

Sou CASE 6035: SOUTHERN UNION SUPPLY CO.,
FOR COMPULSORY POOLING, LEA COUNTY, *pany*
NEW MEXICO

Case Number

6035

Application

Transcripts.

Small Exhibits

ETC.



OIL CONSERVATION COMMISSION

STAT OF NEW MEXICO
P. O. BOX 2003 - SANTA FE
87501



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
November 29, 1977

STATE GEOLOGIST
EMERY C. ARNOLD

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& Gerding
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P. O. Box 1020
Farmington, New Mexico 87401

Re: CASE NO. 6017, 6035, 6036
ORDER NO. R-5579

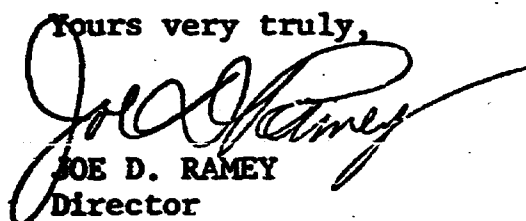
Applicant:

Southern Union Supply Company,
E. L. Latham, Jr. and Poy G. Barton, Jr.

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Commission order recently entered in the subject case.

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Donald G. Stevens

Copy of order sent to Case 6017

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 14, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Southern Union Supply
Co., for compulsory pooling, Lea County,
New Mexico; and Application of E. L.
Latham, Jr., and Roy G. Barton, Jr.,
for compulsory pooling, Lea County,
New Mexico; and Application of E. L.
Latham, Jr., and Roy G. Barton, Jr.,
for compulsory pooling or in the
alternative 40-acre spacing, Lea County,
New Mexico.

CASES
6035
6017, and
6036
CONSOLIDATED

BEFORE: Richard L. Stamets, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission:	Lynn Teschendorf, Esq. Legal Counsel for the Commission State Land Office Building Santa Fe, New Mexico
For Southern Union Supply Company:	Byron Caton, Esq. TANSEY, ROSEBROUGH, ROBERTS & GERDING, P.A. Attorneys at Law 621 West Arrington Farmington, New Mexico
For E. L. Latham, Jr., and Roy G. Barton, Jr.:	Donald G. Stevens, Esq. Attorney at Law 214 Old Santa Fe Trail Santa Fe, New Mexico

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1 MR. STAMETS: Call next case, Case 6035.

2 MS. TESCHENDORF: Case 6035, application of Southern
3 Union Supply Company for compulsory pooling, Lea County,
4 New Mexico.

5 MR. STAMETS: Call for appearances in this case?

6 MR. CATON: Byron Caton, Tansey, Rosebrough, Roberts
7 & Gerding, Farmington, for Southern Union Supply Company.

8 MR. STEVENS: Don Stevens, attorney in Santa Fe,
9 representing Latham and Barton.

10 Mr. Examiner, Latham and Barton have the two next
11 cases which are in direct opposition to the case at hand.
12 We would suggest or ask that perhaps that the Commission might
13 wish to consolidate these cases for the purpose of the hearing,
14 only, or in the alternative if you don't wish to so consolidate
15 them we might propose that our direct evidence in our two
16 cases be considered in opposition to the case at hand.

17 MR. STAMETS: Is there any objection to consolidating
18 these three cases?

19 MR. CATON: We have no objection -- we suggested it.

20 MR. STAMETS: Okay. Let's call Case 6017 and 6036,
21 please.

22 MS. TESCHENDORF: Case 6017, application of E. L.
23 Latham, Jr., and Roy G. Barton, Jr., for compulsory pooling,
24 Lea County, New Mexico.

25 Case 6036, application of E. L. Latham, Jr., and

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1 Roy G. Barton, Jr., for compulsory pooling of a standard or
2 a non-standard oil proration unit and an unorthodox location,
3 or in the alternative, forty acre spacing, Lea County, New
4 Mexico.

5 MR. STAMETS: These cases will be consolidated
6 and separate orders may be issued or perhaps one order will
7 suffice. That, I am sure, will make itself known.

8 MR. CATON: I have two witnesses I would like to
9 have sworn.

10 MR. STAMETS: Will all of those who will be witnesses
11 in this case please stand and be sworn at this time?

12 (THEREUPON, the witnesses were sworn.)

13 MR. CATON: Mr. Examiner, we will be introducing
14 testimony regarding Case Number 6035 and in accordance with
15 counsel's suggestion we would ask that this testimony be
16 considered in opposition as to the other cases which have
17 been consolidated.

18

19

ROY SHIROCK

20 was called as a witness by the applicant, and having been
21 first duly sworn, testified upon his oath as follows:

22

23

DIRECT EXAMINATION

24

BY MR. CATON:

25

Q. Would you state your name, please?

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1 A. Roy Shirock and I am Chief Geologist for Southern
2 Union Gas Company, Dallas, Texas.

3 Q. Mr. Shirock, have you testified before the Oil
4 and Gas Commission previously?

5 A. Yes, I have.

6 Q. Is your job involved, now, with Southern Union
7 Supply Company, directly involved with the application that
8 has been filed in this matter?

9 A. Yes.

10 Q. Are you generally familiar with the field in which
11 this application is made?

12 A. I am familiar area, the periphery of the area, of
13 this forced pooling application that we are asking for on the
14 north half of the northeast quarter of Section 30, Township
15 9 South, Range 33 East.

16 MR. CATON: I would ask that Mr. Shirock's
17 qualifications be accepted.

18 MR. STAMETS: They are.

19 Q. (Mr. Caton continuing.) Mr. Shirock, can you tell
20 the Examiner what it is that Southern Union Supply Company
21 wants in this case?

22 A. Southern Union Supply Company is seeking compulsory
23 pooling in the north half of the northeast quarter of Section
24 30, Township 9 South, Range 33 East, Lea County, New Mexico,
25 and to ask for a standard location on this particular eighty-

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1 acre drilling unit at the location of six hundred feet from
2 the north line and eighteen hundred and fifty feet from the
3 east line.

4 Also, as are asking for to be considered on the
5 cost of drilling and the completing of this well and also
6 we are asking for a risk factor of two hundred percent and
7 also we are asking for one thousand dollars per month over-
8 head expense for drilling a well and we are asking for
9 one hundred dollars per month for administrative overhead to
10 take care of this well.

11 Q All right, thank you. Now, counsel, would you
12 agree that mutual attempts to pool have been made in these
13 cases?

14 MR. STEVENS: That is so stipulated.

15 Q (Mr. Caton continuing.) Mr. Shirock, would you
16 refer to Exhibit One through Four -- are all of these exhibits
17 prepared under your supervision and direction or by you?

18 A They are.

19 Q Do these exhibits directly relate to your opinion
20 as to the proper location of this particular well site?

21 A They do.

22 Q Would you refer to Exhibit One and tell the hearing
23 officer what that is?

24 A Exhibit One is a structure map contoured on top of
25 the P1 zone or the Slaughter porosity. This map was

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1 contoured on an interval of ten feet and the scale of this
2 map is one inch equals one thousand feet.

3 Q Now, would you identify for the hearing officer the
4 area for which we seek pooling, please?

5 A We seek pooling -- it is designated on this map by
6 the hashed area of the north half of the northeast quarter
7 of Section 30. It is so labeled as a pooling unit.

8 Q Now, would you identify the location of the well
9 site within that pooling unit, please?

10 A The location is six hundred feet from the north
11 line and eighteen hundred and fifty feet from the east
12 line.

13 All right. Is that a standard location?

14 A Yes, sir, that is a standard location according
15 to the field rules of the Flying M Field which so designates
16 the northeast -- excuse me -- the northwest or the southeast
17 quarter-quarter section as a drilling unit on eighty acre
18 spacing.

19 Q All right. The standard acreage is eighty acres?

20 A That's correct.

21 Q In that field?

22 A That's correct.

23 Q All right. Now, Mr. Shirock, would you describe
24 Exhibit One and tell the Examiner what you find significant
25 in that particular exhibit?

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1 A As I mentioned before Exhibit One is contoured
2 on top of the Slaughter porosity zone. It is contoured on
3 ten foot intervals.

4 This particular map shows an east-west trending
5 nose through the pooling unit with some closure. This
6 east-west nosing has a structure anomaly on it and the dip
7 rate in this particular field in the area that we mapped
8 here has a dip to the east of about one hundred and twenty
9 feet per mile.

10 Q Now, what is the significance of that structure?

11 A It is my opinion that the significance of this
12 structure shows that the north half of the northwest quarter
13 of Section 30 has similar geological characteristics and
14 for this reason I believe that the north half should be
15 pooled together for a well at a standard location.

16 Q All right. Stepping down on the same exhibit, Mr.
17 Shirock, would you state your opinion as to whether the
18 structure in the south half would be structurally similar?

19 A Yes, I do. The south half of the northeast quarter
20 of Section 30 would have similar geological characteristics.

21 Q Now, Mr. Shirock, would you tell the Hearing Examiner
22 what other wells Southern Union Supply has in this immediate
23 area?

24 A Southern Union Supply Company owns Section 19. It's
25 a state lease. We drilled a number -- Southern Union Supply

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1 Company No. 1, Susco State of 7/7, this year, and it was
2 completed as a San Andres producer.

3 Last week we completed -- we set pipe on the
4 Susco No. 2, which is located nineteen eighty from the south and
5 nineteen eighty from the east line of Section 19. Both
6 of these wells are drilled on a standard location.

7 We plan a conservative approach in developing our
8 acreage out in the area by development in eighty acre spacing
9 on standard locations and our next location that we have
10 determined would be the re-entry of the BTA Oil Production
11 No. 2, FMS, which is located approximately nineteen eighty
12 from the west line and six hundred and sixty feet from the
13 south line of Section 19.

14 Q And your re-entry, what do you plan to do in terms
15 of completion, at what level?

16 A The San Andres, we plan to re-enter that well and
17 also log it and if the logs show that a completion attempt
18 is necessary at that time we will try to complete that well
19 in the San Andres zone -- the San Andres-Slaughter zone.

20 Q All right. Does Southern Union Supply Company have
21 any interest in the land to the south of your proposed pooling
22 unit, Mr. Shirock?

23 A You are talking about the north half?

24 Q Yes.

25 A Yes, we have approximately fifty percent of the

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1 southwest of the northeast quarter.

2 Q All right. Now, can you describe from the structure
3 map the other wells that are in the immediate vicinity
4 of Susco's proposed well?

5 A Would you --

6 Q Would you describe the other wells that are in the
7 immediate vicinity that are not Susco's wells?

8 A The other wells that are drilled in the immediate
9 vicinity in Section 29, are the No. 1, No. 2, No. 3, and
10 No. 4, McGuffin of Coastal States. Also, the No. 1, Nancy
11 Trow and the No. 1. Flying M, and the No. 2, Nancy Trow,
12 those wells are drilled in Section 29.

13 In Section 30, the Saxon Oil Company has the No. 1,
14 Gregg Dodd, which is located in the northwest of the southeast
15 quarter section of Section 30. Also, Section 30, Shell
16 drilled a No. 1, Richardson and the No. 2, Richardson, which
17 the number one did produce from the San Andres for a short
18 time and it is now plugged and abandoned.

19 The No. 2, Richardson was a dry hole to the Bo
20 Sea.

21 The Union Texas No. 1, McGuffin was drilled to the
22 Bo Sea -- completed in the Bo Sea.

23 Q Mr. Shirock can you state as to whether the wells
24 that you have described are all drilled -- original wells,
25 have all been drilled on standard locations?

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1 A Yes, they have been.

2 Q Are there any exceptions to that?

3 A Yes, sir, the No. 2, McGuffin was drilled on an
4 unorthodox location and approved by the New Mexico Oil
5 Commission.

6 MR. STAMETS: That's the well drilled in the southwest
7 quarter of the northwest quarter of Section 29?

8 A That's correct.

9 Q (Mr. Caton continuing.) There is an order of the
10 Commission?

11 MR. STAMETS: Well, as long as we are right there,
12 I am kind of confused on this. It is supposed to be eighty
13 acre spacing and yet in Section 29 I see a well on every
14 forty with the exception of the southwest of the southwest?

15 A Well, after reading many locations in the area
16 the standard location was drilled first and they were all
17 approved and at that time you can drill the other locations
18 after the standard location is drilled and the allowable
19 is counted on one eighty acre spacing.

20 MR. STAMETS: So, what we have is infill wells
21 drilled in Section 29 in the southeast and the south half
22 of the southwest of Section 20?

23 MR. CATON: With the exception of the one unorthodox
24 location.

25 A They were all drilled at standard locations, first.

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1 MR. STAMETS: Okay.

2 A. Even in Section 20 the Arco was drilled first at
3 a standard location.

4 Q (Mr. Caton continuing.) Mr. Shirock, would you tell
5 the Examiner what your conclusions -- what conclusions you
6 would draw from Exhibit One as Susco's location of its
7 well?

8 A. My conclusion is that pooling of the north half
9 of the northwest quarter would be applicable because it has
10 similar structural conditions and also it would protect the
11 correlative rights of the people in that particular eighty
12 acre tract.

13 Q Would, in your opinion, would that well location
14 drain that entire eighty acres?

15 A. Yes, sir.

16 Q Now, can you tell me, go ahead --

17 A. It's our opinion that in this particular area that
18 these wells on eighty acre spacing will produce somewhere in
19 the neighborhood of eighty thousand barrels. On forty
20 acre spacing it appears to us that the recovery would be
21 somewhere in the neighborhood of forty-five thousand barrels.

22 With this difference in the magnitude and the
23 drilling cost out there it seems only plausible that these
24 wells should be developed on forty acre spacing to prevent
25 excess wells being drilled and --

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1 Q You said forty acre spacing, do you mean that?

2 A Should be developed on eighty acre spacing, I
3 am sorry.

4 Q And what would the result be of development on
5 forty acre spacing, Mr. Shirock?

6 A Well, it is my opinion on forty acre spacing these
7 wells would be excessive wells drilled in the immediate
8 vicinity.

9 Q All right. Now, let's refer to Exhibit Two, please.
10 Mr. Shirock, can you tell the Hearing Examiner the interests
11 that are involved in the proposed pooling?

12 A The interest in the north half of the northeast
13 quarter of Section 30 is Southern Union Supply Company,
14 approximately seventy-four point five percent of the working
15 interest.

16 Roy Barton and his group approximatley twenty-three
17 point five percent of the working interest.

18 Q Would you tell the Examiner what Exhibit Two is,
19 please?

20 A Exhibit Two is an isopachous map or a thickness
21 map of greater than seven percent porosity of the Slaughter
22 zone above the oil-water contact. This is shown in footage.

23 It has been contoured with the other wells to
24 indicate that we have an anomalous situation similar to our
25 structural situation on Exhibit One.

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1 It is my thinking that drilling our Susco No. 1,
2 Shell, et al, in the location as recommended would encounter
3 about thirty-two feet of San Andres pay in the Slaughter zone
4 having greater than seven percent porosity.

5 It is our opinion that this one well would effectively
6 drain this eighty acres.

7 Q All right. Are the structure lines or the contour
8 lines that you have drawn seem to me to be strongly similar
9 to the structural map. Do you attach any significance to
10 that similarity, Mr. Shirock?

11 A Well, I think in this particular field that probably
12 structure and porosity are playing an important part in
13 developing the field and we think that where you have an
14 anomalous situation that you are going to have more porosity.

15 Q Now, looking at the eighty acre acreage directly
16 below the forced pooling area would you tell us what the
17 conditions are in that particular area relating to porosity?

18 A Well, it seems to me that the south half of the
19 northwest quarter of Section 30 do have similar geological
20 characteristics of structure and porosity.

21 It seems to me that a well in that area and at a
22 standard location in the south would be much less attractive
23 than a well in our present location.

24 Q Would you refer to Exhibit Three, please? Would you
25 explain to the Examiner what Exhibit Three is, please?

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1 A. Exhibit Three is an average daily production for
2 June 1977 of wells around the periphery of the requested
3 pooling unit.

4 However, our No. 1, Susco State, went on production
5 on July 8th and the average production is from July the 8th
6 through July the 31st for that particular well.

7 This well was contoured on twenty barrels of oil
8 per day, producing. This shows -- indicates with this
9 particular map -- shows that the north half of the northwest
10 quarter of Section 30, the requested pooling unit has similar
11 characteristics and that a well drilled at our requested
12 location on eighty acre spacing should produce somewhere in
13 the neighborhood of approximately eighty-two barrels of oil
14 a day.

15 MR. STAMETS: Where was that well that was producing
16 twenty barrels of oil a day, the location of it?

17 A. Which well?

18 MR. CATON: Well, where is the well that was
19 brought in that was --

20 MR. STAMETS: The original well?

21 A. Oh, the well that we just completed, the Susco No. 2?

22 MR. STAMETS: In the northwest southeast of Section
23 19?

24 A. We just set pipe on that. The well, according to
25 the electric log analysis and core analysis there the well

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1 appears similar to our No. 1. It is -- can I go back to
2 Exhibit One?

3 From the electric log on top of the Slaughter zone
4 the datum is plus sixty-one which increases this nose
5 effect to the north.

6 Q (Mr. Caton continuing.) What you are saying, Mr.
7 Shirock, is that if that datum was incorporated into Exhibit
8 Three and Exhibit One the nozing effect that you see up in
9 Section 19 would be expanded?

10 A That's correct. And possibly that even the structure
11 high anomaly would probably be expanded to go on up into
12 Section 19, too.

13 Q Now, is there a difference between the production
14 that exhibit was used in this particular well and what you
15 have actually produced on it?

16 A I don't understand your question.

17 Q Well, you said that this exhibit that the Susco
18 Well No. 2, was drawn in at twenty barrels, is that correct,
19 or am I wrong?

20 A Yes, drawn in at about sixty-three barrels of oil
21 per day. What I am saying is that the electric log and the
22 core analysis looks similar to our No. 1 Susco so we anticipate
23 that it will make similar production as the No. 1.

24 Q And what does the No. 1 make?

25 A Eighty-four barrels a day.

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1 Q All right. Now, what are the conclusions you
2 draw as to our proposed well location from Exhibit Three,
3 please?

4 A Well, by Southern Union Supply Company taking a
5 conservative approach in developing our acreage in Section 19
6 and the acreage in Section 30 on eighty acre spacing we
7 think that the north half of the northeast quarter of
8 Section 30 have similar characteristics on this particular
9 map. And a well drilled at our location would produce some-
10 where in the neighborhood of eighty plus barrels per day.

11 Q Would you take a look at Exhibit Four, please?

12 A Yes, sir.

13 Q Tell the examiner what that is?

14 A Exhibit Four is a cross section labeled AA prime
15 and it runs from the Shell Oil Company No. 1, Richardson
16 on the east through the Union Texas No. 1, McGuffin and
17 continues eastward through our proposed location of Southern
18 Union Supply Company's Shell et al, No. 1, and on the east
19 to Coastal States Gas Production Company McGuffin No. 4.

20 Q Is the location of those wells by section as shown
21 down in the lower left corner and would you describe to the
22 Examiner the significance of that particular exhibit, please?

23 A We think that this particular exhibit is showing a
24 thinning of the PI slaughter zone over to the east and also
25 it is showing that the PI Salughter zone is becoming structurally

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1 higher.

2 Also, it shows that the perforations in the Coastal
3 States well and the perforations over in the Shell Oil Company
4 No. 1, Richardson are much higher.

5 With this information, data, it appears to me to
6 prove that our structure map and porosity map are validated.

7 Q This supports the previous conclusion that you have
8 drawn?

9 A Yes, sir.

10 Q Now, Mr. Shirock, in your opinion what would be the
11 result of the joinder of the south half of this area of the
12 field with wells in either of the north quarters?

13 A Would you rephrase the question?

14 Q All right. What would be the result of the drilling
15 in the south half of the area below the proposed pooling area?
16 Do you think that would be a good well?

17 A My personal opinion is that I think that the south
18 half of that quarter section has similar geological characteristics
19 and I think a well drilled at the standard location would be
20 a marginal economical well.

21 Q What would be the result, then, of turning the
22 proposed pooling acreages up on end and joining the north half
23 with the south half for two proposed wells?

24 A It appears to me when you try to run the unit where
25 the one unit would be the east half and the other one would be

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1 the west half that you are trying to average out the good
2 with the poor and average out different geological similarities
3 whereby they will average out.

4 When you do that you are not protecting the
5 correlative rights of the people that have the structural
6 high areas.

7 Q Now, Mr. Shirock, in your opinion would the
8 correlative rights of Southern Union Supply Company be protected
9 by spacing which would, setting the eighty acre spacing units
10 on end, be protected in this case?

11 A No, I don't think so. I think it should be run
12 east and west in this particular instance.

13 Q Do you have an opinion as to whether a well in the
14 north half of the Susco proposed well would drain the acreage,
15 the eighty acres?

16 A It is my opinion that that one well would drain that
17 eighty acres.

18 Q Now, Southern Union is asking for a risk factor to
19 be established in this case. I don't think we are in
20 disagreement on that, are we, Mr. Stevens? Are we both asking
21 for the same risk?

22 MR. STEVENS: Not by any means.

23 Q (Mr. Caton continuing.) Okay. I thought I read two
24 hundred percent. Would you tell us your opinion as to what
25 risk factor should be established in this case?

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1 A I think a risk factor of two hundred percent should
 2 be established.

3 Q And on what do you base that, Mr. Shirock?

4 A Well, I base that particular thing on that that is
 5 the maximum amount the Commission will let us obtain on our
 6 investment and also that we do have risk anytime we do drill
 7 a well.

8 Q All right. Mr. Shirock, you are asking that Southern
 9 Union Supply be appointed operator of this particular field?

10 A That's correct.

11 Q Do you have a recommendation as to the cost of
 12 that?

13 A Yes, sir. My recommendation for the cost of drilling
 14 the Shell and others is two hundred and seventeen thousand
 15 nine hundred and fifty-two dollars.

16 Q Now, that's your estimate of the cost of the well,
 17 is it not?

18 A That's correct. That's the cost of the completed
 19 well.

20 Q Now, is that estimate supported by recent data in
 21 the completion of the wells that just have been done out
 22 there?

23 A Yes, sir. I have an exhibit here which indicates or
 24 shows that drilling our Susco No. 1, State which is located
 25 six hundred sixty feet from the south line and six sixty from

1 the west line of Section 19, Township 9 South, Range 33 East,
2 we estimate the cost at one hundred seventy-four thousand
3 seven hundred and five dollars and the actual cost of drilling
4 this particular well was one hundred and ninety-eight thousand
5 and thirty-six dollars.

6 Also I might mention that our cost in drilling the
7 Shell well on a footage rate will be nine dollars and twenty-
8 five cents. That's the same price that they charged us in
9 drilling the Susco No. 2.

10 I think that is the difference to where the two
11 hundred and seventeen thousand from the one hundred and
12 ninety-eight thousand in drilling the first well.

13 Q Now, do you have a recommendation as to a monthly
14 cost for during the drilling time, Mr. Shirock.

15 A Yes, sir. It is my recommendation that our
16 administrative overhead fee be based on one thousand dollars
17 per month for drilling and completing the well or any workover.

18 Q And as for operation, what is your recommendation?

19 A My recommendation is for administrative overhead and
20 is one hundred dollars per month with pumping to be billed
21 directly to the individual companies at whatever rate that
22 would be.

23 MR. CATON: We will offer Exhibits One through Five.

24 MR. STAMETS: Any objection? They will be
25 admitted.

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1 MR. CATON: That completes our direction examination,
2 Mr. Stamets.

3 MR. STAMETS: Are there any questions of the
4 witness?

5 MR. STEVENS: Yes, Mr. Examiner.

6
7 CROSS EXAMINATION

8 BY MR. STEVENS:

9 Q Mr. Shirock, I believe that you testified and please
10 correct me if I say that you testified to something that is
11 erroneous --

12 I believe that you testified that you consider that
13 there are similar geological conditions in the north half of
14 the northeast quarter.

15 Could you state why Southern Union Supply Company
16 staked this location eighteen hundred fifty feet from the east
17 as opposed to nineteen hundred and eighty feet which would be
18 in the center of the northwest-northeast?

19 A At the time we staked the location we owned that
20 particular lease that this location was staked on.

21 Q Now, you are proposing to force pool it. With these
22 new conditions in mind would you object to it being staked
23 nineteen eighty from the east as opposed to the eighteen fifty?

24 A I think we staked the location at a good point.

25 MR. STAMETS: I missed your answer to the first

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1 question and I wish that you would repeat it. I don't
2 remember the question --

3 MR. STEVENS: Why it was staked eighteen hundred
4 and fifty feet from the line.

5 A Yes, because we owned that particular lease at that
6 time and we owned all of the leases now but at that particular
7 time when we staked that particular location we didn't know
8 for sure if we was going to get the lease that would have the
9 center point of nineteen eighty and six sixty.

10 Q (Mr. Stevens continuing.) Do you consider it a
11 superior location, the eighteen fifty from the east, as
12 opposed to nineteen hundred eighty from the east, geologically?

13 A Well, I think geologically we staked the location
14 in the best point available that we think is a legal, standard,
15 location.

16 Q If you had the opportunity disregarding the field
17 rules and any other Southern Union wells in the area would
18 you, concerned solely with geology and not with correlative
19 rights --

20 A May we shut the door, Mr. Examiner, I can barely
21 understand him --

22 Would you repeat your question?

23 Q Sure, if you had the opportunity to stake that
24 location again solely based upon geological and reservoir
25 conditions as opposed to the correlative rights of any other

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1 wells Southern Union might have in the area would you stake
2 it further east? This is a hypothetical question, of course,
3 of an expert witness.

4 A Well, probably if we didn't have to worry about
5 landowners or the New Mexico Commission, I would probably
6 overlay both the porosity map and the structure map and at
7 those points I would probably stake my location that-a-way.

8 But as this shows or indicates that these maps are
9 made solely on the information that is available to us at
10 that time.

11 Q If you did overlay those two where would you stake
12 your location, at the present location or further to the
13 east or further to the west?

14 A I can't move it.

15 Q If you could, hypothetically, I am asking?

16 A Well, that's a hypothetical question and you asked
17 me a hypothetical question, and I would probably might
18 probably want to drill it in the center of the eighty acres.

19 Q You don't consider the northeast quarter of the
20 northeast quarter to be a superior location geologically and
21 reservoir-wise to the northwest quarter of the northeast
22 quarter?

23 MR. CATON: Are you disregarding correlative rights,
24 again?

25 MR. STEVENS: I am speaking strictly of geology.

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1 A I think that that particular location will make
2 a good well. I think that our Southern Union Supply Company's
3 location is going to make a good well. I think that one
4 well up in that area will drain the whole eighty acres.

5 Q Do you consider the wells drilled in 29 should not
6 have been drilled off of the standard locations?

7 These wells are drilled mainly on forty acre spacing
8 as opposed to eighty acre spacing.

9 A Well, I can't -- the thing about it is that each one
10 of these wells in Section 29, I am talking now about the
11 wells that I have -- where I have datum points on it and I
12 know about those wells.

13 These wells were drilled, the first well in each
14 location was drilled on a standard location.

15 Q Do you consider the alternate wells that were not
16 drilled on standard locations to be unnecessary wells to be
17 drilled?

18 A I can't say for other companies.

19 Q Can you say from your own geological opinion?

20 A Our own geological thing, what our company is doing
21 is to take a conservative approach in developing our acreage
22 out there which is in Section 19 and the acreage that we have
23 in Section 30, or the northwest quarter of Section 30.

24 Q You will not state any opinion as to the geological
25 merits of alternate locations in Section 29; is that correct?

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1 A Well, I think that your alternate locations, and
2 I just mentioned, that without your well in the northeast
3 of the northeast, I said, I thought that it would make a
4 good oil well. But I also mentioned, I think, that our well
5 over there, the Susco's Shell and others, would make a good
6 well and drain the whole eighty acres.

7 Q Mr. Shirock, I am not trying to badger you --

8 MR. CATON: Will you let him finish the answer?

9 MR. STEVENS: Sure, excuse me.

10 A What I am trying to do is develop this area on a
11 logical manner in which the New Mexico Oil Commission in its
12 wisdom suggested eighty acre spacing out there and our
13 company, you know, Southern Union goes by the conservative
14 approach on anything.

15 Q Do you consider that section 29 was developed
16 illogically?

17 A I can't come back and say what other people done.
18 I didn't have any control over that.

19 Q Do you consider that a well that would be drilled
20 in the northeast quarter of the northeast quarter would better
21 recover the oil under solely the northeast quarter of the
22 northeast quarter better than a well to be drilled in the
23 northwest quarter of the northeast quarter? Being concerned
24 solely with corrolative rights of the owners under the north-
25 east quarter of the northeast quarter?

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1 A I think that a well in that -- are you talking about
2 this forty acres, is that correct?

3 Q Yes, sir.

4 A I think that a well in that particular location would
5 make a good well. The thing about it is that we don't have
6 forty acre spacing out there to begin with.

7 So, what the next best thing to do or the best thing
8 to do is drill a well which is our Susco well and try to drain
9 that whole eighty acres on a conservative approach.

10 Q If this Commission approved forty acre spacing in
11 this field or granted an unorthodox location in the northeast
12 quarter of the northeast quarter do you think that that well
13 drilled in the northeast quarter under the approval of this
14 Commission would better protect the correlative rights of
15 the owners of the northeast quarter of the northeast quarter
16 than a well drilled in the northwest quarter of the northeast
17 quarter?

18 A Are you talking about a well in this forty acre
19 spacing as compared to a well over here in this forty acre
20 spacing, is that correct?

21 Q Yes, sir, and I am being concerned solely with
22 correlative rights of the owners under the northeast quarter
23 of the northeast quarter.

24 A What I am trying to do is protect the correlative
25 rights on the whole eighty acre spacing because we don't have

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1 forty acre spacing.

2 Q I know. I asked you a hypothetical question. If
3 the Commission granted either forty acre spacing in this
4 field or granted an unorthodox location whereby a well could
5 be drilled in the northeast quarter of the northeast quarter
6 do you consider a well drilled in the northeast quarter of
7 the northeast quarter would better protect the rights of the
8 parties underlying the northeast quarter of the northeast
9 quarter than a well drill in the northwest quarter of the
10 northeast quarter?

11 A Well, the smaller the spacing the better protection
12 correlative rights and the landowners will have or the people
13 will have but sometimes it becomes illogical to do that.

14 Q Mr. Shirock, you show an isopach map greater than
15 seven percent porosity in Exhibit Number Two. Do you consider
16 that the porosity is the determinate as to the amount of oil
17 recoverable under any particular well site?

18 A Well, that and permeability. The thing about it I
19 can't map permeability.

20 Q It is impossible to map permeability?

21 A Well, I can't. Maybe other people can.

22 Q This twenty-five feet in the southeast of the
23 northeast of 19 for the Shell stake -- that well is a dry
24 hole -- does that tend to suggest that the porosity is not a
25 very good determinate of the ultimate productivity of any well?

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1 A No. I think that that particular well had the
2 porosity and the porosity is there and the thing about it is
3 that my thinking of that particular well is that it might have
4 been -- excuse me, I think I am talking about the wrong well.

5 Would you tell me --

6 Q The southeast quarter of the northeast quarter of
7 Section 19, the Shell No. 1, State well --

8 A Excuse me. I was looking at a different well. I
9 have that particular area mapped up there at twenty-three
10 feet of porosity in that particular area. I think that at
11 that time when that well was drilled is that possibly they
12 might not have had a good completion job or something of that
13 sort.

14 I cannot tell you what the situation is. The only
15 thing I can tell you is what we are planning to do if the
16 Susco No. 2 comes in similar as to the Susco No. 1 and that
17 I will recommend to management that we drill the southwest --
18 I mean the southeast of the northeast quarter at a standard
19 location.

20 Q How about the well in the southwest quarter of the
21 northeast quarter of Section 30, that well shows twenty-four
22 feet of porosity and a plugged producer and do you know why
23 it was plugged?

24 A Which?

25 Q The well in the southwest quarter of the northeast

1 quarter of Section 30, the BTA well?

2 A The BTA well did produce in the Bo Sea and it is my
3 understanding that they did come up and completed that well
4 in the San Andres-Slaughter zone. They completed it for a
5 small producer.

6 It is now plugged and I couldn't tell you why. I
7 am sure that it was uneconomical.

8 Q This twenty-four feet porosity that you show, then,
9 apparently doesn't affect that well in a positive sense, is
10 that a fair statement?

11 MR. CATON: To clarify it, isn't that well at a
12 different depth?

13 A This well is here but they did come back and try to
14 complete in the San Andres, is my understanding, is that not
15 right?

16 Q (Mr. Stevens continuing.) That's my understanding,
17 yes, sir.

18 A Yes, sir.

19 Q Phrased another way, is porosity very determinative
20 or is it permeability that is determinative in this field?

21 A It is my understanding that the San Andres in this
22 particular field, area, Section 19 where we drilled our well,
23 that the porosity factor is one factor for completion in the
24 area and that some people map porosity less than six percent.
25 We happen to think it is seven percent that you have got. We

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1 think that in this particular area we have got from fifteen
2 to twenty feet greater than seven percent porosity and we
3 have other porosities in there of six and five and that these
4 other porosities will contribute to the production of seven
5 percent.

6 It is our contention that you have to have seven
7 percent porosity to produce in the area.

8 Coring the Susco No. 2 and, again, getting the core
9 description over the telephone my understanding is that the
10 core is fractured, vertically fractured, for additional
11 permeability.

12 I know in our core analysis that some feet had quite
13 a bit more permeability than other footage in the area and
14 I attribute this to fracturing in the area.

15 Q Are you familiar with the well in the southeast
16 quarter of the northwest quarter of Section 29, the No. 1,
17 McGuffin which shows twenty feet of porosity?

18 MR. CATON: The No. 1, McGuffin?

19 MR. STEVENS: Yes, sir.

20 A Yes, sir, I am familiar with the well as far as
21 looking at the logs.

22 Q (Mr. Stevens continuing.) Do you know what it has
23 produced?

24 A I don't know the cumulative production, sure don't.
25 I can give you the daily production.

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1 Q You contoured your Exhibit Three according to your
2 legend as to average daily production after June of 1977.

3 I note in the southeast quarter of Section 19 you
4 have one well which shows eighty-four barrels a day production
5 and yet north of that well, between there and the dry hole
6 you have a contour line showing one hundred twenty barrels of
7 oil per day. What is the basis for that?

8 A The basis for that particular contour if you will
9 notice to the north it is dotted there and the basis of putting
10 that contour in is the same thing -- you have the basis for
11 the one hundred and twenty contour down at the bottom. We
12 could have left that --

13 Q Just above the Susco No. 1 the lines aren't dotted
14 and yet they go up to one hundred and twenty barrels a day and
15 between there and the Shell dry hole to the north could you give
16 me the basis for drawing in that one hundred and twenty?

17 A I disagree with you there, sir. They are dotted
18 from the barrels of oil per day all of the way over to the
19 No. 3, Arco.

20 Q I am speaking of one inch north of your Susco State
21 No. 1, north on the map and that line is not dotted and I am
22 wondering what is the basis for the one hundred and twenty
23 barrels a day that you have there?

24 A It was my determinate at that time that that particular
25 area could have a well that would make one hundred and twenty

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1 barrels. Can you say that it doesn't?

2 Q No, sir, I can't say it. But I can't see why you
3 did it and I am asking you if you can give me a reason why
4 you did it because nothing on this map apparently shows a
5 reason.

6 A Well, the thing about it is that this particular
7 well come in, our Susco No. 1, and we potentialized that well
8 for one hundred and sixty barrels a day, of oil per day, and
9 thirty-three barrels of water per day.

10 Q And you consider that you are going to make more
11 to the north of that location although you have no evidence
12 to justify that?

13 A The only evidence that I have at this time is the
14 Susco No. 2. I am certainly optimistic about it.

15 Q Are the electric logs very definitive of what you
16 are going to make out of a well in this field?

17 A Well, from the electric logs we do, in this particular
18 area, we were on a stand off logs where we could get a movable
19 oil plot. The movable oil plot was similar to the movable
20 oil plot in the Susco No. 1. And using similarities we think
21 that well will be similar to our Susco No. 1.

22 Q So, basically you are basing it on those two wells,
23 alone, is that correct?

24 A That's correct. Arco now is drilling their No. 3.
25 I am sure that the rig that drilled our No 2 moved over to drill

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1 their No. 3, Flying M. I am sure as soon as that is down
2 we will have additional information up there.

3 Q The well in the southeast of the southeast of 19
4 shows eighty-four barrels a day. The well in the southwest-
5 northeast of Section 30 is a plugged producer and do you know
6 how much it produced before it was plugged?

7 A Which, the BTA well?

8 Q Yes, sir.

9 A I have no idea.

10 Q Between those two wells you show contour lines from
11 eighty-four up to one hundred and one twenty. You pull those
12 contour lines over into the northeast quarter of the northwest
13 quarter of Section 30.

14 I see nothing over there to justify that. Could
15 you explain why it was done?

16 A Well, if you continue contouring on the basis that
17 for these wells are producing, the No. 4, McGuffin, is
18 producing ninety-five barrels a day and the Arco No. 2 is
19 producing ninety-one barrels a day and our well is producing
20 eighty-four barrels a day and you continue with the same contour
21 interval in contouring this thing why you come out with a
22 hundred up to one hundred and twenty barrels.

23 Q Would you have to draw that contour line between the
24 well in the southeast-southeast of 19 and the well in the
25 northwest-northwest of 29 to properly do contouring? I can't

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1 imagine why you draw it to the west?

2 A. You went too fast for me, mister. You are either
3 going to have to backtrack or come over here and show me.

4 Q. I'll be glad to backtrack. The well in the southeast
5 southeast of 19 is your well?

6 A. Okay.

7 Q. The well in the northwest-northwest of 29 is a well
8 making ninety-five barrels a day.

9 No well to the west or south of those two locations
10 makes more than twenty-six point seven barrels a day. Can
11 you explain how you justify putting one hundred to one hundred
12 twenty or eighty or sixty or forty barrels a day west of the
13 line drawn between your Susco No. 1 and the No. 4, McGuffin?

14 A. Would you please come and show me. I lost you, sir?

15 Q. Surely, I'll be happy to. This well shows eighty-
16 four barrels a day and this well shows ninety-five barrels
17 of oil a day. No wells west of there show any production.
18 No wells south of there show any production except in the
19 southwest-northwest of 29 and the northwest of the southwest
20 of 29 which have seven point four and twenty-six point two
21 barrels a day and the well in the northwest-southeast of 30
22 shows four point four barrels a day. How can you justify a
23 line greater than perhaps twenty-six point two barrels a day
24 between the location of the southeast-southeast of 19 and
25 the northwest-northwest of 29?

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1 A Well, the way I am suggesting is that this is the
2 way I contoured it. You can have other people contour it
3 anyway they want to.

4 Q It's just your opinion, though?

5 A It's my opinion.

6 Q You have no basis for your opinion that you are
7 showing on this map?

8 A My basis is that the contour interval is twenty
9 barrels of oil per day and we used the same contour interval
10 and the same equal distant spacing and equal distant contouring
11 is the same thing.

12 Q I want to come back to this again and I am sorry to
13 have to keep reiterating this but how did you go upward from
14 eighty-four barrels a day in a southeast direction from your
15 Susco No. 1 to one hundred and one hundred twenty barrels a
16 day?

17 A I am optimistic.

18 Q I believe you are. What is the basis of your state-
19 ment regarding Exhibit Four that you have pay thinning to the
20 east?

21 A The basis is the Slaughter porosity zone is thinning
22 to the east according to the electric log analysis -- I am
23 sorry thinning to the west.

24 Q The Slaughter zone is thinning to the west?

25 A To the west.

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1 Q To the west, okay, sir. Therefore, would it be
2 a fair presumption to state that the further west you go
3 the poorer wells you might get from east to west on your
4 cross section?

5 A Well, that's an assumption between the Coastal States
6 No. 4 and the Shell because the Coastal is still producing
7 and the Shell didn't produce very long.

8 So, my contention is that with this particular thing
9 with the thinning of the Slaughter zone I think we are going
10 to get greater area of porosity.

11 Q Is that evidenced in those wells to the west on
12 your cross section?

13 A Well, it seems like the Shell Richardson going back
14 to the porosity map, Exhibit Two, and the Shell well was
15 completed there and it shows that they had nine feet of --

16 MR. STAMETS: Which Shell well? When I start
17 reading this transcript --

18 A The Shell No. 1, Richardson --

19 MR. STEVENS: Northwest-northwest of 30.

20 MR. STAMETS: Northwest-northwest of 30, okay.

21 A Are you located?

22 MR. STAMETS: I am located.

23 A Okay. You are having the same problem that I am.
24 The Shell Oil Company's No. 1, Richardson well there the way
25 I see the electric log and the way I interpret the electric log

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1 had nine feet of porosity, greater than seven percent. The
2 Union Texas well up there which never was tested and I don't
3 have any idea. There was no drill stem test. There was one
4 drill stem test made from forty-three hundred to forty-four
5 thirty-eight and they recovered thirty feet of slightly oil
6 cut mud plus five hundred and ten feet of water cut mud.

7 I think that this particular well had twenty-one
8 feet of porosity over here. I think that possibly that the
9 permeability can come into play over here.

10 Q How, then, can you support your statement that you
11 think that porosity will improve to the west?

12 A West of what?

13 Q To the west of your north half northeast of Section
14 30 based on your cross section, Exhibit Number Four?

15 A Well, again, when you come into contouring the thing
16 with our Susco well up there, the Number Two Exhibit, and I
17 have got that contoured at thirty feet. The electric log
18 shows in that exhibit twenty-six feet of pay greater than
19 seven percent porosity.

20 So, when you take similar characteristics where you
21 have got one similarity here and this was my interpretation
22 of the field and that is the way I interpreted it here.

23 Q Yet, that well didn't recover an 11 on the drill
24 stem tests?

25 A We didn't take a drill stem test on the No. 2.

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1 Q I am sorry, I was speaking of the well in the
2 northeast-northwest.

