558: (Continued from the July 28, 1971, Examiner Hearing)
Application of Midwest Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Little Inbe (Bough "C") Unit Area comprising 2,240 acres, more or less, of state lands in Sections 10, 11, 14 and 15 of Township 10 South, Range 33 East, Inbe Permo-Pennsylvanian Pool, Lea County, New Mexico.
- CASE 4559: (Continued from the July 28, 1971, Examiner Hearing)
Application of Midwest Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Little Inbe (Bough "C") Unit Area, Inbe Permo-Pennsylvanian Pool, Lea County, New Mexico, by the injection of water through three wells located in Sections 11 and 14 of Township 10 South, Range 33 East, Lea County, New Mexico.
- CASE 4586: Application of Mobil Oil Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill an oil well as an infill well in its Humphrey Queen Unit Area at an unorthodox location 1325 feet from the South line and 2450 feet from the East line of Section 3, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.
- CASE 4574: (Continued from the July 28, 1971 Examiner Hearing)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Tenneco Oil Company to appear and show cause why it should not take immediate action to repair the production casing in its Bolack "B" Well No. 5 located in Unit J of Section 31, Township 27 North, Range 8 West, Basin-Dakota Pool, San Juan County, New Mexico.
- CASE 4584: Application of Tenneco Oil Company for gas injection, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject casinghead gas

Examiner Hearing
September 1, 1971
-2-

Docket No. 19-71

produced by certain wells located in the Lone Pine-Dakota "D" Pool, McKinley County, New Mexico, into the Dakota "A" zone through perforations from 2547 feet to 2562 feet in its Santa Fe Pacific Railroad Well No. 2 located in the NW/4 SW/4 of Section 13, Township 17 North, Range 9 West, South Hospah Field. The gas is to be injected for storage purposes awaiting the institution of a pressure maintenance project in the Lone Pine-Dakota "D" Pool.

CASE 4539: (Continued from the August 18, 1971 Examiner Hearing)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Doanbuy Lease & Company, Inc., and all other interested persons to appear and show cause why its following described wells in Section 27, Township 14 South, Range 33 East, Saunders Pool, Lea County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4587: Application of Wolfson Oil Company for a non-standard gas proration unit, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the W/2 NE/4 and E/2 NW/4 of Section 12, Township 15 South, Range 29 East, Double L-Queen Associated Pool, Chaves County, New Mexico, to be dedicated to its Amerada "C" Federal Well No. 1 located 330 feet from the North line and 1650 feet from the East line of said Section 12.

CASE 4585: Application of Pennzoil United, Inc., for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 104 of the Commission Rules and Regulations to permit the drilling of a well at an unorthodox gas well location 1980 feet from the South line and 990 feet from the West line of Section 6, Township 23 South, Range 27 East, South Carlsbad-Strawn Gas Pool, Eddy County, New Mexico, the S/2 of said Section 6 to be dedicated to the well.

Examiner Hearing
September 1, 1971
-2-

Docket No. 19-71

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2640
1980
60

Docket No. 19-71

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 1, 1971

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

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Case 4585

Heard. 9-1-71

Res. 10-6-71

Grant Pennzoil a NSL in
the So. Carlsbad Strawn
Gas Pool. to be located
1980/S, 990/W- 6-23-27. The
So. 1/2 to be dedication to the
Strawn Completion.

The location is 280 ft too
far east West for a std location.
The west offset Superior
objected.

The ^{370 A. circle} ~~acreage~~ that can be drained
from a std location as
compared to the NSL is in
the Superior acreage is 18%
I therefore recommend that
the proportion factor be
.82 (82%) to compensate for
crowding Superior.
The can of course still
the std location w/o
penalty.

Thos O. Mc



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

October 14, 1971

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4585
Order No. R-4205
Applicant:
Pennzoil United, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Mr. Booker Kelly, Mr. Don Stevens



Telegram

KA086 NSB341

1971 AUG 30 PM 5 33

RECEIVED
AUG 31 1970
JIL CONSERVATION COMM.