3 A The Union Texas No. 1, McGuffin?

4 Q Yes, sir.

5 A My understanding on a drill stem test from forty-
6 three hundred to forty-four thirty-eight which covered the
7 whole Slaughter zone they recovered thirty feet of slightly
8 cut oil-cut mud plus five hundred and ten feet of sulfa water
9 cut mud.

10 It is my understanding from this type of a drill
11 stem test that certainly didn't show very much permeability.

12 Q So, really, the determinative factor may be
13 permeability to the west as opposed to porosity?

14 A Well, it could be from the Union Texas well, it
15 could be.

16 Q What traps this oil?

17 A In this field, it is my understanding what traps
18 this oil is up-dip determination of porosity and permeability.

19 Q Which way is up-dip from the common corner of 19,
20 20, 29, and 30?

21 A I would say up-dip would be to the west.

22 Q On that basis, then, you would say you would tend
23 to have a greater chance of drilling a dry hole the farther
24 west you went from that common corner?

25 A I think probably the risk would probably be higher

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1 and I think you have got to remember that my recommendation
2 to management that we re-enter the BTA No. 2, FMS which is
3 in the southeast of the southwest of Section 19.

4 Q If the risk would be higher going west the risk,
5 conversely, would be less going east from your location in the
6 northwest quarter of the northeast quarter of 30, the subject
7 of this hearing --

8 A What about the subject?

9 Q The subject well is your Susco staked location in
10 the northwest quarter of the northeast quarter would it be
11 riskier going east from that location or would it be riskier
12 going west from the common corner of 19, 20, 29, and 30?

13 A I think you would have an analogous situation there
14 but that is that is the way I have interpreted the geology
15 there.

16 Q Did I understand your statement that it would be
17 less risky going east?

18 A No, I didn't say that. I said that this is the
19 way that I interpreted it -- interpreted the geology in this
20 particular area and I think the Susco well that we propose
21 I think it will be a good well.

22 I think that the well that you suggested over
23 there in the northeast of the northeast, I think, is going
24 to be a good well, too, but I think that the Southern Union's
25 well is going to be a good well.

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1 What I am trying to do is put this thing on an
2 eighty acre spacing and get a unit where we could drill one
3 well that has similar geological characteristics whereby
4 that one well will recover all of the oil on the eighty
5 acre spacing.

6 Q Do you thing that that well in the northwest of the
7 northeast will recover more oil out from the northeast-
8 northeast than the wells in the southeast-southeast 19,
9 southwest-southwest 20, northwest-northwest 29, the three
10 wells?

11 A You went too fast for me. Are you talking about
12 this well, the No. 2, Flying M and the Susco No. 1, and the
13 No. 4, McGuffin, is that correct?

14 A Yes, sir.

15 Now, you say that these wells will recover more oil
16 than these wells over here?

17 Q No, sir, I asked you if it would recover more of the
18 oil out from under the northeast quarter of the northeast
19 quarter of Section 30 than a well drilled in the northwest
20 quarter of the northeast quarter of Section 30?

21 A Well, I think if you drilled one on eighty acre
22 spacing I think that you are going to recover more oil than
23 if you drilled one on forty acre spacing.

24 Q Will you answer the question that I asked you, though
25 will a well drilled on the northeast quarter of the northeast

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1 quarter recover more oil out from under the northeast quarter
2 of the northeast quarter than a well drilled in the northwest
3 quarter of the northeast quarter?

4 A I would probably have to grant that to you.

5 Q All right. Mr. Shirock, you asked for two hundred
6 percent risk factor on this and would you call this a field
7 well?

8 A I would call it a field development well, yes, sir.

9 Q How much of a risk factor would you give to a wildcat
10 well drilled, let's say, perhaps DeBaca County, New Mexico?

11 A I would probably ask for quite a bit.

12 Q The Commission has empowered only two hundred per-
13 cent and would you consider that the two hundred percent
14 should be the same for a well drilled in this location as a
15 well drilled in DeBaca County?

16 A I don't think the question is similar. I don't
17 think the two things are comparable.

18 Q You won't attempt to answer it then?

19 A No, sir, because I don't think it is comparable about
20 drilling this well and one in DeBaca. The only thing is
21 that you can put your money into banking and earn a one
22 hundred percent with no risk on it, and don't have any risk
23 at all, and you know if you are going to drill a well that
24 you are going to have risk.

25 Q What is the chance of this well making oil in your

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1 opinion?

2 A At our proposed location?

3 Q Yes, sir.

4 A I think it will be a well.

5 Q If you had to evaluate this and I understand as

6 an expert geologist you have to evaluate the risk factor

7 in drilling wells all of the time, what would you say the

8 risk factor would be on a one to ten basis that this well

9 will hit, on a percentage basis, or any other formula that

10 you normally use in your operation in evaluating a risk of

11 completing a well in a field or completing a commercial

12 producer, or whatever you use --

13 MR. CATON: Mr. Hearing Officer, I object to the
14 question. I don't think that is really relevant to establish
15 a risk percentage in this particular case.

16 MR. STAMETS: I think the question is a valid
17 question and the Examiner would have to weigh the impact of the
18 question on risk factors and whether or not that is something
19 which should be considered and I will allow the question to
20 be answered.

21 A Can I make a statement concerning this before I
22 answer the question?

23 MR. CATON: Well, why don't you answer the question,
24 first, and I will give you a chance to --

25 A Well, my statement was that I think -- well, I think

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1 it has probably a fifty-fifty chance of making a well.

2 Q (Mr. Stevens continuing.) When you say making
3 a well is that making any oil?

4 A I am talking about a commercial producer.

5 Q Fifty-fifty chance of commercial production?

6 A Yes, sir.

7 Q On that basis, then, two hundred percent if the
8 well costs two hundred thousand dollars you will recover
9 six hundred thousand dollars? That is what your two hundred
10 percent will allow you to recover.

11 Shouldn't you recover only four hundred thousand
12 dollars presuming my figures are correct for purposes here?

13 A Apparently, I don't understand the risk factor. My
14 understanding was that we returned two times the -- at two
15 hundred percent you would return four hundred if the cost
16 was two hundred thousand.

17 Q I think it would be -- I think it would be two times
18 the cost -- it would be two hundred in addition to the
19 cost.

20 MR. STAMETS: That is a correct interpretation --

21 Q (Mr. Stevens continuing.) On that basis then --

22 A Well, I misinterpreted the risk factor, then. My
23 understanding of the risk factor is that at two hundred percent
24 you would return two times your drilling cost on the thing
25 which would be -- plus your operating cost and everything like

1 that which would be if it was two hundred thousand dollars
2 it would be four hundred thousand dollars. I am mistaken
3 there.

4 Q With that in mind you would ask for a risk factor of
5 one hundred percent based on your present understanding of
6 the risk factor?

7 A Would that give us two times our cost?

8 Q I think so and I'll look around here --

9 A Yes.

10 MR. STEVENS: All right, sir, and we have no further
11 questions on cross examination.

12 MR. CATON: We have a couple of questions --

13 MR. STAMETS: I have some, too.

14 MR. CATON: Why don't you go ahead, first --

15

16

CROSS EXAMINATION

17 BY MR. STAMETS:

18 Q Oh Exhibit Three, the highest daily rate of production
19 I see is ninety-five barrels and I know Mr. Stevens covered
20 this a little bit but with ninety-five barrels being the
21 highest figure that you have shown what justification do you
22 have for putting on rates up to one hundred and twenty barrels?

23 A Well, first, the justification is that these wells
24 I peak are greater than that they are producing now. For
25 example, our No. 1, Susco I peaked for one hundred and sixty

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1 barrels plus thirty-three barrels of water in the No. 4.

2 Q Well, I understand that from your earlier answers.
3 Let me get to the point. What basis, then, are you trying
4 to show with this map, what the initial potential is going
5 to be or what the sustained rate of production might
6 be?

7 A This particular map was developed to show three
8 maps that have similar characteristics to show that the north
9 eighty acres is the one, the north half, is the unit that
10 should be put together.

11 MR. CATON: Roy, I don't think you understood his
12 question.

13 If I may, Mr. Examiner, he wanted to know if the
14 lines that you have contoured on production relate to an
15 initial production or production overall --

16 A He asked me why did I go up to one hundred and twenty
17 barrels. I was trying to explain to him that the main reason
18 I went up to one hundred and twenty barrels of oil -- I peak
19 these wells for more than one hundred and twenty barrels from
20 what I contoured there. It continues to keep an equal distant
21 amount of contouring. I could have stopped the thing at
22 eighty and then you would have asked me why didn't I fill in
23 all of this space.

24 MR. CATON: All right. What you have done is that
25 you have looked at the initial production of these wells and

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1 you concluded from your study of the history of the production
2 of the wells -- you have made certain conclusions and you
3 have drawn them into that Exhibit Three, am I right?

4 A That's correct.

5 MR. CATON: And that exhibit would demonstrate the
6 production of these wells over an extended period of time,
7 is that correct?

8 A Right.

9 MR. CATON: Does that answer your question, Mr.
10 Examiner?

11 MR. STAMETS: The total answer, I think, did that.

12 Q (Mr. Stamets continuing.) On Exhibit Number One,
13 the well that you indicated that you were going to re-enter
14 is the Shell well in the northeast quarter of Section 19?

15 A No, sir, the one that we -- the BTA Well, No. 2
16 FMS which is in the southeast of the southwest of Section 19.

17 Q Okay. I got that right. I got confused later in
18 the testimony, then, what was going to be re-entered.

19 A This is a recommendation that I put together to
20 management.

21 Q Okay. How deep is the San Andres formation in
22 that area?

23 A We drill these wells to a total depth of about
24 forty-five hundred feet. The rate of dip in this area is
25 about one hundred and twenty feet per mile to the east.

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1 Q Does this particular pool in your opinion lend
2 itself to secondary recovery?

3 A I think these particular wells are -- the reservoir
4 drive for these particular wells are solution gas and water
5 drive.

6 Q Well, then, getting back to my question, in your
7 opinion does this field lend itself to secondary recovery?

8 A Yes, sir.

9 Q In your opinion will a second well have to be
10 drilled on all of these eighties to install an effective
11 secondary recovery operation in this pool?

12 A I think that is getting out of my field a little
13 bit because I am sure that from my idea of water flooding
14 this particular area and some petroleum engineer's idea of
15 water flooding the area would be different.

16 Q That's outside your area of expertise?

17 A Well, I can give you an opinion but I don't know
18 whether it would mean much or not.

19 Q If that's the way you feel, then, I don't want to
20 get it into the record.

21 A Okay.

22 MR. STAMETS: That's all I have. Mr. Caton, do you
23 have a little on redirect?

24 MR. CATON: Yes, I do.
25

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REDIRECT EXAMINATION

BY MR. CATON:

Q Mr. Shirock, you were asked if drilling in the northeast-northeast would better drain that or protect the correlative rights of the people in that section.

What would be the effect of correlative rights of those persons in the northeast of the northeast if an upright spacing unit is drilled on an unorthodox location as proposed by the Barton group?

A Well, their correlative rights would not be protected either, on the northeast of the northeast is the way I see it.

Q Would the total effect of drilling in the unorthodox location in the northeast on an upright spacing damage Susco's correlative rights in the northeast of the northeast, in your opinion?

A Yes, sir.

Q What would be the ultimate result of such a well in terms of production as it relates to Susco's interest?

A My thinking on there is if you come back through with the question --

Q What would be the ultimate result in terms of recovery based on Susco's interest in the northeast of the northeast if that well as proposed by the Barton interest is drilled, what would be the ultimate result in the amount of

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1 oil that would be recovered and attributable to Susco's
2 interest?

3 A Well, my thinking of the well is that nature of
4 forty acre spacing would recover somewhere in the neighborhood
5 of forty to forty-five thousand barrels and Southern Union
6 Supply Company would own about fifty percent of it.

7 Q Would the ultimate result be that Southern Union
8 Supply Company's interest in that area would be averaged out
9 with the lower forty?

10 A Yes, sir.

11 Q What affect would that have on Southern Union's
12 interest, Mr. Shirock?

13 A It lowers our interest in the amount of oil we
14 would recover.

15 Q All right. Now, can you tell the hearing officer
16 what you feel the significance structurally similar areas
17 that you have found in both the north half and the south
18 half of the proposed pooling unit, Susco's proposed pooling
19 unit, and a unit that would be made up of the half that is
20 directly south of the proposed pooling unit?

21 A It is my opinion that the north half of the northeast
22 quarter of Section 30 has the same geological characteristics
23 of structure, of porosity, and also probably barrels of oil
24 production -- average barrels of oil production made in this
25 particular north half, has similar characteristics, and this

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1 unit should be putting together for drilling the proposed
2 Susco well.

3 Now, the south half of the northeast quarter of
4 Section 30 would be another unit that does have similar
5 geological characteristics on this thing. I think if a well
6 was drilled in a standard location would be much less
7 attractive than our proposed well.

8 Q Now, Mr. Shirock, as a matter of fact does it make
9 much difference to Southern Union Supply whether this well
10 is drilled at a central location as expressed by counsel or
11 in the unorthodox location or in the standard location so long
12 as the pooling unit is laid down? Does it make any difference?

13 A Well, we would certainly object to the Commission
14 about if the unit is running north and south of drilling
15 an unorthodox location.

16 Q But if the unit is laid over as we have proposed
17 do you have any objection or do you have any particular
18 desires other than compliance and a conservative development
19 of this field with any location of the well other than the
20 standard location?

21 A We are just trying to develop the field on a
22 conservative approach and want to stay with a standard
23 location.

24 MR. CATON: I have nothing further.

25 MR. STAMETS: Any other questions of the witness.

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1 If there are no other questions we will take about a
2 fifteen minute recess.

3 (THEREUPON, the hearing was in recess
4 and the witness excused.)

5 MR. STAMETS: The hearing will please come to
6 order.

7 Mr. Stevens are you ready?

8 MR. STEVENS: Yes, Mr. Examiner, and with your leave
9 I would like to make a very short introductory statement.

10 MR. STAMETS: Go ahead.

11 MR. STEVENS: Basically, Mr. Examiner, the applicants
12 herein have two cases applied for. One, is a forced pooling
13 of an eighty acre tract northeast of the northeast of Section
14 30 and a well to be drilled in a location in the southeast
15 of the northeast and that is 6017 and that includes the usual
16 charges for supervision and risk and so forth.

17 They also have case 6036 which has some alternatives.
18 One, is forced pooling of the east half of the northeast
19 quarter of Section 30 with an unorthodox location to be
20 drilled within two hundred feet of the center of the northeast-
21 northeast of Section 30 and a well, again, to be located within
22 two hundred feet of the center of the northeast-northeast.

23 Further, another option we ask the Commission to
24 respace the pool on forty acre spacing as opposed to the
25 eighty acre spacing as much of the pool already is.

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1 There are many options and alternatives here.
2 The applicants, however, assert Case 6017, the forced
3 pooling of the east half of the northeast as well as the
4 southeast of the northeast only as opposed to Southern Union
5 Supply's request for the north half of the northeast and
6 a well drilled in the northwest of the northeast.

7 The applicants herein prefer a second application
8 for reasons which will be brought out.

9 With that, I will begin.

10
11 JACK ALLEN

12 was called as a witness by the applicants, and having been
13 first duly sworn, testified upon his oath as follows:

14
15 DIRECT EXAMINATION

16 BY MR. STEVENS:

17 Q State your name, residence, your occupation, and
18 your relationship to the applicants herein?

19 A My name is Jack Allen and I am a consulting
20 geologist in Roswell, New Mexico.

21 The applicants have sought my aid as a consulting
22 geologist to investigate the facts of the case and present
23 testimony at this hearing.

24 Q Have you previously testified before this Commission
25 and had your qualifications as a geologist accepted by the

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1 Commission?

2 A. Yes, I have.

3 MR. STEVENS: Mr. Examiner, are the witness'
4 qualifications acceptable?

5 MR. STAMETS: They are.

6 Q (Mr. Stevens continuing.) We have stated, Mr.
7 Allen, what we are seeking here. Do you know of any change
8 in a particular location that the applicants might make,
9 subject to the Commission's approval, and a location of a
10 well in the northeast quarter of the northeast quarter?

11 A Yes, the applicant would change the location of
12 their well in the northeast of the northeast of Section 30
13 to the center of that proration unit.

14 It is presently located two hundred feet north of
15 the center of that proration unit, that forty acre tract,
16 Unit A in Section 30.

17 The application calls for it to be drilled two
18 hundred feet north of the center of Unit A. We would concede
19 that perhaps drilling it in the center of Unit A would be a
20 better location or would be just as good.

21 Q I might state that the application says within
22 two hundred feet but it has been previously staked at that
23 two hundred feet north location --

24 MR. STAMETS: That relates to 6036?

25 MR. STEVENS: Yes, Mr. Examiner.

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1 Q (Mr. Stevens continuing.) Referring to what has
2 been marked as Exhibit Number Five would you explain it, Mr.
3 Allen?

4 A Number Five?

5 Q Pardon me, Number One, I am sorry.

6 A Exhibit Number One is a copy of a land map in the
7 area of the Flying M Pool, Lea County, New Mexico. I submit
8 this copy of the land map in that area to, one, to show the
9 location of the contested acreage in the northeast quarter
10 of Section 30, Township 9 South, Range 33 East.

11 Secondly, I also introduce this Exhibit to show
12 those wells colored in red which are, in fact, drilled on
13 a forty acre spacing.

14 Q The other wells in the field that are San Andres
15 producers are in accordance with the eighty acre spacing
16 pattern?

17 A Yes. The other wells that you see here are eighty
18 acre spaced wells except those in the northwest quarter of
19 30 and the southwest of 19, those for the most part are Bo
20 Sea wells.

21 Let me point out that Section 29, as the Examiner
22 has previously noted, is immediately offsetting the tract
23 in question to the east is already effectively drilled on
24 forty acre spacing as well as most of the south half of
25 Section 20.

1 Q Are about half of the wells in the pool effectively
2 drilled on forty acre spacing?

3 A That is correct.

4 Q Referring, then, to what has been marked as Exhibit
5 Number Two would you explain it, please?

6 A This is a Xerox copy of Costal States Gas Producing
7 Company No. 4, McFuggin which is located in the northwest of
8 the northwest of Section 29, Township 0 South, Range 33 East.

9 It is a direct east offset to our proposed primary
10 location. It is presented, one, to illustrate the pay zone
11 which is located slightly below forty-three hundred feet in
12 this particular well.

13 Approximately seventy feet of section was perforated
14 in this well. It also illustrates the structure marker
15 horizon which I used in preparing my structure map which in
16 this particular well is located at a depth of forty-three
17 hundred and eight feet.

18 It also illustrates the depth and the datum to
19 the pay zone.

20 Q Is this log and are other logs in this deal in your
21 opinion definitive as to quality of wells that may be expected
22 by looking at a log or logs?

23 A No, sir. This particular well log is not very
24 definitive. As a log analyst and working for many years as
25 a log analyst there are some companies that have high quality

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1 logs and some intermediate quality logs and some low
2 quality logs. Therefore, during the course of drilling
3 up a field there are some of each of these types of logs
4 that are run on the various wells through the field making
5 it extremely difficult to prepare the high quality maps
6 necessary to determine various things such as net pay and
7 so on and so forth. For the most part it has to be an
8 educated guess, especially the particular company that ran
9 this log.

10 Q Referring, then, to what has been marked as Exhibit
11 Number Three would you explain it, please?

12 A This is my structure contour map on the top of the
13 porosity zone that is producing in the Flying M Pool and I
14 have restricted my map to the four sections in question which
15 have a common corner in Sections 29, 20, 29, and 30, of
16 Township 9 South, Range 33 East.

17 On this particular well I show generally east
18 dipping structure at the San Andres horizon all through Eddy,
19 Chaves and Lea Counties. There is a very gentle dip with very
20 few anomalous situations which you get reverse dip -- that
21 would be a dip to the north or a dip to the northwest or a
22 dip to the west.

23 I show on this map predominantly a dip to the east.
24 This particular map shows a slight nosing through the common
25 corner of the four sections. The rate of dip increases slightly

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1 on the east side of Sections 20 and 29

2 This also shows wells that are completed in the
3 San Andres as well as those wells that are dry holes that have
4 penetrated that horizon.

5 It also shows some of the injection wells that are
6 utilized in Section 20 and in Section 29. You will note on
7 the west side of the map in Section 19 and 30 four dry holes
8 to at least the San Andres formation and some of these wells
9 were specifically drilled as San Andres tests and have failed
10 as such.

11 You will also note two abandoned San Andres producers
12 notably in Section 30, the northwest of the northwest, and
13 in Section 30 the southwest of the northeast. Both of those
14 are abandoned non-commercial San Andres producers. It would
15 appear from this map that the further you go west the more
16 likely you are to get a dry hole and the greater the risks
17 of drilling a commercially productive well.

18 Q What is the trapping mechanism of this field?

19 A This particular field is quite similar to all of
20 the rest of the San Andres producing fields in the area in
21 that the oil and gas is trapped by a permeability and porosity
22 barrier as stated by the previous witness.

23 Q In this case would you say that the trapping mechanism
24 is more so permeability than porosity or vice versa?

25 A In some instances they are directly related to

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1 each other and in others they are completely unrelated.

2 So, they independently determine the productive
3 capacity as well as rate of production.

4 Q In Sections 19 and 20 is it your opinion that
5 permeability or porosity is the greater trapping mechanism,
6 in your opinion, in the pinch out?

7 A In some places the permeability and porosity goes
8 away and that is why there is no oil there. I presume that
9 the operators of these wells were prudent operators at the
10 time that this operation took place.

11 I also note that the well that is the dry hole in
12 the northeast quarter of 19 was drilled after some of the
13 producers were drilled in Section 20.

14 Therefore, they knew that the San Andres was productive
15 in the area and yet they decided it was non-commercial at the
16 time they drilled it.

17 Q Is this porosity or permeability pinch out easily
18 determinable or is it erratic?

19 A It is extremely erratic but only a well drilled at a
20 location can determine whether you have a well or not.

21 Q As a prognostication as to the quality of a well
22 nearer or closer or farther away from this pinch out means in
23 your opinion a lot or very little?

24 A It is a factor to be quite seriously considered in
25 staking a location.

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1 Q Would you discuss the current operations of wells
2 being drilled in the area right now?

3 A Yes, currently, the No. 3 well located in the
4 southwest quarter of Section 20 is being drilled. Recent
5 attempts at completion are presently being attempted right
6 now in the northwest of the southeast of 19.

7 Q What do your knowledge is the best well in this four-
8 section area?

9 A In Section 29, the well located in the southeast
10 of the northwest is the best well in the area. It has
11 produced in excess of three hundred thousand barrels of oil.

12 Q Mr. Allen, I'll ask you to --

13 A I have an exhibit later on that will show cumulative
14 production.

15 Q I will ask you to refer to the Exhibit Number One
16 of the applicant in Case 6035, structure map, and would you
17 discuss aspects of this map that you think are pertinent to
18 your map and our case at hand?

19 A May I ask the previous witness a question, first?

20 MR. STAMETS: Sure.

21 THE WITNESS: I note in the legend, Exhibit One,
22 Structure Map top T/PI or P- One --

23 MR. SHIROCK: P-One zone -- top of the porosity.

24 A Okay. There was some confusion in my mind whether
25 it was pi or P-One and there is a difference.

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1 MR. SHIROCK: I would have changed that but I
2 didn't have enough room.

3 A. When you were giving testimony before you said in
4 Section 19 the brand new No. 2 well the top of pi was at a
5 datum of plus sixty-one feet --

6 MR. SHIROCK: That is incorrect. That is the top of
7 the Slaughter zone, porosity zone.

8 A. I was confused by that --

9 MR. SHIROCK: Sorry about that.

10 A. Thank you.

11 Q. (Mr. Stevens continuing.) Referring to this map
12 have you some comments as to the regional dip as shown in
13 this map in Sections 24 and 19?

14 A. Of course, this map covers just a little more area
15 than mine does and it is a different scale. I think one of
16 the primary differences between the two maps is the scale.

17 Q. In what respect?

18 A. Well, when you have a map that is blown up tremendously
19 large you can do all sorts of gyrations with the contours
20 with quite a few "streamulations" and so forth and when you
21 close the scale of your map down you have to draw straighter
22 and straighter lines.

23 I think that is the primary difference between these
24 two maps. The datums as you can see are quite similar. There
25 are just very few variations in the order of differences in

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1 elevations or whether they log from the derrick bar or the
2 Kelly bushing or from the ground level.

3 Sometimes different operators will log from different
4 places and it is not noted on the log so you come up with
5 plus or minus ten feet and that's a reasonable difference.

6 There are a couple of primary differences between
7 the two maps though in that the previous Exhibit Number One
8 shows counter regional dip that I don't agree with. I don't
9 don't think that it is there.

10 Q What is your basis for that?

11 A Well, my basis is general knowledge of Chaves and
12 Lea Counties as there are just very few places in this country
13 where you have a counter regional dip. The San Andres is a very
14 uniformly eastward dipping formation.

15 Q In the southeast quarter of Section 24 you have
16 regional dip to the north as shown by the applicant in the
17 other case as a northwest dip. Do you see any evidence to justify
18 his dipping that regionally to the northwest on his map?

19 A There are no datums posted next to those wells.
20 It's an interpretation. Most of us geologists make interpre-
21 tations of the data at hand and when you don't have the data
22 there you either do not contour it or you just end your contours.

23 Q Do you see any justification for the regional
24 dip to the northwest of the south half of Section 19?

25 A Well, when you put the datum, plus sixty-one datum,

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1 on the Susco No. 2 well rather than the way it is contoured
2 it would tend to flatten that dip out. It would not be
3 nearly as a direct? north contour.

4 If you look at the map that I prepared without
5 knowledge of that particular datum my map is contoured and
6 the sixty-one datum comes right in on the contours that I
7 drew on that location.

8 Q I note that you also have a datum of seventy-nine
9 on the well in the southeast quarter of the southwest quarter
10 of 19 whereas the previous applicant's Exhibit One has a datum
11 of plus sixty-three.

12 Would that materially change the north dip in the
13 contouring of the purported structure in the north half of
14 the northeast of Section 30?

15 A My datum is seventy-nine and his datum is sixty-
16 three and that is a difference of sixteen feet. Sometimes
17 it is very difficult to pick the top of the porosity as a
18 clean break especially if you are looking at a log that goes
19 to the Bo Sea and not a detailed log through the zone that
20 you have your datum.

21 It is quite simple on an electric log scale of
22 one inch to a hundred feet and your pencil line is five feet
23 thick.

24 So, I would say that he is probably a little bit
25 too deep on that datum. My interpretation says it is sixteen

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1 feet deep.

2 Q Based on your study of this area and looking at
3 the applicant's exhibits do you believe that the closed
4 structure shown in the north half of the northeast of
5 Section 30 is there?

6 A I do not think it is there.

7 Q Do you think the proposed location of Susco in the
8 northwest of the northeast is a superior location to a location
9 in the northeast of the northeast or the southeast of the
10 northeast?

11 A I do not. The risk in drilling a hole there is
12 considerably greater than drilling one in the northeast of
13 the northeast of Section 30.

14 Q Is that because you are getting closer to the
15 pinch out?

16 A That's correct.

17 Q And the further west?

18 A The further west you go the closer you get to the
19 pinch out and the greater the possibility for a non-
20 commercial producer.

21 Also, there is a significantly greater advantage in
22 drilling in the northeast of the northeast because it directly
23 offsets three producing wells.

24 Q This is based on geology or empirical oil finding?

25 A This is an empirical relationship.

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1 Q Is it --

2 A If you are directly offset to a producer there is
3 a lot better chance of jumping out on an extra location.

4 Q Regardless of geology?

5 A Regardless of geology or anything else.

6 Q Thank you. Do you have any further comments regarding
7 your Exhibit Three or the previous applicant's Exhibit One?

8 A Well, there are some gyrations here -- geologists
9 have different ways of expressing their opinions. Some
10 people are extremely optimistic and some people are extremely
11 conservative and I consider myself optimistic.

12 But I think the structure anomaly that we see in the
13 southeast quarter of Section 30 is extremely optimistic based on
14 no data whatsoever. The ditch that thumbs through there may
15 or may not be present.

16 Q Does the --

17 A It doesn't do anything for me.

18 Q Does the structure as shown in the southeast of 30
19 give you a re-entrance and therefore a low in the south half
20 of the northeast of Section 30?

21 A Well, when you draw a structural anomaly in the
22 southeast quarter such as is drawn here then your only
23 alternative is to draw a deep re-entrance or syncline on your
24 map immediately opposing it and therefore possibly manufacturing
25 a low that is, indeed, not there and making that acreage look

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1 less attractive.

2 Q Referring to what has been marked as Applicant's
3 Exhibit Number Four would you explain it?

4 A My Exhibit Four?

5 Q Your Exhibit Four?

6 A My Exhibit Number Four is a map showing a completion
7 date of each of the wells drilled in the four sections.

8 You will note that the dry hole in the northeast
9 of 19 was drilled subsequent to the discovery of this pool
10 and it was drilled or completed in November of '64, while
11 producing wells were drilled in Section 20, in the extreme
12 southeast of Section 20 in June of '64 and in July of '64,
13 the No. 2 well in the southeast of 20 and in June of '64,
14 the No. 3 well in the southeast of the northeast of 20,
15 also, the No. 5 well in the southeast of the northwest of
16 20, so, people were fully cognizant of the fact that this
17 pool was in a state of development and they were looking
18 for a producing well at that location and it was not over-
19 looked, the pay zone was apparently not overlooked, and
20 it would be a high risk venture, re-entering the hole and
21 I make the presumption that the operators were prudent and
22 this illustrates a valid dry hole to the west of permeability
23 pinch out.

24 Q Do many of these same considerations apply to the
25 well in the southwest quarter of the northeast quarter of

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1 30?

2 A Okay, that well was completed as a San Andres
3 producer. However, it is a plugged San Andres producer
4 because of being a non-commercial producer. Therefore,
5 somewhere in this vicinity should be the porosity pinch out,
6 the limit of commercial production.

7 This well that was drilled in the southeast of
8 30 that is a producer is a very marginal well. Currently,
9 it is only producing three barrels of oil a day.

10 The well drilled specifically as a San Andres
11 producer in the southeast of the southeast of 30 was plugged.

12 Q On the basis of these would you consider that
13 the pinch out, at least the effective pinch out of this
14 field, is somewhere in the second location west of the
15 east line of 19 and 30?

16 A Say that again?

17 Q Let me rephrase that -- well, let's just forget
18 that question.

19 Is that pinch out line possibly being indicated by
20 the dry hole you mentioned in the southeast-northeast of 19
21 and the southwest-northeast of 30?

22 A It is highly possible that a well located in Unit
23 B of Section 30 would be a dry hole. I would say that there
24 is a fifty percent possibility just as the previous witness
25 has said that that would be a dry hole.

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1 Q Referring to what has been marked as Exhibit Number
2 Five would you explain it in conjunction with Exhibit Number
3 Four?

4 A Exhibit Number Five is a map indicating the total
5 cumulative production of all wells in these four sections
6 to the date of 1/1/77, in other words approximately nine
7 months ago. This is a cumulative production of all wells in
8 this area and generally you can correlate data of completion
9 with cumulative production, total cumulative production, with
10 a few outstanding exceptions such as the No. 1, McGuffin which
11 is located in the southeast of the northwest of Section 29.
12 It is the exceptional well in the area and it has produced
13 three hundred and eleven thousand barrels of oil -- the
14 dream of every geologist to have one of those wells.

15 Q This Section 29 surrounding that well is it drilled
16 on, in effect, forty acre spacing?

17 A Section 29 is effectively drilled on forty acre
18 units.

19 Q And the amount of oil produced by that No. 1 has not
20 prevented the completion of the extra wells in those alternate
21 forties has it?

22 A It has not.

23 Q Referring, then, to what has been marked as Exhibit
24 Number Six would you explain that please?

25 A Exhibit Number Six shows production in the pool as

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1 of the month of July 1977 -- not in the pool but of those
2 selected wells in the immediate vicinity of the contested
3 acreage.

4 It shows that the highest, the most highly,
5 productive wells are at the common border of sections 19,
6 20, 29 and 30.

7 Q Referring to what has been marked as Exhibit Number
8 Seven would you explain it?

9 A Exhibit Number Seven is an interpretation of Exhibit
10 Number Six. It is the average daily production of wells in
11 the immediate vicinity and you will note that the Southern
12 Union Well No. 1 in the southeast of 19 produced two thousand
13 sixteen barrels of oil during the month of July. The
14 completion date was the 7th of July and therefore I would
15 assume that that was twenty-two days of production which gave
16 an average production through the month of July of ninety-
17 two barrels of oil.

18 In the previous testimony it was stated that the
19 average production was eighty-four and I will concede that.

20 You will note also that the No. 2 well drilled by
21 Arco in Section 20 in the extreme southwest of the southwest
22 of 20 produced an average of eighty-one barrels through the
23 month of July.

24 The McGuffin No. 4 in the extreme northwest corner
25 of Section 29 produced ninety barrels of oil.

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1 So, oil is rapidly being produced from the common
2 corner by those three wells and in all probability is
3 presently draining the acreage in question.

4 Q Do you consider that your contouring which you did
5 based on production, is there any evidence that a location
6 in the northwest of the northeast quarter would produce
7 more oil than the three wells around that common corner that
8 you just talked of?

9 A I presume -- do you mean Unit B, Section 30?

10 Q Yes, sir.

11 A From the data at hand, the basic data that we get
12 from the official records of the Oil Conservation Commission,
13 the best location for the highest production would be in
14 Unit A -- probably the center of Unit A of Section 30.

15 Q Do you have any other comments concerning these
16 two exhibits?

17 A No.

18 Q Based upon your study, Mr. Allen, first let me
19 ask you, based on your empirical observations do you think
20 the operators in Sections 20 and 29 consider that one well will
21 drain eighty acres?

22 A No, sir, I sure don't. I think that they have
23 demonstrated that it will not adequately drain eighty acres.

24 Q Do you consider that one well will drain eighty
25 acres in the north half of the northeast or the east half

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1 northeast?

2 A No.

3 Q In your opinion what is the best location to drill
4 in the northeast quarter of Section 30?

5 A Unit A.

6 Q To get a good well?

7 A Unit A, in fact, I know of no other field in this
8 development in the San Andres that has ever been developed
9 on an eighty acre spacing. All other fields that I can think
10 of in southeastern New Mexico, San Andres fields, are
11 developed on forty acre spacing and on occasion they are not
12 adequately drained.

13 As a matter of fact, in the Lavaland-Slaughter
14 field and the Watson field they are drilling infill wells
15 right now and are finding that bottom hole pressures are
16 quite near virgin and they are on twenty and ten acre spacing.

17 So, in my estimation eighty acre spacing is not
18 adequate to drain the San Andres reservoir anywhere.

19 Q In your opinion is it possible that this field
20 might be better drained on twenty acre spacing?

21 A It might.

22 Q Based on your study of this and considering only the
23 proximity to the pinch out which would be the superior of
24 the three locations, Unit A, B, or H in Section 30?

25 A I think the superior location is Unit A of Section

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1 30.

2 Q What, in your opinion, would be the secondary
3 location?

4 A The second best would be Unit H.

5 Q Based upon your consideration of proximity to the
6 wells from an empirical approach which would be the superior
7 location to be drilled in the northeast quarter of Section
8 30?

9 A Unit A.

10 Q And your second best location?

11 A Unit H.

12 Q In your opinion would a well in the northwest quarter
13 of the northeast quarter drain the northeast quarter of the
14 northeast quarter?

15 A Part of it. Well, just as the well in Unit P
16 of 19 and the well in Unit M of Section 20 and C of Section
17 29, in that same sense. Each of them are draining acreage
18 in Unit A of Section 30.

19 Q Will a well in the southeast quarter of the
20 southeast quarter drain the northeast quarter -- pardon me --
21 the southeast quarter of the northeast quarter drain the
22 northeast quarter of the northeast quarter?

23 A Of what section?

24 Q 30, sorry.

25 A Section 30, the southeast of the northeast, would

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1 it drain it?

2 Q Yes, sir?

3 A Partially.

4 Q In the same manner --

5 A In the same manner that one in the northwest of
6 the northeast or Unit P of 19 and so forth.

7 Q Mr. Allen, in your opinion should this pool be
8 spaced on forty acre spacing as opposed to eighty acre
9 spacing?

10 A My personal opinion is yes.

11 Q Is this because in your opinion everything -- one
12 well might always drain forty acres or is the production so
13 variable that there might be a better way to develop it?

14 A I think the recent activity in the area demonstrates
15 that quite a bit of oil has been overlooked in the past.

16 You will note on Exhibit Four there is generally
17 periods of development of this pool. The initial period from
18 '64 through '67 in which the original eighty acre spacing was
19 initiated and, then, from '74 through to the present in which
20 this unique area of extremely high productivity or at least
21 initial productivity is being developed.

22 This is not an area that would not have been
23 discovered in reality if the eighty acre spacing had been
24 maintained.

25 Q If the entire pool would be developed on forty acre

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1 spacing would more oil be produced in your opinion?

2 A I think so but I am fighting a whole lot of
3 engineers who have said otherwise and probably a great deal
4 of the industry.

5 This particular reservoir, though, in my opinion
6 does require forty acre spacing, at least.

7 Q Do you consider this field to be subject to
8 secondary recovery successfully?

9 A Yes, sir.

10 Q What would be more beneficial eighty acre spacing
11 or forty acre spacing?

12 A Forty.

13 Q If it were subject to secondary recovery would it
14 be necessary to infill drilling in your opinion?

15 A At least to forty acres density in some areas. It
16 may be necessary depending on engineering studies to drill
17 even more densely than that.

18 Q Could you give us your estimate as to a risk factor
19 on Unit A of Section 30?

20 A I would say there is an eighty-five percent probability
21 of completing a well at that location successfully at
22 commercial production.

23 Q How about in the south in Unit H, the southeast of
24 the northeast of Section 30?

25 A I would estimate a probability of production there

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1 of commercial production of about seventy percent.

2 Q And Unit B in the same section?

3 A About fifty percent.

4 Q Based on your study and your previous observations
5 do you believe the granting of the application in Case 6036
6 providing for an unorthodox location or in the alternative
7 forty acre spacing so that a well could be drilled in the
8 northeast-northeast and forced pooling only in the northeast-
9 northeast would promote conservation and protect correlative
10 rights and prevent waste?

11 A Yes, I do.

12 Q Were Exhibits One through Seven prepared by you or
13 under your direction?

14 A Yes, they were.

15 MR. STEVENS: Mr. Examiner, we would like to
16 introduce Applicant's Exhibits One through Seven at this
17 time.

18 MR. STAMETS: These exhibits will be admitted.

19 MR. STEVENS: We have no further questions on
20 direct.

21 MR. STAMETS: I would like to clarify a couple of
22 things at this point.

23

24 CROSS EXAMINATION

25 BY MR. STAMETS:

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1 Q If I understand this correctly, Mr. Stevens, you
2 have tentatively abandoned your position in Case 6017?

3 MR. STEVENS: We haven't abandoned it. If the
4 Commission denies Case 6036 or the alternative therein we have
5 have not abandoned it.

6 If the Commission grants any portion of 6036, yes,
7 we have abandoned it.

8 Q Let's put all of these things into order. What
9 you would like to have, first, what would you like to have,
10 the eighty acres in Unit letter A?

11 MR. STEVENS: May I state this, we have one more
12 witness and he will expand upon this, if you don't mind or
13 I'll tell you right now.

14 Q It would, perhaps, help the interrogation if we
15 knew for sure what it is.

16 MR. STEVENS: Definitely, the applicants, Latham
17 and Barton, would prefer the best possible for all parties,
18 not just themselves, and it would be either an unorthodox
19 location in the northeast-northeast of Section 30 and as a
20 basis therefore the unorthodox location or a forty acre spacing
21 in the field whichever mechanically the Commission feels is
22 the better way to get there.

23 Further, they would desire to force pool only the
24 northeast quarter of the northeast quarter for purposes of
25 drilling that well.

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1 Now, they might selfishly desire to have the
2 east half of the northeast forced pooled but we will point
3 out later that that just isn't equitable. So, you have
4 defined what we particularly want, first.

5 Q I thought I had but now I am not sure.

6 MR. STEVENS: Well, we have another witness who
7 will go into that, if you don't mind. Mr. Latham will go
8 into that.

9 MR. CATON: I would like to reserve my questions
10 until after Mr. Latham has testified and it might shorten
11 the proceedings.

12 MR. STAMETS: The Southern Union witness testified
13 as to the north half of the northeast of Section 30. Will
14 somebody tell me if that is the interest in the entire
15 northeast of Section 30.

16 MR. STEVENS: Mr. Latham can.

17 Q (Mr. Stamets continuing.) As to your application
18 for the changing of the pool rules from eighty acre spacing
19 to forty acre spacing might that not have some harmful
20 effects on the rights of interest owners in the proration
21 units already completed?

22 MR. STEVENS: In our opinion we certainly do and we
23 asked for some disinclination there however we felt the
24 Commission should have every opportunity and every mechanical
25 method by which they are authorized to allow a well to be

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1 drilled in the northeast quarter of the northeast quarter.
2 And it could be argued that the unorthodox location for
3 forced pooling only in the northeast-northeast might not
4 be permissible. I don't think it could be argued successfully
5 but it might be.

6 Q Okay.

7 MR. CATON: I am not certain that you are sworn,
8 Mr. Stevens.

9 MR. STEVENS: I'll be happy to be sworn.

10 MR. CATON: We will take your statement for what it
11 is worth.

12 MR. STAMETS: Do you have some questions, Mr.
13 Caton?

14 MR. CATON: I have some questions but it will
15 probably be more profitable to hear Mr. Latham, first.

16 MR. STAMETS: That sounds just fine and I'll be
17 happy for Mr. Stevens to proceed.

18
19 E. L. LATHAM, JUNIOR
20 was called as a witness by the applicants, and having been
21 first duly sworn, testified upon his oath as follows:

22
23 DIRECT EXAMINATION

24 BY MR. STEVENS:

25 Q Would you state your name, residence and occupation

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1 and your relationship to the applicants herein?

2 A My name is E. L. Latham, Junior, and I live in
3 Hobbs, New Mexico, and Mr. Barton and I are independent
4 operators.

5 Q Are you and Mr. Barton and other independent
6 parties partners in the ownership of certain of the lands in
7 question here?

8 A Yes, we are.

9 Q Subject to the alternatives which may be available
10 here do you desire to operate the well or wells to be drilled
11 that the Commission might allow?

12 A Yes, we do.

13 Q I don't propose to have Mr. Latham as an expert
14 witness however I would like to have him give his background
15 in the oil business.

16 Would you briefly state your educational background
17 and your oil experience?

18 A I have been associated with the oil business all of
19 my life. I graduated from T.C.U. in 1949, with a B.S. Degree
20 in Business Management.

21 I went to South America with Gulf Oil Corporation
22 for four years and I worked in oil handling there.

23 Then, from there I went to San Francisco and worked
24 for Shell Oil Company in the purchasing department and I
25 was an assistant to one of the buyers.

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1 In the last twenty-five years I have been in
2 southeastern New Mexico, first, working as a logging
3 incorporating engineer, a salesman, and then as an oilfield
4 equipment salesman.

5 In the last nineteen years I have been self-employed
6 and I have my own oil equipment business and in the last
7 ten or eleven years I have been an independent oil operator
8 dealing primarily with state, federal and fee oil and gas
9 leases, minerals, overrides and working interests.

10 MR. STEVENS: Are his qualifications satisfactory,
11 Mr. Examiner, as an operator?

12 MR. STAMETS: Mr. Latham, how many wells are you
13 the operator of or part operator of?

14 A At the present time Mr. Barton and I operate one
15 well.

16 MR. STAMETS: Mr. Latham is certainly recognized
17 as an operator and the Commission has always considered the
18 testimony of operators and of people familiar with oil
19 well operating, from the practical standpoint, as well as
20 those educated in universities.

21 Q (Mr. Stevens continuing.) Thank you, Mr. Examiner.
22 Referring to what has been marked as Exhibit Number Eight,
23 Mr. Latham, and would you explain the first portion thereof
24 and I am going to ask some questions under each of the
25 subdivisions that we have here.

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1 A. I beg your pardon?

2 Q. Would you explain the first portion of Exhibit
3 Number Eight, the ownership?

4 A. Okay. The east half of the northeast quarter,
5 Latham and Barton, we have a seventy-three percent working
6 interest. Our net revenue interest is sixty-seven percent.

7 Q. The difference between those two figures is the
8 amount of royalty, is that correct?

9 A. That's correct.

10 Q. On that basis, then, the twenty-seven percent, plus
11 or minus, would be owned by Southern Union, is that correct?

12 A. That's correct.

13 Q. That would also give them only twenty-seven percent
14 of the northeast quarter of the northeast quarter, is that
15 correct?

16 A. That's correct.

17 MR. STAMETS: Let me get that clear. What you are
18 saying is that that set of figures applies both to the east
19 half of the northeast and the northeast?

20 A. The eighty acres.

21 Q. (Mr. Stevens continuing.) If it were forced pooled
22 on --

23 A. On eighty acres.

24 MR. STAMETS: Okay, I understand. You also are
25 saying that the same thing is true as to the forty acres being

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1 the northeast quarter of the northeast quarter?

2 MR. STEVENS: I should have explained that. That
3 would be the case only if it were forced pooled as a pooled
4 unit.

5 In other words they have twenty-seven percent of
6 the southeast-northeast and twenty-seven percent of the
7 northeast-northeast if that were forced pooled.

8 MR. STAMETS: Okay.

9 Q (Mr. Stevens continuing.) The next, Mr. Latham?

10 A On the north half of the northeast Southern Union
11 has seventy-six percent, plus, that's working interest.

12 They have a net revenue interest of sixty-one, plus,
13 percent.

14 Q And the difference between seventy-six and sixty-one
15 is the amount of royalty, is that correct?

16 A That's correct.

17 Q Therefore, while Southern Union has a higher working
18 interest percentage than you do in the north half of the
19 northeast, in working interest, you have a higher net of
20 revenue interest in the east half of the northeast than they
21 do in revenue interest, is that correct?

22 A That's correct.

23 Q Then, in this north half of the northeast you have,
24 Latham and Barton, have some twenty-four percent?

25 A Twenty-three and a half.

1 Q If this were forced pooled would you have twenty-
2 three and a half percent in the northwest-northeast and in
3 the northeast of the northeast?

4 A Run that by again, Don?

5 Q Sure. If the north half of the northeast were forced
6 pooled would you have twenty-three and half percent in the
7 northwest-northeast and in the northeast-northeast?

8 A Yes.

9 Q All right. The next is the northeast-northeast and
10 would you explain it, please?

11 A Southern Union has fifty-three percent working
12 interest and thirty-nine, plus, net revenue interest.

13 Latham and Barton have forty-six, plus, percent
14 working interest and forty-one percent net revenue interest.

15 Q Thus they have a higher working interest in the north
16 east-northeast however you have a higher net revenue interest,
17 is that correct?

18 A That's correct.

19 Q What is the reason for that?

20 A It is the amount of royalty that was given to
21 some of their leases.

22 Q All right. In the west half of the northeast?

23 A Well, according to the testimony here they have
24 fifty percent of the southwest quarter, only. I really don't
25 know the figures.

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1 Q. But you own none?

2 A. We own none, right.

3 Q. Mr. Latham, if you were granted, and asserted to
4 be granted, your original application in 6017 would you drill
5 a well in the southeast quarter of the northeast quarter
6 and then would you drill a well in the northeast quarter
7 of the northeast quarter?

8 A. That's what we intended. We staked two wells.

9 Q. Is that what most others in the area have done?

10 A. Yes.

11 Q. And in your opinion would that greater protect the
12 correlative rights of the owners of the northeast quarter
13 of the northeast quarter?

14 A. Yes, sir.

15 Q. Well, if Southern Union managed to force pool you
16 in the north half of the northeast would you be in effect
17 giving up half of your ownership in the northeast-northeast
18 to Southern Union?

19 A. That's correct.

20 Q. In other words if the northeast-northeast was drilled
21 as a forty acre unit by yourself you would have a forty-one
22 percent net revenue interest.

23 What would you have in the northeast-northeast if
24 Southern Union forced pooled you in the north half of the
25 northeast?

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1 A. We would have twenty-three point five percent
2 working interest.

3 Q. And do you agree with your geologist that the
4 northeast-northeast is by far the superior location to drill?

5 A. I do.

6 Q. Would, then, their forced pooling be considerably
7 to your detriment and affect your correlative rights?

8 A. It would, yes.

9 Q. Referring, then, to what has been marked as Exhibit
10 Number Nine, would you explain that, please?

11 A. This is our A.F.E. for the drilling of a well to
12 be located seventeen hundred and eighty feet out of the north
13 and six sixty out of the east which would be the position H
14 in Section 30, 9 South, 33 East.

15 Q. Now, this would refer to the first case, Number 6017?

16 A. Right.

17 Q. Would these figures apply also to the Case 6036?

18 A. No, it would be a little cheaper.

19 Q. All right. Go ahead --

20 A. The only difference would be the dirt work. We
21 wouldn't have as much road to build.

22 Q. What is the total amount that you would anticipate
23 that this well would cost?

24 A. In which location?

25 Q. In your Exhibit Number Nine?

1 A I would anticipate one hundred sixty-eight thousand
2 one hundred fifty-three dollars and eighty cents.

3 Q How did you arrive at these figures, Mr. Latham?

4 A I contacted each of the suppliers that operate in
5 this area and also the service companies that operate in the
6 immediate area and got prices from them.

7 Q Did you allow additional possible overruns and
8 miscellaneous expenses in addition thereto?

9 A I did like miscellaneous two thousand dollars and
10 in various places here and possibly we could trim it just a
11 little bit.

12 Q In other words you can not only have overruns you
13 can have underruns, is that correct?

14 A Absolutely.

15 Q Have you received an A.F.E. from Southern Union but
16 I guess you heard the witness for the previous applicant
17 state, and do you consider that price is a reasonable price
18 that they estimated?

19 A No, I don't.

20 Q Do you believe that you can complete the well for
21 considerably less than that?

22 A I do.

23 Q Do you feel that by completing the well at this
24 lesser figure that you can do a workmanlike job or at least
25 as good a job as Southern Union might do?

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1 A. Yes, I do.

2 Q. Mr. Latham, how do you plan to have this well
3 drilled and completed?

4 A. Well, we engaged our geologist, Mr. Allen, to be
5 the geologist on any well we might drill and also we have
6 engaged Mr. Jack Noss and he is retired from Gulf with
7 thirty years of experience and for the last ten years he has
8 been a consulting drilling and completion foreman and he is
9 presently engaged with Continental Oil Company.

10 Q. Do you consider that your consultants plus your
11 experience in the field will give you the necessary qualificati
12 to complete a well and operate the proposed well should the
13 Commission grant it as well or better than Southern Union
14 Supply Company?

15 A. As well, yes.

16 Q. You have heard Mr. Allen's testimony as to the risk
17 factor here. Do you agree that the charge for risk should
18 be along the same lines as the risk factor that he came up
19 with?

20 A. Yes, sir, I do.

21 Q. Do you know -- would that figure be fifteen percent
22 or would you add something in there for interest or something
23 like that for the application for the well in the northeast
24 of the northeast?

25 A. Well, it depends on -- if you have to spend money

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1 to force pool somebody and spend money in their behalf, I would
 2 like to know whether interest on the money that you possibly
 3 borrow in their behalf, is that included in the cost? If
 4 it is not, I think it would not be just at fifteen percent.

5 Q It would be higher?

6 A It would be higher. It would depend -- it would be
 7 higher if the cost of interest is not in for the money you
 8 borrow to drill on their behalf. If it is, if the cost of
 9 interest is in that then the fifteen percent would be
 10 equitable.

11 MR. STAMETS: Let's go off the record for a minute.

12 (THEREUPON, there was a short discussion off
 13 the record.)

14 Q (Mr. Stevens continuing.) Would you agree, then,
 15 that fifteen percent wouldn't be sufficient as a charge for
 16 risk since you have to borrow the money to carry the monthly
 17 expenses?

18 A No.

19 Q What would you consider would be sufficient to charge
 20 for risk in this case?

21 A Well, in the norhteast of the northeast, in this
 22 case, it would be twenty-five percent.

23 Q And in the southeast of the northeast?

24 A It would be forty-five percent.

25 Q Mr. Latham, you originally asserted the east half of

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1 the northeast and in your opinion if you got the east half
2 of the northeast wouldn't that dilute the interest of Southern
3 Union in the northeast of the northeast where you propose
4 to drill a second well?

5 A. It would.

6 Q. To their detriment?

7 A. Uh-huh.

8 Q. It would not protect their correlative rights?

9 A. That's correct.

10 Q. Conversely, they receiving approval of the north
11 half of the northeast would have the same effect upon you?

12 A. It would.

13 Q. Do you consider, then, an unorthodox location approve
14 by the Commission or, conversely, forty acre spacing in the
15 field whereby a well could be drilled in the northeast-
16 northeast and you could drill yours southeast-northeast and
17 they could drill their northwest-northeast would that, in your
18 mind, be the most equitable manner of taking care of this
19 situation?

20 A. It would.

21 Q. Were Exhibits Eight and Nine prepared by you or made
22 under your direction?

23 A. They were.

24 MR. STEVENS: I have no further questions on direct,
25 Mr. Examiner. I would move that these two exhibits be

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1 introduced into evidence.

2 MR. STAMETS: Exhibits Eight and Nine will be
3 admitted.

4
5 CROSS EXAMINATION

6 BY MR. STAMETS:

7 Q Let me clarify a couple of things before you get
8 started.

9 Mr. Latham, you have no interest whatsoever in the
10 southeast of the northeast?

11 A We do, the southeast of the northeast?

12 Q The southeast of the northeast?

13 A We have one hundred percent working interest.

14 MR. CATON: Conversely, Southern Union has no interest
15 whatsoever.

16 Q (Mr. Stamets continuing.) Okay. I am going to
17 add that to my copy of Exhibit Number Eight here -- the
18 southeast of the northeast will be one hundred percent working
19 interest for Latham and Barton.

20 A That's correct.

21 Q Okay.

22 MR. STEVENS: I might mention, Mr. Examiner, that
23 the northwest of the northeast is one hundred percent Southern
24 Union.

25 Q (Mr. Stamets continuing.) Again, I am going to try

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1 to put what I now perceive as Latham and Barton's desires.

2 First off, they would like to have a forty acre
3 non-standard unit with a well to be drilled in the northeast
4 quarter of the northeast quarter?

5 MR. STEVENS: Yes, sir.

6 Q Or forty acre pool spa -- either one of those
7 two would be satisfactory?

8 MR. STEVENS: With a forced pool provision.

9 Q And you will have to have forced pooling in the
10 northeast-northeast.

11 A Yes, sir.

12 Q Then, second, if you don't get that, second, of what
13 you would like to have would be an eighty acre forced pooling
14 in the east half of the northeast with a non-standard north-
15 east-northeast location?

16 MR. STEVENS: Very good, yes.

17 Q Third, then, or fourth, depending on how you count
18 one, whether it is one or two, you would like to have the
19 east half of the northeast pooled and a well drilled in the
20 southeast-northeast?

21 MR. STEVENS: Yes, sir.

22 MR. STAMETS: Okay, I think I am clear on that,
23 finally.

24 MR. STEVENS: It took a long time to get here,
25 Mr. Examiner.

1 MR. STAMETS: You may go ahead and cross examine,
2 Mr. Caton.

3
4 CROSS EXAMINATION

5 BY MR. CATON:

6 Q It is true, Mr. Latham, that Southern Union does
7 not own any interest in the southeast of the northeast?

8 A That's correct.

9 Q You own one hundred percent of that and you agree
10 that drilling in the northeast of the northeast on an upright
11 eighty acre spacing would damage Southern Union's correlative
12 rights?

13 A That's correct.

14 Q Now, what is your opinion on what the rights of
15 those parties that are directly adjacent to the northeast
16 of the northeast, the three wells that border this corner?
17 What is your opinion of the affect on their correlative
18 rights by drilling in the northeast of the northeast? Do
19 you think those rights will be damaged?

20 A I think that would be a question for a geologist.
21 I don't know.

22 Q I respect that opinion. Now, if I understand you
23 correctly you basically abandoned the position that you would
24 like to have the drilling unit, whether it is eighty or forty,
25 in the east half if it included the southeast of the --

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1 A. That would be our third choice, I believe.

2 Q. Now, Mr. Latham, in looking at your expenditures
3 on this matter, looking at your equipment expenditures
4 and comparing with Southern Union's actual expenses of a
5 well just completed we found total equipment expenditures
6 of approximately ninety thousand dollars and you found
7 sixty-four thousand six hundred and forty as your estimate.

8 Are you proposing to use anything other than new
equipment?

10 A. Well, where you circulate your eighteen hundred
11 feet of eight and five and it is going to be circulated, I would
12 say use good used pipe would be sufficient there.

13 Q. So, you are proposing -- can you tell the hearing
14 officer what equipment you propose would be used in the
15 well besides the casing?

16 A. Really just the casing on the eight and five eighths
17 and a pumping -- probably a pumping unit.

18 Q. Can you tell me where you got the estimate of cost
19 of the pumping unit?

20 A. Well, just past experience. That's just a ball
21 park figure.

22 Q. So, you didn't call anyone and find out?

23 A. No, it takes time to shop and find a used pump
24 jack. So, I haven't called.

25 Q. How long has it been since you were the supervisor

1 or handling the drilling of a well, Mr. Latham?

2 A. Five months.

3 Q. All right. And was this a well in this similar
4 San Andres formation?

5 A. No, it was the Grayburg.

6 Q. Now, can you tell me in item six your electrical
7 logging and can you tell me what your footage rate is on
8 that?

9 A. I got that figure from our geologist who suggested
10 what logs to run and what the extension would be.

11 Q. All right, I'll ask him about that. Now, the same
12 thing on your number seven your drilling you gave me?

13 A. That is the figure from the same contractor that you
14 used.

15 Q. All right. Now, do you agree that there is a risk
16 in the drilling of any of these wells either of the two you
17 propose and the one proposed by Southern Union Supply?

18 A. Any of them.

19 Q. All right. Do you disagree with the amount of
20 risk involved in these matters -- do you feel, Mr. Latham,
21 that you have a fifty-fifty chance of getting a well in the
22 northeast of the northeast or do you feel that you have a
23 better chance?

24 A. A lot better chance than that.

25 Q. What about your well in the southeast, what do you

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1 think about that?

2 A I think it is like our geologist says about a seventy
3 percent chance of a commercial producer.

4 Q Do you have any objection to drilling of a well
5 in the center of the northern pooling, eighty acre pooling,
6 unit, Mr. Latham?

7 A You would have to explain where that would be.

8 Q Well, in the center of the eighty acre tract, the
9 north half of the northeast?

10 A In the center location, B?

11 Q Yes, sir.

12 A I don't know --

13 Q Well, I don't know what your location B would be
14 but the location for the pooling acre as requested by
15 Southern Union Supply, the pooling unit, do you have an
16 objection to a well at the center of that location?

17 A It would depend on what the interest would be.
18 It wouldn't be my choice by any means.

19 Q Why wouldn't it be your choice, Mr. Latham?

20 A Well, for the same reason as my geologist, I don't
21 want to go west. We picked up all of that acreage and did
22 not.

23 Q It is your preference, geologically, it's not a
24 preference from the amount of interest that you have in it?

25 A Geologically and the interest, also.

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1 MR. CATON: That's all I have. If I may undertake
2 cross of Mr. Allen?

3 MR. STAMETS: Okay.

4 MR. STEVENS: If I may ask him one question?

5 Q (Mr. Stevens continuing.) Mr. Latham, is it common
6 practice by good legitimate operators and major large
7 independents in this business to use an eight and five
8 eighths production intermediate string?

9 A Yes, it is.

10 Q Is it also a fairly common practice to use a used
11 pumping unit?

12 A Absolutely.

13 Q Is your pumping unit cost similar to or close to
14 that proposed by Southern Union?

15 A It is.

16 MR. STEVENS: No further questions.

17 MR. STAMETS: Mr. Stevens, for clarification, again,
18 if I understand this correctly of what you have asked for is
19 a twenty-five percent risk factor if you get the forty acres
20 in Unit A?

21 MR. STEVENS: Yes, sir.

22 MR. STAMETS: And you have asked for forty-five
23 percent risk factor if you get the eighty acres -- no, still
24 twenty-five percent of you get the eighty acres but the non-
25 standard location in A?

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1 MR. STEVENS: Yes, sir.

2 MR. STAMETS: Forty-five percent in the eighty
3 acres with a non-standard location in H?

4 MR. STEVENS: Well, it would be a standard location
5 in H.

6 MR. STAMETS: I am sorry, standard location.

7 MR. STEVENS: Just forced pooled.

8 MR. STAMETS: All right. I don't believe that we
9 have had any testimony from either of the witnesses as to
10 supervisory costs while drilling or producing.

11 MR. STEVENS: That is an error on my part. I had
12 it in my notes and I forgot and I will now and thank you for
13 reminding me.

14 Q (Mr. Stevens continuing.) Could you give us what
15 costs you might seek if the Commission approved your request
16 for administrative overhead on a monthly basis while the
17 well is drilling?

18 A One thousand dollars.

19 Q What monthly costs would you seek after the well
20 is completed?

21 A One hundred and twenty-five dollars plus any pumping
22 expenses. I mean by that the contract pumper.

23 Q Is that less or greater than most people get for
24 wells of that depth in this area?

25 A That's less.

1 MR. STEVENS: Thank you, Mr. Examiner.

2 MR. CATON: I have no further questions.

3 MR. STAMETS: Anything further from this witness?

4 He may be excused and Mr. Allen will you return, please, to
5 the stand?

6

7

CROSS EXAMINATION

8 BY MR. CATON:

9 Q Mr. Allen, there is no question in your mind from
10 the geological data that you have prepared that drilling the
11 standard location in the east half of the northeast would
12 damage Southern Union --

13 A East half of the northeast?

14 Q East half of the northeast, the standard location,
15 which would be your location H, there is no question that that
16 would damage Southern Union Supply's correlative rights?

17 A Yes, sir, just as Southern Union's drilling in
18 Unit E would damage our correlative rights.

19 Q Where would your correlative rights -- in what
20 respect would they be damaged?

21 A To the extent that the questionable acreage resides
22 in the northeast quarter of the northeast quarter and each party
23 owns somewhat near fifty percent of the property, the right
24 to drill, have a lease.

25 Okay. If Southern Union drills at their location

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1 they get seventy-five percent of the revenue.

2 If my client drills at their location they get
3 approximately seventy-five percent of the revenue. Whoever,
4 drills get seventy-five percent of the revenue.

5 The only area where we have a fight is in the
6 northeast of the northeast in not getting our fair share of
7 the northeast of the northeast.

8 The proper solution would be for all parties to
9 agree to a well in the center of the northeast of the northeast
10 and at their own discretion drill their own well at the other
11 two proposed locations. That, to me, would be the most
12 equitable solution to the problem if the O.C.C. will allow
13 this.

14 Q That gets us to the crux of the problem.

15 A I do not think that there is an impairment of the
16 offset operators to the north, northeast, or east --

17 Q Well, I didn't ask that question, yet. If Mr.
18 Stamets will let me get to that and it may be that Joe will
19 want me to back up and let you say that, I don't want to.

20 But I want to ask you how many wells are you going
21 to have to drill if you drill the center of the north half
22 of the northeast, Mr. Allen?

23 How many wells, ultimately, to produce the proper
24 amount of oil from this quarter section?

25 A From this quarter section and there is already one

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1 well drilled?

2 Q Yes.

3 A Three wells will be drilled to properly drain this.

4 Q All right. Now, it is not true is it under the
5 regulations that we operate by that simple drainage of the
6 reservoirs accomplishes our work without waste is it? There
7 is such a thing as economic waste? You will agree with that,
8 Mr. Allen?

9 A Yes.

10 Q And you agree that economic waste arises when producer
11 are required to drill more wells than are absolutely necessary
12 to drain and specific structure, isn't that correct?

13 A Well, you used the word "absolutely" and that is a
14 modification.

15 Q Well, do you agree or do you not agree?

16 A In areas where the reservoirs are homogeneous
17 and by homogeneous I mean porosity and permeability are uniform
18 both vertically and horizontally that perhaps it would be
19 proper to have an eighty acre spacing in the San Andres. But
20 the San Andres is far from a homogeneous reservoir.

21 There are idiosyncrasies both vertically and
22 horizontally in the San Adres reservoirs that require to drill
23 it at the proper density.

24 I think that the experience in southeastern New
25 Mexico indicates that forty acres is the proper spacing for the

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1 San Andres producing fields.

2 Q Well, I don't think you answered my question. My
3 question was that waste, economic waste, will occur if more
4 wells are drilled than necessary to properly drain the
5 area that we are talking about?

6 A I don't think that one well will properly drain --

7 Q That is not my question. My question is that is
8 economic waste, is it not, Mr. Allen?

9 A That could be defined as economic waste if you drill
10 more wells than you need to.

11 Q And your whole theory of this particular matter
12 depends on your opinion that forty acre spacing is the proper
13 way in which to drain this particular pool?

14 A Yes.

15 Q And you are in disagreement with Mr. Shirock
16 on that are you not?

17 A Yes, that's correct.

18 Q In that general situation would you not feel that
19 the proper manner of developing the field would be as has
20 been done in 20 and 29 and in 19 which you have very little
21 data on, to drill first in the standard location and then to
22 infill, isn't that the way we designed this thing, Mr. Allen?

23 A That's the way you have designed it. I have no
24 rights to design your drilling program.

25 Q Okay. Now, as a matter of fact referring to your

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1 Exhibit One, Mr. Allen, you have not indicated in Section 19
2 the pattern of spacing that has been used in this rather new
3 area which I think by the hearing officer's own motion or
4 the Commission's motion, will be included in the Flying M, you
5 haven't indicated that have you?

6 A No, sir. My marking here is what apparently is the
7 case from the location of wells that have already been ==

8 Q If you are familiar with it, then, you would agree
9 that the development of that new area of the field has been
10 on eighty acre spacing has it not?

11 A Yes.

12 Q Okay. To change from an eighty acre spacing at this
13 point in the midst of the progress of the development of
14 the field would possibly create economic waste would it
15 not, Mr. Allen?

16 A I disagree, principally because the offset operators
17 in Section 20 have drilled on a non-standard location in
18 the southwest of the southwest of 20 and this is the most
19 recent development for Arco, a reputable firm drilling oil
20 and gas wells in the State of New Mexico.

21 Q Arco drilled first in a standard location did they
22 not?

23 A Yes, but they drilled a non-standard location before
24 they drilled their next standard location.

25 Q Now, Mr. Allen, as a practical matter you believe

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1 that twenty acre spacing would be proper in this field?

2 A. It has not yet been demonstrated that that would
3 be improper.

4 Q Mr. Allen, have you reviewed the testimony that
5 was presented to the Commission relating to the establishment
6 of the eighty acre spacing in the field?

7 A. No, sir.

8 Q All right. You are not familiar with that testimony
9 at all?

10 A. No.

11 Q Then, you could not testify here today as to any
12 substantial change that has occurred due to production
13 information from the testimony that was given at that time?

14 A. Since I am not familiar with that testimony obviously
15 that is correct.

16 Q Mr. Allen, in any of the exhibits which you have
17 prepared here have you drawn for the benefit of the hearing
18 officer the pinching that you indicated exists in the four
19 sections that you have talked about?

20 A. I have not drawn the pinch out, no, sir.

21 Q Can you do that?

22 A. Just as anybody else could utilizing the dry holes
23 as the guide.

24 Q Which exhibit would you prefer to do that on?

25 A. How about my structure map?

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1 Q Okay.

2 MR. STAMETS: Exhibit Three?

3 Q (Mr. Caton continuing.) Exhibit Three, and would
4 you do that for me from the information available at the
5 present time and assuming that everyone is a prudent operator
6 until proven otherwise --

7 MR. STAMETS: Would you please do it on two of
8 them, Jack, so that I will have a copy?

9 A I can only assume that you are going to make a
10 producer out of your No. 2 well --

11 Q (Mr. Caton continuing.) I just want you to draw
12 the line, the pinch line, if you can, and it will show what it
13 will show.

14 A That is true. Now, you are privy to information
15 that I do not have available on both of your wells and your
16 No. 1 well or No. 2 well logs have not yet been released
17 and are not available for the public, so, on that basis I will
18 drawn the line.

19 I will draw my pinch out line through your No. 2
20 well. I fully expect that it will not be as good a well as
21 your No. 1 well.

22 Q If you would do that on two of them, please, Mr.
23 Allen?

24 A All right. Let me do it on my own --

25 Q Did you get it done on yours?

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1 A Yes, sir.

2 Q All right. Now, you have drawn that pinching line
3 to the west of our proposed well site?

4 A Yes, sir.

5 Q All right.

6 A I would say that you have a fifty percent probability
7 of succeeding and completing a commercial producer at that
8 location.

9 Q Now, looking at the two wells in the extreme south-
10 west of Section 19 did I understand you to say that those
11 wells had been field tested at the San Andres?

12 A No, you didn't.

13 Q Okay. You are aware that they are not field
14 tested?

15 A That is correct.

16 Q So, those well don't enter into your data at all
17 as far as the San Andres is concerned?

18 A You will note that the well in the extreme northeast
19 of Section 30 was a San Andres producer and has been plugged.
20 That well produced -- the northwest of the northwest, that's
21 the Shell No. 1, Richardson and it has been plugged after
22 producing six hundred and twenty-four barrels out of the
23 San Andres. I consider that a non-commercial San Andres well.

24 Q So, really all of the figures that you have in Section
25 19, since you don't have available the information that we

1 had from our two wells would be drawn from that well and the
2 interpretation that you made, the gyrations that you have
3 made?

4 A The fact that there is a non-commercial well in
5 the northeast quarter of 19?

6 Q Yes.

7 A As well as a non-commercial well in the northwest
8 quarter of 19.

9 Q Now, my question a minute ago was the two wells in
10 the extreme corner of Section 19, the southwest corner,
11 neither of those wells figure into the contours as you have
12 drawn them do they?

13 A Other than the fact of your drill stem test of that
14 well in the extreme southwest corner which did have a water
15 test.

16 Q In addition, then, --

17 A That could be subject to error as we both know since
18 the interval covered by that drill stem test was extremely
19 long.

20 Q All right. In addition the exhibit which you have
21 drawn does not include information of the Susco No. 2 and the
22 Susco No. 1?

23 A That is correct because that information was not
24 available to me anywhere.

25 I did guess pretty well at the structure marker,

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1 though.

2 Q Now, referring to your Exhibit Number Two, Mr.
3 Allen, you have indicated the perforations or it shows
4 indications of perforations in the bottom half of that exhibit
5 does it not?

6 A Yes, sir.

7 Q And those perforations are made -- do they just
8 happen to be opposite the maximum porosity or were they
9 drawn there intentionally to take advantage of the porosity?

10 A The holes?

11 Q Yes.

12 A A prudent operator perforates what he thinks is the
13 most porous part of the well above the oil-water contact.

14 Q Well, my point is that the porosity -- the exhibit
15 that was produced here by Southern Union that shows porosity
16 and the pay area at porosity is significant isn't it?

17 A Porosity in the San Andres is a significant factor
18 whether you get a well or not.

19 My remarks concerning log quality had to do with
20 the qualitative analysis of electric logs and especially
21 through casing. This well was logged through casing. The
22 quality of your interpretation is significantly reduced
23 when there are materials interfering between the logging
24 instrument and the rock, itself.

25 The more material between the two things the worse

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1 your interpretation and my remarks were meant to indicate
2 that determining the difference between seven percent
3 porosity and six percent is less accurate under these
4 adverse conditions.

5 But I concur that you also perforate the porosity.

6 Q And this is what this log shows has been done?

7 A Yes, sir. Are we in disagreement about something?

8 MR. CATON: I think that's all I have of this witness.

9 Mr. Stamets, I did not introduce any testimony into direct
10 as to the amendment of the field rules and I have what I
11 hope would be some short testimony on this that I would ask
12 to put on.

13 MR. STEVENS: I have a question or two of this
14 witness.

15
16 REDIRECT EXAMINATION

17 BY MR. STEVENS:

18 Q You were asked would it not be more equitable to
19 drill the standard location first and then infill drill.
20 Would that be more equitable?

21 A Not under these very peculiar conditions where there
22 is that dual ownership in the northeast-northeast.

23 Q In what respect?

24 A Because whoever drills the well and gets the
25 proration unit beats the other person out of half of their

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1 interest.

2 Q There was testimony about a change since the
3 original testimony set this field up in eighty acre spacing
4 and has the price of oil changed since then to your
5 knowledge?

6 A Significantly.

7 Q Is it more economic and do you tend not to have
8 economic waste when the price is higher and you drill more
9 wells?

10 A That's correct.

11 Q Is that why at that time or is it true at that time
12 that eighty acre spacing might have resulted -- I mean
13 forty acre spacing might have resulted in economic waste
14 whereas now it will not?

15 A That's a true statement, yes.

16 Q Is another factor that since that original hearing
17 has the practice of operators in this field changed in how they
18 drill their wells whether they are on forty or eighty?

19 A The practice has, in fact, changed specifically
20 in Section 29 because they are, indeed, on forty and filled
21 in.

22 Q So, price and spacing since this original eighty
23 acre spacing hearing some years ago are two changes since
24 then, is that correct?

25 A Yes, sir.

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1 Q You drew this pinch out line on your Exhibit Number
2 Three and you testified previously that the pinch out line
3 is variable and erratic and do you consider that this line
4 is absolute that you drew or that it might be elsewhere?

5 A There are no absolutes in geology. You never say
6 never or always -- you never say always.

7 Q Then your line might change based on different
8 information but at this time this is where you think it should
9 be drawn?

10 A That's correct. If Southern Union would re-enter that
11 well in the northeast of Section 19 and make a commercial
12 producer I might have to change this line.

13 MR. STEVENS: No more questions.
14

15 CROSS EXAMINATION

16 BY MR. STAMETS:

17 Q Mr. Allen, do you have any specific evidence of
18 or in the opposite of communication between the wells in
19 this reservoir?

20 A I don't have any direct evidence but I have an
21 intimation -- if you will note on my Exhibit Number Five --
22 and the type of communication I am talking about is extra
23 production that a particular well has because it is near
24 an especially permeable zone, part of the field, and I am
25 referring to the McGuffin No. 1 in the southeast of the

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1 northwest of Section 29.

2 I think that exceptional production is directly
3 related, at least, indirectly related to the good wells that
4 we are seeing now in that part of the field that was not
5 adequately drained by the rest of the wells in the field.

6 Is that the type of communication that you had in
7 mind, vertical communication with water?

8 Q I was -- any evidence of pressures or interference
9 between drainage and non-drainage and this type of thing?

10 A No, sir.

11 Q If it finally gets down to a choice in this
12 situation between Southern Union's application for a eighty
13 acre unit or Latham's application for an eighty acre unit
14 what do you feel the controlling factors are in any decision
15 should be?

16 A Equitability to all parties concerned.

17 Q Okay.

18 A Such as prevention or interference with correlative
19 rights to the greatest extent.

20 Q Now, I think that could be a very important point
21 in this case and I want to make sure that you understood my
22 question and that I understood your answer.

23 That in the final analysis it gets down to simply a
24 decision between which eighty acre unit to approve, not
25 considering where the wells are going to be, whether a stand up

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1 eighty or a lay down eighty, and I understood your answer to
2 be that you feel that whichever eighty treats the rights,
3 correlative rights of the owners involved in this case
4 most equitably, that should be the eighty that is approved?

5 A I don't think you can achieve equity with eighty
6 acre units.

7 Q I realize that that is a part of your testimony.

8 A I refuse to answer that question on that basis.

9 Q Well, of course, perhaps this denies you an
10 opportunity, then, to properly present your -- to represent
11 your client should the decision get to that point and of
12 course you have that right.

13 A That is true -- but here is where I am too impartial
14 to give you an unbiased opinion, as Mr. Shirock would be.

15 MR. STAMETS: You have not answered that question
16 and it remains unanswered.

17 MR. STEVENS: May I?

18 MR. STAMETS: Yes, Mr. Stevens, you certainly may.

19

20 REDIRECT EXAMINATION

21 BY MR. STEVENS:

22 Q Mr. Allen, geologically you have testified that
23 the southeast-northeast has a superior location to the north-
24 west-northeast, is that correct?

25 A That is correct.

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1 Q This between just those two locations, geologically,
2 you would prefer the east half of the northeast?

3 A Say that again?

4 Q As between a well to be drilled in the east half
5 of the northeast or the northwest of the north half of the
6 northeast you would prefer the east half, northeast, geological
7 based on the two location that I have just given you?

8 A Yes, I think you would have a better probability
9 of success with the two eastern locations than with the
10 two northern locations.

11 Q All right. As to the parties and the amount of
12 their estimate as to the cost of each well, would in your
13 opinion Latham and Barton be more entitled to drill a well
14 in the southeast of the northeast or Southern Union Supply
15 drill a well in the northwest of the northeast as based on
16 the estimate of cost of the well?

17 A You would probably get more oil for less money by
18 drilling a well in the southeast of the northeast.

19 Q You have heard testimony of Mr. Shirock that he
20 considers that there is a fifty percent probability in the
21 northwest of the northeast and that equates with your same
22 probability?

23 A Yes, sir.

24 Q You have previously testified that the southeast of
25 the northeast you gave a thirty percent probability or

1 seventy percent probability of success. On that basis
2 probability of success which location would you say is
3 the superior location, the southeast-northeast; northwest-
4 northeast?

5 A Southeast to the northeast.

6 MR. STEVENS: No further questions.

7 MR. CATON: I have a couple of questions.

8 MR. STAMETS: Mr. Caton.

9
10 RECROSS EXAMINATION

11 BY MR. CATON:

12 Q Mr. Allen -- well, I am going to pass --

13 MR. STAMETS: Any other questions of this witness?

14 He may be excused.

15 (THEREUPON, the witness was excused.)

16 MR. STAMETS: Mr. Caton to you have something on
17 direct?

18 MR. CATON: Yes, I would recall Mr. Shirock.

19
20 ROY SHIROCK

21 was called as a witness by the applicant, and having been
22 previously duly sworn, testified upon his oath as follows:

23 DIRECT EXAMINATION

24 BY MR. CATON:

25

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1 Q Mr. Shirock, have you examined the testimony that
2 was introduced at the hearing in which the eighty acre
3 spacing was established and the temporary spacing and the
4 testimony that was presented at the final determination of
5 that matter?

6 A Yes, I have.

7 Q Is there any information that comes to your attention
8 from the actual development of this field that you are
9 aware of that would require a change in the spacing rules
10 as established by the Commission?

11 A No.

12 Q Is there any substantial difference in the estimation
13 of -- was it Arco's testimony at that time --

14 A Coastal States.

15 Q Coastal States' testimony is there any actual
16 substantial difference between their estimate of future
17 production and what has actually occurred?

18 A I don't believe so.

19 Q And Southern Union Supply's plans the development
20 of 13 based on the information which you have in Susco's
21 No. 1 and No. 2, does request and plan on standard spacing
22 is that correct?

23 A That is correct.

24 Q And you have established Susco No. 1 and 2 in
25 standard lay down positions, is that correct?

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1 A No, the Susco No. 1 and No. 2 are on a north-south.

2 Q Okay. And you have proposed to enter into an
3 old well which is in a standard location, is that correct?

4 A That's correct.

5 Q All right. Now, based on the information that you
6 have from Susco's 1 and 2, can you comment on the pinch line
7 that Mr. Allen drew?

8 A Well, it is my thinking that the pinch line is
9 further west than what Mr. Allen drew there simply because
10 the BTA Well No. 1 and 2, FMS wells are located in the south-
11 west quarter of Section 19 and they were never tested in the
12 San Andres. There was no drill stem tests run from the
13 information that I have available to me and they weren't
14 perforated.

15 Q What would be the standard location for drilling
16 of a well on an upright eighty acre spacing in the northeast --
17 in the east half of the northeast?

18 A I didn't understand that.

19 Q What is the standard location -- what would it be
20 for an upright eighty acre spacing?

21 A That would be the standard location, the re-entry.

22 Q Now, referring to Barton proposed location, H,
23 is that a standard location for an upright spacing on an
24 eighty acre pattern?

25 A Which location?

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1 Q The H location?

2 A Yes.

3 Q All right. Do you, in your opinion, believe that
4 can be a productive well?

5 A I think that that well is less attractive than our
6 location.

7 Q In the protection of correlative rights is it important
8 for the hearing officer to keep in mind that you have identified
9 similar structures in the north half and the south half of
10 both of these areas?

11 A That's correct.

12 Q Would you specifically tell him what you feel is
13 the significance of drilling wells in similar structures?

14 A I would like to go back to my Exhibit One, structure
15 map, and I don't have it -- here I got it here -- as I
16 mentioned to the Examiner this map is a structure map on
17 top of the porosity zone and what I wanted to bring out to
18 the Examiner is this map does not reflect the San Andres
19 structure. This map reflects porosity structure. And
20 porosity structure is erratic in the San Andres carbonate
21 and in one well you might have an area that has a couple
22 hundred feet of productive interval and in another well you
23 might have some that only has ten feet of productive
24 interval.

25 This is why this particular map shows structure,

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1 more structure, more anomalies than a San Andres particular
2 map and this is what we use for a field type development.

3 Also, this particular map is detailed in showing
4 the San Andres structure and San Andres porosity and when
5 you do have structure in the San Andres porosity the
6 porosity map shows similar structures as the structure map
7 simply because you have structure in the Slaughter zone
8 porosity and you usually get this porosity in the upper part
9 and it shows structure.

10 Now, what happens here in this particular field
11 and why we want the north half of the northwest quarter is
12 simply because that shows a structure that is similar in
13 characteristics and also similar with porosity.

14 Now, the south half has similar structure and also
15 it has similar porosity.

16 Q Now, do you feel that a well which is meant, intended
17 to serve similar structure and porosity better preserves
18 correlative rights?

19 A I sure do, I firmly believes that is true.

20 Q And there would not be any averaging between the
21 south and the north half if that were the manner in which
22 we proceeded, is that correct?

23 A That's correct.

24 Q Do you agree with Mr. Allen's statement that the
25 final resting place should be the protection of the correlative

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1 rights?

2 A. That's correct.

3 Q. Do you believe that the north half development and
 4 the south half development on a lay down basis better protects
 5 the correlative rights of all of the parties involved based
 6 on the geological structures that you have found?

7 A. I believe these two units, the one to the north
 8 and the one to the south would protect all of the correlative
 9 rights of all of the mineral owners and royalty owners in
 10 the whole northeast quarter of Section 30.

11 MR. CATON: That's all I have.

12 MR. STAMETS: Mr. Stevens?

13

14 CROSS EXAMINATION

15 BY MR. STEVENS:

16 Q. Mr. Shirock, your attorney asked Mr. Allen wouldn't
 17 it be more equitable to first drill a standard location and
 18 later infill drill as opposed to an unorthodox location.
 19 Do you agree with that?

20 MR. CATON: I don't agree that I asked that question.

21 Q. (Mr. Stevens continuing.) Presuming that he did
 22 would you answer it, please?

23 A. Would you run through it, again, please?

24 Q. Yes, sir. Do you consider that it would be better
 25 to drill a standard location first and then infill drill as

1 opposed to a unorthodox location, first?