NS MDA073 DJ NL PD=MIDLAND TEX 30=

A L PORTER JR SECRETARY DIRECTOR=

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE NMEX

REF. CASE #4585. ATAPAZ PETROLEUM INC SUPPORTS THE
APPLICATION OF PENNZOIL UNITED INC FOR UNOHTHORDOX GAS
WELL LOCATION 1980 FEET FROM SOUTH LINE AND 990 FEET
FROM WEST LINE OF SECTION 6 TOWNSHIP 23 SOUTH RANGE
27 EAST, SOUTH CARLSBAD STRAWN GAS POOL EDDY COUNTY
NEW MEXICO, THE SOUTH HALF OF SAID SECTION 6 TO BE
DEDICATED TO THE WELL=

ATAPAZ PETROLEUM INC F C EDWARDS VICE PRESIDENT==

WU 1201 (R 5-69)



Telegram

KA055 NSA419

NS MDA065 PB PDF 7 EXTRA=MIDLAND TEX 31 330P CDT=

NEW MEXICO OIL CONSERVATION COMM, A L PORTER JR=

STATE LAND OFFICE BLDG SANTAFE NMEX=

AS A WORKING INTEREST OWNER IN THE ROUTH HALF OF SECTION
SIX, 23S, 27E, GULF SUPPORTS THE APPLICATION OF PENNZOIL
OIL IN CASE NO. 4585. IN OUR OPINION A COMBINED TEST OF
THE STRAWN, MORROW AND ATOKA PENN WOULD BE IN THE
INTEREST OF THE PREVENTION OF ECONOMIC WASTE=

H E BRAUNIG JR GULF OIL CO-US A DIVISION OF GULF
OIL CORP.==

23S 27E 4585.==

WU 1201 (R 5-69)