2 A Well, the history of the field has been that they
3 have drilled, except one location which is the No. 2
4 McGuffin, they drilled a standard location and we commenced
5 developing Section 19 on standard locations and with our
6 conservative approach we would like to stay with standard
7 eighty acre location.

8 Q You have not had any ambition or desire to ever
9 drill in the northeast-northeast?

10 A I wouldn't say that.

11 Q Right now you don't -- you may change in the future?

12 A For example, we come over here and drill the present
13 location and at a later date we have additional information
14 that might require a well to drill in the northeast of the
15 northeast and I am sure that I would recommend to management
16 that we drill that location.

17 Q You own the full interest in the southeast-south-
18 east of 19 don't you?

19 A Yes, sir.

20 Q Under any formula that we get here you are going to
21 own less than that in the northeast-northeast of Section 30,
22 aren't you?

23 A Well, if we are going to the northeast of the
24 northeast we are going to own approximately fifty percent,
25 something of that sort.

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1 Q Well, that may not be true, but regardless you
2 will own less than a hundred percent, is that correct?

3 A Of the pooling unit that we are requesting?

4 Q Yes, sir.

5 A Yes, sir.

6 Q Your well in the southeast-southeast is a direct
7 offset to the northeast offset -- of the south offset and
8 will that southeast-southeast probably drain some oil out
9 from under the northeast-northeast?

10 A Possibly could.

11 Q Therefore, you don't have any real economic interest
12 in having a well drilled in the northeast-northeast do you?

13 A Well, our economic interest would be to drill our
14 suggested location where both could be drained at the same
15 rate.

16 Q But your economic interest would not be the same
17 as the owners under the northeast-northeast are they?

18 A Well, we have one hundred percent on Section 19,
19 working interest. Here, we would have on the north half we would
20 have approximately seventy-five percent -- seventy-six point
21 four, I believe is correct.

22 Q You testified that one well would drain eighty
23 acres, right?

24 A Yes, sir.

25 Q And that eighty acres would include part of the

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1 northeast-northeast?

2 A. Yes, sir, I think this well here would drain the
3 whole eighty acres.

4 Q. Would the correlative rights of those owners under
5 the northeast-northeast be protected if no well were drilled
6 in the northeast-northeast?

7 If that well in the southeast-southeast is going
8 to drain part of it?

9 A. Southeast, are you talking about --

10 Q. Your southeast-southeast --

11 A. Would drain part of this?

12 Q. Yes, sir.

13 A. Well, I think if we keep the field on eighty acre
14 spacing I think we will have the same drainage.

15 Q. Is the field going to be effectively drained on
16 eighty acre spacing?

17 A. That's is the way it was commenced.

18 Q. Is it presently drilled on eighty acre spacing?

19 A. They have infill drilling.

20 Q. On forty acre spacing?

21 A. Yes, sir. But I must say that the allowable on both
22 wells is for only one eighty acres.

23 Q. What is the allowable?

24 A. One hundred and sixty barrels.

25 Q. How many wells make that allowable?

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1 A. Well, ours started out but it didn't make it
2 very long.

3 Q. You say that changes since the Costal States
4 hearing -- you don't consider that the substantial increase
5 in the oil prices is worth drilling on forties instead of
6 eighties?

7 A. Well, you have a similar increase in the cost of
8 drilling.

9 Q. Is it similar? Can you give a percentage?

10 A. I don't know if it is similar. I can't remember the
11 testimony correctly but I think that they were getting two
12 dollars and thirty-eight cents a barrel when this particular
13 thing -- I can't remember the testimony correct -- but it
14 was two thirty-eight or something like that. But you were
15 drilling one of these wells for forty thousand dollars --
16 drilling and completing it for forty-thousand dollars.

17 Now, we are getting about, say, in the neighborhood
18 of eleven dollars a barrel out there for that oil and the
19 cost is two hundred thousand dollars.

20 Q. Real quick you have got an equivalent ratio of one in
21 four but how about dollars recovered? You are going to have
22 eighty thousand barrels at, let's say, eleven dollars a
23 barrel and let's say that is eight hundred and eighty thousand
24 dollars as opposed to your cost of two hundred and seventeen
25 thousand dollars and this is over six hundred thousand dollars

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1 per well. Wouldn't it be better to go ahead and drill that
2 on forty and get that money, now?

3 A. Okay, you say you recover on forty acres in the
4 neighborhood of forty to forty-five thousand barrels per
5 forty acre spacing. It cost you two hundred and fifteen
6 thousand dollars to drill it and if you got, say, ten dollars
7 a barrel for the oil that would give you four hundred to
8 four hundred and fifty thousand dollars for that particular
9 well. You are making just as much money on the other way
10 and you are making more for your money if you take in the
11 economic consideration of time interval on your money that
12 you have.

13 I don't know, I didn't work out the economic analysis
14 of it.

15 Q. Would that protect your royalty owners therein?

16 A. Well, it is depending on what you want to say
17 is the worth of money today and the worth of it in the
18 future.

19 Q. Well, I am thinking of the royalty owners and the
20 other owners. Are they protected by the fact that you want
21 your money on the longer term basis and lesser of it and
22 they don't have to pay any costs?

23 A. Well, I would think that over a period of time that
24 they had an investment that they would rather have "X" number
25 of dollars over a period of time providing that inflation wasn't

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1 such as it is now.

2 Now, if you go into the economic justification of
3 whether you wanted something now or over a period of time
4 I would have to get on the computer to find out what that
5 rate of return would be.

6 Q Something that is going to be produced ten years
7 from now is going to be worth considerably less in five
8 years?

9 A True, I agree with you there.

10 MR. STEVENS: No further questions.

11 MR. STAMETS: Any other questions of the witness?

12 MR. CATON: No.

13 MR. STAMETS: He may be excused. Is there anything
14 further in this case?

15 (THEREUPON, the witness was excused.)

16 MR. STEVENS: A very brief statement.

17 MR. STAMETS: I believe that since the original
18 application in this case was filed by Latham that I will
19 let Mr. Caton go first.

20 MR. CATON: Mr. Stamets, it is not unusual, I imagine
21 to have geological data which is directly contradictory but
22 that basically is our case except for the problems and the
23 lack of data that I think I have pointed out to you in the
24 production of the Barton exhibits.

25 I think that probably this case can be simplified

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1 from what it started out to be. From the testimony that I
2 have heard today it becomes very clear that from either
3 geologist's testimony that the north half of the area is
4 probably the best half in which to begin development of the
5 normal field development.

6 I think it is significant and the Commission should
7 take into consideration the fact that Section 19 is just
8 now being recognized as a part of the Flying M Pool and I
9 assume that it will be, although that was only taken under
10 advisement.

11 I think in terms of waste, both economic and
12 underground, that the Commission must consider that the
13 development of the other areas including Susco No. 1 has
14 been on eighty acre spacing, whether laid down or stand up.

15 The general progress of the field has been on
16 eighty acre spacing. I would have to agree with both
17 geologists that the protection of correlative rights will
18 occur -- should control, and the matter, I don't envy the
19 position that you are in trying to resolve the geological
20 data to accomplish that.

21 However, I would suggest to the Commission that
22 the geological data that has been produced here by Susco
23 with the information of the later two wells is probably the
24 most recent information that is available.

25 There is really not that much difference in what

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1 Mr. Allen produced -- as a matter of fact he said he guessed
2 but that is creative thinking and his guess was on what that
3 well would do and it was a good one, even though he did
4 not have the information.

5 We believe that waste to the immediate -- to the
6 adjacent wells will occur if the standard location and spacing
7 are not used in this case.

8 We believe that economic waste will occur from the
9 duplication of wells -- that additional wells will necessarily
10 have to be drilled to properly drain the reservoir and to
11 protect correlative rights.

12 We believe that that in, itself, will also drain
13 reservoir energy and create other problems.

14 The cost involved in this type of development is
15 certainly expensive. The testimony has been somewhat in
16 conflict on that. The cost of the development of the well,
17 I believe, can best be attributed to Southern Union's policy
18 of using new equipment.

19 Who is to say whether in the long run in the operation
20 of a well over a long period of time whether new equipment
21 is not preferable. It is Southern Union's belief that it is.

22 In every case that we see presented here today that
23 there is no justification for an upright eighty acre spacing.
24 The damage to correlative rights is apparent and obvious and
25 that should be dismissed from the Commission's mind as one

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1 of the alternatives to this matter.

2 As to the amendment of the field rules, the law
3 would require that there be substantial evidence to support
4 a change in eighty acre spacing. This law is based on
5 the quite proper approach that the development, once begun,
6 must be continued in a manner to protect those people who
7 have gone before.

8 The fact that infill drilling has occurred does not
9 change that -- infill drilling takes its position after
10 the development and is usually involved in secondary recovery.

11 It isn't a proper consideration for the Commission
12 that there is infill drilling. If the Commission gets into
13 that kind of thing then it certainly must counter the infill
14 drilling in Section 29 by the fact that in Section 19 there
15 is none.

16 In this case, Southern Union's specific testimony
17 is that the standard location in the north half will drain
18 the entire eighty acres.

19 Basically, the testimony that I heard today seems
20 to boil down to choosing one or the other in that regard.
21 Mr. Shirock's opinion is that it will and our location is
22 based primarily on that particular matter.

23 I would submit to the hearing officer an Oklahoma
24 case, Continental Oil vs. Corporation Commission, which
25 directly relates to the burden of proof and requirements of

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1 proof in changing of federal rules in the spacing.

2 I have a copy for you someplace and those are
3 my comments. Thank you very much -- I am sorry that we
4 drug on.

5 MR. STAMETS: Mr. Stevens?

6 MR. STEVENS: Mr. Examiner, Mr. Caton believes
7 his client's geologist and I believe in my client's geologist.

8 In this case it doesn't really matter whose
9 geology is correct. I could make a big case that Mr. Allen
10 knows what he is doing as opposed to the other parties but
11 the question is should the Commission grant the north half
12 of the northeast to be forced pooled to Latham and Barton,
13 Latham and Barton have lost half of their interest under
14 the northeast of the northeast.

15 Conversely, if Latham and Barton forced pooled
16 Southern Union in the east half of the northeast, Southern
17 Union will have lost their half interest in the northeast-
18 northeast.

19 I don't care whose geology you use, the northeast-
20 northeast is the place to drill. It is surrounded by three
21 good wells on forty acre spacing. They are draining that
22 tract right now and the correlative rights of the owners
23 under that forty acres cannot be protected by the field rules
24 set up herein.

25 There must be either an unorthodox location in that

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1 location or the pool rules changed to forty acre spacing
2 and a well drilled there and soon because there is vast,
3 vast, liability of the owners of that northeast-northeast
4 to their royalty owners from drainage.

5 The Southern Union Supply has a well in the
6 southeast-southeast and they have testified that every well
7 in the field will drain eighty acres and that means that
8 they are draining oil out from underneath the northeast-
9 northeast. The well to the northeast diagonal is the east
10 offset and the southeast diagonal is draining oil out from
11 underneath that.

12 I submit that Southern Union doesn't want to drill
13 a well there because they want the oil out from under that.
14 I think that the Commission should grant the first choice
15 as we previously set out of Latham and Barton.

16 MR. STAMETS: Thank you. Is there anything further
17 in this case?

18 MR. STEVENS: Nothing.

19 MR. CATON: Nothing.

20 MR. STAMETS: Oh, yes, we have a telegram --

21 MS. TESCHENDORF: From Atlantic-Richfield -- stating
22 that they are the operators of the southwest quarter of
23 Section 20, Township 9 South, Range 33 East, Lea County, New
24 Mexico, and being the diagonal offset to the acreage in
25 question of Case 6036 they are opposed to the application of

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1 E. L. Latham and Roy G. Barton to amend the San Andres
2 Pool rules from eighty acre proration units to forty
3 acre proration units.

4 MR. STEVENS: May I speak to that, Mr. Examiner?

5 MR. STAMETS: Yes.

6 MR. STEVENS: The location they speak of is a
7 non-standard unit.

8 MR. STAMETS: If there is nothing further in this
9 case the case will be taken under advisement and the hearing
10 is adjourned.

11 (THEREUPON, the hearing was concluded.)
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do hereby certify that the foregoing and attached Transcript
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was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill
and ability.

Sidney F. Morrish
Sidney F. Morrish, C.S.R.

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do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6035, 6036, 6037
heard by me on 9-14-77 1977
Richard L. Latham, Examiner
New Mexico Oil Conservation Commission

NEW MEXICO OIL CONSERVATION COMMISSION

Conference Room - State Land Office Bldg.

Santa Fe, _____, NEW MEXICO

Hearing Date December 27, 1977TIME: 1:00 P.M.

NAME	REPRESENTING	LOCATION
<i>Donald G. Stearn</i> BYRON CATON <i>Rothmannock</i>	<i>Latham + Barton</i> South Union Supply Co. <i>Susco</i>	<i>Santa Fe</i> Fairfax, N.M. <i>Dallas, Tx.</i>
JOHN M. GROEBLI <i>E. Latham, Jr.</i>	SELF & WIFE - LAND OWNERS <i>Latham & Barton</i>	5394 DORWIN LN. SANTA BARBARA, CALIF. 93111
<i>Ray H. Barton</i> <i>Jack Allen</i>	" " <i>Latham & Barton</i>	HOOBS, N.M. " "
		Roswell

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 27, 1977

COMMISSION HEARING

IN THE MATTER OF:

Application of E. L. Latham, Jr. and Roy G. Barton, Jr., for compulsory pooling, Lea County, New Mexico.)	CASE 6017 (De Novo)
Application of Southern Union Supply Co., for compulsory pooling, Lea County, New Mexico.)	CASE 6035 (De Novo)
Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for compulsory pooling of a standard or a non-standard oil proration unit and an unorthodox location, or in the alternative, 40-acre spacing, Lea County, New Mexico.)	CASE 6036 (De Novo)
Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for an order requiring Latham and Barton or Southern Union Supply Company to commence the drilling of a Flying M-San Andres well in Unit A of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico.)	CASE 6112

BEFORE: Joe D. Ramey, Secretary-Director
Emery C. Arnold, Commissioner

Richard L. Stamets, Oil Conservation Commission

TRANSCRIPT OF HEARING

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A P P E A R A N C E S

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For Southern Union Supply Company:	Byron Caton, Esq. Attorney at Law 218 W. Apache Farmington, New Mexico
For Latham and Barton:	Donald G. Stevens, Esq. Attorney at Law 214 Old Santa Fe Trail Santa Fe, New Mexico

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

2 We have four cases on the docket today, Mr. Stevens,
3 I assume that you want all of these consolidated for purposes
4 of testimony?

5 MR. STEVENS: Yes, Mr. Commissioner.

6 MR. CATON: That is correct, Mr. Commissioner. I
7 would point out for the record that 6017, 6035, and 6036 had
8 been previously consolidated. The application 6112 is a new
9 filing but we have no objection to that being consolidated.
10 We think it should properly be heard.

11 MR. RAMEY: We will call the cases at this time.
12 Case 6017, application of E. L. Latham, Jr. and Roy G.
13 Barton, Jr. for compulsory pooling, Lea County, New Mexico.

14 Case 6035, application of Southern Union Supply
15 Company for compulsory pooling, Lea County, New Mexico.

16 Case 6036, application of E. L. Latham, Jr. and
17 Roy G. Barton, Jr. for compulsory pooling of a standard and
18 non-standard oil proration unit and an unorthodox location,
19 or in the alternative, forty-acre spacing, Lea County,
20 New Mexico.

21 And Case 6112, application of E. L. Latham, Jr. and
22 Roy G. Barton, Jr. for an order requiring Latham and Barton or
23 Southern Union Supply to commence the drilling of a Flying M-
24 San Andres Well in Unit A of Section 30, Township 9 South,
25 Range 33 East, Lea County, New Mexico, on or before January 31.

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1 1978.

2 I will ask for appearances at this time.

3 MR. STEVENS: Mr. Commissioner, I'm Don Stevens,
4 an attorney in Santa Fe, representing Latham and Barton in all
5 of these cases and we will have three witnesses to be sworn.

6 MR. CATON: Byron Caton, Farmington, representing
7 Southern Union Supply Company and I'll have one witness to be
8 sworn.

9 MR. RAMEY: Any other appearances? I will ask that
10 all of the witnesses stand at this time and be sworn.

11 (THEREUPON, the witnesses were duly sworn.)

12 MR. STEVENS: Mr. Commissioner, would you like for
13 us to present our case first? We presumed they were.

14 MR. RAMEY: All right, Mr. Caton, do you want to
15 proceed?

16 MR. CATON: I have no objection to proceeding if it
17 please the Commission.

18 I would like to make a brief opening statement if
19 I might.

20 MR. RAMEY: All right.

21 MR. CATON: Since I wasn't familiar with the Com-
22 mission's position of the displaying of the exhibits that
23 haven't been put into evidence, I'll use these to describe
24 this case.

25 I don't know how much detail to go into in this

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1 matter because you, the Commission, have heard all of our
2 testimony in this case, as I recall, or a substantial portion
3 of it and it's possible that we can shorten some of the testi-
4 mony from the lengthy hearing that we had. I would keep my
5 case to your desires in that respect.

6 MR. RAMEY: Mr. Caton, we have read the transcript
7 and been advised by the Examiner with his recommendations.

8 MR. CATON: Then we will proceed with that in mind
9 and try to limit the testimony to those things that would be
10 helpful, knowing that you have read the transcript.

11 Our basic position and our application, the Southern
12 Union Supply Company application, seeks to pool the north half
13 of the northeast, right in this position. There are several
14 peculiarities that have developed both geologically and from
15 the general development of this particular area that makes
16 this what I consider to be quite a tough case in terms of how
17 the various rights or proportions but basically Southern Union
18 Supply Company takes the conservative position that this
19 field should be developed in accordance with the established
20 field rules on eighty-acre spacing and in accordance with the
21 standard locations for drilling. There are several reasons
22 for doing this and we will explain it but probably the most
23 significant feature that we have as we believe our testimony
24 will show is that the north half of the northeast amounts to
25 a structurally similar type of area.

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1 Our testimony in this case and in the previous case
2 was not that different geologically from Barton and Latham's.
3 The primary difference, according to Mr. Ahlen, was the scale
4 on which the various exhibits were drawn. It has been our
5 position and is our position that the best method of develop-
6 ing this area in here would be the conservative approach with
7 a well drilled on a standard eighty-acre spacing at an
8 orthodox location which would be where our application puts
9 it.

10 Now the features that are significant generally in
11 this case are the facts that in Section 19, a State lease
12 section, there has been development done on a stand-up eighty-
13 acre spacing basis on an orthodox development basis. In
14 Section 20 and in Section 29 the development has been, with
15 one exception, a pattern of drilling in the orthodox locations
16 but with infield drilling accomplished at a later date. That
17 puts us in a position where we have three wells cornering
18 this particular location and this is where the Hearing Officer
19 in an attempt to correctly, we think, to protect the correla-
20 tive rights in the northeast of the northeast, that's Site A
21 according to the Commission's standard terminology, has offset
22 these three wells and our testimony will vary in some manner
23 slightly--our geologist's testimony will vary in some manner
24 from the last testimony due to the development of SUSCO No. 2
25 at this location and the reentry of SUSCO No. 3 here. That

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1 testimony will vary and our geologist will testify that there
2 has been postulated a permeability barrier along this particu-
3 lar line that runs along the west side of the proposed eighty-
4 acre pooling tract, cutting off effectively development to the
5 west of that permeability barrier.

6 In the previous testimony the Commissioners will
7 recall that this barrier was designated by Mr. Ahlen as a
8 pinchout line and he drew it in in somewhat this manner.

9 Now our basic position in this case is that the
10 rights of all parties can be best protected by development of
11 the standard location at the present time. We would make no
12 quarrel that the best site for drilling in the pool's north
13 half would be Mr. Sharrock's testimony previously. I think
14 you would recall that he would overlay the structural map and
15 the porosity map and he would drill someplace in the center
16 of this area.

17 Our position contrary to the Hearing Officer's
18 findings is, we are willing to drill in either Site A or Site
19 B or in both sites, Site A or Site B, but our position has to
20 be that this pooling unit is the only pooling unit that can
21 be equitably established and still protect the rights of the
22 interest holders in the northwest of the northeast.

23 That is our position, Commissioners, and now I
24 would proceed with my witness.

25 MR. STEVENS: Mr. Commissioner?

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1 MR. RAMEY: Yes.

2 MR. STEVENS: I would like to make a brief state-
3 ment.

4 MR. RAMEY: Yes, Mr. Stevens.

5 MR. STEVENS: Basically I'm not going to testify as
6 to what the geology is. We think the evidence will show that
7 two wells could have been drilled in the east half of the
8 northeast and been on production by October first of this
9 year had Southern Union joined in the drilling here or had
10 they not subsequently opposed the forced pooling subsequently
11 appealed that by March first which would be the earliest two
12 wells could be completed after this hearing and an order
13 issued, that two hundred and nineteen thousand dollars of oil
14 could have been produced from the east half of the northeast
15 but this amount of oil and money was not produced because of
16 the action of Southern Union Supply Company. Every day of
17 delay in this hearing and in the right to drill and require-
18 ment to drill in the northeast of the northeast results in
19 more oil being lost out from under the east half of the north-
20 east, more oil being drained by Southern Union Supply Company
21 out from under their one hundred percent owned well in Unit P
22 of Section 19, a direct north offset to Unit A of Section 30,
23 the proposed location at issue.

24 Another factor, and this I think should be con-
25 sidered all the way through all of this testimony, as should

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1 the other one, that is Southern Union Supply Company, as it
2 will be shown, has no interest in the east half of the north-
3 east quarter, and yet they are proposing to force pool the
4 northwest of the northwest quarter, Unit B with Unit A, north-
5 east northeast quarter and in effect average out the one
6 hundred percent or the hundred percent acreage owned by
7 Latham and Barton in the east half of the northeast with the
8 hundred percent owned by Southern Union in the west half
9 northeast. I say one hundred percent because Shell does have
10 some interest and there may be some others but regardless,
11 Southern Union Supply Company has no interest in the east
12 half of the northeast and Latham and Barton has no interest
13 in the west half of the northeast. These two units should
14 not be pooled on an east-west basis and fracture the interests
15 in the separate undivided ownerships.

16 Another thing I would like to mention, the words,
17 "conservative approach in spacing" seems to have been used
18 all ready in this hearing and considerable in the last hearing
19 and it seems to be equated with something good and wonderful
20 and possibly it is a play on words of the New Mexico Oil Con-
21 servation Commission. I don't know whether liberal or con-
22 servative is a good word in this circumstance but I do not
23 consider the eighty-acre spacing as necessarily good because
24 it is characterized as conservative. I also do not consider
25 forty-acre spacing that was done effectively in Section 29 as

1 bad if it can be characterized as liberal as opposed to con-
2 servative.

3 With that I will turn the floor over to opposing
4 counsel.

5 MR. CATON: Mr. Commissioner, we might, not in
6 response, but in clarification of Southern Union Supply
7 Company's position. As far as Case 6112 is concerned, we do
8 not disagree with Barton and Latham's application. That
9 application would ask that a well be drilled within the
10 shortest possible time and we agree with that. The only point
11 on which we would disagree is that we want to drill that well
12 but we don't disagree that that well should be drilled as soon
13 as possible or if it is not, we would agree with the alterna-
14 tive that until the natural order of due process can be
15 followed then perhaps some curtailment should be established
16 but probably the best procedure in that regard would be to go
17 ahead and proceed to drill the well and hold the funds in
18 some type of escrow until such time as the rights in the pool
19 are established. We would anticipate that this case should
20 come on for decision quickly. We would point out that not
21 only Barton and Latham and Shell and other persons have
22 suffered from the delay in this particular case but Southern
23 Union Supply Company's lease with Shell Oil which gave them
24 an interest in the northeast of the northeast terminated
25 November 31st, prior to the time this particular decision

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1 could be rendered. We had no opportunity to drill and save the
2 lease so we have been damaged too and in that regard I would
3 ask the Commission if they might direct the court reporter to
4 give priority to the reproduction of this particular tran-
5 script, Mr. Commissioner. I think it is quite important that
6 we do this.

7 MR. RAMEY: Since the Commission is hearing this we
8 won't need a transcript to render a decision but we hope we
9 can get a timely decision for all parties.

10 MR. CATON: Thank you. Mr. Sharrock.

11
12 ROY SHARROCK

13 called as a witness, having been first duly sworn, was
14 examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. CATON:

17 Q Would you state your name, please?

18 A I'm Roy Sharrock, Chief Geologist for Southern
19 Union Gas Company, Dallas, Texas.

20 Q Mr. Sharrock, would you state briefly your qualifica-
21 tions? Have you testified before the Oil and Gas Commission?

22 A Yes, I have. Do you want my qualifications?

23 MR. CATON: Would you accept his qualifications on
24 that basis?

25 MR. RAMEY: Yes, we will accept him as a qualified

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1 witness.

2 You are familiar with the subject matter in this
3 case?

4 A Yes, sir.

5 Q (Mr. Caton continuing.) And you did testify
6 previously?

7 A Yes, sir, I sure did.

8 Q Mr. Sharrock, would you state briefly what Southern
9 Union Supply Company's application seeks in this particular
10 case?

11 A Southern Union seeks compulsory pooling of the north
12 half of the northeast quarter of Section 30, Township 9 South,
13 Range 33 East, principally to drill a well in the orthodox
14 location or to drill a well in the unorthodox location, which
15 will be Unit letter B for the orthodox location or Unit letter
16 A for the unorthodox location.

17 Q Mr. Sharrock, the Commissioners have stated that
18 they have read the transcript in this particular matter. One
19 of the changes in position, you have stated that you would
20 agree to drill in A of the north half, is that correct?

21 A That is correct.

22 Q And that is a change from your previous position?

23 A Yes, that is right.

24 MR. RAMEY: May I interject something here?

25 MR. CATON: Yes.

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1 MR. RAMEY: Now in your Case 6035 you just asked for
2 a standard location?

3 MR. CATON: That is correct, Mr. Commissioner, and
4 that is a change of departure from our position, a willingness
5 to drill in Site A at this time.

6 MR. RAMEY: Mr. Stevens, do you have any objections?

7 MR. STEVENS: Mr. Examiner, this really isn't into
8 the call of the notice, however, to object to it and require
9 them to get notice would take another three weeks at the
10 minimum and another hearing. We have no objection if the
11 Commission sees fit to grant them that northeast forced pool
12 unit if they drill in the northeast of the northeast. The
13 idea is to get this well drilled to protect the correlative
14 rights of the owners in the northeast of the northeast. We
15 certainly don't agree, obviously, with the northeast as a
16 proration unit but they could hitchhike upon our subsequent
17 application and we did ask the Commission to direct Latham
18 and Barton or Southern Union Supply to drill a well so that
19 is amenable with us.

20 MR. CATON: I don't think, Mr. Commissioner, that
21 the decision, the order entered by the Commission, really
22 gives anybody precisely what they asked for at this time. The
23 stance of the case is that all of us have been denied some
24 portion of our request, either in the alternative or directly.
25 The primary reason for putting this in this stance is that

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1 Mr. Sharrock was asked on several occasions whether we were
2 willing to drill that particular well and he had no upper-
3 level decision at the time the testimony was taken previously
4 as to our willingness to proceed on that basis.

5 Q (Mr. Caton continuing.) Mr. Sharrock, have you
6 prepared certain exhibits in this case, either yourself or
7 through your direction?

8 A They were prepared under my direction.

9 Q All right. Would you step up to the board and would
10 you go through what has been marked for identification as
11 Southern Union Supply No. 1 and would you point out to the
12 Commission what you consider--well, tell the Commission what
13 that is. Identify the map and then point out to them the
14 significant features that you think are there?

15 A Exhibit One is a map prepared by Southern Union
16 Supply Company for this compulsory pooling application de novo
17 hearing set for December 27, 1977. This is a structure map
18 on top of the Slaughter zone porosity. This map was prepared
19 under my direction through the geological staff, our geological
20 staff in Dallas. the map was mapped on top of this datum on
21 top of the Slaughter zone porosity. This particular zone is
22 about two hundred to three hundred feet below the top of the
23 San Andres formation.

24 The main reason for preparing this map on top of
25 the Slaughter porosity is to exhibit to the Commission a

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1 configuration of the porosity in this particular field and to
2 show that the north half of the northeast quarter has similar
3 geology to this configuration. The scale of the map is one
4 inch equals five hundred feet. The contour interval is ten
5 feet.

6 The primary structural feature on this map shows an
7 east dip at the rate of about sixty to seventy feet a mile.
8 The main structure feature is an east trending nosing that is
9 plunging to the east and on top of this structure is where we
10 propose a pooling unit.

11 In our first hearing we asked to drill an orthodox
12 location and due to the outcome of that ruling, in thinking
13 that the northeast of the northeast must be drilled, we have
14 changed our position and will drill either at the eighty-acre
15 location or at an unorthodox location or both locations.

16 When we were here at the previous hearing we had
17 set pipe on this particular well here.

18 MR. RAMEY: Would you give the locations, please,
19 for the record?

20 A It is nineteen eighty from the south line and
21 nineteen eighty from the east line of Section 19, Township 9
22 South, Range 33 East, Lea County, New Mexico.

23 We had just set pipe on this well and we had not
24 completed it. Subsequent to that time we have completed this
25 well and it has made a producer and it is averaging about

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1 thirty-five barrels of oil per day at this time.

2 From that time we proceeded down to this well which
3 is a well that is located six hundred and sixty feet from the
4 south line and nineteen hundred and eighty feet from the west
5 line, which is a reentry. We have labeled this Southern Union
6 Supply Company SUSCO State No. 3. It is a reentry of a BTA
7 Well No. 2 FMS designation. We reentered this well and logged
8 the San Andres zone porosity. The Slaughter zone showed
9 similar porosity to our No. 1 and our No. 2 Wells. After we
10 perforated this well we acidized the well with something like
11 ten thousand gallons and fraced it with forty thousand gallons
12 and forty thousand pounds of sand and swabbed six and a half
13 barrels of water per hour and that's after we recovered all of
14 our frac water, with a trace of oil.

15 Somewhere between this well and this well we have
16 had an updip termination of the permeability and I have
17 postulated that this permeability barrier is down in this
18 syncline portion of the structure map and when I get over to
19 the porosity I will show you additional reasons why I drew
20 the permeability barrier at that point.

21 Also I come down with a permeability barrier to the
22 south, coming straight south and coming across the nosing
23 that is the narrowest point and then coming down to the BTA
24 oil producer which they did. It was a Bough C producing
25 well and it was completed in the Slaughter zone of the San Andres

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1 and it produced a hundred or two hundred barrels of oil,
2 something in that neighborhood and they plugged it.

3 And so my thinking is that this well here is at the
4 western edge of the zone since this well did produce a little
5 bit of oil and this well did not produce any oil.

6 Going south from there the permeability is still
7 postulated. It is going straight south, it is going over the
8 narrow part of the nose structure, nose to the southeast.

9 This is about the significance of this particular
10 map, however, you can see on the electric log which has a
11 gamma ray and a neutron log and a porosity log and it shows
12 here that the zone of producing interval, it shows porosity
13 and it shows a zone of oil and water transition and then it
14 shows the water zone.

15 Q (Mr. Caton continuing.) All right. Would you go
16 to Exhibit Two and tell what that is and describe that to the
17 Commission?

18 A Exhibit Two is an isopachous map greater than seven
19 percent porosity. It is our thinking that one needs seven
20 percent porosity in this particular zone to produce oil and
21 that other zones of lower than seven percent will contribute
22 but you have to have seven percent porosity for production.

23 This map is contoured on this interval from the
24 top of the Slaughter zone to the oil and water transition
25 zone, contouring porosity that is greater than seven perce ...

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1 We added up the porosity in this and put the different figures
2 on the different wells and then contoured this with a five
3 foot interval. What we have here is essentially some north-
4 south alignment of porosity pods showing the thickness of
5 the thicker porosities. This particular porosity seems to
6 correlate with this nosing down here and this particular
7 porosity seems to correlate with this nosing here.

8 Since this well tested the San Andres over here and
9 we got water it seems like this particular pod or porosity
10 interval, thick porosity interval, that this area over here
11 is updip but it is wet so I postulated this permeability
12 barrier where I had the least porosity coming down through
13 here. I used both of these maps which were overlaid to help
14 draw this particular permeability barrier.

15 Q Now you have part of that postulated permeability
16 barrier, part of that barrier is in a straight line and part
17 is in a dotted line, what is the significance of that,
18 Mr. Sharrock?

19 A Well, the part that is up here that I think is the
20 true permeability barrier, where I think the barrier is, is
21 related to my experience and also too that we have the least
22 porosity shown here, and also that we have the syncline show-
23 ing here off the nosing.

24 I don't know for sure that's where the permeability
25 barrier is, but I'm using my best judgment, it's a judgment

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1 call.

2 Q Now what would be your opinion based on your best
3 call as to where the permeability barrier exists as to getting
4 a producing well in the San Andres in either area, C, D, F, or
5 E?

6 A This doesn't exist, I just don't think there is any
7 production over in this area. Mr. -- I can't recall his
8 name right now but he is with Cleary Production Company --
9 they have tried to recomplete this well which is a Bough C
10 Well in the San Andres and my understanding is that they are
11 just pumping a hundred percent water in this as you can tell
12 from conversations with them.

13 Q All right. In your opinion then, Mr. Sharrock, the
14 permeability barrier runs north and south directly to the
15 west of the area that SUSCO is seeking to pool, is that
16 right?

17 A That's my opinion. I think for a fact that this
18 well is west of the permeability barrier, these two wells
19 here are east of the permeability barrier, I believe. This
20 well never has been -- it was tested with a drill stem test
21 and it recovered a lot of water and some oil and I think
22 that's east of the permeability barrier or this well by
23 recovering a little bit of oil might be similar to this well.
24 I mean it could be over here but what I'm doing is postulating
25 that the permeability barrier comes in the area of least

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1 porosity.

2 Q And as far as pooling the northeast of the northeast,
3 which would be the forty acres designated as B by Commission
4 terminology, it would be detrimental to the interest owners
5 in B to pool with anything to the west?

6 A I think so, yes, sir.

7 Q Now similarly your postulation on the barrier and
8 your empirical knowledge about the well drilled in Section G,
9 according to the terminology, what would be the effect of
10 pooling on the north-south basis with the northwest of the
11 northeast? The pooling of B and G?

12 A It is my thinking in pooling B and G that you are
13 averaging out one type of area with another area and that
14 they are not similar structurally or with porosity, with the
15 same porosity, and what you are doing is averaging one with
16 the other.

17 Q All right, Mr. Sharrock, would you tell the Com-
18 missioners what your Exhibit Three is and describe it?

19 A Exhibit Three is the average daily production for
20 this immediate area for October 1977 and for this particular
21 well, our SUSCO No. 3 for October of 1977.

22 The main reason I didn't use the other October
23 production, it wasn't out the day I made this particular map.

24 This shows the average daily production for the
25 wells in October of 1977. It shows that the No. 4 McGuffin

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1 is producing ninety-two point one barrels of oil a day. The
 2 Arco No. 2 Flying-M State, eight five point six barrels a day.
 3 The SUSCO No. 1 State, seventy-nine point four barrels a day
 4 and the SUSCO No. 2 State, thirty-five point eight barrels a
 5 day and the SUSCO No. 3 will be at a later date converted to
 6 a water injection well. It shows the Southern Production
 7 Coastal States No. 2 McGuffin made thirteen point three barrels
 8 The Saxon Oil Company No. 1 Gregg died at four point four
 9 barrels.

10 I'm taking this particular production in the
 11 surrounding wells in the immediate vicinity of the north half
 12 of the northeast quarter and contoured this thing with contour
 13 intervals of twenty feet and contoured it from the SUSCO No. 1
 14 around to the Flying-M No. 2 Well to the No. 4 McGuffin and
 15 around is similar production and coming to the south using
 16 equal distant contouring, coming on around and postulating
 17 that this thing would close up in this vicinity.

18 I have done this on the rest of the contour lines
 19 contouring production. It is my thinking by showing this
 20 map particularly that the regular field rules, eighty-acre
 21 spacing, on the north half of the northeast quarter produced
 22 somewhere in the neighborhood of sixty barrels per day and
 23 that the unorthodox location would produce greater than eighty
 24 barrels a day.

25 MR. RAMEY: Excuse me, you said the standard location

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1 would produce about sixty barrels a day?

2 A About sixty barrels a day, yes, sir.

3 MR. RAMEY: And better than eighty on the unorthodox
4 location?

5 A Better than eighty, yes, sir. And it shows further,
6 I might state, with contouring this by using the methods that
7 I contoured with and truly it can be contoured different ways,
8 that the regular location down in H there, would be somewhere
9 about forty to fifty barrels a day wherever it comes on
10 through.

11 Q (Mr. Caton continuing.) Mr. Sharrock, that partic-
12 ular contour has been changed slightly from the exhibit that
13 shows similar -- what was the reason for the change?

14 A Yes, sir, the main reason was because the Arco Well
15 here is producing an average of nine barrels a day and when I
16 had it contoured before I had that well up there producing as
17 much as these wells down here and it was my thinking at that
18 time that that thing would extend up to the northwest but the
19 Arco No. 3 Flying-M terminates the production up in that area.
20 Also I might say that one reason why this thing might have
21 been terminated up here is that it is only making nine barrels
22 a day and due to this No. 5 Skelly State is an injection well
23 and that oil has been migrated from this particular location.

24 Q Referring now to what has been marked as SUSCO
25 Exhibit No. 5, that's Exhibit Four.

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1 A Exhibit Four is a cross section AA prime. It's a
2 cross section running from east to west and it's running from
3 the Shell Oil Company No. 1 Richardson that's located six sixty
4 from the north line and six sixty from the west line in Section
5 30, Township 9 South, Range 33 East, Lea County. It runs
6 through the Union of Texas No. 1 McGuffin which is located six
7 hundred and sixty feet from the north line and nineteen eighty
8 from the west line in Section 30, Township 9 South, Range 33
9 East.

10 Q Would you show the Commissioners where that is up
11 on your Exhibit Three there?

12 A This is the Shell well and the Union of Texas well
13 and this is the proposed eighty-acre field rule drill site,
14 the unorthodox location, and our Coastal States No. 4 McGuffin
15 which is located six sixty from the north and six sixty from
16 the west line in Section 29, Township 9 South, Range 33 East,
17 Lea County.

18 Q Would you tell the Commissioners or describe what
19 you feel is significant about that cross section?

20 A This particular cross section shows the Slaughter
21 zone of porosity going from the No. 4 McGuffin west to the
22 proposed unorthodox site and the proposed eighty-acre field
23 rule drill site into the Union of Texas, it shows that this
24 interval is about the same thickness and then proceeding on to
25 the Shell Oil Company which perforated the San Andres Slaughter

1 zone with an IP of twenty barrels of oil plus seventy-one
2 barrels of water a day. This produced for a short time and
3 was later plugged.

4 This particular cross section was revised from the
5 other cross section after we reentered this particular well
6 and run new electric logs in the thing and then we come down
7 and was able to re-correlate the old gamma ray sonic logs in
8 this particular well.

9 On the first cross section I showed, I showed some
10 thinning to the west. By re-correlating the log, which was
11 just north of this particular well, it shows that there is not
12 much thinning there and that we have about the same thickness
13 of Slaughter porosity as we do over here in the No. 4 Well in
14 the Slaughter zone.

15 Q Anything else of significance?

16 MR. ARNOLD: Where is the trace of this cross
17 section, do you have it on a map?

18 A Yes, sir, right here. The scale is one inch equals
19 four thousand feet.

20 Q (Mr. Caton continuing.) Would you go through again
21 for the Commissioner where it shows on the Exhibit?

22 A The cross section AA prime runs through --

23 Q For the record, shown on Exhibit Three by the red
24 line.

25 A I wanted to show that this cross section does show

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1 the postulated permeability barrier here and I put this
2 particular barrier at this particular point simply because
3 that is where it come out on my horizontal map of structure
4 and porosity map and this particular permeability barrier is
5 at that point.

6 Q Would you tell the Commissioners what Exhibit Five
7 is and describe it to them, its significance?

8 A Exhibit Five is a cross section BB prime which runs
9 to the south of cross section AA prime. This particular cross
10 section runs through the Shell Oil Company No. 2 Richardson
11 Well which is located nineteen eighty from the north and six
12 sixty from the west line and the BTA Shell No. 1 which is
13 located nineteen hundred and fifty-five feet from the north
14 line and nineteen hundred and fifty-five feet from the east
15 line and through the Roy Barton and Latham Cash No. 1 proposed
16 drill site. These are all in Section 30 of Township 9 South,
17 Range 33 East. And on through the Coastal States No. 2
18 McGuffin Well, this is located nineteen eighty from the north
19 line and six sixty from the west line in Section 29, Township
20 9 South, Range 33 East.

21 Q Would you mark this in green up on Exhibit Three?
22 (THEREUPON, the witness complies.)

23 Q (Mr. Caton continuing.) Would you tell the Com-
24 mission what you find significant in that, Mr. Sharrock?

25 A This cross section is simply the same cross section

1 that was presented before, I don't think we changed a blamed
2 thing. The cross section shows the top of the pi marker in
3 the San Andres that has been mapped on many, many times. Also
4 it shows the top of the Slaughter zone which is geologically
5 called the P-1 or porosity-one zone. This does show an oil-
6 water contact down below it.

7 Our interpretation from this thing is that the
8 Slaughter zone is thinning to the west in this particular area.
9 The No. 4 McGuffin is perforated. It shows perforations in
10 the No. 2 McGuffin and is producing at the rate of thirteen
11 point three barrels a day now.

12 The BTA Well is perforated in the top part of the
13 Slaughter zone and it had an IP of forty-two barrels of oil
14 per day, plus one hundred and twenty-eight barrels of water
15 per day. It was plugged and abandoned on 10-13-67. This
16 well produced somewhere in the neighborhood of one hundred to
17 two hundred barrels before being plugged.