SUPERIOR OIL COMPANY

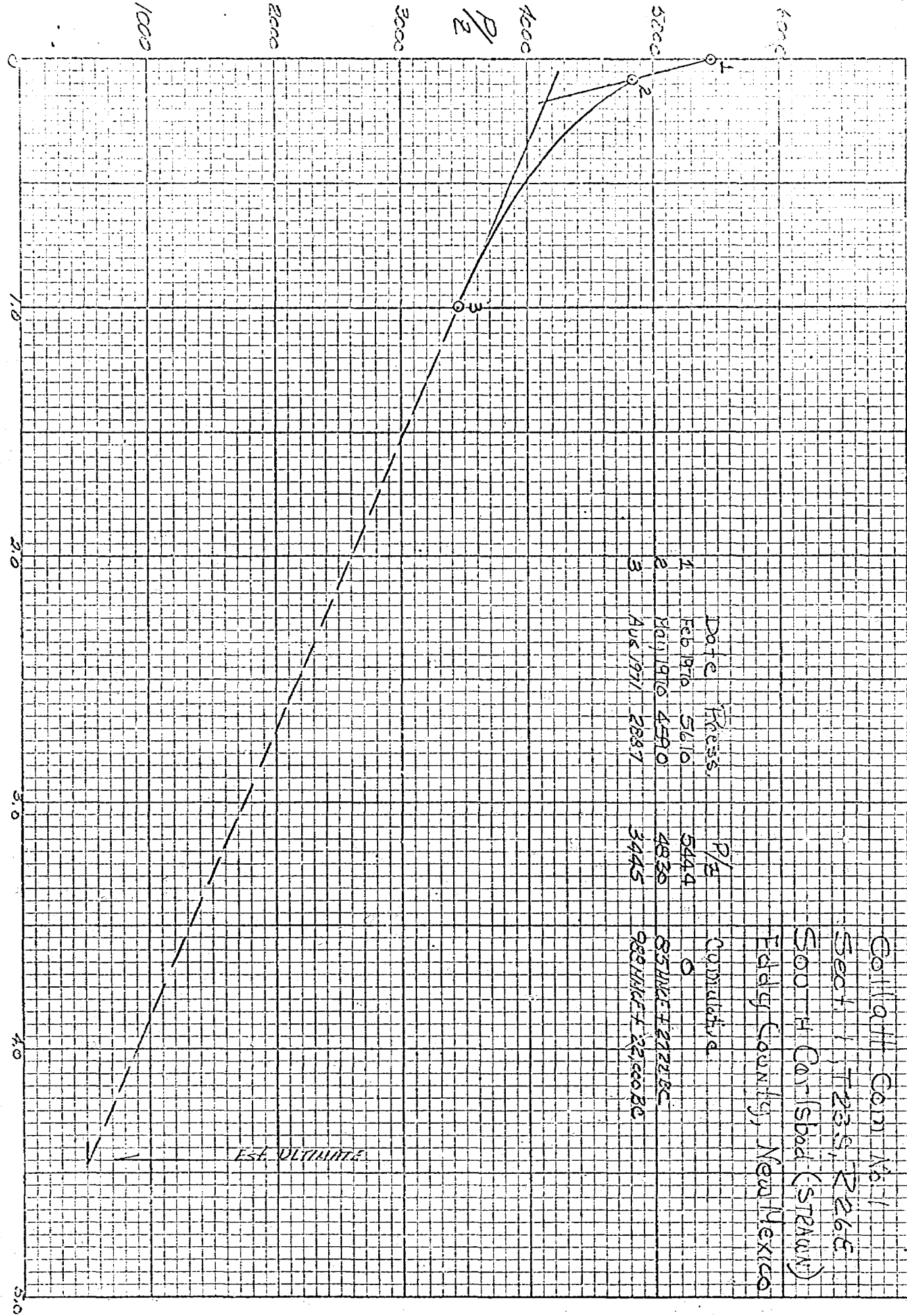
Corlath Com No. 1

SECT. 1 T23S, R26E

SOUTH CARLSBAD (STRAW)

Eddy County, New Mexico

Date	Press.	P/E	Cumulative
1 Feb 1910	5610	5444	0
2 May 1910	4590	4830	85 MMCF + 22,222 BC
3 Aug 1911	2887	3445	929 MMCF + 22,000 BC



Cumulative Gas Production, BCF

X-4

at re
4.5 MMCF
90 000 bbls

X-5

09-28-2006

Deer

Shore

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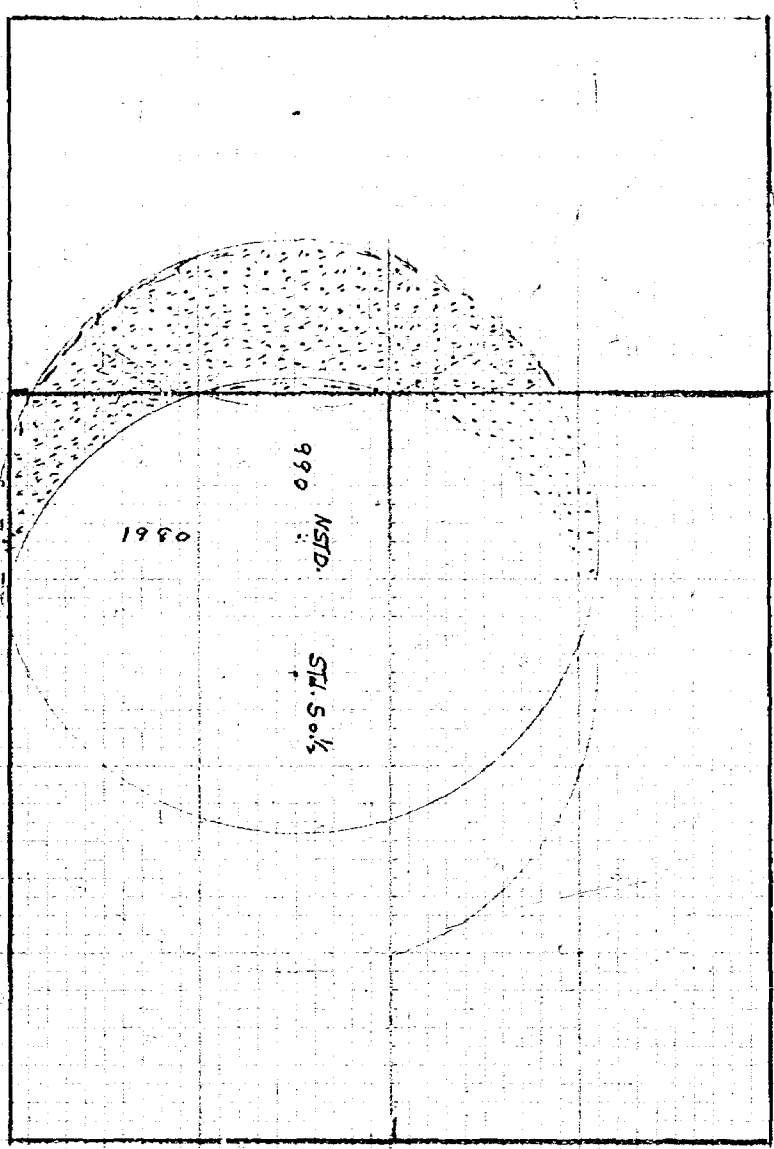
ارمیت

22

NO. 340R-L310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

$$\begin{aligned}
 4'' &= 1/11' \\
 320 \text{ Ac. Area} &= 13,937,200 \text{ sq ft} \\
 .7854 D^2 &= 13,937,200 \text{ sq ft} \\
 D^2 &= 17,747,840 \\
 D &= 4213 \text{ ft} \\
 R &= 2106.5 \text{ ft} \\
 \text{each } D &= .4 \text{ Ac.}
 \end{aligned}$$

$$\begin{aligned}
 \text{AREA OUTSIDE Ded. } 153 \times .4 &= 61.2 \\
 \text{Area } 496 \\
 \text{AREA OUTSIDE Ded.} \\
 \text{Area of 40 ASTD } 100 \times 110 \times 4 &= \frac{116}{59.6} \\
 - 59.6 + 320 &= \frac{260.4}{320} = 81.5
 \end{aligned}$$



COLLAPSED

CASH FLOW ANALYSIS - DEVELOPMENT WELL
 PENNZOIL UNITED - WELL IN SW/4 SECTION 6
 SOUTH CARLSBAD - EDDY COUNTY, NEW MEXICO - MIDLAND
 DUAL GAS - STRAWN AND MORROW
 ATAPAZ 17.08, MOBIL 25.31, GULF 11.88

INTEREST - \$
 OPERATING 45,730
 ROYALTY 19,680
 REVENUE 36,730

INVESTMENT
 100% \$ 400,000
 OPR INT \$ 182,900

PRICES
 GAS 22.000\$/MCF
 LIQUID 3.430\$/DBL

DEPLETION EXPLANATION

YEAR	100% PRODUCTION GAS M/MCF	LIQUIDS BARRELS	REV INTEREST GAS M/MCF	PRODUCTION LIQUIDS BARRELS	REVENUE GAS \$	INTEREST LIQUIDS \$	DOLLARS TOTAL \$
INITIAL INVESTMENT							-182900
1	1500	22190	550	8150	121208	27955	149164
2	1150	17000	422	6244	92926	21417	114344
3	890	13160	326	4833	71917	16579	88496
4	680	10060	249	3695	54948	12673	67622
5	530	7840	194	2879	42827	9877	52704
6	410	6050	150	2225	33130	7634	40765
7	310	4580	113	1682	25049	5770	30819
8	240	3550	88	1303	19393	4472	23865
9	190	2810	69	1032	15353	3540	18893
10	140	2070	51	760	11312	2607	13920
SUB TOTAL	6040	89320	2218	32807	488067	112528	417696
0.0 REMAINING	0	0	0	0	0	0	0
10.0 LIFE	6040	89320	2218	32807	488067	112528	417696

YEAR	OPERATING EXPENSES \$	SEVERANCE TAXES \$	DEVELOPMENT COSTS \$	TOTAL DEDUCTIONS \$	NET INCOME BEFORE TAX \$	CASH INCOME AFTER TAX \$	PRESENT WORTH 8.0% \$
INITIAL INVESTMENT					-182900	-182900	-182900
1	2195	8940	0	11144	138019	137243	131964
2	2195	6860	0	9055	105288	72674	64607
3	2195	5309	0	7504	80991	55088	46018
4	2195	4057	0	6252	61369	425122	32306
5	2195	3162	0	5357	47347	32882	23102
6	2195	2445	0	4640	36124	25174	16353
7	2195	1849	0	4044	26775	18754	11263
8	2195	1431	0	3626	20238	14265	7921
9	2195	1133	0	3328	15564	11055	5675
10	2195	835	0	3030	10890	7845	3723
SUB TOTAL	21950	36035	0	57986	359710	235496	160037
0.0 REMAINING	0	0	0	0	0	0	0
10.0 LIFE	21950	36035	0	57986	359710	235496	160037