18 The zone over here in the Shell Well, it's getting
19 nearly impossible to find on these particular gamma ray and
20 sonic. I'm sure that probably if we had different logs
21 through this interval that we could do more with the interpre-
22 tation.

23 Q Do you draw any conclusions as to the advisability
24 of drilling a well in site H from that particular cross section,
25 Mr. Sharrock?

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1 A It is my thinking in cross section A that the
2 proposed drill site of the Cash No. 1 would make a well, how-
3 ever, I think it would make a well somewhere in the neighbor-
4 hood of forty to fifty barrels a day.

5 Q Would you describe Exhibit Six and tell the Commission
6 its significance?

7 A Exhibit Six is a cross section CC prime which is a
8 cross section through the BTA Oil Producers' well No. 1 FMS.
9 It is located three thirty from the south and six sixty from
10 the west of Section 19. It comes through the reentry which we
11 call the Southern Union Supply Company SUSCO State No. 3 which
12 is located six sixty from the south and nineteen eighty from
13 the west line and the Southern Union Supply Company SUSCO State
14 No. 1 which is located six sixty from the south and six sixty
15 from the west lines. All of these are in Section 19, Township
16 9 South, Range 33 East.

17 Also it continues eastward through the Atlantic
18 Richfield No. 2 Flying-M which is located five hundred feet
19 from the south line and seven hundred and ten feet from the
20 west line in Section 20, Township 9 South, Range 33 East.

21 This particular cross section was drawn on a new log
22 that was run in the No. 2 Well and the Arco No. 2 Flying-M
23 through the SUSCO No. 1 and the SUSCO No. 3 and into the
24 Flying-M. It shows essentially that the Slaughter zone is
25 about the same thickness. It shows that the porosity seems to

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1 be better in our No. 1 SUSCO State than in the No. 2 SUSCO
2 State because Arco only perforated the top part of it, we
3 perforated all of it and also it does show the oil-water con-
4 tact as determined by the No. 1 SUSCO State log analysis which
5 is this log here.

6 Of interest to this particular cross section to the
7 geologist is showing that this log in the No. 3 Well is the
8 same log as the neutron porosity log which was run through
9 here. It showed similar porosity in the No. 3 Well as the
10 No. 1 Well. It shows similar porosities. We went out there
11 and we perforated selected porosity intervals that showed
12 similar porosities and we acidized the well with about ten
13 thousand gallons and it was tight, very tight. Then we went
14 out and fractured the area, sand fraced the well with forty
15 thousand gallons and forty thousand pounds of sand and we
16 opened up the reservoir and we produced in the neighborhood of
17 six and a half barrels of water per hour. That was on a swab
18 test with just a very trace of oil, I would say a scum of oil.

19 This shows to me that the updip termination of this
20 reservoir is probably due to lack of permeability. It traps
21 the oil and lets the water go through but it will trap the
22 oil. This is the updip termination of the Flying-M Field,
23 it's somewhere between this well and this well here. It is
24 my thinking that this particular line is simply because the
25 structure and porosity shows the line of permeability to be

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1 at that point. It indicates to me that the permeability
2 barrier should be at that point.

3 Q Mr. Sharrock, would you draw the cross section in
4 blue for the record?

5 (THEREUPON, the witness complies.)

6 Q (Mr. Caton continuing.) All right, sir. Now, Mr.
7 Sharrock, using your charts can you tell the Commission how
8 Southern Union Supply Company, what they have done in trying
9 to develop this particular Flying-M Field?

10 A I won't use the conservative.

11 Q Use the orthodox.

12 A The history of Southern Union Development in this
13 particular area, I may go back -- Arco came in here and they
14 drilled the No. 1 Flying M, which is an orthodox location
15 and it is on the south half of the southwest quarter of
16 Section 20.

17 Q Why don't you mark that in, Mr. Sharrock? For the
18 record, it is marked in blue in Section 20.

19 A Arco drilled this well here. That well came in
20 making somewhere--well, at the present time it is making
21 twenty-six barrels a day. They moved over sometime later and
22 they drilled the No. 2 Flying-M which would be in here in an
23 orthodox location and drilled. It would be an infield well.
24 They drilled that well and currently this well is making
25 eighty-five barrels a day. When we saw that this particular

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1 well was drilled and how good it was, we come over and we
2 staked an orthodox location on an eighty acres that would run
3 north and south which would be an orthodox location and drilled
4 it. That well is currently making seventy-nine point four
5 barrels a day. That is the average for October.

6 Then sometime later we moved up and drilled a No. 2
7 Well which was drilled on an orthodox location, on eighty-acre
8 spacing and that well is currently making thirty-five point
9 eight barrels a day.

10 Subsequently we moved down here and reentered an old
11 BTA well which we called the No. 3 SUSCO State and reentered
12 that well for possible production, however, that well is west
13 of the permeability barrier, postulated permeability barrier,
14 and it produced water at the rate of six and a half barrels
15 an hour.

16 Our position in this thing was to take the north
17 half of the northeast quarter of Section 30 and put this unit
18 together and drill an orthodox location on it and that was
19 the basis of our hearing due to it having similar geology and
20 we didn't have any idea about the permeability barrier at that
21 time and due to the porosity being similar, this is approxi-
22 mately similar and, of course, you know the result of that.
23 I think for putting this thing together, the north half, I
24 think that there is similar geology as to structure, similar
25 porosities as I have mapped here and my thinking is to continue

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1 to drill the thing on the eighty-acre locations, on the eighty-
2 acre spacing.

3 What really to me, if this particular well hadn't
4 been drilled, the No. 2 Flying-M, there was no question about
5 that you would have to drill it on eighty-acre spacing is my
6 thinking. Actually the result of our hearing about saying that
7 correlative rights of people in the immediate area A was not
8 being adequately cared for and we come with the position then
9 that we would drill either an orthodox location or an un-
10 orthodox location.

11 Q Now what is your opinion as to the best location
12 for drilling in the north half; what is the best location?

13 A My thinking on the best location is the same as I
14 thought in the previous hearing or that you overlay both of
15 these maps and probably in the center of that eighty acres.
16 The thing about it is, we could drill up here in this corner
17 and make a well but that location is unfeasible.

18 Q Now, Mr. Sharrock, what is your objection to the
19 north-south spacing, designating Unit A and H as a pool unit?

20 A Well, my main objection to the thing is that this
21 particular unit has dissimilar geology, it's got one type of
22 geology in the north half of it, one type of geology in Unit A
23 and Unit A has another type of geology from this here. I
24 think that these two units, or if you put the east half to-
25 gether, A and H, it looks like you are trying to take one type

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1 of geology and average it out with another type of geology.

2 Q Mr. Sharrock, in the previous hearing you were asked
3 a question about your opinion on whether this field should be
4 developed on or if we would be justified in developing forty-
5 acre spacing, what is your opinion on that at this time?

6 A Well, my opinion is that if it is going to continue
7 with the primary type of production over here that the field
8 be developed on eighty-acre spacing and if the field is going
9 to continue to be into the secondary type operation then it
10 would probably have to go to forty-acre spacing.

11 Q Am I correct in interpreting your testimony that as
12 far as development you feel that it should be on eighty-acre
13 spacing?

14 A Yes, sir, primary development should be on eighty-
15 acre spacing.

16 Q Mr. Sharrock, what is the energy that produces the
17 oil in this particular field?

18 A The energy in my opinion is the energy that pushes
19 this type of oil is solution and water drive through injection
20 of water over in these particular injection wells, 1, 2, 3,
21 4, 5, and 6.

22 Q Now you indicated that Southern Union Supply intended
23 to convert its No. 3 into an injection well; that's not for
24 purposes of secondary recovery?

25 A No, sir, it is for purposes of disposing of produced

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1 water in the No. 1 and No. 2 Well. I do not think there is
2 any injection of water into this particular well will enhance
3 the reservoir pressure any simply because of this permeability
4 barrier.

5 Q Mr. Sharrock, would you discuss with the Commission
6 your opinion as to the economics of the development of various
7 proposals that are before the Commission?

8 A It is our opinion that to drill and equip one of
9 these wells out here it costs two hundred thousand dollars.
10 On the forty-acre spacing we think that we can recover, say,
11 forty-five thousand barrels of oil. At the rate of ten dollars
12 a barrel for the oil net to the operator, this would give him
13 four hundred and fifty thousand dollars income for about a
14 two hundred thousand dollar expenditure, not counting operat-
15 ing or overhead expense, that type of expense. Over the life
16 of the field this gives a ratio of a little over two to one
17 on your investment and if the thing is drilled on eighty-acre
18 spacing, continued development on eighty-acre spacing, it is
19 my thinking that the recovery would be somewhere in the
20 neighborhood of eighty to eighty-five thousand barrels per
21 well and you would still have the same two hundred thousand
22 dollars for drilling costs. This increases the income to
23 somewhere in the neighborhood of eight hundred and fifty
24 thousand dollars. This gives you a ratio of a little over
25 four to one. This does not count the time interval that one

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1 requires to get this type of income, I don't know what it
2 would be. I don't know whether it would be over a five-year
3 period or a ten-year period.

4 Q Now, Mr. Sharrock, do you have an opinion as to what
5 is happening to the correlative rights of the interest holders
6 in Unit A, that would be the northeast of the northeast?

7 A Well, at the present time I think these correlative
8 rights are only being damaged by one well and that's this
9 particular well here, everything else in particular has been
10 drilled on the regular orthodox location.

11 Q When you say this well here which one do you mean?

12 A It would be the Arco No. 2 Flying-M State which is
13 located in letter M in Section 20.

14 Q Now that I believe you stated was an infilled well?

15 A That is correct.

16 Q And the original well was drawn on a lay down eighty-
17 acre spacing with drilling in the orthodox side?

18 A Yes, sir, beginning in Section 20, Unit letter M
19 and N.

20 Q Now, Mr. Sharrock, do you have an opinion as to the
21 effect on the interest holders in Unit B of Section 30 if the
22 Commission order which has been entered here is continued?

23 A Well, it's my thinking that this particular thing,
24 if this unorthodox location is separated from this one, if
25 Unit A is separated from Unit B then it becomes diluted, the

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1 royalty owners' interest in Unit B, also not only the royalty
2 owners but the leasehold owners too.

3 Q Mr. Sharrock, if the Commission continued the order
4 which is presently in effect what plan would you propose for
5 continuing the development of Unit B of Section 30?

6 A Well, if the Commission continues the order here the
7 only thing we have here is to continue with the eighty-acre
8 spacing and come down and pool with Unit G for an eighty-acre
9 location and drill a standard location.

10 Q What would be the effect of the interest owners of
11 the northeast if they were required to pool with Unit G? If
12 the interest owners of B are required to pool?

13 A If the well is located down there in G then they
14 would have a limited amount of production. You are averaging
15 out uncommercial with commercial or unattractive with attrac-
16 tive acreage.

17 Q Is it your opinion that Unit G will not produce
18 as substantial amount of oil, Mr. Sharrock?

19 A That's my thinking at the present time.

20 Q And is that opinion based on recent information?

21 A It is based on the most recent information I have
22 available, yes, sir.

23 Q All right, now, is there any possibility of combin-
24 ing Unit B with Unit C, Mr. Sharrock, what would be the effect
25 of that?

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1 A Well, we would have the same thing because this unit
2 would be coming over into another well that is already tested
3 in the San Andres that tested oil and water and we have a
4 postulated permeability barrier. It would be the same thing
5 as putting attractive acreage with unattractive acreage.

6 Q Well, it's even a little stronger than that, isn't
7 it, Mr. Sharrock, in Unit C and G we don't have postulated
8 non-producing acreage, we know that is non-producing acreage?

9 A That is correct.

10 Q And to require the interest owners in Unit B to go
11 in either of those directions for pooling purposes, what would
12 be the effect on their interest?

13 A It would dilute their interest, in my opinion.

14 Q Now, as far as combining Units H and G, that would
15 be the standard location for pooling of the east half of A
16 and H Units, would you give your opinion as to the effect
17 there?

18 A Well, it was the same as I gave awhile ago. My
19 thinking is that you are pooling similar geological acreage
20 with unsimilar or a different type of acreage and you get an
21 averaging out of one type of acreage to another.

22 Q All right. Now, Mr. Sharrock, you show a swing of
23 the permeability barrier to the east after you cross the north
24 unit, A and B Units, is that your postulation of where that
25 barrier goes?

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1 A The main reason I swung it down to the south from
2 this point is due to the minimal amount of porosity that we
3 have here and then swinging it back to the east to come
4 through the BTA simply because I believe that is on the east
5 side of the permeability barrier but it is really non-
6 commercial or non-economic and I'm postulating that it comes
7 south from there due to coming across the narrow point of that
8 nosing.

9 Q All right. Now as far as the field rules, Mr.
10 Sharrock, that are established, if development is done by
11 following the field rules, do you have an opinion as to
12 whether the correlative rights of the owners of interest
13 would be protected?

14 A The correlative rights of what unit?

15 Q Well, of any unit. I'm asking the question in a
16 general fashion of all interest owners.

17 A It is my thinking that if this particular area had
18 been developed on eighty-acre spacing then the correlative
19 rights would be protected. The only thing I can see why the
20 correlative rights are not protected is due to this well which
21 is an infill well drilled on an orthodox location and if this
22 well wasn't there all correlative rights would be protected.

23 Q Even by drilling in Unit B of the north half of the
24 northeast?

25 A That is correct. That would all be on eighty-acre

1 spacing.

2 Q Would you have an opinion as to how this particular
3 problem as presented to the Commission should be resolved,
4 Mr. Sharrock?

5 A My thinking is that the problem could be resolved
6 by having pooling in the north half of the northeast quarter
7 and drilling either a field rule location or drilling at an
8 unorthodox location. I think that would solve the problem
9 fine.

10 Q Referring to SUSCO Exhibit Number Seven, the well
11 costs estimate, would you tell the Commission how this
12 particular exhibit varies from the previous estimate that
13 was submitted?

14 A This particular exhibit was prepared by me, it is
15 for either the orthodox or the unorthodox drill site. It's
16 virtually the same except that on our last well we found that
17 we didn't spend near the money that we thought we would on
18 our production facilities hook-up. It is estimated that that
19 cost would run somewhere around five thousand dollars instead
20 of the twenty thousand we had previously. This would bring
21 the expenditure down to two hundred and two thousand nine
22 hundred and two dollars.

23 Do you want me to run through it all or does the
24 Commission want me to run through it?

25 Q No, just the change is all, I think.

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1 Mr. Sharrock, looking down at the bottom of your
2 exhibit it says, total estimated cost a hundred and ten five
3 five one and then there is a two oh two, which is your total?

4 A Two oh two nine oh two. The first column, the
5 ninety-two three fifty-one is--the eighty-six five twenty-
6 three is the intangible cost. The total tangible expenses is
7 at the top of the page under total tangible. Total intangible
8 is down at the bottom, then you add both of these up to get
9 your total cost, the two oh two nine oh two.

10 Q And that's the figure that is just below the line?

11 A Yes, sir.

12 Q Now, Mr. Sharrock, does Southern Union Supply Company
13 desire to be the operator of the wells that you have suggested?

14 A Yes, sir, we do.

15 Q And do you have an estimate of cost on operations?

16 A Yes, sir, our overhead while drilling would be a
17 thousand dollars per month for the days that we are working.
18 The overhead after production is established would be at the
19 rate of a hundred dollars per month for office overhead and
20 then plus the expenses.

21 Q All right. Now how many wells is Southern Union
22 operating in this particular area at the present time?

23 A Two wells.

24 Q Does this have an effect on the cost of operation,
25 Mr. Sharrock?

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1 A Yes, sir, we think since we are situated in the
2 immediate vicinity that we can operate economically.

3 Q Okay. Would the location of the other wells have
4 any effect on the oil batteries that you constructed?

5 A No, sir, we would have to construct new batteries.

6 Q Now, Mr. Sharrock, do you have a request on risk
7 that you would like to submit to the Commission?

8 A Yes, sir, I would like to submit that we could
9 drill these wells on a risk basis of thirty-three and a third
10 percent.

11 Q Now that is a change from your previous risk?

12 A Yes, sir. It is my understanding that the Com-
13 mission's interpretation of risk as being one obtains his
14 capital back and we are asking for an additional thirty-three
15 and a third percent.

16 MR. CATON: All right. Does the Commission have
17 any questions of the witness?

18 MR. RAMEY: One thousand dollars for drilling and
19 a hundred and fifty for producing?

20 MR. SHARROCK: One hundred dollars a day, I mean
21 a hundred dollars a month.

22 MR. RAMEY: Okay. Mr. Stevens, do you have any
23 questions?

24 MR. STEVENS: Yes, Mr. Commissioner, I surely do
25 have.

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CROSS EXAMINATION

BY MR. STEVENS:

Q Mr. Sharrock, is it true that Southern Union has no interest in the northeast quarter or Unit A of Section 30?

A At this time that is correct.

Q It does have an interest in Unit B?

A Yes, sir.

Q And it does have an interest in Unit G?

A Yes, sir.

Q And it has no interest in Unit H?

A That is correct.

Q Yet Southern Union has requested that Unit B where it has an interest and Unit A where it has no interest be pooled?

A At this time when we made that request we did have an interest in Unit A.

Q But you have none now?

A That is correct.

Q Southern Union is also requesting then for a force that Unit G and H be pooled, G in which Southern Union has an interest and H in which it has no interest, is that correct?

A I don't think we made that request.

Q All right, would it logically fall then that if the south half of the northeast quarter were to be developed that it would have to be pooled on an east-west basis if your

1 application is granted?

2 A Would you ask me the question again, please?

3 Q If Southern Union's application were granted for
4 forced pooling in the north half of the northeast would the
5 forced, the south half of the northeast have to be pooled in
6 order to drill a well in the south half of the northeast?

7 A I wouldn't think so, sir.

8 Q How would it be drilled without an eighty-acre
9 proration unit assigned to it?

10 A The same way, I guess, that our Unit B would have to
11 be drilled without a proration unit.

12 Q I believe Unit B could be but we will leave that up
13 to the Commission.

14 A Okay.

15 Q State again, if you will please, the direction of
16 your postulated permeability barrier in Section 19 and 30?
17 Just state it, if you will, you don't have to show it.
18 Generally? Its linear alignment in accordance with the
19 cardinal rules of the compass.

20 A Okay. The postulated permeability barrier starts
21 near the center of the section and then comes south along a
22 line pretty well straight to the section line.

23 Let me get up and I'll tell you.

24 Q Surely, I didn't want to stop you from looking at
25 it.

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1 A The postulated permeability barrier commences near
2 the center of Section 18. It comes south and then it curves
3 back southwest through a syncline that I have drawn on the
4 structure map to a point about mid-section on the north line
5 of Section 30. It proceeds south to just east of the Unit
6 Texas Petroleum No. 1 McGuffin and it turns across a structural
7 nosing, coming south-southeast and then coming southeast to
8 the BTA Oil Producers No. 1 Shell and it comes from there
9 about south across another structural nose.

10 Q Is that generally north-south in direction?

11 A It stays pretty well north-south.

12 Q Do you anticipate increased possibilities of obtain-
13 ing economic production as you go east of that line, your
14 opinion as an expert witness?

15 A Yes, sir.

16 Q Would you anticipate obtaining superior production
17 as you go east of that postulated permeability barrier, the
18 farther you go east?

19 A I think that from this line the farther that you go
20 east that you are going to obtain superior production until
21 you get past the No. 2 Flying-M State which is in Section 20,
22 which is in letter M in Section 20 and then the No. 4 McGuffin
23 Well which is in letter D of Section 29, from that point on
24 east I think the production is going to deteriorate.

25 Q Could you estimate the datum or the datums of the

1 field rules eighty-acre location in your original application
2 in Unit B in Section 30 and also estimate the possible datum
3 of Unit A in Section 30 based upon your Exhibit One structure
4 map?

5 A Our datum on top of the Slaughter porosity zone?

6 Q Yes.

7 A It is approximately ninety feet, plus. Our datum on
8 the unorthodox location in Unit A would be approximately plus
9 ninety.

10 Q Is there any other wells produced in the Flying-M
11 San Andres Field at that datum, that high?

12 A No, sir, not that I know of.

13 Q What is the highest datum that it does produce at?

14 A Plus sixty-six.

15 Q You stated that the conditions are similar in the
16 north half of the northeast, are they similarly good or
17 similarly bad in the sense that you do not have a well pro-
18 ducing at a datum that high?

19 A I think they are similarly good.

20 Q Would you make a generalization then that the higher
21 you go on the datum in the Flying-M San Andres Field, the
22 greater your chances are of obtaining good production?

23 A It really wasn't the datum on this particular con-
24 figuration on the top of the Slaughter zone in this particular
25 zone. When you have a higher datum it shows that you have

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1 more porosity in the zone, so, therefore, we have more porosity
2 and it is assumed that you would have a better well.

3 Q Look at your Exhibit One then and state to me the
4 wells that have the higher datum than sixty-six that produce
5 oil.

6 A There is no higher datum than sixty-six that pro-
7 duces oil.

8 Q Doesn't that contradict your past statement, your
9 most recent statement?

10 A No, sir, because you are going updip to the west.

11 Q That's obvious from your map but that's not my
12 question. If you are going updip the wells that have high
13 datums and no production, if you go updip in the north half
14 of the northeast solely, according to your map, shouldn't you
15 get the same dry wells that produce at those higher datums
16 to the west?

17 A I don't think so, simply because I think that this
18 permeability barrier is at this point here.

19 Q Does that mean then that the structure is not
20 determinative as to the commercial accumulation in this field?

21 A No, sir, I think the structure has something to do
22 about the accumulation in the field but I think the lack of
23 permeability probably has the most effect due to accumulation.

24 Q Does that then contradict your statement, the
25 similar geological conditions as regards to structure make it

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1 better to drill in the north half of the northeast?

2 A I don't think it contradicts because I think the
3 structure enhances the possibility of it having good wells in
4 this particular field but I think the main reason that we
5 don't have any wells west of this permeability barrier is due
6 to that permeability barrier.

7 Q From that then can you affirm, based on your previous
8 testimony and this exhibit, that the higher structural position
9 you show on your map in the north half of the northeast is
10 immaterial as to whether you get a good well or a bad well or
11 whether correlative rights are being damaged or enhanced by
12 your proposed locations and your forced pooling?

13 A I couldn't tell you that.

14 Q Well, that's what we are asking you, what are your
15 chances of hitting? You have given us an estimate, now you
16 say you can't tell us.

17 A Well, I can't tell you for sure, I can give you an
18 estimate but I can't tell you for sure until I drill a well.

19 Q Plus your contradictory statements merely point out
20 the unpredictability of finding oil in a particular location?

21 MR. RAMEY: I object to the question as being
22 argumentative. Would you word it in another manner?

23 MR. STEVEN I'll just drop the question, Mr.
24 Commissioner.

25 Q (Mr. Stevens continuing.) Mr. Sharrock, you stated

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1 that the SUSCO State No. 2 in Unit J of Section 19 averaged
2 thirty-five barrels of oil per day in October, can you tell
3 us the day in October it was completed?

4 A I think it was completed on September the 30th or
5 September 29th, September 30th or something of that sort.

6 Q What was the potential of that well?

7 A Thirty-five barrels a day.

8 Q Then your statement that it averaged thirty-five
9 barrels a day of every day of October of 1977?

10 A Thirty-five point eight barrels, sir.

11 Q Did anyone ever tell you that well made twenty
12 barrels a day?

13 A I hadn't heard that.

14 Q Did you talk to anybody who was actually on the
15 field and measured the production in that well?

16 A All I know is the figures that come into the office
17 and divide them by thirty. I didn't actually divide them, I
18 mean, some of the people under me divided them by thirty.

19 Q Is it a coincidence that the average daily production
20 happens to be the initial potential of the well?

21 A I don't know.

22 Q If the well did in fact make only twenty barrels
23 during the time that it was on production, during the month
24 of October, would you tend to draw that postulated permeabil-
25 ity barrier a little bit to the east?

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1 A It could be.

2 Q Would you tend to draw your heart-shaped area of
3 maximum possible production in your Exhibit Three farther
4 east? Exhibit Three, Mr. Sharrock?

5 A This one?

6 Q Yes, your Exhibit Three.

7 A What are you talking about, the heart, are you
8 talking about the A contour?

9 Q Yes, the closed contour line that you show in
10 Exhibit Three.

11 A Well, if this was making twenty barrels or it might
12 be ten barrels, this thing would be closed off down here at
13 the end.

14 Q It would make no difference as to your contour
15 lines then?

16 A It would be closed down to the south, that is
17 correct.

18 Q All right. You show your permeability postulated
19 barrier as going through Unit C of Section 30, you just barely
20 avoid the west line of Unit B of Section 30, is that based
21 upon your knowledge or understanding of the Union Texas
22 Petroleum No. 1 McGuffin Well just west of your postulated
23 barrier?

24 A It is based on the knowledge that I brought this
25 thing down through this syncline and across the narrowest point

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1 of this particular nosing, then through the other part of the
2 syncline, then coming through the BTA Well. I think that BTA
3 Well is on the east side of that permeability barrier.

4 Q Could you have drawn that reasonably, perhaps six
5 hundred and sixty feet east of there, not quite at the narrow-
6 est part there, not quite at the narrowest part of your nosing
7 but possibly almost the narrowest part?

8 A By using the structure map as I mentioned before
9 that I overlayed the porosity. To draw this permeability
10 barrier I used this structure map and also the porosity map
11 and come out with an area that I thought was the best. You
12 are saying about yours, I could take this thing and come down
13 through the syncline and come back over here through the
14 narrowest part and come down here but I used the porosity
15 map and tried to draw the thing by using both maps and drawing
16 in a most significant place that I thought that the permeabili-
17 ty barrier would be.

18 Q I refer you to a statement you made with regard to
19 Exhibit Six. You stated that the logs showed similar porosi-
20 ties in the SUSCO 3 yet they were treated tight and they
21 produced water. Do porosity evaluations mean anything in this
22 field based upon your experience with your SUSCO 2 and 3?

23 A Yes, sir, I think they mean the difference between
24 making a well and not making a well.

25 Q Certainly it is interpretive, is it not?

1 A Yes, sir.

2 Q Therefore, your map of Exhibit Number Two is inter-
3 pretive, is it not?

4 A It is my interpretation.

5 Q It could be interpreted differently and further east
6 could it not?

7 A Yes, sir, it certainly could.

8 Q You show east of the Saxon Well in Unit J in Section
9 30, a closed structure, and though it might be contoured as a
10 nose, did that closed structure or nose contribute to better
11 production in that particular area?

12 A I really don't know, Mr. Stevens, because this
13 Saxon Well down here is just producing a minimum amount of
14 oil yet it had one of the higher amounts of porosity of some-
15 thing like forty-four feet. I cannot tell you whether this is
16 just my interpretation, I interpreted that nose and closed the
17 thing out due to using equal distance contouring. The thing
18 about it, I tried to bring this thing around through this
19 nosing here, the continued permeability pinchout. The thing
20 about it, some of these wells that have made a considerable
21 amount of--a cumulative amount of oil--and I sure don't think
22 that permeability, that you could separate this zone from this
23 I think it comes across this nosing to go south. I don't have
24 any well data over here to confirm that.

25 Q You can't say then that structure contributes or does

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1 not contribute to good or bad production in the southeast
2 quarter of Section 30, is that a correct statement?

3 A Well, if you want to make it that way.

4 Q Well, I don't want to make it one way or the other,
5 I think it is just a question--

6 A I think the thing that shows the most, I think struc-
7 ture helps one out in the area but certainly you have got to
8 have permeability to produce, you've got to have that.

9 Q On that basis then permeability would be the primary
10 criterion for commercial production?

11 A Well, I think if you had to put it on a percentage
12 basis I think you are going to have to have sixty percent of
13 everything is going to have to be permeability, the other
14 forty percent is going to have to be structure and porosity
15 related.

16 Q Would you say twenty percent to each, just for a
17 figure, not to be exact?

18 A I don't know.

19 Q On that basis, using this map you show on Exhibit
20 One, is no less than forty percent determinative and possibly
21 twenty percent if you split porosity and structure, is that
22 a fair statement?

23 A No, sir, I don't think so, I think this is my inter-
24 pretation of the thing. I gave you those figures before
25 simply because it is my opinion that the field, the reason the

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1 field is there is due to the updip termination of effective
2 permeability for hydrocarbon migration.

3 Q The reason I asked the question is because you keep
4 coming back to similar geologic conditions as related to struc-
5 ture and porosity, this being the reason for force pooling
6 the north half of the northeast and yet you keep reiterating
7 the structure is only a very small part of it and it would
8 seem that really this Exhibit One has very little meaning in
9 the northeast.

10 MR. CATON: I object to the question. I don't think
11 it is a question I think it is a statement and in addition it
12 misstates the testimony of the witness. He has never stated
13 that porosity or permeability or structure is a very small
14 part of it and he has testified very consistently that he
15 looked at all of them and it is his interpretation of all of
16 them and I object to the question.

17 MR. STEVENS: Mr. Examiner, I won't guarantee that
18 I'm stating his statements exactly correctly, I'm probably
19 generalizing it but I think this has been the total thrust of
20 their testimony that, quote, similar geological conditions
21 as regards to structure and porosity control whether this
22 thing should be force pooled, the north half of the northeast
23 and I am merely trying to show and trying to get this witness
24 to give an opinion as to how much they mean in the commercial
25 accumulation.

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1 MR. CATON: Well, just a minute, let the Commissioner
2 rule on my objection.

3 MR. RAMEY: I'm going to overrule your objection,
4 Mr. Caton, and ask the witness to answer the question about
5 permeability. Would you like the question restated, Mr.
6 Sharrock?

7 MR. SHARROCK: Yes, sir.

8 Q (Mr. Stevens continuing.) How much, in your opinion,
9 does structure have to do with the accumulation percentage?

10 A Let me tell you in my own words and then if I don't
11 answer this question, ask me again.

12 Q Go right ahead.

13 A I think that this particular field is that permea-
14 bility is a major cause of entrapment of the oil. I also
15 think that structure helps enhance one to produce that oil
16 that's trapped, also I think that you have to have that
17 porosity to help the permeability produce its oil. The thing
18 that a permeability--I just don't know how to map permeability
19 I think that there is a relationship between porosity and
20 permeability and the relationship of this porosity and
21 permeability is how goods move through reservoir rock and
22 porosity being the amount of oil space in the rock and
23 permeability being the capability of the fluid flowing through
24 the rock and these two have a direct relationship in this
25 particular field. I can't explain what the direct relationship

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1 does. I think that the entrapment is due to the closing of
2 the flow throats of the permeability so small until the water
3 can go through the permeability and it traps the oil. This is
4 called capillary action. That's my thinking on it and if I
5 knew how to map porosity, Mr. Stevens, I would certainly have
6 mapped it for you.

7 Q Well, you certainly did in Exhibit Two.

8 A I mean permeability, I'm sorry.

9 Q Oh, sorry. Let's go then to your Exhibit Two and
10 again you show a north-south alignment, do you not, of your
11 permeability barrier that is postulated?

12 A Yes, sir, they are similar on every map. All the
13 maps were overlain with the permeability barrier similar.

14 Q And yet you seek an east-west alignment of your
15 north half of the northeast. You show some, I guess I will
16 use your term, pods.

17 MR. CATON: Mr. Commissioner, I'm going to have to
18 object to the statements made by counsel.

19 MR. RAMEY: I was just about to call his attention
20 to that, Mr. Caton.

21 MR. STEVENS: I stand corrected.

22 MR. RAMEY: If you are asking questions go ahead and
23 if you want to testify we will put you on the stand, Mr.
24 Stevens.

25 Q (Mr. Stevens continuing.) Mr. Sharrock, in Exhibit

1 Two, Unit H of 19 you show twenty-three feet of porosity in
2 a pod of porosity and yet that well is a dry hole, how do you
3 explain the fact that it is a dry hole?

4 A The only way I can explain that dry hole is due to
5 lack of permeability, the same as our No. 3 Well.

6 Q That's in Unit G of 19?

7 A In Unit H.

8 Q Unit H, I'm sorry, of Section 19.

9 A I can't explain it, on that particular well why it
10 is not a well. We would have tried to reenter that well if
11 Coastal hadn't gone back in there and left a packer in the
12 thing. I can't explain it to you. I do think, if you want
13 my opinion of it, I think that this well up here would be
14 similar to the Arco No. 3, making about nine barrels a day.

15 Q The porosity in that case was not determinative as
16 to whether you had a commercial well or not, is that true?

17 A It was drilled before we come onto the particular
18 lease.

19 Q Well, is my question true or do you not know? That
20 porosity is not determinative as to whether that well produces
21 commercially or not?

22 A That is true.

23 Q In Section 30, Units P and J, one is a dry hole and
24 one is a producer and yet they have quite a bit of porosity,
25 is that porosity that determines whether you have a good or a

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1 bad well down there?

2 A E and J?

3 Q In Section 30, Unit P and J.

4 A I really can't tell you the reason why that Saxon
5 Well didn't produce. The electric logs showed that it had
6 thirty-four feet of porosity on the thing. The only thing I
7 can think of is possibly that it didn't have the permeability
8 to produce.

9 Q Do you know which well on this map, your Exhibit
10 Number Two, has produced the most oil?

11 A I believe it's in Section 29, it would be the No. 1
12 McGuffin.

13 Q How does its porosity compare with the other wells
14 east of your postulated permeability barrier?

15 A It has twenty feet of porosity, from the Saxon Well
16 it has about half that amount of porosity that it does and
17 up to the north, our SUSCO No. 1 Well and our SUSCO No. 2 Well
18 they have a little more, one has eight feet more, the other
19 one has thirteen feet.

20 Q It has little porosity and the poor wells have a lot
21 of porosity, is there any correlation between porosity and
22 commercial producibility of any well?

23 A Well, as I mentioned to you before, I think that
24 the permeability has a great deal to do with production.

25 Q In that sense then you postulated your permeability

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1 barrier, as you said, with an overlay of your structure map
2 and your pod of porosity in the north half of the northeast
3 of Section 30 or your isopach map?

4 A That is correct.

5 Q Therefore, would you logically say that the permea-
6 bility barrier should be moved in some other direction as
7 opposed to giving value to the pod of porosity you show in
8 the north half of the northeast?

9 A Well, I think that the permeability barrier could
10 be moved any direction you wanted to the east, all the way
11 through these particular wells over here, I mean it could
12 come all the way down through here. I'm just giving you the
13 best indications of where I think its at.

14 Q Do you consider that superior geological considera-
15 tions in the north half of the northeast that you have dis-
16 cussed are partly caused by the forty feet of possible
17 porosity that you have drawn in the north half of the north-
18 east on Exhibit Two?

19 A Yes, sir, I think so.

20 Q And yet the best well in the field has half that
21 amount of porosity?

22 A I think it has quite a bit of permeability.

23 Q One of the worst wells in the field has more than
24 that porosity and yet you still consider this a valid
25 determinate of quality of similar geologic conditions?

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1 MR. CATON: I'll object to the question. I think it
2 has been asked and answered. That same question has been asked
3 and answered several times.

4 MR. STEVENS: Mr. Commissioner, it has been asked
5 in other respects but regarding other exhibits and other
6 geological data. This is merely again trying to determine on
7 what basis he can state that the north half of the northeast
8 should be force pooled on the basis of what similar geological
9 conditions and in which he shows no correlation between those
10 similar conditions and the commercial ability of any well to
11 be drilled. I think the question deserves answering.

12 MR. RAMEY: I overrule the objection and let the
13 witness answer the question.

14 Q (Mr. Stevens continuing.) The question was, and I
15 will certainly be rephrasing it, is that on the basis of the
16 fact that the best well in the field has lower porosity than
17 some of the worst wells in the field that have higher porosity
18 how can you state that similar geological conditions with
19 higher porosity as you show in the north half of the northeast
20 make it a better manner of forced pooling?

21 A Well, I think in consideration of you talking about
22 that these particular wells over here, that this particular
23 well has more accumulative oil production and only having
24 twenty feet of pay in this particular well is, I think you
25 have to think back and say that this particular well has been

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1 drilled every since 1966, also it has a water injection well
2 which is up to the northeast of it and also it has another
3 water injection well which is down to the southeast of it. I
4 think that trying to compare this well with secondary recovery
5 injection wells' accumulative production on the twenty feet
6 of porosity in this particular well and due to the secondary
7 nature of recovering oil out of this and the additional
8 pressure put on the reservoir by these two injection wells has
9 caused this well with twenty feet of porosity a better well,
10 a much better well, than it would have been in primary pro-
11 duction.

12 Q Referring then to your Exhibit Number Three, you
13 show that well which incidentally is in Unit E of Section 29,
14 that well is still making fifty-four barrels a day according
15 to your map, doesn't that tend to show that the fact that it
16 was drilled earlier is of no consequence, it's still a good
17 well?

18 A It's still a good well. These wells up here that
19 were drilled later, though, are making anywhere from ninety-
20 two to eighty barrels a day and they were drilled later and
21 you give those wells the same length of time and they are
22 going to recover possibly the same amount of oil, we hope so
23 anyway.

24 Q They have more porosity, do they not?

25 A Yes, sir.

1 Q Therefore, is porosity really much of a determinate
2 based on all of this evidence?

3 A I think that porosity is one of the better deter-
4 minates that we have to map because I certainly can't map
5 permeability.

6 Q Yet you have mapped a limited permeability, have
7 you not?

8 A I have mapped the postulated permeability barrier
9 due to knowledge that we gained here in the last month on the
10 reentry of this particular well and due to the stimulation
11 techniques we did to that particular well.

12 Q Are you familiar with the cumulative production of
13 the wells in the northwest quarter of 29, generally, not
14 specifically?

15 A No, sir, I just happen to know that particular well
16 has recovered, I believe it is a hundred and ten thousand
17 barrels or something like that.

18 Q If the well had produced over three hundred thousand
19 barrels of oil could you be surprised?

20 A Which well?

21 Q Unit letter E in Section 29, the No. 1 McGuffin.
22 Pardon me, Unit letter F.

23 A No, I wouldn't be surprised, simply because its got
24 two water injection wells up there.

25 Q Is it on forty-acre spacing effectively?

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1 A Yes, sir, infield drilling has been drilled.

2 Q Your estimate of primary production on forty-acre
3 spacing is forty-five thousand barrels, how does that equate
4 with this well and other wells that have produced in the north-
5 west quarter of Section 29, a direct offset to the unorthodox
6 location?

7 A Well, the only way I can particularly answer that
8 particular question is that probably water injection has en-
9 hanced the recovery of that well into secondary. I couldn't
10 tell you what the primary was.

11 Q How about the other wells, were they enhanced by
12 water injection?

13 A What others?

14 Q The other wells in the northwest quarter of Section
15 29, the ones I was previously speaking of?

16 A They probably were.

17 Q You don't know the accumulative?

18 A No, sir, I didn't study the cumulative productions.

19 Q You made an estimate of forty-five thousand barrels
20 on forty-acre spacing and eighty thousand barrels on eighty
21 acres. I'm not trying to beat you to death with it but you
22 estimated your economics on those figures and yet they are
23 considerably below the wells in the northwest quarter of 29,
24 how do you explain that?

25 A Well, if you go back to the previous testimony

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1 testified by Coastal States when they put this unit together
2 years ago that you will find that their testimony on forty-
3 acre spacing, I believe, is forty-six thousand barrels and on
4 eighty-acre spacing is ninety-two thousand barrels.

5 Q How far along was the field at the time of their
6 estimate?

7 A It had twenty-three producing wells.

8 Q Ten years ago?

9 A I don't know, I would have to get the testimony back
10 out and read it.

11 Q Well, in your opinion was it one year or seven
12 years or forty years?

13 A When the Commission ruled the field on eighty-acre
14 spacing.

15 Q Do you consider that really means much when you have
16 the actual production now?

17 A Well, I think one has to look on primary recovery
18 as being the part of recovery due to the movement of oil
19 through the solution gas and secondary recovery would be the
20 movement of oil through secondary means. I think that the
21 recovery factor that these particular people used was some-
22 thing like twelve.

23 MR. STEVENS: Mr. Examiner, I have no further
24 questions of this witness.

25 MR. RAMEY: Are there any other questions of the

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1 witness? Mr. Arnold?

2 CROSS EXAMINATION

3 BY MR. ARNOLD:

4 Q You were speaking of porosity and permeability and
5 you spoke earlier that there was no particular relationship,
6 isn't there usually a relationship between the porosity and
7 the permeability?

8 A I think I definitely spoke that there is some type
9 of relationship between permeability and porosity, they do
10 have a relationship.

11 Q In other words, where you show the higher porosity
12 you would expect normally better permeability also?

13 A Yes, sir.

14 MR. RAMEY: Mr. Stamets?

15 CROSS EXAMINATION

16 BY MR. STAMETS:

17 Q Aside from the considerations for compulsory pooling
18 that are set out in the law, do you feel that the geological
19 considerations should be the most important factor in the
20 Commission's decision or should this be just one of the
21 factors in the decision?

22 A I think that it should be one of the factors in the
23 Commission's decision. I believe that the Commission should
24 consider all of the aspects of this particular case.

25 MR. STAMETS: That's the only question I have.

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1 MR. ARNOLD: One other one. Is there an oil-water
2 contact in this pool?

3 A I believe there are, yes, sir. I can't prove it
4 because we haven't perforated any well down below the oil-
5 water contact.

6 MR. ARNOLD: In other words, this is primarily a
7 structural trap which is modified by porosity and permeability
8 changes?

9 A No, sir, I would say it is more of a permeability-
10 type trap modified by structural changes.

11 MR. ARNOLD: In other words, you think you would
12 have production in the pool if there weren't structural
13 differences?

14 A Well, I think that the structural differences is
15 what probably enhanced the production in the field.

16 MR. ARNOLD: You would call it primarily a strati-
17 graphic trap rather than structure?

18 A Yes, sir.

19 MR. ARNOLD: That's all.

20 MR. RAMEY: Are there any other questions of the
21 witness? He may be excused.

22 (THEREUPON, the witness was excused.)