PAYOUT TIME - AFIT 1.63 YEARS

PROFIT RATIO - AFIT \$ 1.29 PROFIT PER EACH DOLLAR INVESTED

RATE OF RETURN - AFIT 12.88 AVERAGE RATE OF RETURN PER YEAR

DCF RETURN - AFIT 49.90 DISCOUNTED CASH FLOW RATE OF RETURN

BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
Pennzoil EXHIBIT NO. 2
 CASE NO. 4585

PENNZOIL UNITED, INC. CASE NO. 4585
APPLICATION FOR UNORTHODOX GAS WELL LOCATION
SOUTH CARLSBAD - STRAWN GAS POOL
EDDY COUNTY, NEW MEXICO

PRESSURE DATA ON STRAWN WELLS IN AREA

Date	Pennzoil - Mobil "12" Federal No. 1	Superior - Collatt Estate Com. No. 1	Antweil - Joell No. 1
8-17-68	5676 DST-		
2- 9-70 ✓		5610 - 56 da.	
5-14-70		4295 - 46 hrs.	
1-11-71 ✓			5610 5229 DST Antweil S.I.
8- 9-71		2887 - 72 hrs.	399

12
7000
60,000

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Pennzoil EXHIBIT NO. 3
CASE NO. 4585

Pennzoil United Inc. Case #4585 - Application for unorthodox location Sec. 6, S. Carlsbad Field, Eddy County, New Mexico
OIL & GAS PRODUCTION 1971.

OPERATOR & WELL NAME	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
<u>CARLSBAD ATOKA SOUTH</u>							
Mobil 12 Federal							
Pennzoil United Inc.	88,456	75,834	69,120	79,135	70,458	72,428	455,431
<u>CARLSBAD MORROW SOUTH</u>							
Missouri New Mexico Land Co. Comm.							
Morris R. Antweil			1,827	4,139	3,682	2,866	12,514
Pennzoil United Inc.							
Echols Com.					55,725	65,939	121,664
Gulf Federal Com.	64,027	48,388	43,596	38,292	35,963	31,533	261,799
Mobil 12 Federal	69,909	64,742	72,043	68,587	71,087	66,222	412,590
<u>CARLSBAD STRAWN SOUTH</u>							
The Superior Oil Co.	60,023	47,739	65,156	63,603	65,812	62,174	364,507
Collatt Estate Comm.	1,188	1,058	1,582	1,461	1,520	1,352	8,161
Morris R. Antweil							
Little Jewel Com.							
Commingle w/Antelope Ridge							
Unit Battery							
					127		127

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4585

OPERATOR & WELL NAME

ACCUM. PROD.

JUNE PROD.

DAILY RATE

CAOF

Pennzoil United Inc.
Mobil 12 Federal

1,482,407

72,428

2414.

2.6MMCF

CARLSBAD MORROW SOUTH

Missouri New Mex. Land Co. Comm.
Morris R. Antweil

49,415

2,866

176.

2.4MMCF

Pennzoil United Inc.
Echols Com.

121,664

65,939

2203.

3.86MM

Gulf Federal Com.
Mobil 12 Federal

710,713

31,533

1124.

12.7MM

1,393,636

66,222

2244.

3.3MMCF

CARLSBAD STRAWN SOUTH

The Superior Oil Co.
Collatt Estate Comm.

924,070

62,174

2147.

291MMCF

22,071

1,352

166.

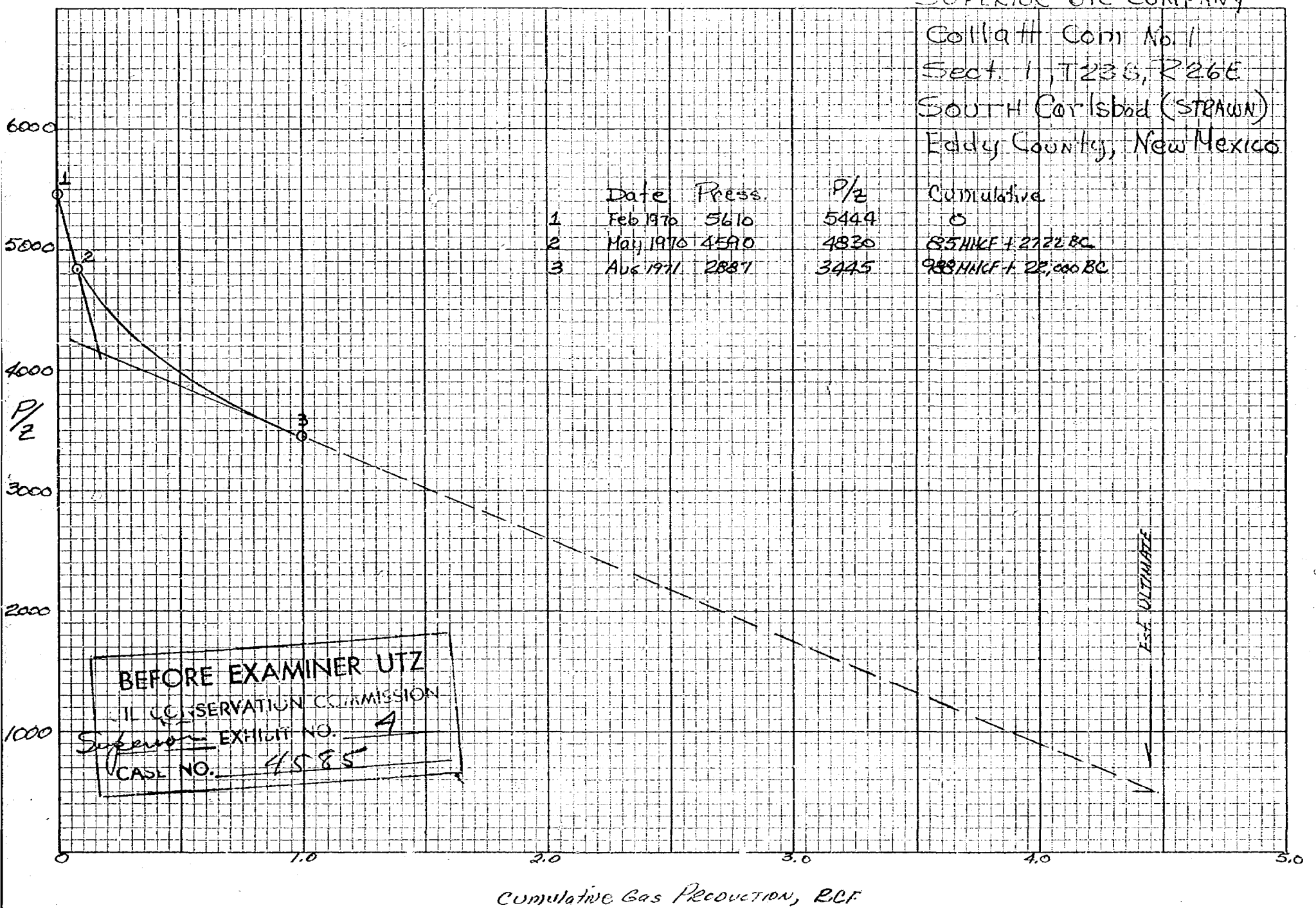
Morris R. Antweil
Little Jewel Comm.
Commingled w/Antelope
Ridge Unit Battery

127

K&E 10 X 10 TO THE INCH 46 0700
7 X 10 INCHES
KEUFFEL & ESSER CO.