23 MR. RAMEY: Let's recess for about fifteen minutes.

24 (THEREUPON, the hearing was in recess.)

25

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1 MR. RAMEY: The hearing will come to order, please.

2 Mr. Stevens, would you proceed at this point?

3 MR. CATON: Mr. Commissioner, I have a couple of
4 ends to tie up. I don't have any further testimony, however.

5 MR. RAMEY: Okay, go ahead.

6 MR. CATON: I ask the Commission for the record to
7 take Commission notice of the testimony that has been entered
8 previously and the exhibits that were entered in that particu-
9 lar hearing and I would offer my Exhibits One through Seven.

10 MR. RAMEY: Any objection to that, Mr. Stevens?

11 MR. STEVENS: No objections, Mr. Commissioner.

12 MR. RAMEY: The Commission will take such notice.

13 (THEREUPON, Southern Union Supply Company

14 Exhibits One through Seven were offered

15 into evidence.)

16

17 ROY G. BARTON, JR.

18 called as a witness, having been first duly sworn, was

19 examined and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. STEVENS:

22 Q Would you state your name, your residence, your
23 occupation and your relationship to the applicants herein?

24 A My name is Roy G. Barton, Jr. I live at 309 West
25 Gold in Hobbs, New Mexico. I'm an independent oil producer

1 and operator and I'm in joint venture with Mr. Latham in these
2 applications.

3 Q Very briefly would you state what the applicants
4 seek herein and some of the alternatives therein?

5 A The applicants herein in Case 6017, we applied for
6 an order pooling the east half of the northeast quarter of
7 Section 30, Township 9 South, Range 33 East, Lea County to be
8 dedicated to a well drilled at a standard location.

9 Also in Case 6036 we filed for an order pooling a
10 standard or non-standard oil proration unit and an unorthodox
11 location or an alternative of forty-acre spacing in Section
12 30, 9 South, 33 East. Also in that same case we asked for a
13 pooling of all of the interest in the east half of the north-
14 east to be dedicated to a well drilled at an unorthodox loca-
15 tion in Unit A or an order pooling only the northeast of the
16 northeast of Section 30, also Unit A, forming a non-standard
17 forty-acre unit and in the alternative we asked for an amend-
18 ment of the Flying-M pool rules to forty-acre spacing and
19 also in Case 6112 the applicants asked that the Commission
20 order a well drilled in Unit A of Section 30 and that the
21 working interest income there be put in escrow at the time of
22 completion if there is any litigation.

23 Q In view of the change of position of the opponents
24 to your application and of the Commission's Order 5579, do
25 you now seek only to force pool the east half of the northeast

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1 to get an unorthodox location in Unit A of Section 30?

2 A Yes.

3 Q And an order asking the Commission to require the
4 drilling?

5 A Yes, sir.

6 Q And the others you are not asserting inasmuch as
7 they are not an issue, is that correct?

8 A That is correct.

9 Q Referring to what has been marked as Exhibit One
10 would you very briefly explain it for the Commission?

11 A Exhibit One is a copy of the Commission's method of
12 designating forty-acre units within section and we will be
13 using the letters there for unit numbers.

14 Q Referring to Exhibit Number Two, would you explain
15 it, please?

16 A Exhibit Number Two is a breakdown of the working
17 interest ownership in the northeast quarter of Section 39, 33,
18 and the top portion being what Mr. Latham and myself have
19 proposed and that is designating the east half of the north-
20 east quarter as a working interest unit and here we show that
21 Latham and Barton on a seventy-three point forty-four percent
22 working interest, Southern Union with no interest, Shell with
23 twenty-six point fifty-six percent working interest.

24 Okay, in the west half of the northeast quarter, in
25 the same picture, we show Latham and Barton with no interest,

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1 Southern Union Supply Company with a seventy-eight point
2 percent interest and we have a question mark there as we are
3 not completely sure what their ownership is but we are assum-
4 ing they own the balance and we also show Shell with a twenty-
5 one point eight seven percent working interest.

6 Q This ownership, if the Commission grants your
7 application, will Southern Union have any correlative rights
8 to be violated in the east half of the northeast?

9 A I don't see where they have any correlative rights
10 in the east half of the northeast or in the southeast-
11 northeast.

12 Q Okay, would you continue with the bottom part of
13 that exhibit?

14 A All right, in the bottom part is the unit as pro-
15 posed by Southern Union and we show Latham and Barton with a
16 twenty-three point four four percent working interest, Southern
17 Union Supply Company with a forty point sixty-two percent
18 working interest, Shell with a thirty-five point nine four
19 working interest. That is the north half of the northeast.

20 In the south half of the southeast we show Latham
21 and Barton with fifty percent working interest, Southern Union
22 with a thirty-seven point five percent working interest and
23 Shell with a twelve and a half percent working interest.

24 Q If the Southern Union Supply Company application
25 were granted what would be the working interest percentage

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1 loss or the interest lost to the owners of the northeast-
2 northeast?

3 A The owners there--well, the applicant, Latham and
4 Barton, would lose a fifty percent working interest if their
5 application was approved.

6 Q They would gain that in Unit B?

7 A Yes, they would.

8 Q Okay, and how about in the south half of the north-
9 east?

10 A The same is true for the south half of the northeast
11 if the application were granted and we were drilling in this
12 part we would lose a fifty percent working interest in the
13 southeast of the northeast.

14 Q Conversely Southern Union Supply Company would get
15 an interest in east half of the northeast that they presently
16 do not have, is that correct?

17 A That is correct.

18 Q Did you have a chance to lease the acreage in the
19 west half of the northeast quarter of Section 30?

20 A Yes, we did, in fact we started leasing in there in
21 May of 1976 and for reasons we felt the acreage in the west
22 half of the northeast not attractive we did not attempt to
23 buy any leases over there.

24 Q Thus the forced pooling in compliance with Southern
25 Union's request would in effect force you to own acreage you

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1 initially had refused to own?

2 A Yes, sir.

3 Q Referring to what has been marked as Exhibit Number
4 Three, would you explain that, please?

5 MR. RAMEY: Mr. Stevens, before we go on, are these
6 letters part of Exhibit One?

7 MR. STEVENS: Those letters were originally Exhibit
8 One, Mr. Examiner. We changed it and I should have taken it
9 off of your set of exhibits. We felt it wasn't pertinent to
10 the issues as they have developed today and I will relieve
11 you of them if you desire.

12 MR. RAMEY: Thank you.

13 MR. STEVENS: We felt it might behoove us to sub-
14 stitute as an exhibit the Exhibit One as shown there for
15 purposes of the record.

16 MR. CATON: We would ask the Commission to not
17 consider any information that they might have inadvertently
18 found in those letters.

19 MR. STEVENS: And I certainly will concur with
20 opposing counsel's request.

21 MR. CATON: I would suggest to the Commission that
22 if we get into that area or periphery the testimony would be
23 extensive and not really relevant to the questions involved.

24 Q (Mr. Stevens continuing.) Mr. Barton, would you
25 explain Exhibit Three, please?

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1 A Exhibit Three is what we have determined to be the
2 possible income to the working interest owners in the east
3 half of the northeast quarter of Section 30, 9 South, 33 East,
4 for a period from October 1st, '77 through March 1st, '78.
5 We used these figures as we felt that if we had not been
6 contested we would have had the first well producing or both
7 wells producing by October 1st and since we are tied up in
8 litigations we doubt that one could be completed now until
9 March 1st of next year.

10 Okay, we show estimated barrels of production for
11 Wells 1 and 2 and those would be Units A and H. We took an
12 average of four offsetting wells, one to the north, northeast,
13 east and southeast and these are offsets of Units A and H.
14 We took an average of those four wells times one and a half
15 and came up with a hundred and eleven barrels of oil per day
16 average that we could have been producing or for a total for
17 the period of sixteen thousand six hundred and fifty barrels.

18 From a recent price quoted to us we used the figure
19 of eleven dollars and fifteen cents per barrel, I think it
20 may be a little bit higher right now. We come up with a
21 current revenue loss for the east half of the northeast owners
22 of a hundred and eighty-five thousand six hundred and forty-
23 seven dollars.

24 Also we show an AFE cost for two wells, this is
25 our AFE of August 24th, we show two wells completed, costing

1 three hundred and thirty-six thousand three hundred and seven
2 dollars and our AFE of December 13th for two wells of three
3 hundred and seventy thousand four hundred and twenty-two
4 dollars, with an increase of thirty-four thousand one hundred
5 and fifteen dollars.

6 Adding that figure with the gross revenue loss we
7 come up with a total figure of two hundred and nineteen
8 thousand seven hundred and sixty-two dollars of possible
9 income.

10 Q On the first line of the exhibit you say, average
11 of four offset wells times one point five, what is the basis
12 for this one point five?

13 A The one point five, we felt that the well drilled
14 in Unit H would be about half as good as the well in Unit A.

15 Q On the basis of this possible loss in the past,
16 would you say this is a reason for the Commission to grant
17 your application in Case 6112 to require the drilling of the
18 well in the northeast-northeast prior to January 31st?

19 A I think it should be taken under consideration, yes.

20 Q If such application is not granted is there a
21 possibility that losses such as these will continue?

22 A It looks like they will, yes.

23 Q Is this income you point out here as to the current
24 gross revenue and the increase in costs, is this income lost
25 forever?

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1 A No, I think you could say part of it would be lost
 2 forever. The increase in services and drilling has gone up
 3 approximately ten percent in this period. I think that figure
 4 of thirty-four thousand dollars would be lost. I also think
 5 that we would lose perhaps ten to twenty percent by drainage
 6 from offset wells for this period if it is not drilled and
 7 I've come up with a figure of approximately thirty--well,
 8 ten percent would be about eighteen thousand dollars and
 9 twenty percent somewhere around thirty-six thousand. So I
 10 would say out of the total, two hundred and nineteen thousand,
 11 we might lose seventy thousand dollars.

12 Q Permanently lost?

13 A Permanently lost.

14 MR. STEVENS: I have no further questions of this
 15 witness, Mr. Commissioner.

16 MR. RAMEY: Any questions of the witness?

17 MR. CATON: Yes, Mr. Commissioner.

18 CROSS EXAMINATION

19 BY MR. CATON:

20 Q Mr. Barton, in your designation of working interests
 21 in your Exhibit Number Two would you think it's fair to state
 22 that the development of this area has been such that regardless
 23 of which unit the Commission chooses to pool, either the
 24 north-south unit or the north unit, that either the location
 25 in Unit B or the location in Unit H there will be damage to

1 the correlative rights of the interest holders?

2 A If what?

3 Q No matter what they do?

4 A No, I can't see that because we plan to drill two
5 wells, one in Unit A and one in Unit H acreage. If we are
6 depriving these people in Unit H, if they suffered any damage,
7 it would be because of offset drainage and for lack of drill-
8 ing.

9 Q How do you protect the rights of the interest
10 holders in Unit B by drilling in Units A and H?

11 A Well, I'm not sure there is any oil in Unit B.

12 Q Well, let's assume there is, how would you suggest
13 their correlative rights be protected, Mr. Barton?

14 A Well, I would think the well would be drilled in
15 Unit B.

16 Q You would suggest forty-acre spacing or what would
17 you suggest?

18 A I would go along with the field rules and require
19 eighty-acre spacing.

20 Q Then you would require spacing on eighty acres,
21 would you require it on a stand up or a lay down basis, Mr.
22 Barton?

23 A I would do it on a stand up basis.

24 Q So you would require the interest holders in Unit B
25 to join in pooling on forty acres in which there is a non-

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1 producing well?

2 A Apparently that is the way it would work out.

3 Q Now as far as the losses that you have incurred as
4 set out in your Exhibit Number Three, on what did you base
5 your prediction of oil produced, Mr. Barton?

6 A On the figure of a hundred and eleven barrels.

7 Q Where did you get it?

8 A The total barrels. Well, we took an average of the
9 offset production, thinking that we would have a well in
10 Unit A of around seventy-five barrels and a well in Unit H
11 that would probably make around thirty-seven barrels.

12 Q And you took an average?

13 A And we determined that from average offsetting
14 production.

15 Q Now wouldn't it be true that any interest holders
16 other than you would have been damaged in the same amount,
17 Mr. Barton?

18 A If you are talking about the royalty owners, yes.

19 MR. CATON: That's all.

20 MR. RAMEY: Any other questions of the witness?

21 Mr. Stamets?

22 CROSS EXAMINATION

23 BY MR. STAMETS:

24 Q Mr. Barton, which one of the two proposed proration
25 units or compulsory pooling units in your opinion will best

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1 serve to protect the correlative rights of Latham and Barton?

2 A I would say that a stand up proration unit covering
3 Units A and H would best protect our rights.

4 Q Would that totally protect the rights of Latham and
5 Barton in the northeast quarter of the section?

6 A Yes, sir.

7 Q How about Southern Union, now you indicated that
8 they have no interest whatsoever in that same tract?

9 A That is correct, no interest.

10 Q And their interest in the northeast quarter of this
11 Section 19 is all in the west half of the northeast?

12 A Yes, sir.

13 Q And how could Southern Union Supply Company protect
14 their correlative rights in that west half of the northeast
15 quarter?

16 A They could protect their rights by drilling a well
17 wherever they saw fit in the west half.

18 MR. STAMETS: Okay, that's all.

19 MR. RAMEY: Any other questions of the witness? He
20 may be excused.

21 (THEREUPON, the witness was excused.)

22 MR. STEVENS: I'll call next Mr. Jack Ahlen.

23 JACK AHLEN

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

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DIRECT EXAMINATION

BY MR. STEVENS:

Q Would you state your name, your address, your occupation and your relationship to the applicants here?

A My name is Jack Ahlen, I live in Roswell, New Mexico. I'm a consulting geologist and as a consulting geologist I have been hired by the contestants, Latham and Barton to prepare exhibits and present testimony in this hearing.

Q You have testified in this case previously and other cases before this Commission?

A Yes, sir, I have.

MR. STEVENS: Mr. Commissioner, are the witness' qualifications acceptable?

MR. RAMEY: Yes, we consider him a qualified geologist.

Q (Mr. Stevens continuing.) Mr. Ahlen, do you have any interest in the lands concerning this application in the northeast quarter of Section 30?

A No, sir.

Q Have you any previous association with Latham and Barton other than in relation to this hearing?

A No, sir.

Q Are you being reimbursed for your testimony herein?

A Yes, sir.

Q And your geological work herein?

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1 A Yes, sir.

2 Q Does your reimbursement depend in any manner upon
3 the testimony you give herein?

4 A Do you mean the quality of it or whether we win or
5 lose?

6 Q Well, the--

7 A In the last case they paid me before we won or lost.
8 They were most prompt in rendering their check for my services

9 Q Is it your contention that your testimony will not
10 be swayed by any monetary considerations herein?

11 A No, sir. I consider my reputation much more valuable
12 than any money I might earn here.

13 Q Referring then to what has been marked as Exhibit
14 Number Four, would you explain it for the Commission, please?

15 A Yes, sir. Exhibit Number Four is a xerox copy of
16 Midland Map Company's area map in this portion of Lea County,
17 New Mexico. It shows the acreage that has been dedicated to
18 the Flying-M San Andres Pool. It is located in Township 9
19 South, Range 33 East, primarily.

20 I have marked the northeast quarter of Section 30
21 with a square showing the acreage under contention. We have
22 subdivided that northeast quarter into north-south proration
23 units of eighty acres each. I have also marked in red each
24 of the wells in the Flying M San Andres Pool which are
25 apparently ineffectively drilled on forty-acre spacing.

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1 Approximately half of the wells have this type of a unit.

2 Q Approximately half are on forty-acre spacing and
3 approximately half are on eighty-acre spacing?

4 A Yes, sir.

5 Q Referring then to what has been marked as Exhibit
6 Number Five, would you explain it, please?

7 A Exhibit Number Five is an area map in the vicinity
8 of the Flying-M Pool, Lea County, New Mexico. It is a xerox
9 copy of a commercial structure map, that is available for any-
10 one who cares to pay the purchase price, of the structure at
11 the Yates horizon.

12 This Yates structure map closely parallels a
13 San Andres map if it were to be drawn in this particular area.
14 I show it primarily to give a feel of the structural drain
15 in this country. You will note that the structural drain
16 generally shows dip to the east-southeast. The rate of dip
17 changes slightly from area to area with slight nosings and
18 increasing dip in terracing dip. It is primarily a mono-
19 clinal area in the Yates horizon which is also reflected at
20 the San Andres horizon.

21 For easy reference I have marked a red square in
22 the northeast quarter of Section 30 again to help orient the
23 particular area of interest.

24 Q Are you offering this exhibit to show the geology
25 of any particular localized area or is it to acquaint the

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1 Commission with the generalized geology of the area?

2 A Just the general geology of the area and that it is
3 generally a monoclinal dip to the east with no significant
4 structural anomalies.

5 Q Referring now to what has been marked as Exhibit
6 Number Six, would you explain that, please?

7 A Exhibit Number Six is a blown-up map of the specific
8 area in question, showing six sections in Lea County, New
9 Mexico. This area is in the vicinity of the Flying-M Pool and
10 centers on Section 30 which is at contention here. I show
11 portions of Township 9 South, Range 32 East and Township 9
12 South, 33 East, specifically Section 24 and 25 of 9, 32 and
13 Sections 19, 20, 30 and 29 of 9, 33 and let me refer to them
14 by section number only rather than becoming redundant.

15 It might serve a useful purpose also to explain the
16 legend on the left side of the map since there are several
17 maps all with the same legend. I have followed OCC convention
18 in designating wells. Location is the open circle, a produc-
19 ing San Andres well is a solid circle and an injection well
20 has an "I" to the lower right of the well. An unreported well
21 has a "U" to the lower right of the well. The Wolfcamp pay
22 zone or the Bough C is indicated by a triangle over the well.
23 An abandoned well has a slash through it. The customary symbol
24 for a gas well, you will note in Section 24 and Section 25, are
25 Pennsylvanian gas wells and are not pertinent to this hearing.

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1 I also show a heavy blue arrow pointing to the
2 location in question which Latham and Barton propose to drill,
3 along with a dotted line showing the east half of the north-
4 east quarter of Section 30.

5 On this particular exhibit I show the completion
6 date of all of the wells in the immediate vicinity which have
7 been completed or attempted completion in the San Andres
8 horizon. You will note that there are two general periods of
9 drilling for the San Andres pay zone in this area. The period
10 of '64 through '67 when the field was initially developing
11 and then the period through '74 to the present time when
12 infield drilling was commenced and has proceeded to the present
13 point.

14 Q Referring now to what has been marked as Exhibit
15 Number Seven, explain that, please?

16 A Exhibit Number Seven is an IP map. It shows the
17 initial potential of each well in the area. You will note
18 that there is a wide variation in IP's in the mapped area for
19 the San Andres. You should also note that the IP does not
20 necessarily reflect the total cumulative production or the
21 quality of a well after it has been on production for awhile.

22 Q Could you compare Exhibit Eight with that and at
23 the same time illustrate your statement?

24 A Yes, I could.

25 MR. STAMETS: On your Exhibit Seven where are the

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1 IP's shown?

2 A To the lower right of each well. You will note that
3 the first figure is the number of barrels of oil and the
4 second figure is the barrels of water. In other words, in
5 Unit B of Section 20 it shows eighty-one plus fifteen W.
6 Okay, that is eighty-one barrels of oil, plus fifteen of
7 water.

8 MR. STAMETS: Mine doesn't.

9 (THEREUPON, a discussion was held off
10 the record.)

11 A Does everyone have the same exhibit now?

12 MR. RAMEY: The figures are to the right or under-
13 neath to the right?

14 A To the right and/or underneath, right.

15 You will note when comparing with Exhibit Number
16 Eight, which is a cumulative production map through the date
17 1-1-78, specifically in Unit F of Section 29 the potential on
18 that well was eighty-seven barrels of oil plus one water. In
19 comparison with other wells in Section 29 that does not appear
20 to be unique. However, that is indeed a very unique well in
21 that that well has produced over three hundred and eleven
22 thousand barrels of oil. There are several other wells in
23 Section 29 and in Section 20 that IP'd initially for consider-
24 ably more than that eighty-seven barrels of oil.

25 Q (Mr. Stevens continuing.) Do you tend to show any

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1 correlation between production as shown in Exhibit Eight and
2 date of completion as shown in Exhibit Six?

3 A Okay, when comparing date of completion with cumula-
4 tive production there is a very significant correlation. There
5 is a ninety percent correlation. In almost all instances the
6 date of completion, the wells that were completed first have
7 had the most oil and this is a normal expected relationship.
8 That is true in every instance except in Section 29, Unit A.
9 That well has produced seventy-five thousand barrels, signifi-
10 cantly more than the well in Unit B which was completed in the
11 initial period of exploration in this area. That is the one
12 exception to that general rule. There is a good correlation.

13 You will also note that some of the wells that
14 completed quite well in Section 30 in Unit G, it completed
15 for forty-two barrels of oil and a hundred and twenty-eight
16 barrels of water, yet its cumulative is a hundred and fifty-
17 six barrels of oil, so IP is something to use sometimes to
18 give you a relative value of your well but it is really not
19 indicative, completely indicative.

20 Q Referring to Exhibit Nine would you explain that,
21 please?

22 A Exhibit Number Nine is the average daily production
23 of wells from the San Andres formation in the month of
24 December, 1976 or the average production through the year 1976.
25 I used December '76 because some of the wells were completed

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1 in 1976 so it wouldn't be fair to divide by three hundred and
2 sixty-five, but it gives you a relative productivity of wells
3 and an idea of what the relative permeability in some of these
4 areas are, especially in Section 29. It shows the best well
5 to be located in Section 29, in Unit D.

6 Q How does Exhibit Nine compare with Exhibit Ten?

7 A Exhibit Number Ten is the average daily oil for the
8 month of October 1977. That is the most recent month for which
9 production data is available through the Hobbs OCC office.
10 The numbers I have spotted on each of these wells reflect the
11 total monthly production through the month of October of this
12 last year.

13 You will note that this exhibit uses almost the same
14 numbers as Exhibit Number Three, was it not, of SUSCO, where
15 they showed the monthly production for the month of October.
16 The only variation is in the two SUSCO wells. In the SUSCO
17 No. 2 Well there was no data published in the October periodical,
18 therefore, I did not have an evaluation except that I have
19 noted on this map the IF of the well.

20 Also there is a difference between the one hundred
21 and seven barrels of oil which was reported and the seventy-
22 nine which Exhibit Three shows.

23 Q Referring to Unit E of Section 29 in Exhibit Ten.

24 You show it averaging thirteen barrels a day. Can you comment
25 on that well that appears to be anomalous with the other wells?

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1 A In Unit E, it is located immediately adjacent to the
2 best well in the pool which has been producing steadily since
3 it was originally drilled very significant quantities of oil.
4 It probably also is not nearly as good a well as that well
5 located in F of Section 29, therefore, it shows less produc-
6 tivity in the month of October.

7 Q Could its lessened productivity be occasioned by that
8 drainage from the east offset?

9 A It could have, yes, sir.

10 Q Can you project productivity of offsetting or loca-
11 tions to be drilled, one location away or two locations away,
12 on the basis of these Exhibits Nine and Ten?

13 A I think that one can take the data that is available
14 and contour it in several manners. Projecting this type of
15 data one location has a high probability of success. In other
16 words, you have a relatively high degree of credence to it.
17 When you project it two locations away it is more difficult
18 to project with any accuracy and by the time you get three or
19 four locations away you are wildcatting.

20 Q Would you say there is a greater incidence of
21 predictability in the east half of the northeast as opposed to
22 the west half of the northeast?

23 A Oh, yes.

24 Q And if you had to pre based on these two exhibits
25 the producibility of a well located in Unit B of Section 30,

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1 would you feel very strongly as to the quality of your pre-
2 diction?

3 A I would say the quality of my prediction is con-
4 siderably lessened in Unit B, more so than it is in Unit A.

5 Q Do your lines in Exhibit Ten tend to predict what
6 you might make in Units A and H of Section 30?

7 A Yes, my prediction for a well in Unit A at that
8 particular location appears to be somewhat in excess of a
9 hundred barrels initially, in Unit H probably forty barrels.

10 Q Referring to what has been marked as Exhibit Number
11 Eleven, would you go through that, please?

12 A Exhibit Eleven is a structure map on top of the
13 porosity, almost the same as Southern Union's Exhibit Number
14 One. It shows the top of the porosity on top of the Slaughter
15 zone. You will note that the datums that I have used are
16 almost identical to those used by Southern Union in their
17 exhibit. I show a difference, however, in the interpretation
18 of the basic data. There are a few spots where there is a
19 slight difference that is really not explainable and they
20 occur in the western part of Section 19 in Units M and N.

21 This structure map shows the same general configura-
22 tion as the Yates map. In other words, gentle, eastward
23 dipping beds, especially in the eastern half of the map. Over
24 the western portion of the map there is nosing at the common
25 section line between Section 24 and Section 25 and then the

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1 nose diminishes in magnitude eastward through Section 19 and
2 30 and it is almost gone in Sections 20 and 29.

3 There could be a significant structural anomaly in
4 the northeast corner of Section 25 if one were to diminish the
5 contour interval to, say, a contour interval of ten feet, one
6 could build a case for a structural anomaly in the northeast
7 corner of Section 25.

8 Q Mr. Ahlen, using Unit A of Section 30 as your start-
9 ing point, would you compare the structural similarities of
10 Unit A and Unit B, which are the two units Southern Union
11 proposes to force pool?

12 A Yes, sir. Okay, datum-wise in Unit A I would expect
13 that the structural datum would be about sixty-five, a plus
14 sixty-five or a plus sixty-seven, somewhere in there, just
15 making an estimate of it from these contour lines.

16 In Unit B it would be approximately seventy-five,
17 a datum of plus seventy-five.

18 Q I will ask you the same question I asked Mr. Sharrock,
19 do you know of a well that produces commercial oil in this
20 field at a datum as high as the proposed location in Unit B
21 of Section 30?

22 A No, sir, I know of none commercial wells. The
23 Shell 1 Richardson in Unit D of Section 30 was originally
24 completed as a San Andres producer, however, it was non-
25 commercial.

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1 Q Using Unit A again as your reference point, would
2 you compare the geological similarities of the proposed loca-
3 tion in Unit A with the proper location in Unit H of Section
4 30?

5 A A location in Unit H should have a datum of approxi-
6 mately sixty, plus sixty, versus sixty-five and sixty-seven
7 in Unit A.

8 Q Would you say that Unit H has a greater similarity
9 structurally geologically than Unit B does with Unit A?

10 A It is more similar to Unit A and more similar to
11 Unit D in Section 29 and Unit P in Section 19.

12 Q That is in direct contradiction with Mr. Sharrock's
13 testimony, how do you explain that?

14 A Well, structurally they come very close to the
15 same datum.

16 Q Yet he contended the north half of the northeast
17 was more similar than the east half of the northeast geological
18 ly?

19 A Well, this is the difference in our geological
20 interpretation of data which I spoke of earlier.

21 Q Thus is this difference not only geological but is
22 it also the fact that a higher well with a higher datum may
23 have less chance to produce?

24 A The primary consideration in this San Andres Pool,
25 as well as most other San Andres Pools in southeastern New

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1 Mexico is a consideration of permeability whether the
2 permeability is present or not, that is the primary considera-
3 tion in almost every case. Thus if the permeability is
4 present you have a high probability of success.

5 Q So even though you would say the east half of the
6 northeast is more permeable and the north half of the north-
7 east is more similar and the north half of the northeast is
8 less similar, that is not the determinate as to whether you
9 will get commercial production?

10 A Not the primary determinate, no.

11 Q Could you explain your dashed line on Exhibit Number
12 Eleven, please, sir?

13 A The dashed line on Exhibit Eleven is my estimate of
14 the commercial limits of this pool in the San Andres formation.
15 If you will refer back to my original testimony in September
16 you will note that the outline that I show on this map is very
17 close to the outline shown on that. I have drawn this line
18 on the basis of proven production versus wells that are
19 apparently non-commercial. Let me be a little bit more
20 specific. All of the wells that have been drilled in Section
21 20 I have considered to be commercial wells. In Section 19
22 the well located in Unit H is a non-commercial well because
23 it was specifically drilled to the San Andres formation. It
24 was considered at that time by the operator who is familiar
25 in the area to be a non-commercial well. They plugged it, they

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1 didn't even attempt to make a well out of it. It was their
2 opinion at that particular time that it was a non-commercial
3 well so they plugged it. They were operators of wells immedi-
4 ately east in Section 20 so I considered that they were a
5 prudent operator and they would not have plugged a well that
6 was capable of producing.

7 The SUSCO No. 2 Well at the time of the last hearing
8 was in the process of being completed and I believed SUSCO
9 when they said it would make a well and the completion has been
10 reported since that time and it is a commercial well.

11 Looking at the log on the SUSCO No. 3 Well, which
12 was drilled originally to the Bough C, I made an estimate at
13 that time, at the time of the previous hearing, that it would
14 not be a commercial well based on the logs that were available
15 at that time. I still maintain that opinion and SUSCO has
16 substantiated that.

17 In Section 30, Unit G, that well was originally
18 drilled as a Bough C test, it was unsuccessful, subsequently
19 it was plugged back to the San Andres. The well was perfora-
20 ted in the San Andres, stimulated, and completed as a San Andres
21 producer. However, it only produced a hundred and fifty-six
22 barrels of oil, therefore, I determined that was a non-
23 commercial well.

24 The well located in Unit J of Section 30 is the
25 Saxon Well. It has been completed and has been producing

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1 San Andres oil since '72. It has produced a total of ten
2 thousand barrels of oil. That well may return the initial
3 investment to the investors in this well, however, it is
4 highly problematical that they will ever make money on it, so
5 in my opinion it is a non-commercial well.

6 The well located in Unit P of Section 30 is a dry
7 hole in the San Andres, therefore, a non-commercial well.

8 Okay, weighing all of the evidence, such as pro-
9 ductivity and lack of completion efforts and so forth, I have
10 drawn an average line on this map in the area where I think a
11 commercial well might be completed to the east of this line,
12 to the southeast and to the northeast of this line.

13 You will note that my permeability line is somewhat
14 to the east of Southern Union's line.

15 Q What is the basis for your having it further east?

16 A Well, in order to attract an investor in a well
17 whether it is a large company or small one percent revenue
18 owners of a well, you really need to show an investor that he
19 will get his money back at least and I feel as though you need
20 to take this into consideration when you spot a well.

21 Q Then your permeability pinch out is based upon
22 commercial recovery of a well as opposed to "the actual pinch
23 out"?

24 A Just actually oil being there. I am certain oil is
25 present to the west of this line and the State of New Mexico

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1 could probably derive some tax income from a well being drilled
2 to the west of this line but one must also consider that an
3 investor needs a return on his investment. There is no reason
4 to stay in business if you don't.

5 Q Drawing a line where you drew it then, would you say
6 that the east half of the northeast and the west half of the
7 northeast are within themselves geologically similar as regards
8 to the permeability pinch out of commercial producibility of
9 oil?

10 A Yes, sir, I would.

11 Q In your opinion as to the north half of the north-
12 east, considering that same pinch out line?

13 A Okay, combining the bad acreage in Unit B with the
14 good acreage in Unit A, or the marginally good acreage in
15 Unit B, with the outstanding acreage in Unit A would be a
16 miscarriage of justice because you would include good acreage
17 with mediocre acreage. Conversely, combining Unit A with
18 Unit H, both Southern Union and Latham and Barton suggest that
19 a good commercial well of forty barrels of oil would be
20 established in Unit H. I'm not really that certain that forty
21 barrels would be a good number for a well in Unit B.

22 Q How about combining Unit B with Unit G.

23 A I just wouldn't want--this is one of the problems
24 that you run into in an eighty-acre spaced unit. Latham and
25 Barton have no interest in Unit B or G and, therefore, the

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1 owners of that particular part of the country can do what they
2 see fit with their acreage.

3 Q Would you say that the west half of the northeast
4 is geologically similar with regard to your pinch out line?

5 A Yes, it is geologically similar. The west half is
6 similar north-south as the east half is similar geologically.

7 Q Would you say structurally, forgetting your permea-
8 bility pinch out for the moment, you say structurally, Unit B
9 and Unit G are structurally similar?

10 A Somewhat, yes.

11 Q For what that's worth?

12 A Yes. Well, we already have a datum of plus sixty-
13 nine for a dry hole to the San Andres in Unit G. A location
14 in Unit B as I previously said would be about seventy-five,
15 plus seventy-five. Those two numbers are closer together
16 than the sixties I quoted in A and H.

17 Q Referring then to what has been marked as Exhibit
18 Number Twelve, would you explain it, please?

19 A Exhibit Twelve is a map showing the top of seven
20 percent porosity in the Slaughter zone. You will note that on
21 the east half of the map it's quite similar to the structure
22 map that I have exhibited previously. On the west half of the
23 map, however, there is considerable difference between the
24 two maps due to the fact that the top of the San Andres
25 porosity does not equal seven percent. This is explained

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1 further by Exhibit Number Thirteen.

2 Exhibit Number Thirteen is a cross section between
3 the SUSCO No. 2 Well in Section 19 and the Shell Richardson
4 Well in Unit D of Section 30. It shows the two logs of those
5 two wells. One is a well which has porosity in the very top
6 of the Slaughter zone and the Shell Richardson is a well which
7 has porosity quite far down in the Slaughter zone and the top
8 of seven percent porosity might be even argumentative in the
9 Shell Richardson. You will note that I have drawn the top of
10 the porosity in the vicinity where Shell perforated the well.
11 This particular sonic log shows one spike of porosity less
12 than two feet thick at a depth of forty-two ninety-five.

13 Now someone with equal experience in picking the top
14 of porosity might argue about that and say that the spike of
15 porosity that really counts is at forty-two eighty-five where
16 you see one little spike on the porosity log come in, so
17 drawing a map on top of porosity itself is probably not a very
18 good idea.

19 This also illustrates the permeability barrier which
20 exists between the SUSCO No. 2 and the Shell Richardson which
21 makes the SUSCO No. 2 a productive well and the Shell
22 Richardson a non-commercial well.

23 I did not attempt to specifically locate the exact
24 spot on this cross section, it is merely diagrammatic.

25 Q Mr. Ahlen, what is your experience as a log analyst?

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1 A I was designated as a log analyst for Gulf Oil during
2 eighteen of my twenty years with Gulf.

3 Q Was much of that in southeast New Mexico?

4 A I would say ninety percent of it was in southeastern
5 New Mexico.

6 Q On the basis of your experience and in your opinion
7 does an isopach map of porosity in this area mean much as
8 regards to the commercial productivity of any particular well?

9 A Empirically the more porosity you have in any well
10 the more oil should be in place, however, just because you
11 have a large quantity of oil in place does not necessarily
12 mean that you are going to get a large amount of oil out of
13 the rock. There are many, many places in southeastern New
14 Mexico where there are fantastic reserves of oil in the ground
15 that will never be extracted because the permeability is
16 infinitesimal.

17 Q Would you agree then with Mr. Sharrock's statement
18 that permeability, if I'm quoting correctly, is a much greater
19 factor than porosity or structure in the accumulation of oil
20 in this field?

21 A If he made that statement I would agree with him,
22 yes.

23 Q Based on all of your evidence here, Mr. Ahlen,
24 without trying to be repetitive, would you shortly summarize
25 your opinion as to the effect of correlative rights on the

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1 east half of the northeast pooled unit and the north half of
2 the northeast pooled unit that the opposing parties desire?

3 A Well, as far as I can see Southern Union has no
4 correlative rights in the east half of Section 30. They own
5 portions of the west half of the northeast quarter of Section
6 30 and they have correlative rights there. Latham and Barton
7 have no rights in the west half of the northeast of 30 but
8 they do have correlative rights in the east half of the north-
9 east of 30 and, therefore, the most equitable way to unitize
10 the area, in my estimation, would be to unitize the east half
11 and the west half, both on the basis of present acreage owner-
12 ship as well as geological and permeability considerations.

13 Q Okay, forgetting the ownership for a moment and being
14 concerned only with geology, this may be repetitive, could
15 you compare the east half of the northeast and the north half
16 of the northeast as to the geological similarities and the
17 producibility of the oil that might be found under each tract?

18 A The most geologically similar areas would be the
19 east half versus the west half of the northeast quarter. They
20 would be geologically most similar to each other.

21 Q Would the north half and the south half be geologically
22 dissimilar?

23 A One would be combining dissimilar geological con-
24 siderations if he went east-west. I would expect there are
25 greater reserves recoverable under the east half of the north-

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1 east than there are under the west half of the northeast.

2 Q I will ask you your opinion as to the risk factor
3 that should be assessed against the non-consenting parties
4 therein, regardless of which way the Commission goes, on that
5 basis in Unit A what would you say is the chance of a dry
6 hole? Unit A of Section 30?

7 A Okay, in Unit A of Section 30 I think there is an
8 eighty-five percent probability of success.

9 Q How about Unit H of Section 30?

10 A I think there is a seventy percent probability of
11 success for a commercial well in Unit H.

12 Q And Unit B?

13 A There is a fifty percent probability of success
14 for a commercial well in Unit B.

15 Q Suppose we crowded the location and pulled it two
16 hundred feet northeast of the center of Unit G what would be
17 the chances of success there in your opinion?

18 A That would be a pretty tough well to convince anyone
19 to drill. There would be probably a twenty-five percent
20 probability. I would just guess.

21 Q Would you recommend to the Commission that they
22 give a risk factor to be based on these?

23 A Commensurate with these?

24 Q Yes.

25 A I would suggest such a thing.

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1 Q In that sense I believe the risk factor would be a
2 hundred percent minus those percentages you gave, would it
3 not be? There would be a fifteen percent penalty factor in
4 Unit A, a thirty percent penalty factor in Unit H and a fifty
5 percent penalty factor in Unit B and a seventy-five percent
6 penalty factor in Unit G, would it not?

7 A Okay, that's primarily a geological consideration in
8 that it does not consider the cost of money or return on in-
9 vestment or the discounting of money or anything like that.

10 Q But that is the proper percentage based on your
11 geological--

12 A Yes, sir.

13 MR. STEVENS: I have no further questions of the
14 witness, Mr. Commissioner.

15 MR. RAMEY: Any questions of the witness, Mr. Caton?

16 CROSS EXAMINATION

17 BY MR. CATON:

18 Q Mr. Ahlen, I'm not sure I understand your testimony.
19 You indicate that there are no producing wells above sixty-
20 nine porosity in this entire field, is that your testimony?

21 MR. STEVENS: Excuse me, would you state the exhibit
22 to which you are referring?

23 MR. CATON: Well, not anything right now.

24 A On my structure map I show commercial production,
25 the highest commercial production, to be at a datum of sixty-

1 five to date.

2 Q (Mr. Caton continuing.) And is it your testimony
3 that the more porosity datum, the higher the porosity datum
4 you have, the less likely you are to get a well, is that your
5 testimony?

6 A No.

7 Q Then is it your testimony that the higher porosity
8 datum you have the more likely you are to get a well?

9 A No.

10 Q Well, what is your testimony, Mr. Ahlen, what is
11 the significance of your statement pointing out that Section
12 B would be a datum of seventy-five, while the highest pro-
13 duction datum you have is sixty-five, what is the significance
14 of that, please?

15 A I was stating that in comparison to the testimony
16 previously given that the higher a well is the higher the
17 probability for success. It is not necessarily true.

18 Q I haven't heard any testimony like that but that is
19 why you were stating that, is that right, Mr. Ahlen, and it
20 doesn't have anything to do and your testimony is not that the
21 more porosity datum, the higher the porosity datum, the less
22 likely you are to get a well?

23 A No, sir.

24 Q And as a matter of fact, if you refer to SUSCO's
25 No. 1 you don't disagree with--or 2, you don't disagree with--

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1 I'm sorry, SUSCO No. 2, you don't disagree with the porosity
2 data that Mr. Sharrock has given here, do you?

3 A I have not made a map that isopachs porosity.

4 Q So will you come up here and look at this and tell
5 me whether you disagree with it or not?

6 A I cannot dispute the specific numbers on this map
7 because I have not prepared a map of this variety because
8 there are so many wells in the pool that have been drilled
9 over such a long period of time, the difference in quality of
10 logs has significantly changed over the years and different
11 people like to run different types of logs under different
12 conditions. Some logs were run through casings and are very
13 poor quality logs and so it is like trying to compare apples
14 and oranges.

15 Q I understand your testimony, you cannot evaluate
16 what Mr. Sharrock has done with SUSCO's Exhibit Number Two,
17 is that correct?

18 A To the extent of the specific values at each loca-
19 tion.

20 Q All right, please sit down. I'm sorry I got you up
21 on your feet.

22 And your testimony is not that the more porosity,
23 the higher the porosity, the less likely you are to get a
24 well?

25 A No, sir.

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1 Q All right, now, you would agree that a well in
2 location B of Section 30 would produce about forty barrels a
3 day?

4 A I did not say that.

5 Q You did not say that?

6 A No, sir. I said it might be a commercial well.
7 There is a fifty percent probability that it would be a
8 commercial well.

9 Q Did you testify to that previously, Mr. Ahlen?

10 A I thought so.

11 Q Well, you did say that it would produce about forty
12 barrels, did you not?

13 A No, sir.

14 MR. RAMEY: I thought that was in Unit H.

15 MR. CATON: Well, I'm talking about previous testi-
16 mony, Mr. Commissioner.

17 A You mean in September?

18 Q (Mr. Caton continuing.) Yes, sir.

19 A I don't remember whether I testified to that or
20 not. I've slept since then.

21 Q So have we all. Well, I'll pass that for the
22 moment.

23 Now, isn't it true, Mr. Ahlen, that development of
24 a field, following the field rules established in that field,
25 the purpose of those are designed to protect the correlative

1 rights of the parties involved?