SUPERIOR OIL COMPANY
Collaatt Com No. 1
Sect. 1, T23S, R26E
South Carlsbad (STRAWN)
Eddy County, New Mexico

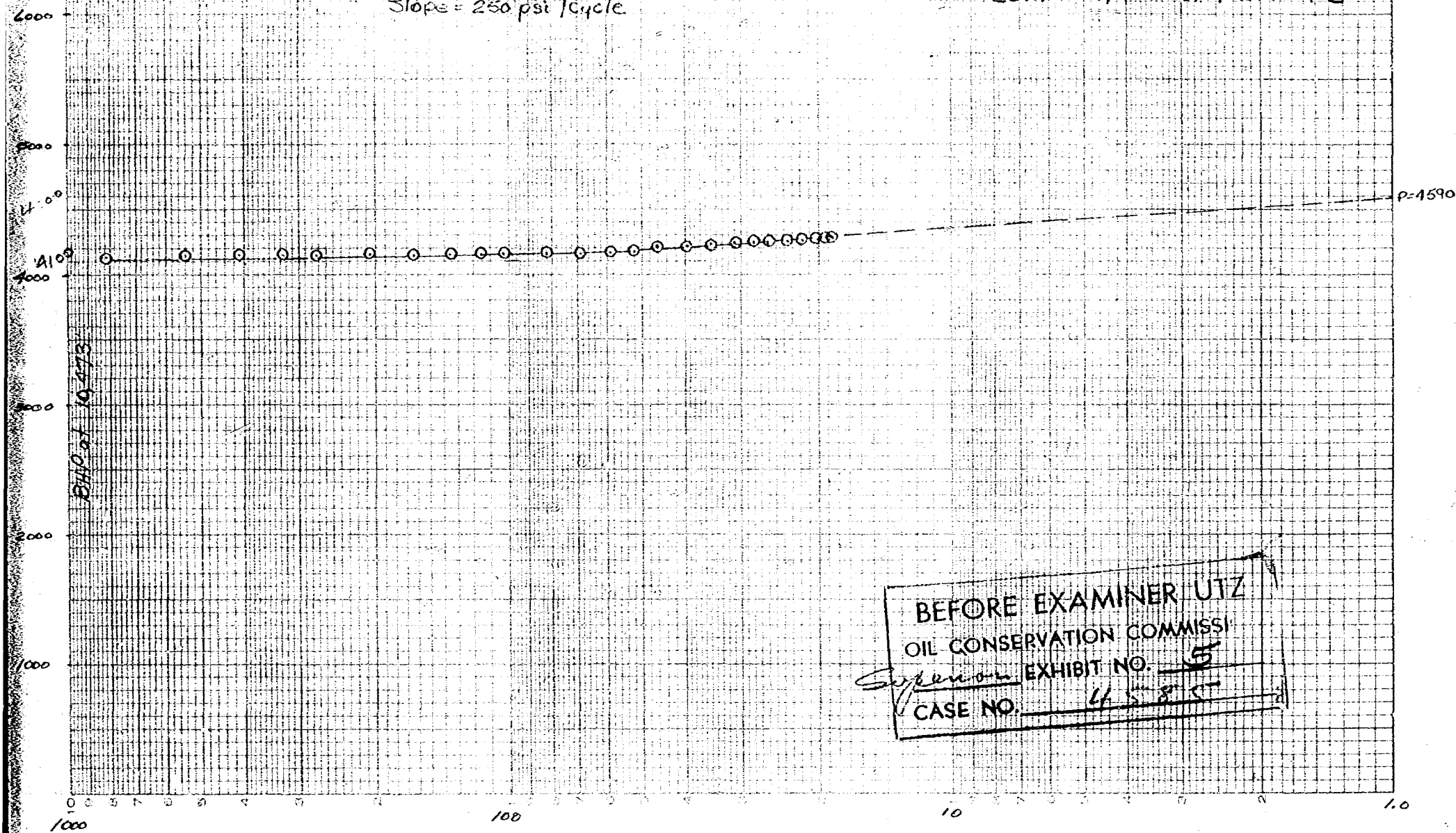
	Date	Press.	P/z	Cumulative
1	Feb 1970	5610	5444	0
2	May 1970	4510	4830	85 MMCF + 2722 BC
3	Aug 1971	2887	3445	988 MMCF + 22,000 BC