2 A I think that would be the primary basis on which
3 the Commission issues orders.

4 Q And you would agree that the Commission has establish-
5 ed that eighty-acre spacing in this particular pool and it
6 does adequately drain the areas involved?

7 A Obviously that is a matter of record.

8 Q All right, you disagree totally with that, do you
9 not? The foundation of your testimony here today is that you
10 do not believe that eighty-acre spacing is sufficient to drain
11 these areas?

12 A Yes, I think that is--

13 Q As a matter of fact, your testimony is that perhaps
14 twenty-acre spacing would more properly drain this area?

15 A I think I said that in September.

16 Q So any testimony you have must be considered, keeping
17 in mind the foundation that you do not agree with the Commis-
18 sion's eighty-acre spacing, is that true?

19 A I think the evidence at hand indicates that it was
20 not adequate either.

21 Q Now, in addition to that, Mr. Ahlen, you have testi-
22 fied on direct that you have sought to protect the correlative
23 rights of Barton and Latham. Barton and Latham as the opera-
24 tors and developers are not the only interest rights in any of
25 this land, are they, there are other interest rights?

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1 A That's right.

2 Q There are royalty owners and others?

3 A That's right.

4 Q Now, isn't it true that Southern Union Supply Company
5 has correlative rights in whether a well is drilled in Unit A
6 based on their locations both above, directly above across
7 the section line, and to the west, isn't that correct?

8 A Would you please restate that? There were several
9 questions there, one at a time, please.

10 Q You testified, Mr. Ahlen, that Southern Union Supply
11 Company had no correlative rights to be protected in Unit A,
12 that's what you said?

13 A Yes, sir.

14 Q And none to be protected in Unit H?

15 A Right.

16 Q All right, now, Mr. Ahlen, the rules of capture
17 assume that oil migrates, is there anything that you have
18 found in this particular structure that would indicate that
19 the normal rules of migration of oil do not apply?

20 A The wells produce as they produce, I mean--

21 MR. STEVENS: Answer his question first and then he
22 will let you explain.

23 A I don't know how to answer it directly.

24 Q (Mr. Caton continuing.) Is there anything that you
25 have found that indicates that the normal rules of the migra-

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1 tion of oil, oil flowing from one place to another, do not
 2 apply in this particular field?

3 A No, sir, oil will flow irrespective of what you and
 4 I do.

5 Q That's right, irrespective of property lines above
 6 it?

7 A Yes, sir.

8 Q All right, does not Southern Union Gas Company have
 9 correlative rights dependent upon Unit A that flow from the
 10 migration of oil from Unit P above, in the section above, in
 11 Section 19?

12 A Well, we have an Oil Conservation Commission, no,
 13 sir.

14 Q Well, answer my question.

15 A Okay, I say, no, to the extent that at the present
 16 moment Latham and Barton cannot protect their correlative
 17 rights and they are being infringed upon by those people who
 18 have already drilled on offset acreage and they have a require-
 19 ment in their leases to protect the correlative rights of the
 20 individual owners in those tracts which are different from
 21 those in Section 19.

22 Q Mr. Ahlen, I understand that it is to your interest
 23 to protect the correlative rights of Latham and Barton. My
 24 question was: Does Southern Union Supply Company have cor-
 25 relative rights involved in the drilling of Unit A in Section

1 30 that flow from their ownership of Section P in Section 19?

2 A No, sir, I don't think they have any rights there.

3 Q All right, do any other interest holders?

4 A They own a lease on Section--

5 Q All right, now, you know what I'm talking about.

6 A In Unit A.

7 Q I'm talking about this area right here. You don't
8 feel that there are any correlative rights involved from the
9 drilling of a location in Unit A, this is P?

10 A Okay, their rights extend downward in Unit P of
11 Section 19. It is a circumstance that the porosity is connected
12 across the section line. The oil reservoirs have no respect
13 for fence lines at the surface, so just a consequence of the
14 well being drilled there, oil is being drained three hundred
15 and sixty degrees around that particular location and there
16 is no way you could block it.

17 Q Let's back up. You would agree that there are other
18 interest owners besides Southern Union Supply Company in
19 Section P?

20 A Certainly.

21 Q In Unit P of Section 19?

22 A Certainly, the individuals that the lease--primarily
23 the State of New Mexico.

24 Q This is a State lease so the State of New Mexico--
25 does the State of New Mexico have any correlative rights that

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1 are going to be affected by the drilling of an unorthodox
2 location in Unit A, Mr. Ahlen?

3 A The State of New Mexico owns all of the oil immedia-
4 tly under Section 19. If some moves across the section line
5 during the pumping operation this also belongs to the State of
6 New Mexico due to migration across the section lines.

7 Q So you would agree finally that the drilling in an
8 unorthodox location in Unit A would affect correlative rights
9 of the State of New Mexico in Unit P of Section 19?

10 A No, I wouldn't agree.

11 Q Okay, that's fine. Now, Mr. Ahlen, what, in your
12 opinion, is the effect of drilling in Unit A on the correla-
13 tive rights of the persons in Unit B?

14 A Okay, the people who presently own rights in Unit A
15 own the oil that is immediately under Unit A. The longer
16 Latham and Barton are delayed in drilling this particular
17 hole, the more--

18 Q Mr. Ahlen, I'm going to stop you because that is
19 not responsive to my question. The question was: What is
20 the effect of the drilling in Unit A on the interest holders
21 of Unit B, that's my question.

22 A Unit B, I thought you said P.

23 Q No, Unit B, I'm sorry, have you got it? Can you
24 answer that question?

25 A It is the same relationship that exists between

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1 Unit P in Section 19 and Unit A in Section 30.

2 Q What is that?

3 A That is, the people who rightly own that oil can't
4 get it out until a hole is drilled and until the hole is
5 drilled it will migrate in the direction of lower pressures,
6 which today is the three offset wells.

7 Q So you would answer that if a well is drilled in
8 Unit A it would damage the rights of the interest holders in
9 Unit B?

10 A Until they themselves drilled a hole there.

11 Q All right, now, do you have a suggestion for pooling
12 Unit B so that it would not involve fooling with non-productive
13 land, Mr. Ahlen?

14 A No, sir.

15 Q If you pool with Unit C, if you pool B and C, you
16 are pooling across what you have drawn as your pinch out line,
17 is that correct?

18 A Yes, sir.

19 Q And you understand that this Commission cannot
20 constitutionally or in any other manner pool non-productive
21 with known productive lands, isn't that correct?

22 A I do not know that, but thank you for telling me.

23 Q There is not any question that a well drilled in
24 Unit G is not going to be a productive well, is it?

25 A It is not going to be very commercial.

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1 Q And I believe you said that was twenty-five percent
2 possibility, did I hear you right?

3 A Yes, sir.

4 Q Well, it has already been drilled, isn't it a
5 hundred percent that it is not going to be a good well, Mr.
6 Ahlen?

7 A If one would crowd it as far as possible toward the
8 producing wells it might be completed as a producer and with
9 today's technology one might be able to achieve a commercial
10 production of some sort.

11 Q All right.

12 A Since after ten years I think we know a little bit
13 more about completing wells than we did then.

14 Q So in that regard do you believe that we have a
15 choice between pooling Unit G with either B or H?

16 A Referring back to geological similarities, the
17 similarities are much greater north-south than they are east-
18 west.

19 Q Well, you disagree with Mr. Sharrock, but do you
20 believe that either pooling Unit H or G is equally a possi-
21 bility. when you are pooling with G you are not pooling with
22 nothing, is that what you are saying?

23 MR. STEVENS: I would like to take a moment, Mr.
24 Commissioner, and correct a statement that I believe opposing
25 counsel made. He stated that this Commission had a rule that

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1 you could not pool non-productive acreage with productive
2 acreage. I believe the testimony has shown that Mr. Ahlen
3 has stated that the area west of there has oil but it was not
4 commercial. I believe opposing counsel is confusing non-
5 commercial with non-productive and that the Commission certain-
6 ly has the power and does all the time pool acreage in which
7 the commerciality of any part of it may be in question. The
8 point being that there has to be hydrocarbons underlying the
9 land as opposed to commercially productive hydrocarbons.

10 MR. CATON: Mr. Commissioner, I don't consent to
11 be corrected in that regard. The law as I have read it and as
12 cited in Cordelio versus Corporation Commission, Supreme Court
13 of Oklahoma, case cited in 1976 at 551 Pacific 2nd., 1110, says
14 that a corporation commission may not constitutionally include
15 known non-productive area in the drilling of a spacing unit.
16 That's the whole point of our argument here today.

17 MR. STEVENS: Let's go back then to the definition of
18 "productive" versus "commercial" and that was my previous
19 point. Mr. Ahlen has not testified that it was non-productive.
20 He said it was non-commercial and I think the Oklahoma case
21 has no moment for this Commission.

22 MR. CATON: Well, I'll argue this later on, Mr.
23 Commissioner, for whatever it's worth.

24 Q (Mr. Caton continuing.) Mr. Ahlen, you don't dis-
25 agree that the well that has been drilled in Unit G is both

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1 non-productive and non-commercial, do you?

2 A No.

3 Q It's both but it is non-productive in terms of today.

4 A There is not a well there.

5 Q All right, now, if you would examine your Exhibit
6 Number Ten, please, Mr. Ahlen, I'm sorry, Number Eleven. Now,
7 I'm not sure from your testimony but is that dotted line that
8 runs across Section 19 and down into Section 30, is that the
9 pinch out line that counsel was talking about?

10 A No, that is the limit of commercial wells.

11 Q Okay, there will be wells drilled on the west side
12 of that that probably have some oil as demonstrated by the
13 Shell Richardson, as well as the Saxon well?

14 A All right, identify--

15 Q The Shell Richardson in Unit D of Section 30, and
16 that is a productive well, is it not?

17 A No longer, sir.

18 Q And it produced approximately--

19 A Six hundred and fifty barrels of oil.

20 Q All right, and to the south of that is a well,
21 Shell 2 Richardson, and that produced how much?

22 A That was a dry hole in the Bough C. No attempt
23 was made at completion in the San Andres.

24 Q Now, what you have drawn then is not comparable to
25 the line, the pinch out line, the permeability line, that you

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1 drew in the previous hearing, is that correct?

2 A Yes, I think it is.

3 Q It is comparable?

4 A Yes, sir.

5 Q All right. I wonder if you would take your Exhibit
6 Eleven, please, and if you would transpose the pinch out line
7 that you drew on your previous exhibit on that?

8 A Yes, sir.

9 (THEREUPON, the witness complies.)

10 Q (Mr. Caton continuing.) All right, let me see both
11 of them. For purposes of examination the pinch out line that
12 you drew previously was to the west of the north half of the
13 northeast, was it not?

14 MR. STEVENS: Excuse me, what section?

15 MR. CATON: Of section 30.

16 A I can't see it. Perhaps I could draw it on several
17 maps.

18 (THEREUPON, a discussion was held
19 off the record.)

20 Q (Mr. Caton continuing.) Now when you drew that line
21 previously you drew it to the west of Unit B, did you not?

22 A I drew it through Unit B but a little further to
23 the west than I presently draw it.

24 Q All right. And comparing a well in Unit H, would
25 you tell me the distance from a well in Unit H directly west

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1 to the pinch out line, how far is that when you drew it in the
2 previous hearing?

3 A In the previous hearing I just sort of estimate that
4 I drilled it two hundred feet west of Unit H, in the current
5 about fifty feet west.

6 Q All right, and referring to the center of the north
7 half of the northeast, how far is that from the pinchout line?
8 Directly west?

9 A That would be the center of the west line of Unit
10 A?

11 Q Yes. No Unit B. What I'm interested in is from
12 the center, from the mid-point of Units A and B, how far is
13 it to the pinch out line as you previously drew it, approxi-
14 mately?

15 A As I previously drew it, four hundred feet. Excuse
16 me, as I previously drew it, about seven hundred feet, as I
17 currently draw it, three hundred feet.

18 Q You have no disagreement that probably the best
19 well to drill if you were drilling in the north half of the
20 northeast, Units A and B, would be in the center of that unit?

21 A Of Unit A?

22 Q Yes. The center of Unit A?

23 A Yes, sir.

24 Q You wouldn't put it in between Unit A and Unit B?

25 A I see no reason to. The Commission rules say that

1 in this particular area it should be within two hundred feet
2 of a standard or non-standard location.

3 Q You have not asked for a standard location have you,
4 Mr. Ahlen?

5 A A non-standard.

6 Q Yes, that's right.

7 MR. CATON: That's all I have.

8 MR. RAMEY: Any other questions of the witness?

9 Mr. Stevens?

10 REDIRECT EXAMINATION

11 BY MR. STEVENS:

12 Q Mr. Caton was concerned with productive acreage, you
13 have testified as to commercially productive acreage, I'm
14 speaking with reference to the west half of the northeast
15 quarter of Section 30. Is all of the west half of the north-
16 east of Section 30, in your opinion, probably productive of
17 oil and gas?

18 A Yes, sir.

19 Q Is all of the west half of the northeast of Section
20 30 probably commercially productive of gas?

21 A No.

22 Q Is any part of the west half of the northeast of
23 Section 30 commercially productive of oil and gas?

24 A Yes, sir.

25 Q What part would you estimate?

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1 A Somewhere in Unit B.

2 Q If a well were drilled in Unit B under a pooled
3 eighty-acre proration unit, would that well tend to protect
4 the correlative rights of the owners in the west half of the
5 northeast of the unit of Section 30?

6 A Yes, it certainly would.

7 Q All would share in the production from that well,
8 would they not?

9 A All of the owners of the west half of 30 would share
10 in that production, other than the northeast quarter of 30.

11 Q Right, this would be in compliance with present
12 Commission Rules and Regulations so far as you know, would
13 it not?

14 A Yes, sir.

15 Q No acreage would be excluded nor would the allowable
16 be cut?

17 A No, sir.

18 Q To your knowledge?

19 A Not that I know of.

20 Q If you were evaluating this as a geologist in
21 assigning an allowable would you personally cut the allowable?

22 A No, sir.

23 Q Does New Mexico have any such thing as a productive
24 acreage hearing, to your knowledge, wherein allowables are cut
25 because part of the acreage is non-productive?

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1 A I do not personally know of any such thing.

2 Q That's what I'm asking. Are you aware that allow-
3 ables are sometimes cut when an unorthodox location is asked
4 for?

5 A Yes, sir, there is no indication of petroleum
6 products under some portions.

7 Q But that is not our case here, is it?

8 A No, sir, there is oil under all of Section 30 but it
9 may not be commercial.

10 Q At the time you drew your line in our previous
11 hearing, Mr. Ahlen, this was at the request of opposing
12 counsel, was it not?

13 A Yes, sir.

14 Q Did you have all of the time you would have liked to
15 have to draw that line?

16 A No, sir. As a matter of fact, it was done quite
17 hastily in the presence of the Examiner.

18 Q You have since changed that line. Do you consider
19 that your changes are major or minor?

20 A Comparing the two lines which are present on this
21 map I would say that it was quite a good guess, after going
22 back and reviewing the data and having sufficient time to
23 review my previous notes and look at the logs again and every-
24 thing that I would normally do in order to determine such a
25 line and after applying due consideration to all of the

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1 various circumstances.

2 Q Can you draw that line with any great precision in
3 any case?

4 A No, this is just a matter of judgment anyhow.

5 Q So you wouldn't disqualify your previously drawn
6 line, would you?

7 A No, sir.

8 MR. STEVENS: No further questions, Mr. Commissioner.

9 RE CROSS EXAMINATION

10 BY MR. CATON:

11 Q There isn't any question that there is a pinch out
12 to the west running down pretty much in the middle of the
13 Section 30, is there?

14 A Correct.

15 Q That is the primary cause for the problem that we
16 have?

17 A True.

18 Q And there isn't any question that it is very un-
19 likely that if you go further than the mid-line of Section 30
20 you are going to get much production in Section 30, isn't
21 that right?

22 A It would certainly appear so from the evidence at
23 hand.

24 MR. CATON: That's all I have.

25 MR. RAMEY: Any other questions of the witness? He

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1 may be excused.

2 (THEREUPON, the witness was excused.)

3 MR. STEVENS: Mr. Commissioner, we would like to
4 call one more witness, Mr. Lewis Latham.

6 LEWIS LATHAM

7 called as a witness, having been first duly sworn, was
8 examined and testified as follows:

9 DIRECT EXAMINATION

10 BY MR. STEVENS:

11 Q Would you state your name, your residence, your
12 occupation and your relationship to the applicants herein?

13 A My name is E. L. Latham, Jr. and I live at 715 East
14 Llano in Hobbs, New Mexico and I'm an independent oil pro-
15 ducer.

16 Q You are one of the owners under the east half of
17 the northeast quarter of the leases?

18 A That is correct.

19 Q And you would propose to be an operator of wells to
20 be drilled in the east half of the northeast?

21 A Yes.

22 Q Do you and your partner desire to be the operators
23 of any wells to be drilled in the east half of the northeast
24 quarter?

25 A Yes.

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1 Q Referring then to what has been marked as Exhibit
2 Number Fourteen, would you explain it for the Commission?

3 A Exhibit Fourteen is just to show that this AFE is
4 greater than the one that we prepared in August and the main
5 reason is because the cost of services, materials, and the
6 drilling is going up at a rapid rate and this delay that we
7 are encountering here is a continuing thing and it will con-
8 tinue to go up.

9 Q How much was the increase in the period from your
10 previous AFE and what was the date of your previous AFE?

11 A The previous AFE was dated August 24, 1977 and this
12 one was prepared on December 13, 1977. There is roughly a
13 ten percent increase.

14 Q Mr. Latham, I think you gave previously your ex-
15 perience which I don't want to take the time of the Commission
16 with. It is a matter of record and opposing counsel has in-
17 corporated into this hearing, I will only ask one other ques-
18 tion in that respect. Do you plan to have consultants in the
19 drilling and completion of this well?

20 A Yes, we do.

21 Q What will be their experience roughly and generalized?

22 A We plan to use Mr. Jack Noss as our drilling and
23 production foreman and completion foreman and he has had thirty
24 years or more of experience with Gulf Oil and he is presently
25 employed by Continental Oil Company as a consultant.

1 Q How about the drilling thereof of the well?

2 A Yes, he will be our drilling foreman.

3 Q Do you consider his qualifications in this field are
4 as good as or possibly superior to those of the personnel
5 that Southern Union employs?

6 A I do.

7 Q Do you have a proposal for administrative overhead
8 to be allocated to the drilling of these wells as to drilling
9 on a monthly basis and producing on a monthly basis?

10 A I think that a thousand dollars a month while drill-
11 ing will be adequate and overhead for a monthly charge of a
12 hundred and twenty-five dollars a month.

13 Q Are these greater or lesser than those of the
14 average of wells that are of comparable depth in the area?

15 A I believe a hundred and twenty-five a month is
16 probably less.

17 Q You heard Mr. Ahlen's testimony as to risk factors.
18 he would assign to the drilling of these wells. Do you agree
19 with those risk factors he assigned?

20 A I do to a certain extent but if you consider the
21 cost of the money that would be necessary for the non-
22 consenting owners that you have to advance in their behalf,
23 I would say that you would have to raise a well in Unit A to
24 twenty-five percent and a well in Unit H to forty-five.

25 Q What is the basis for that raise?

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1 A The cost of the money that you would have to advance
2 in their behalf.

3 Q As part of your Case 6112 and we have previously
4 gone into that as to regards to drilling of the well and the
5 money you have to pay out to be put in escrow. You had an
6 alternative there concerning the shutting in of the wells as
7 an alternative if the Commission did not require that this
8 well be drilled. What is your idea there?

9 A You mean as an alternative to shutting in the wells?

10 Q No, as an alternative to the Commission requiring
11 that the well in the northeast of the northeast be drilled in
12 Unit A , Section 30. You asked for the possibility that the
13 offsetting wells to Unit A be either shut in or their pro-
14 duction curtailed, what is your idea there?

15 A Well, our purpose was to protect the correlative
16 rights of our royalty owners and also the working interest
17 owners which are being drained daily and really I have no
18 quarrel with Coastal States, they are not causing this delay
19 or with Arco but Southern Union to the north, I would recom-
20 mend that their well be shut in unless we can drill our well.

21 Q As an alternative then to having the Commission
22 require the operator that the Commission designates in drill-
23 ing a well in Unit A of Section 30, you would request then
24 that Southern Union's well be curtailed or shut in?

25 A Curtailed or shut in, yes, sir.

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1 Q If curtailed what would be your idea?
2 A To have the allowable--
3 Q The allowable or current production?
4 A Current production.
5 Q The allowable is what?
6 A The allowable is a hundred and sixty barrels a day.
7 Q And do you remember the amount of production SUSCO's
8 Exhibit Number--
9 MR. CATON: It's eighty-four.
10 Q (Mr. Stevens continuing.) I believe that is on
11 Mr. Ahlen's exhibit, therefore, it would be something over
12 forty-two barrels a day, roughly speaking?
13 A Yes, sir.
14 Q But that would not be your preference, would it?
15 A No, it would not.
16 Q Your preference would be--
17 A To drill.
18 Q To drill.
19 MR. STEVENS: With that in mind, Mr. Commissioner,
20 the whole idea here is to get these wells drilled. We have
21 no further questions.
22 MR. CATON: I have nothing for this witness.
23 MR. RAMEY: Mr. Stamets?
24 CROSS EXAMINATION
25 BY MR. STAMETS:

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1 Q Mr. Latham, at the original hearing in this case the
2 ownership in the east half of the northeast was somewhat
3 different than it is now and I believe you or one of your
4 witnesses testified that attempts had been made to gain
5 voluntary communitization and you were not able to do that.
6 Now that the interests have changed in the east half of the
7 northeast quarter have Latham and Barton attempted to obtain
8 voluntary communitization?

9 A Yes, we have.

10 Q And what has been the effect of that attempt?

11 A Shell Oil Company's acreage is in question and they
12 will not take any part in any decision or make a decision
13 until after the results of these hearings are known.

14 Q So you have made the attempt and you have not been
15 able to obtain voluntary communitization of the east half of
16 the northeast quarter of this section?

17 A That's right.

18 MR. STAMETS: That's all I have.

19 MR. RAMEY: Any other questions? The witness may
20 be excused.

21 (THEREUPON, the witness was excused.)

22 MR. RAMEY: Any statements at this time?

23 MR. CATON: If it please the Commission, I have a
24 statement I would like to make.

25 MR. RAMEY: Okay.

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1 MR. CATON: Mr. Commissioners, the problems presented
2 here, we believe, can be resolved by following the rules that
3 have been established in this area. We do not believe, we do
4 not by the argument that the drilling of wells in the standard
5 pattern in the normal eighty-acre spacing in itself damages
6 the correlative rights of any parts. We believe that the
7 field rules are designed so that if the wells are drilled on
8 a standard basis that the correlative rights of all interest
9 holders, not just Barton and Latham or Southern Union, are
10 protected.

11 We believe that there is only one well, an infield
12 well, in Section 20, that in any way has any effect on the
13 correlative rights of Barton and Latham or Shell or any of the
14 interest holders in Unit A. That is an infield well that was
15 properly drilled in accordance with secondary recovery in this
16 particular area.

17 According to the general rules there is no necessarily
18 injurious result to the Unit A from the drilling of a standard
19 location by Southern Union in P of 19, nor is there damage by
20 the drilling of the McGuffin Well in Unit D of Section 29.
21 These are standard locations and the drilling in Unit H as
22 requested by Barton and Latham and in the standard location
23 at Unit B would ultimately protect all of the correlative
24 rights of any parties involved.

25 Now that is the basic position from which we start

1 and posed on this are some difficulties which we must agree
2 exist. We've got what we call a postulated permeability
3 barrier that runs to the west of our proposed pooling unit.
4 There is no question, according to all of the testimony before
5 the Commissions today, there is no question that development
6 to the west of that is economic waste in no uncertain terms.

7 Now we would take great dispute with Mr. Ahlen's
8 testimony as it relates to Unit G of Section 30. We do not
9 believe that either H or B should be required to combine with
10 a known loser. Unit G is not a producing well. There is oil
11 but it is not a producing well.

12 The Commissioners will recall that in the last
13 testimony before the hearing officer, perhaps at that time
14 everyone was more generous but there was a general consensus
15 that both geologically and every other way, combining Unit
16 A with either B or H does some injury and dilutes the interests
17 of either Barton and Latham or Southern Union Gas and there is
18 no way for us to get around that, Mr. Commissioners. If you
19 combine A and H you can make an orthodox pool and you damage
20 the interest of the owners of B. If you combine it the other
21 way you damage H, you dilute their interest.

22 The question then, in view of damage either way,
23 what must this Commission do and we have one answer for that.
24 You must follow the field rules and drill in the orthodox
25 location, drill and pool the north half of Unit A and drill

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1 in Unit B and drill in Unit A, A and H. Either of these will
2 ultimately protect the rights.

3 There are other solutions to this problem. It hasn't
4 been mentioned today but one of the solutions which was
5 rejected by the Commission was forty-acre spacing. Everybody
6 here drills a well in each unit, A, H and B and everybody is
7 protected but in our opinion you have committed economic
8 waste and contrary to the law you have drilled one more well
9 than actually would be necessary.

10 There are some other alternatives that the Commission
11 has in its power and I'll mention them for the purpose of
12 showing what I believe the Commission has the power to do of
13 pooling all of the units, A, H and B. It is a dilution but
14 it is probably less of a dilution than any of the other argu-
15 ments that we have.

16 Now imposed on us in this particular case is the
17 problem of what we do in regard to protecting the correlative
18 rights of the interest holders in Unit B and we don't believe
19 the order that has been entered gives any consideration to
20 that question. We believe that the interest holders in Unit B
21 have been denied the right to produce the oil under that
22 unit, denied by a decision that is presently before this
23 Commission.

24 We point out to the Commission that they must choose
25 the geological data on which they are going to base their

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1 decision. There is a direct conflict in that data and what
2 you decide about that in a large part will govern what the
3 Commission does in this particular case.

4 We would call to the Commission's attention the
5 case that I previously cited and the crux of our argument,
6 the whole point of our argument, is that the Commission cannot
7 legally, lawfully, combine and pool non-productive with pro-
8 ductive land. I don't think this Commission can legally pool
9 Unit B with Unit G. I don't think this Commission can legally
10 pool Unit B with Unit C.

11 Now where do we go from there; where do we go to
12 get out of this kind of argument? We can validly take the
13 other half of it. I don't think that this Commission can
14 validly require the pooling of G and H. I think that that
15 would be the same problem.

16 I would read just a short paragraph from the case
17 that I cited you. (Reading.) This State's Oil and Gas Con-
18 servation statutes require that the evidence show the area for
19 which drilling and spacing units are established must be under-
20 lain by the common source of supply. The Commission has no
21 authority to include a non-productive area in a ten-acre
22 drilling and spacing unit. (End of reading.)

23 That's the basic law as it exists in Oklahoma today,
24 as of 1976, and I would argue that that is our law here today.

25 My answer to the dilemma that the Commission is faced

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1 with is following your rules, following the orthodox pattern
2 of development of the fields and thus when you do that in the
3 long run you protect the correlative rights of all of the
4 parties involved.

5 Thank you very much for hearing our argument and
6 during the holiday season we appreciate the time you have
7 taken, it has been as long as it was before. I don't know how
8 we do it.

9 MR. RAMEY: Mr. Stevens?

10 Before we start, did either of the attorneys offer
11 their exhibits?

12 MR. CATON: I offered mine. You did not rule on it,
13 Commissioner.

14 MR. RAMEY: We will accept your exhibits.

15 (THEREUPON, Southern Union Exhibits One
16 through Seven were admitted into evidence.)

17 MR. STEVENS: I did not so offer and I would offer
18 these.

19 MR. CATON: No objection.

20 MR. RAMEY: His exhibits will be accepted also.

21 MR. STEVENS: Thank you.

22 (THEREUPON, Barton and Latham Exhibits One
23 through Fourteen were admitted into evidence.)

24 MR. STEVENS: Mr. Commissioners, we didn't go into
25 the merits of forty-acre versus eighty-acre spacing much. I

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1 think it was probably stipulated by Southern Union and they
2 agreed to drill an orthodox in Unit A and Unit B. Therefore,
3 I'm not going to argue it, however, we have incorporated the
4 evidence in that hearing in this hearing and I would refer you
5 back to it to determine the merits of eighty-acre spacing
6 versus forty-acre spacing in this area.

7 A point made by opposing counsel and his witness
8 was, only one well is off pattern surrounding this acreage.
9 This is not true. The well you spoke of is in Unit M, Section
10 20, but also another well is off pattern and offsets this
11 acreage, Unit E of Section 29. So any contention that we've
12 effectively got eighty-acre spacing except for one well, one
13 well is specious in that respect. In addition, most of the
14 other two sections to the east are drilled on forty so we
15 don't think that's much of an argument.

16 We had the situation where Southern Union Production
17 Company, as shown in Exhibit Number Two of Latham and Barton,
18 owns seventy-eight percent interest in the west half of the
19 northeast. Shell owns twenty-one percent. I think the evi-
20 dence showed, I won't guarantee it, that Shell's interest is
21 in the northwest of the northeast of Unit B and a logical
22 corollary of that is Southern Union owns all of the leases on
23 all of the acres in Unit G. Perhaps that's not quite true
24 but from the evidence it certainly is substantially true. Yet
25 they don't want to pool it with anyone. They don't want to

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1 pool it with Unit B to the north, they even stated that it
2 would be unfair to pool it with Unit H, Latham and Barton's
3 to the east.

4 My only statement is: If there is commercial oil
5 there and that's an unknown quantity, then that will never be
6 recovered to the detriment of the correlative rights of the
7 owners in that thirty-acre tract. Conversely, if Southern
8 Union Supply Company's request is granted and as Mr. Caton
9 said, he said that the Commission can't validly pool Units G
10 and H, that is the Latham and Barton H and the Southern Union
11 G. If you can't pool it, you can't drill it, if you can't
12 drill it what happens to the correlative rights of the owners
13 in Unit H? Mr. Caton didn't give us an answer to that.

14 So we are coming back to two aspects here really,
15 one is the geology of this area. As pointed out it is con-
16 flicting. To point out, Mr. Caton believes his expert witness
17 and I believe mine but it is up to the Commission to decide
18 that, we have done all we can there. But one factor is dif-
19 ferent from before, Southern Union owns no interest in the
20 east half of the northeast. They own all of the leased
21 interests presumably, in the west half of the northeast. I
22 think that is the other aspect the Commission should consider.
23 To force Latham and Barton to share their lease rights in the
24 northeast of the northeast, obviously the best location, with
25 the rights owned by Southern Union in the northwest of the

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1 the northeast, Unit D, which certainly is controversial as
2 to how good it is, is a miscarriage of justice to Latham and
3 Barton and impossible for any other working interest owner
4 who doesn't have an interest in Unit B of that acreage.

5 With those two considerations in mind, obviously
6 I think the evidence shows that the unit should be run north-
7 south and Latham and Barton shouldn't be forced to pool with
8 Southern Union in the west half of the northeast.

9 Only one other factor here I think is worth talking
10 about, again with the problem of non-productive versus
11 productive reserves, particularly in Unit G. We have gone
12 through this but basically Mr. Ahlen has stated the entire
13 Section 30 is underlain by oil. That would be, in his
14 opinion, any place you drill there it would be productive.
15 There is a vast difference between what is commercially pro-
16 ductive and what is productive. His line is drawn on com-
17 mercial limits but not on productivity. This Commission has
18 always granted pooling of acreage that may or may not be
19 productive. Especially the rule of reason applies here.
20 Nobody knows until a well is drilled, nobody knows about that
21 BTA Well in Unit G to this day, will it be commercially pro-
22 ductive today at eleven fifteen a barrel as opposed to two
23 dollars and twenty cents a barrel as it was in the sixties
24 somewhere? On that basis we feel the Commission should
25 certainly rule in favor of the ownership of the tracts in-

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1 involved and run these units north-south, granting the unorthodox
2 location and, in particular and of primary importance, requiring
3 one of the other parties here to drill that well in the north-
4 east of the northeast of Unit A of Section 30 to protect those
5 correlative rights and to stop the drainage coming out from
6 under that tract in the offsetting wells nearby.

7 Thank you for your time.

8 MR. RAMEY: Thank you.

9 I have a Mailgram from the mineral and royalty
10 owners of the northeast quarter of Section 30, Township 9
11 South, Range 33 East, Lea County, New Mexico. (Reading.) In
12 regards to Commission Order R-5579, please be advised that we
13 fully support Latham and Barton in their plan to drill Cash
14 Well No. 1 located in the northeast quarter of the northeast
15 quarter of said section and to be dedicated to a proration unit
16 comprising the east half of the northeast quarter. Until said
17 well is drilled and producing my correlative rights from
18 drainage from offset wells are not being fully protected.
19 Latham and Barton are obligated under the terms of our lease
20 agreement to prevent drainage by fully developing the property.
21 It seems to me that the appeal de novo of Order R-5579 is
22 causing undue delay, waste, and drainage and I support the
23 Commission in its efforts to reinstate Order R-5579. Very
24 truly yours, Jack W. Cash. (End of reading.)

25 Further, I think Mr. Arnold and I can probably reach

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1 a decision on the first three cases, probably within twenty-
2 four hours. It may take a little longer in Case 6112.

3 MR. GROEBLI: Mr. Commissioner, may I comment? I
4 made a two thousand mile trip.

5 My name is John Groebli, G-r-o-e-b-l-i.

6 I'm concerned about what I heard here today and I
7 was alerted to the information. I happen to own a fourth of
8 the so-called Unit B and it seems like I'm hanging out in the
9 breeze and my wife suggested rather strongly that I come back
10 here and take time off and do so and see about the matter.
11 From the datum I have, what I have gotten here today, I still
12 feel the same way that if Unit B is not included in that pool
13 in a horizontal basin, we've been had. We are not big at goat
14 raising and we are not big in other endeavors in this area but
15 we have had this property a long time and we believe it would
16 be fair to go to the A-B combination rather than up and down,
17 A-H. There were suggestions, I think perhaps directly or
18 indirectly by Mr. Stevens and Mr. Ahlen, that those people in
19 Unit B could go ahead and drill for fun and hope that they
20 might find something, but the overall evidence seems to be
21 that there is very little chance of getting anything out of
22 there and I really think our rights will be damaged severely
23 if that horizontal arrangement is allowed to come to pass.

24 I can certainly understand Mr. Barton's and Mr.
25 Latham's position since the data that I have read indicates

1 that they have a hundred percent control of the horizontal
2 eighty acres. It would be very nice for them to do so.

3 MR. STEVENS: Excuse me, do you mean vertical?

4 MR. GROEBLI: Vertical, I'm sorry, yes. Yet if it
5 goes A-B it seems to me that everybody wins at that, including
6 the Swiss brokers, both Southern Union and Latham and Barton
7 have representation in that too.

8 I don't know how I can make a case, certainly I'm
9 not qualified in law nor qualified in geology of the kind to
10 influence you but I can hopefully speak or appeal to you as a
11 person who has specific rights and I don't want to see them
12 overrun or ignored or drained by going the vertical route. I
13 can see no possibility of us joining in a B and a C basis or
14 a B and a G basis. We will have been had, frankly, and that
15 would be the end of our story.

16 I don't know that we want to contribute our mineral
17 rights but I think if Barton and Latham were holding them we
18 would be giving our oil to them whether we wanted to or not,
19 without a compensation. As I understand, the oil flows and
20 it will probably flow toward A and we will be making a gift to
21 them and I'm sure they would appreciate it but we wouldn't.

22 There are other owners in that area, I'm sure they
23 feel equally as strong as I do but perhaps they were unable
24 to come today.

25 The second point relative to representing our own

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1 interest and from what I have observed is that I assume that
2 the Commission takes into account the relative capability of the
3 companies that are trying to develop that area and frankly I
4 feel very comfortable with Southern Union from what I have
5 heard of their track record today and their capabilities,
6 nothing personal against Mr. Barton and Mr. Latham but I think
7 the other expertise is on a greater scale than Latham's
8 standpoint. So for whatever it is worth, I put my two cents
9 in, or ten acres, or whatever it is, and hope that it goes to
10 A and B.

11 I think that Exhibit Ten is probably one of the most
12 interesting I have seen today. I have drawn a few lines
13 before on maps and if you look at Exhibit Ten and extend the
14 circles that Mr. Ahlen so graciously prepared there you can't
15 help but loop in almost on a target-like basis Unit B with
16 Unit A to get the highest production. He didn't draw his
17 hundred-barrel line and seventy-five-barrel line much beyond
18 the boundary of the Latham and Barton tract but if you extend
19 it and go up into Section 19 it seems to me it would make a
20 perfect circle and would produce more oil.

21 I like that one, Mr. Ahlen.

22 MR. RAMEY: Thank you, Mr. Groebli.

23 MR. STEVENS: Mr. Groebli, did I understand that you
24 weren't willing to take your chances on wells being drilled
25 in Unit B?

1 MR. GROEBLI: Pardon me.

2 MR. STEVENS: As I understand it, earlier in your
3 conversation you didn't want to take your chances on wells
4 being drilled in Unit B?

5 MR. GROEBLI: Well, if it combined B and the one
6 below it, or B and the one to the west of it, it seems to me
7 that from the data that has been presented here today that the
8 chances are pretty slim. Just a dry well in one case and a
9 non-producing well on the west and south boundary of the
10 Unit B, that's pretty hard evidence to a lay person. It says,
11 well, why should I go there and join with those people?

12 MR. STEVENS: But do you consider that Unit B will
13 make a good well or not from your understanding here?

14 MR. GROEBLI: From my understanding, yes, it seems
15 to me that it would be desirable and I understand that is the
16 kosher way to do it according to the ground rules in New
17 Mexico.

18 MR. STEVENS: According to Southern Union's con-
19 tention?

20 MR. GROEBLI: No, according to what I understood
21 here today, you drill on the Unit B if you have the eighty-
22 acre pool in a horizontal way.

23 MR. STEVENS: Do you have any interest in Unit G?

24 MR. GROEBLI: B.

25 MR. STEVENS: Do you have any interest in Unit G?

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1 MR. GROEBLI: C?

2 MR. STEVENS: Yes, sir.

3 MR. GROEBLI: None.

4 MR. STEVENS: Do you have any interest in Unit A?

5 MR. GROEBLI: None.

6 MR. STEVENS: No further questions.

7 MR. GROEBLI: You mean ownership interest?

8 MR. STEVENS: Yes, sir.

9 MR. GROEBLI: My oil will be into A if that were to

10 take place.

11 MR. RAMEY: The Commission will take the case under

12 advisement, or the cases under advisement, and the hearing is

13 adjourned.

14 (THEREUPON, the hearing was adjourned.)

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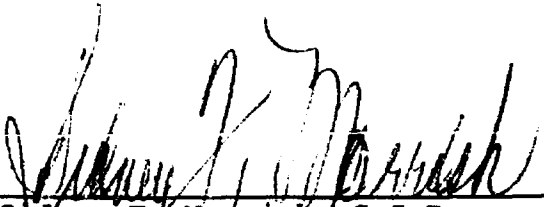
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

Case 6017
 6035, 6036
 6112
 Exh. 5, 7, 1
 LaThun & Benton

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF SOUTHERN UNION SUPPLY COMPANY
FOR COMPULSORY POOLING OF ITS WELL
TO BE DRILLED IN Section 30,
Township 9 South, Range 33 East, N.M.P.M.
LEA COUNTY, NEW MEXICO.

AMENDED
APPLICATION

Comes now Southern Union Supply Company, by its undersigned attorneys, as provided by Section 65-3-14, New Mexico Statutes, 1953, as amended, and hereby makes application to the Oil Conservation Commission of New Mexico for an order pooling all the mineral interest in and under the N/2NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M. Lea County, New Mexico, from the surface to the base of the San Andres formation, and in support thereof Applicant would show:

1. Applicant is the owner of the right to drill an oil or gas well and develop part of the following described acreage: N/2NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M. Lea County, New Mexico and proposes to drill a well to the San Andres Formation at a standard location thereon being 600 feet from the North line and 1850 feet from the East line of said Section and seeks to dedicate the said N/2NE/4 of said Section 30 to the well. The location is a standard location within the variance permitted.

2. Applicant has requested the owner of an unleased mineral interest in a 2.5 acre tract in said N/2NE/4 of Section 30 to lease said interest to Applicant or to voluntarily agree to pool said interest and acreage and join with Applicant in the drilling of the above proposed well. Further, the Applicant has also requested the owner of the oil and gas leases covering six small tracts also in the N/2NE/4 of Section 30, and constituting a total of 18.75 acres, to voluntarily agree to the pooling of said interest and acreage and join with Applicant in the drilling of said well proposed in Paragraph 1 above. The above mentioned 2.5 acre tract is presently unleased and neither the owner of that tract nor the owner of the oil and gas leasehold interest in the six other tracts, totaling 18.75 acres, has voluntarily agreed to pool or join in the drilling of the

well Proposed by Applicant.

3. Applicant requests that it be designated Operator of the pooled unit requested above.


4. For reasons stated in Paragraph 2 above, Applicant has been unable to obtain agreement for the pooling of unpooled interest indicated in said Paragraph 2, and in order to avoid the drilling of unnecessary wells to protect correlative rights, and to prevent waste, the Commission should pool all interest in the spacing or proration unit as a unit.

5. The risk and expense of drilling and completing the proposed well is great and if any owners of any other possible interest in the N/2NE/4 of Section 30, Township 9 South, Range 33 East do not choose to pay their share of the cost of drilling and completion, Applicant should be allowed a reasonable charge for the supervision and a charge for the risk involved in addition to recovery of the actual cost of drilling and completing the well.