WORTH OIL CO.
Collatt Com No.
Sec 1, T23S, R26E
South Corried (377000) FIELD
Eddy County, New Mexico

BHP Build-UP - 5/14/70
Cum = 85,000 MCF + 2722 PC

Slope = 250 psi / cycle



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Superior EXHIBIT NO. 5
CASE NO. 4585

THAT
AT

NO. 1000 10 100 1000

JASON W. KELLAHIN
ROBERT E. FOX

KELLAHIN AND FOX
ATTORNEYS AT LAW
54½ EAST SAN FRANCISCO STREET
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO 87501
July 30, 1971

TELEPHONE 982-4315
AREA CODE 505

71 AUG 2 AM 10 23

[Handwritten signature]

Oil Conservation Commission of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 4585

Gentlemen:

Enclosed is the application of Pennzoil United, Inc.,
for approval of an unorthodox well location in the South
Carlsbad-Strawn Gas Pool, Eddy County, New Mexico.

It is requested that this case be set for hearing at the
next examiner hearing.

Yours very truly,

Jason W. Kellahin
Jason W. Kellahin

jwk;jk

DOCKET MAILED

Date 8-19-71

BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF PENNZOIL UNITED, INC., FOR
APPROVAL OF AN UNORTHODOX WELL
LOCATION, SOUTH CARLSBAD-STRAWN
GAS POOL, EDDY COUNTY, NEW MEXICO

Page 4585

A P P L I C A T I O N

Comes now Pennzoil United, Inc., and applies to the Oil Conservation Commission of New Mexico for approval of an unorthodox well location, South Carlsbad-Strawn Gas Pool, Eddy County, New Mexico, and in support thereof would show the Commission:

1. Applicant is the owner of the right to drill in Section 6, Township 23 South, Range 27 East, N.M.P.M., Eddy County, New Mexico.

2. Applicant proposes to drill a well as a dual completion, in the South Carlsbad-Strawn Gas Pool, and the South Carlsbad-Morrow Gas Pool, Eddy County, the well to be located 990 feet from the West line and 1980 feet from the South line of Section 6, Township 23 South, Range 27 East.

3. Because of lease ownership, applicant proposes to dedicate the W/2 of Section 6 to the well for production from the South Carlsbad-Morrow Gas Pool; and to dedicate the S/2 of Section 6 to the well for production from the South Carlsbad-Strawn Gas Pool.

4. The proposed location is a standard well location for the South Carlsbad-Morrow Gas Pool, but an unorthodox well location for the South Carlsbad-Strawn Gas pool.

5. Approval of the well location is in the interests of conservation and the prevention of waste.

WHEREFORE Applicant prays that this matter be set for hearing before the Oil Conservation Commission or the Commission's duly appointed examiner, and that after notice and hearing as provided by law, the Commission enter its order approval the well location as prayed for.

Respectfully submitted,

PENNZOIL UNITED, INC.

By Jason W. Kellahin
KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

DRAFT

GMH/dr

(Handwritten initials)

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4585

Order No. R- 4205

APPLICATION OF PENNZOIL UNITED,
INC. FOR AN UNORTHODOX GAS WELL
LOCATION, EDDY COUNTY, NEW MEXICO.

(Handwritten signature)
10-8-71

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 1, 1971,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this October day of September, 1971, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Pennzoil United, Inc., seeks ~~authority~~
an exception to Rule 104 C II of the Commission Rules and Regulations
to drill a gas well to the ~~straw~~ *straw* formation in an undesignated
in the South Carlsbad-Strawn Gas Pool at an unorthodox gas well loca-
tion 1980 feet from the South line and 990 feet from the West
line of Section 6, Township 23 South, Range 27 East, NMPM, Eddy
County, New Mexico; that the S/2 of said Section 6 would be
dedicated to said well.

(3) That a standard location for the subject pool
would require the well to be no closer than 660
feet to the nearest side boundary of the dedicated tract
nor closer than 1980 feet to the nearest end
boundary nor closer than 330 feet to any quarter-
quarter section or subdivision inner boundary.