Wherefore, Applicant respectfully requests the Commission set this matter for hearing before the Commission's duly appointed examiner on September 14, 1977, and that after notice and hearing as required by law the Commission enter its order pooling all interests from the surface to the base of the San Andres formation underlying the N/2NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and designate Applicant Operator of pooled unit, together with provision for Applicant to recover its cost out of production, including a risk factor to be determined by the Commission, with provisions for the payment of operating costs and costs of supervision out of production to be allocated among the owners as their interest may be determined and for further orders as may be proper in the premises.

Respectfully submitted,

TANSEY, ROSEBROUGH, ROBERTS & GERDING, P.C.
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By 
Byron Caton, Attorney for Southern Union Supply
Company

proof of Mr. Spradlin's agency for the defendant, and that his testimony alone was insufficient as such proof. The rule that the "declarations" of an agent are not admissible to prove his agency does not apply to his testimony. In addition to *Benham v. Selected Investments Corp.*, Okl., 313 P.2d 489, 493 (cited by plaintiff) see *Munn v. Mid-Continent Motor Securities Co.*, 126 Okl. 241, 259 P. 249, and 2 Am.Jur., "Agency", secs. 445, 446.

In accord with the foregoing, the trial court's judgment overruling defendant's motion for a new trial, appealed from herein, is reversed; and this cause is remanded to said court with instructions to sustain said motion.

WILLIAMS, C. J., and WELCH, DAVISON, HALLEY, JOHNSON, IRWIN and BERRY, JJ., concur.

JACKSON, J., concurs in result.



Application of CONTINENTAL OIL COMPANY for an Order Amending Corporation Commission Order No. 38493 Establishing Drilling and Spacing Units for the Third Bromide Common Source of Supply—Southwest Sandy Creek Pool, Murray County, Oklahoma.

CONTINENTAL OIL COMPANY,
Plaintiff in Error,
v.

The CORPORATION COMMISSION of the
State of Oklahoma, Defendant in
Error.

No. 39139.

Supreme Court of Oklahoma.

May 29, 1962.

As Corrected Oct. 22, 1962.

Rehearing Denied Oct. 23, 1962.

Oil company's appeal from State Corporation Commission order denying its ap-

plication to amend or modify former order establishing spacing and drilling units. The Supreme Court, Irwin, J., held that evidence on oil company's application for change in drilling and spacing units so as to permit it to drill another well in order to prevent waste and secure greatest ultimate recovery of oil and gas and to protect the correlative rights of all owners of economic interests was such as to sustain its burden of proof.

Reversed.

1. Mines and Minerals —92.32

Legislature intended that orders establishing well spacing and drilling units could and should be modified when modification is necessary to conserve oil or gas or bring about fair and equitable production. 52 O.S.1961 § 87.1(a).

2. Mines and Minerals —92.40

Corporation Commission has wide discretion in performance of its statutory duties with respect to establishing and modifying well spacing and drilling units, and Supreme Court may not substitute its judgment on disputed questions of fact for that of Commission unless findings of Commission are not supported by law and substantial evidence.

3. Mines and Minerals —92.32

When application is made to vacate, amend, or modify spacing or well drilling unit established by former order of Corporation Commission which has become final, Commission is without authority to entertain or grant the application in absence of showing of substantial change of conditions in area since former order was made or other change, or factual situation specified in statute. 52 O.S.1961 § 87.1(a).

4. Mines and Minerals —92.38

Evidence on oil company's application to change drilling and spacing units established by former final order so as to permit it to drill another well in order to prevent waste and secure greatest ultimate recovery of oil and gas and to protect correlative rights of all owners of economic inter-

ests was such as to sustain its burden of proof and denial of application was error. 52 O.S.1961 § 87.1(a).

Syllabus by the Court

An application to amend or modify a former order of the State Corporation Commission establishing well spacing and drilling units should be granted where the evidence discloses a substantial change in the knowledge of the conditions existing in the area since the original order was entered and modification or amendment of the former order is necessary to prevent or to assist in preventing waste or to protect or assist in protecting the correlative rights of the interested parties.

Continental Oil Company appeals from an order of the State Corporation Commission which denied its application to amend or modify a former order establishing well spacing and drilling units. Order reversed.

John W. Wolfe, Richard R. Linn, Mainard Kennerly, John Wimbish, Oklahoma City, for plaintiff in error, Continental Oil Co.

Robinson, Shipp, Robertson & Barnes, by T. Murray Robinson, J. Stanley Gill, Oklahoma City, for Van-Grisso Oil Co.

Ferrill H. Rogers, Conservation Atty., Oklahoma City, for defendant in error, Corporation Commission.

IRWIN, Justice.

On December 28, 1958, the Commission made and entered Order No. 38493, which established 20 acre drilling and spacing units for the development of the Third Bromide common source of supply underlying certain lands in Murray County. Three wells had been completed before the order was entered. (1) Van-Grisso-Billesbach No. 1, located in the center of the SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 34, and designated as the permitted well for the drilling and spacing unit for the E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 34; (2) Continental-Greer No. 1,

located in the center of the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Sec. 34, and designated as the permitted well for the drilling and spacing unit for the E $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Sec. 34; and (3) Continental-Greer No. 2, located in the center of the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 34, and designated as the permitted well for the E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Sec. 34. It is to be noted these three wells form a triangular pattern.

Thereafter, Continental filed its application to reassign the Continental Greer Well No. 2, as the permitted well for the W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ instead of the permitted well for the E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ as prescribed by Order No. 38493. If such application were granted, it would permit Continental to drill a well in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, which would be the permitted well for the E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$. The grounds for the application for an order amending Order No. 39493 are that such amended order would prevent waste and secure the greatest ultimate recovery of oil and gas and would protect the correlative rights of all owners of economic interests.

The application for an order amending Spacing Order No. 38493, was referred to a trial examiner for the purpose of taking testimony and reporting to the Commission. After hearing all the evidence, the trial examiner took the matter under advisement and thereafter filed his report with the Commission recommending that the application be granted.

Van-Grisso Oil Company filed its exceptions to the report of the trial examiner and the exceptions were argued to the Commission. The Commission, inter alia, found:

"4. That no sufficient change in the information available as to the structure has been developed since said Order No. 38493 was entered to justify amending said order.

"5. That taking into consideration all of the evidence, facts and circumstances in this cause, and in the interest of securing the greatest ultimate recovery of oil from the pool, the prevention of waste and the protection of

correlative rights, this application should be denied."

Continental Oil Company perfected its appeal from the Commission's order denying its application for an order amending spacing Order No. 38493.

CONTENTIONS

Van-Grisso does not question the authority of the Commission to modify the prior unappealed Order No. 38493, but contends that Continental has failed to produce credible and substantial evidence showing a substantial change of condition in the area sufficient to authorize and require the Commission to modify or change the original order.

Continental contends that it is the duty of the Commission to amend a prior spacing order so as to prevent underground waste and so as to protect correlative rights from confiscation where the uncontroverted evidence of properly qualified sworn witnesses shows that the information gained in the drilling of wells subsequent to the entry of such order demonstrates changes in the geological conditions thought to exist when the spacing order was entered; that underground waste and the destruction of correlative rights can be prevented without interfering in any respect with the legitimate interests of any person if the application were approved.

FACTS

The report of the trial examiner, who recommended the application be granted, contained, inter alia, the following findings:

"* * * that subsequent to Order No. 38493, the following wells have been drilled: Continental Oil Company's No. 1 Dalley, located in the SW/4 of the NE/4 of the SW/4 of Section 34, Continental Oil Company's No. 3 Greer, located in the SW/4 of the NW/4 of the SE/4 of Section 34, Continental Oil Company's No. 4 Greer, located in the SW/4 of the SW/4 of the SE/4 of Section 34, the Pan American Petroleum Corporation's No. 1 West, located in the NE/4 of the NE/4

of the NW/4 of Section 3, Township 1 South, Range 2 East; that it is the testimony in this cause that by the drilling of these additional wells, additional geological information has been obtained which indicates a change in the knowledge of the conditions as compared to that thought to exist at the time Order No. 38493 was entered; that with the drilling of the additional wells, additional control has been gained and the top of the structure now appears to be located within the E/2 of the SE/4 of the SW/4 of Section 34; that all wells in this area have a common water table and are producing from the Third Bromide Sand common source of supply except for the two dry holes which are Continental's No. 1 Dalley, located in the SW/4 of the NE/4 of the SW/4, and Continental's No. 3 Greer, located in the SW/4 of the NW/4 of the SE/4 of Section 34; that said No. 1 Dalley Well was structurally in position to produce, however the top part of the sand section was not developed and was not porous; that said Continental's No. 3 Greer was structurally low and near the water table and had shaly conditions in the sand; that the productive area lying west of the SE/4 of the SW/4 of Section 34 has been sharply limited by the oil-water contact line; that the limits of the reservoir to the North have been established by the failure of the sand to develop and the existence of two faults.

"5. That it is the testimony in this cause that if Continental Oil Company is permitted to assign the well located in the approximate center of the SE/4 of the SW/4 as the permitted well for the unit consisting of the W/2 of the SE/4 of the SW/4 rather than the E/2 of the SE/4 of the SW/4 and then is permitted to drill a well within the permitted location, which would be within the approximate center of the North-east 10 acres of the 40-acre tract de-

scribed as the SE/4 of the SW/4 of Section 34, then said well would encounter approximately 80 feet-plus of productive sand; that it is the testimony in this cause that if the applicant is not permitted to drill a well within the approximate center of the NE/4 of the SE/4 of the SW/4 of Section 34, an amount of recoverable oil underlying the E/2 of the SE/4 of the SW/4 would not be recovered by the existing wells drilled and completed in the Third Bromide Sand, as the high part of the Third Bromide Sand structure appears to be in the E/2 of the SE/4 of the SW/4 of Section 34.

"6. That there is a conflict in testimony as to the exact location of Continental's No. 2 Greer Well, but the evidence indicates that said well is in the approximate center of the SE/4 of the SW/4 of Section 34.

"7. That due to the change in the knowledge of conditions and in the interest of securing the greatest ultimate recovery of oil from the pool, the prevention of waste and the protection of correlative rights, this application should be granted.

"8. So, taking into consideration all of the evidence, facts and circumstances in this cause, this application should be granted and an order should be made permitting and authorizing Continental Oil Company to assign its Greer No. 2 Well, located in the center of the SE/4 of the SW/4 of Section 34, as the well for the unit described as the W/2 of the SE/4 of the SW/4 of Section 34, and that it should be permitted and authorized to drill a well at the permitted location on the unit described as the E/2 of the SE/4 of the SW/4 of Section 34, and that Order No. 38493 should be amended to so show."

The above findings were based upon the testimony submitted in behalf of Continental. Neither Van-Grisso nor the Commission submitted evidence. Robert W. Allen, assistant Division Geologist for Contin-

tal, who testified at the original hearing, qualified as an expert and his testimony was to the effect that: at the time of the original hearing, the best information available at that time indicated the highest portion of the reservoir was to the north; since the original hearing, two direct offsets to Van-Grisso's Billesbach No. 1 have been drilled, Continental Dalley No. 1, to the West and Continental Greer No. 3, to the East; that both of these holes were dry. That Dalley No. 1 is structurally in position to produce, but the top of the sand is not developed and the sand is not porous; that Greer No. 3 is structurally low; there are two faults extending east and west to the immediate north of Billesbach No. 1 as disclosed by the drilling of Dalley No. 1 and Greer No. 3; dipmeter tests on Greer No. 1 showed a slight dip to the southeast; dipmeter tests on Greer No. 2 showed a dip to the west; the Greer Fault which lies to the south and east of all the wells drilled is shown on the structure map used at the first hearing; Billesbach No. 1 has 40 feet of net effective pay; Greer No. 1 has 64 feet of net effective pay and Greer No. 2, 44 feet of net effective pay. From this information, Allen concluded that the productive area under Billesbach No. 1 is limited to 6½ acres; that the producing zone is limited to the southeast by the Greer Fault; to the North by the two faults extending east and west and to the northeast and southwest by oil-water contact; and that a well drilled in the center of the SW of the SE of the SW would have from twenty to twenty-five feet of productive sand.

Allen further testified that from the information gained from all seven of the wells, he prepared the structure-isopach map introduced in evidence; that the map was drawn in accordance with good geological practices on the basis of all available information; that the highest portion of the reservoir is in the E½ of the SE of the SW of Sec. 34, instead of to the north as originally interpreted; that by his interpretation and by projection, a new contour, showing 80 feet of effective pay sand cover-

ing most of the E $\frac{1}{2}$ of the SE of the SW is now shown; that there will be 80 feet of productive sand within the new contour; that such sand will be topped 30 feet higher than in the other wells; that in his opinion a well drilled in the NE $\frac{1}{2}$ of the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ would in no way affect Billesbach No. 1; that such well would recover oil not recoverable in any well then drilled because the top of the effective producing sand would be thirty feet higher than in the other wells.

Donald B. Pray, Production Engineer for Continental, qualified as an expert, testified that he heard the testimony of Allen and agreed with Allen's conclusions; that figuring Billesbach No. 1 and 6 $\frac{1}{2}$ acres of effective production under it, such well would have 86,750 barrels of recoverable oil and by using ten acres of effective production, there would be 133,500 barrels of recoverable oil; That without further development within the perimeter of the three wells, Billesbach No. 1 would recover 201,500 barrels of oil; That if the exception is granted and the offset well is drilled, Billesbach No. 1 would recover 164,000 barrels of oil; that if the exception is not granted there would be 55,000 barrels of recoverable oil left in the reservoir.

Pray also testified the dipmeter test on Greer No. 2 shows a dip to the west and the map was contoured on the best evidence available; that a well drilled in the SW SE SW would be 15 feet lower structurally than Billesbach No. 1 and would not recover as much oil and would not protect the correlative rights of the owners in the NE SE SW but that it would make a commercial producer; that Continental owns 60 acres of the estimated 80 acres underlain with the Third Bromide productive sand.

CONCLUSIONS

It must be borne in mind that this is not a proceeding wherein Continental Oil Company seeks an original order establishing well spacing and drilling units, but, rather is one wherein Continental seeks to modify a previous order which was made upon ap-

plication of, and evidence submitted by the Continental Oil Company.

Title 52 O.S.1961 § 87.1(e) empowers the Commission to establish well spacing and drilling units to prevent or to assist in preventing waste or to protect or assist in protecting the correlative rights of interested parties.

[1] The Legislature intended and contemplated that orders establishing well spacing and drilling units could and should be modified when it is shown that modification is necessary in order to conserve oil or gas or bring about a fair and equitable production of the oil or gas. See Application of Bennett (Vierson v. Bennett) (Okl.), 353 P.2d 114.

[2] The Commission has a wide discretion in the performance of its statutory duties and this court may not substitute its judgment on disputed questions of fact for that of the Commission, unless the findings of the Commission are not supported by the law and substantial evidence. See Shell Oil Company v. Davidor & Davidor, (Okl.), 315 P.2d 259.

[3] When an application is made to vacate, amend or modify a spacing and well drilling unit established by a former order of the Commission, which has become final, the Commission is without authority to entertain or grant such application in the absence of a showing of a substantial change of condition in the area since the former order was made or other change of factual situations specified in the statute. See Wood Oil Company v. Corporation Commission, 205 Okl. 534, 239 P.2d 1021.

In the instant proceeding before the Commission, the burden was upon Continental, which filed the application to amend the original order, to show a substantial change in the knowledge of the conditions existing in the area since the former order was made or other change of factual situations specified in the statute.

[4] We will now review the evidence to determine if the order denying the application to amend should be sustained under the

rules above set forth. As heretofore stated, the only evidence with reference to additional geological information and change of knowledge of the conditions existing was that of Continental. Although it was admitted that the opinions expressed in behalf of Continental were "projected interpretations". There is no evidence refuting or contradicting these "projected interpretations".

When we examine the evidence, we find at the time the original order was entered only three wells had been drilled. These wells formed a triangle with the Billesbach No. 1 well to the north, which had 40 feet of sand; Greer No. 1 to the southeast, which had 64 feet of sand; and Greer No. 2 to the southwest, which had 44 feet of sand. There was a known fault to the south and east of these wells. From this information, it was believed that the pool extended to the north and east and the highest point in the pool was to the northeast when the original order was entered. The original order was responsive to the then available information.

Subsequent to the order, a well offsetting the Billesbach No. 1 to the west and a well offsetting it to the east were drilled. Both were dry. The east offset encountered salt water and the west offset showed the sand to be undeveloped and not porous. Two faults were encountered which were shown to extend east and west and to the immediate north of the Billesbach No. 1.

Dipmeter tests showed a dip to the south and east from Greer No. 1 and a dip to the west from Greer No. 2.

In the opinion of the geologist and the engineer, the pool did not extend to the north as originally believed but was cut off by the faults and water contact, and the top of the structure has now been established as being in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of the section. The geologist was of the opinion that the Billesbach unit had only 6 $\frac{1}{2}$ acres of productive oil underlying said unit instead of 20 acres, as was believed when the original order was entered.

The opinion evidence with reference to the prevention of waste and the correlative

rights of the parties disclose that the Billesbach unit has 6 $\frac{1}{2}$ acres of productive sand and is underlain with 86,750 barrels of recoverable oil; that if the unit has 10 acres of productive sand there would be 133,500 barrels of recoverable oil; that unless the application is granted, the well will recover 201,500 barrels of oil and there will be 55,000 barrels of recoverable oil left in the ground; that the Billesbach No. 1 will recover 164,000 barrels of oil if the application is granted. From the evidence submitted we can not conclude that these figures are not substantially correct.

In analyzing the evidence we find that the information obtained from drilling the additional wells subsequent to the entry of the original order, discloses that the geological structure of the pool is not as it was interpreted to be when the original order was made. There is substantial evidence from the additional information obtained that the common source of supply has been limited to the northwest by the dry hole drilled on the location west of the Billesbach unit and to the northeast by the dry hole drilled on the location east of the Billesbach unit, and on the west by the established oil-water contact line. There is also substantial evidence that the Billesbach unit is not underlain with as much productive Third Bronide Sand as it was mapped originally, and that the highest portion of the structure is located further south than originally mapped.

There is no evidence whatsoever that if the application is granted and Continental drills a well according to such application, that such well would interfere with the correlative rights of any interested owner. There is sufficient evidence, however, that if the application is not granted and the well is not drilled the correlative rights of all interested parties will not be protected and several thousand barrels of recoverable oil will be left in the ground.

We therefore hold that Continental sustained its burden of proof and the order denying the application to amend Order No. 38493 should be reversed.

We further conclude that Continental did make a proper record for review and we can not sustain the proposition that the cause should be dismissed for this reason.

This opinion shall not be construed as depriving the Commission of jurisdiction on further hearing to protect the correlative rights of persons affected by Order No. 38,403, or an order amending said Order, by regulating the amount of oil or gas that may be purchased from wells drilled in the area embraced by said Order or amended Order.

Order reversed.

WILLIAMS, C. J., BLACKBIRD, V. C. J., and HALLEY, JACKSON and BERRY, JJ., concur.

WELCH and JOHNSON, JJ., dissent.



SAFEGWAY STORES, INC., and the Travelers Insurance Company, Petitioners,

v.

Juanita M. EVANS and the State Industrial Court, Respondents.

No. 39932.

Supreme Court of Oklahoma.

Nov. 13, 1962.

An original proceeding was brought by employer and its insurance carrier to review an award of the State Industrial Court for death benefits. The Supreme Court, Jackson, J., held that evidence sustained finding that death of grocery clerk from cerebral hemorrhage after moving heavy cartons resulted from accidental injury arising out of and in course of employment.

Award sustained.

Halley, J., dissented.

1. Workmen's Compensation ⇨563

Injury resulting from strain constitutes accidental injury and is compensable where it occurs while employee is doing work in usual and ordinary manner, though nothing unusual occurs or happens to cause strain.

2. Workmen's Compensation ⇨1716

Question whether death of employee is result of accidental injury is question of fact in compensation proceeding. 85 O.S. 1961 § 22, subd. 7.

3. Workmen's Compensation ⇨1939

Where there is competent medical evidence in compensation proceeding that death resulted from accidental injury, Supreme Court will not disturb award of State Industrial Commission. 85 O.S. 1961 § 22, subd. 7.

4. Workmen's Compensation ⇨1535

Evidence sustained finding that death of grocery clerk from cerebral hemorrhage after moving heavy cartons resulted from accidental injury arising out of and in course of employment. 85 O.S. 1961 § 22, subd. 7.

Syllabus by the Court

Whether the death of an injured employee is the result of an accidental injury is a question of fact, and, where there is competent medical evidence that death resulted from the accidental injury, this court will not disturb an award made by the State Industrial Court based thereon.

Original proceeding brought by Safeway Stores, Inc., employer, and its insurance carrier, the Travelers Insurance Company, petitioners, to review an award of the State Industrial Court for death benefits made to Juanita M. Evans, claimant. Award sustained.

Sanders, McElroy & Whitten, Tulsa, for petitioners.

Bonds & Matthews, by Thomas R. Mason, A. Camp Bonds, Muskogee, Mac Q. Williamson, Atty. Gen., for respondents.

SOUTHERN UNION SUPPLY COMPANY
WELL COST ESTIMATE

Lease and Well No. Orthodox and/or Unorthodox Drill Site
 Location N-1/2 NW 1/4 Section 30. T-9-S. R. 33-E
 Field _____ County Lea State New Mexico
 Primary Target San Andres Depth 4500 Estimated Days 15
 (WC) (D) {80} {0WDD}

EQUIPMENT QUANTITY			TANGIBLE EQUIPMENT DESCRIPTION	EXPENDITURE COST		
Estimated		Actual		Estimated		Actual
Dry Hole	Producer			Dry Hole	Producer	
			Casing:			
500'			8-5/8" OD, 24#, K-55, St&c	578		
	4500		4-1/2" OD, 9.5#, K-55, St&c		15070	
			Tubing:			
	4450		2-3/8" OD, 4.7#, J-55, EUE		9200	
	4450'		3/4" Sucker rods		4100	
			Other Equipment:			
			Well Head			
			Casing Flange	1950		
			Tubing head & valves		3500	
			Tank battery & separator		15000	
			Bottom hole pump		1050	
			Pumping unit used		15000	
TOTAL TANGIBLES				5828	6620	

INTANGIBLE COST DESCRIPTION

Drilling Contract:						
Footage	4500	ft. @ \$ 9.25	/ft.	41625		
Daywork, w/D.P.	4	days @ \$ 2500	/day	10000		
Daywork, w/o D.P.		days @ \$	/day			
Completion Rig Costs	6	days @ \$ 900	/day		5400	
Other Rig Costs						
Drill Pipe Rental						
Tool and Equipment Rentals				500	2500	
Casing Crews, Tools and Tongs						
Fuel and Water				3000	700	
Bits and Coreheads						
Drilling Mud and Chemicals				6500		
Primary Casing Cementing Services and Materials				3300	13000	
Squeeze Cementing Services and Materials						
Acidizing and Fracturing					7000	
Open Hole Logging				4500		
Cased Hole Logging and Perforating					3500	
Coring, Core Analysis and Paleo.						
Mud Logger						
Drill Stem Tests						
Transportation				1000	1000	
Location Costs				5500		
Supervision				2500	2500	
Geologist				2500		
Miscellaneous Services				1200	1800	
Production Facilities Hook Up					5000	
				4398	5231	
TOTAL INTANGIBLES				86523	47631	
TOTAL ESTIMATED COST				92351	110551	

BY: R. G. Sharrock

202902

Chief Geologist

Date Spudded _____

Date December 22, 1977

Date Completed _____

Total Depth _____

- CASE 6030: Application of Burleson & Huff for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the SE/4 SE/4 of Section 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to be dedicated to its re-entered Smith Well No. 1 located in Unit P of said Section 4, or in the alternative, to a well to be drilled at a standard location thereon. Also to be considered will be the cost of re-entering and recompleting or of drilling and completing the unit well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in recompleting or drilling said well.
- CASE 6032: Application of Burleson & Huff for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the SW/4 SW/4 of Section 21, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to be dedicated to its re-entered Lanehart Well No. 1-Y located in Unit M of said Section 21, or, in the alternative, to a well to be drilled at a standard location thereon. Also to be considered will be the cost of re-entering and recompleting or of drilling and completing the unit well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in recompleting or drilling said well.
- CASE 6031: Application of Rex Alcorn for compulsory pooling and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 SW/4 of Section 35, Township 16 South, Range 37 East, West Knowles-Drinkard Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 2310 feet from the South line and 1980 feet from the West line of said Section 35. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6033: Application of Basin Fuels, Inc., for salt water disposal, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Mesaverde formation through the perforated interval from 1948 feet to 2755 feet in its Slick Well No. 1 located in Unit O of Section 7, Township 20 North, Range 5 West, Franciscan Lake-Mesaverde Pool, McKinley County, New Mexico.
- CASE 6034: Application of Flag-Redfern Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation through the perforated interval from 4941 feet to 5022 feet in its Bilbrey "51" Well No. 1 located in Unit A of Section 23, Township 9 South, Range 37 East, Sawyer-San Andres Pool, Lea County, New Mexico.
- CASE 6035: Application of Southern Union Supply Co., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the N/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6017: (Continued from August 31, 1977 Examiner Hearing)
- Application of E. L. Latham, Jr. and Roy G. Barton, Jr., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6036: Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for compulsory pooling of a standard or a non-standard oil proration unit and an unorthodox location, or in the alternative, 40-acre spacing, Lea County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests in the Flying M-San Andres Pool underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location for said pool within 200 feet of the center of the NE/4 NE/4 of said Section 30, or an order pooling only the NE/4 NE/4 of Section 30 to form a non-standard 40-acre unit to be dedicated to the aforesaid well. In the alternative, applicants seek the amendment of the Flying M-San Andres Pool Rules to provide for 40-acre spacing, and seek an order pooling the aforesaid NE/4 NE/4 of Section 30 as a standard unit for said pool to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling

**SOUTHERN UNION SUPPLY COMPANY
WELL COST ESTIMATE**

Lease and Well No. Susco #1 State
 Location 660' FSL & 660' FNL Section 19, T-9-S, R-33-E
 Field _____ County Lea State New Mexico
 Primary Target San Andres Depth 4450 Estimated Days 15
 (WC) (D) (50) (CHDD)

EQUIPMENT QUANTITY			TANGIBLE EQUIPMENT DESCRIPTION	EXPENDITURE COST		
Estimated		Actual		Estimated		Actual
Dry Hole	Producer			Dry Hole	Producer	
			Casing:			
375'			8-5/8" OD, 24#, K-55, St&C	2915		
	4500		4-1/2" OD, 9.5#, K-55, St&C		15070	21385
				Total	17985	
			Tubing:			
	4450		2-3/8" OD, 4.7#, J-55, EUE		9200	9350
	4450'		3/4" Sucker rods		3510	4050
			Other Equipment:			
			Well Head			
			Casing Flange	1950		
			Tubing head & valves		2500	
			Tank battery & separator		11000	60990
			Bottom hole pump		1050	
			Pumping unit used		8500	
			TOTAL TANGIBLES	4865	50930	95781

INTANGIBLE COST DESCRIPTION

Drilling Contract:						
Footage	4475	ft. @ \$ 7.75 /ft.		34680		42022
Daywork, w/D.P.	4	days @ \$ 2500 /day		10000		2544
Daywork, w/o D.P.		days @ \$ /day				
Completion Rig Costs	5	days @ \$ 900 /day			4500	4827
Other Rig Costs						
Drill Pipe Rental						
Tool and Equipment Rentals				500	1500	3285
Casing Crews, Tools and Tongs						
Fuel and Water				3500	700	3938
Bits and Coreheads						
Drilling Mud and Chemicals				4500		6178
Primary Casing Cementing Services and Materials				2700	8000	16130
Squeeze Cementing Services and Materials						
Acidizing and Fracturing					19000	4448
Open Hole Logging				4500		3971
Cased Hole Logging and Perforating					3500	2437
Coring, Core Analysis and Paleo.						
Mud Logger						
Drill Stem Tests						
Transportation				1000	1000	
Location Costs				4500		6242
Supervision				2500	1500	6004
Geologist				2500		
Miscellaneous						329
Production Facilities Hook Up						
Contingencies at 5%				3800	4530	
TOTAL INTANGIBLES				74680	44230	102255
TOTAL ESTIMATED COST				79545	95160	

BY: David J. Ahalt

Drilling Engineer

Date March 22, 1977

Actual Cost - \$198036 - 9/7/77

174705

198036

Date Spudded _____

Date Completed _____

Total Depth _____

[Handwritten Signature]
4/11/77

ROY G BARTON JR
PO BOX 978
HOBBS NM 88240

 **Mailgram**
western union



4-092178E356 12/22/77 ICS 1PMRNCZ CSP ABQA
2138762452 MGM TDRN LOS ANGELES CA 200 12-22 1005P EST

NEW MEXICO OIL CONSERVATION COMMISSION
STATE LAND OFFICE BLDG
SANTA FE NM 87501

3 22 1977

GENTLEMEN:

I AM A MINERAL AND ROYALTY OWNER IN THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 9 SOUTH, RANGE 33 EAST, LEA COUNTY NEW MEXICO. IN REGARDS TO COMMISSION ORDER #R-5579, PLEASE BE ADVISED THAT I FULLY SUPPORT THE EFFORTS OF LATHAM AND BARTON IN THEIR PLAN TO DRILL THE CASH WELL #1 LOCATED IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION TO BE DEDICATED TO A PRO RATION UNIT COMPRISING THE EAST HALF OF THE NORTHEAST QUARTER. UNTIL SAID WELL IS DRILLED AND PRODUCING, MY CORRELATIVE RIGHTS AS TO DRAINAGE BY OFFSET WELLS ARE NOT BEING FULLY PROTECTED. LATHAM AND BARTON ARE OBLIGATED UNDER THE TERMS OF OUR LEASE AGREEMENT TO PREVENT DRAINAGE BY FULLY DEVELOPING THE PROPERTY. IT WOULD SEEM TO ME THAT THE APPEAL DE NOVO OF ORDER #R-5579 IS CAUSING UNDUE DELAY, WASTE AND DRAINAGE. I WILL SUPPORT THE COMMISSION IN IT'S EFFORTS TO REINSTATE ORDER #R-5579. VERY TRULY YOURS

JACK W CASH

2216 EST

HGMC OMP MGM

Dockets Nos. 2-78 and 3-78 are tentatively set for hearing on January 18 and February 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - DECEMBER 27, 1977

OIL CONSERVATION COMMISSION - 9 A.M. - CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6017: (DE NOVO)

Application of E. L. Latham, Jr. and Roy G. Barton, Jr., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6035: (DE NOVO)

Application of Southern Union Supply Co., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the N/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6036: (DE NOVO)

Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for compulsory pooling of a standard or a non-standard oil proration unit and an unorthodox location, or in the alternative, 40-acre spacing, Lea County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests in the Flying M-San Andres Pool underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location for said pool within 200 feet of the center of the NE/4 NE/4 of said Section 30, or an order pooling only the NE/4 NE/4 of Section 30 to form a non-standard 40-acre unit to be dedicated to the aforesaid well. In the alternative, applicants seek the amendment of the Flying M-San Andres Pool Rules to provide for 40-acre spacing, and seek an order pooling the aforesaid NE/4 NE/4 of Section 30 as a standard unit for said pool to be dedicated to a well to be drilled at a standard location thereon.

Also to be considered in each of the above cases, will be the cost of drilling and completing the proposed well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of the applicant in each case as operator of the well and a charge for risk involved in drilling said well.

Upon application of Southern Union Supply Company, the above cases will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6112: Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for an order requiring Latham and Barton or Southern Union Supply Company to commence the drilling of a Flying M-San Andres well in Unit A of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico, on or before January 31, 1978; further, to require that all working interest income after payout of the aforesaid well be placed in escrow pending any subsequent appeal, or in the alternative to require the curtailment or shutting in of all wells within one half mile radius of the aforesaid Unit A pending completion of said well.

LAW OFFICES

TANSEY, ROSEBROUGH, ROBERTS & GERDING, P.C.

621 WEST ABBINGTON
FARMINGTON, NEW MEXICO 87401CHARLES M. TANSEY
HASKELL D. ROSEBROUGH
AUSTIN E. ROBERTS
RICHARD L. GERDING
BYRON CATON
LARRY T. THROWER
TOMMY ROBERTS

August 23, 1977

Mailing Address:
P. O. Box 1020Phone: 525-1801
Area Code 505Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico 87501

Attention: Richard Staments

Re: Application of Southern Union Supply
Co. for Compulsory Pooling, Lea
County, New Mexico

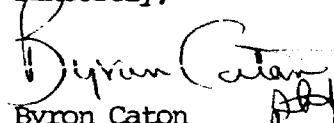
Dear Mr. Staments:

Enclosed is the written Application for Compulsory Pooling filed August 23, 1977 by telephone with you as the Hearing Officer for the Oil Conservation Commission.

Please note that E. L. Latham, Jr. and Roy G. Barton, Jr. have filed an Application for Compulsory Pooling on the SE/4 NE/4 of Section 30, Township 9 South, Range 33 East in the same formation and field which conflicts with this Application. The hearing is set on the Latham and Barton Application on August 31, 1977, Case No. 6017. We note that Southern Union Supply Company's Application to drill was approved by the Commission on August 3, 1977 and the pooling attempt in Case No. 6017 is in direct conflict with that approval.

Be advised that we have requested counsel for Latham and Barton to continue the hearing on their Application so it might be held at the same time as the Southern Union Supply Company Application. If such consent is not forthcoming, then nevertheless, Commission action should not take place until a hearing on the Southern Union Supply Company matter has been held. Accordingly we will seek a consolidation of the two Applications and a joint hearing after proper notice has been given.

Sincerely,


Byron Caton

BC/sf

cc: William M. Parks
Southern Union Supply Company

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

APPLICATION OF SOUTHERN UNION)
 SUPPLY COMPANY FOR COMPULSORY)
 POOLING, LEA COUNTY, NEW MEXICO)

APPLICATION

COMES NOW Southern Union Supply Company, as provided by Section 65-3-14, New Mexico Statutes, 1953, as amended, and applies to the Oil Conservation Commission of New Mexico for an order pooling all the mineral interests in and under the N/2 NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M., Lea County, New Mexico, from the surface to the base of the San Andres formation, and in support thereof Applicant would show:

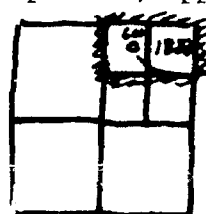
1. Applicant is the owner of the right to drill and develop part of the following described acreage: N/2 NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M., Lea County, New Mexico and plans a well to the San Andres formation in the Flying M field at a standard location thereon. Said location may be more specifically described as 600' from the North line and 1850' from the East line of said Section 30. The location is a standard location within the variance permitted.

2. Applicant has obtained voluntary agreement for pooling from the surface to the base of the San Andres formation from some owners of mineral rights under the subject leasehold but 2.50 acres are presently unleased and the owner of that tract has not voluntarily agreed to pool, or to join in the drilling of the well proposed by Applicant.

3. Applicant requests that it be designated operator of the pooled unit requested above.

4. For reasons stated in Paragraph 2 above, Applicant has been unable to obtain agreement for the pooling of unpooled interests indicated in said Paragraph 2, and in order to avoid the drilling of unnecessary wells to protect correlative rights, and to prevent waste, the Commission should pool all interests in the spacing or proration unit as a unit.

5. The risk and expense of drilling and completing the well is great and if any owners of any other possible interests in the N/2 NE/4 Section 30 do not choose to pay their share of the cost of drilling and completion, Applicant should be allowed a reasonable charge for the supervision



Loc 600' N/2
1850' E/4

and a charge for the risk involved in addition to recovery of the actual cost of drilling and completing the well.

WHEREFORE, Applicant respectfully requests that the Commission set this matter for hearing before the Commission's duly appointed examiner on September 28, 1977, and that after notice and hearing as required by law the Commission enter its order pooling all interests from the surface to the base of the San Andres formation underlying the N/2 NE/4 of Section 30, Township 9 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and designating Applicant operator of the pooled unit, together with provision for Applicant to recover its costs out of production, including a risk factor to be determined by the Commission, and with provisions for the payment of operating costs and costs of supervision out of production to be allocated among the owners as their interests may be determined and for further orders as may be proper in the premises.

Respectfully submitted,

SOUTHERN UNION SUPPLY COMPANY

By: TANSEY, ROSEBROUGH, ROBERTS & GERDING, P.C.
P. O. Box 1020
Farmington, New Mexico 87401

By: Byron Caton
Byron Caton, Attorney for Applicant

Phone in Application

Application Southern Union Supply
Co. for compulsory pooling
of N/2 NE/4 30-95-33 E.
San Andres Fur Flying M-
San Andres Pool

See

Byron Cotton
RLS

8-23-77

Case 6035

E. L. Latham, Jr. + Roy S. Barton,
Jr.
the two

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

OFFICE OF THE
 OIL COMMISSIONER
 6017 6035 6036 6112
 COUNTY OF Latimer
 Hearing Date 12-27-77

Latham and Barton Proposed Pooling

	Percent		Percent
Latham & Barton	0	Latham & Barton	73.44
Southern Union Supply Company	78.13(?)	Southern Union Supply Company	0
Shell	<u>21.87</u>	Shell	<u>26.56</u>
	100.00		100.00

Southern Union Supply Company Proposed Pooling

	Percent
Latham & Barton	23.44
Southern Union Supply Company	40.62
Shell	<u>35.94</u>
	100.00

	Percent
Latham & Barton	50.00
Southern Union Supply Company	37.50 (?)
Shell	<u>12.50</u>
	100.00

CHL. CO. ...
 6017, 6025, 6036, 6112
 ... 1 ... 2 ...
 ... LATHAM & BARTON ...
 ... 12-27-77 ...

Possible Income to E/2 NE/4
 Sec. 30, T-9-S, R-33-E, Lea Co., N. Mex.
 Period October 1 thru March 1, 1978

Estimated barrels production for wells #1 and #2
 (average of 4 offset wells times 1.5) 111 BO
 Total barrels producible for period 16,650
 Price of Oil. \$11.15
 Current gross revenue loss to E/2 NE/4 owners . \$185,647

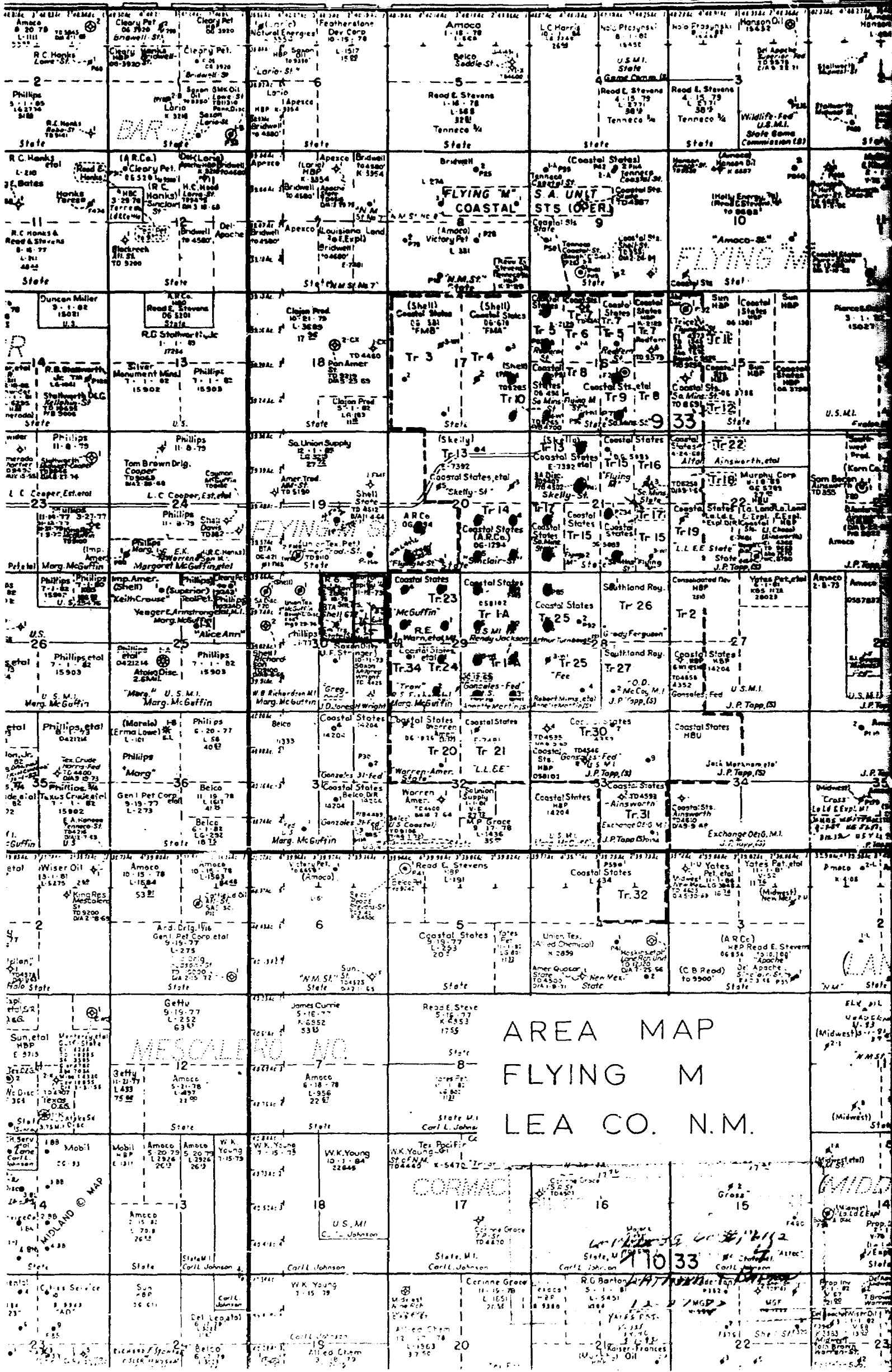
AFE estimated cost - 2 wells 8-24-77 \$336,307
 AFE estimated cost - 2 wells 12-13-77 370,422
 Increase in cost: \$ 34,115

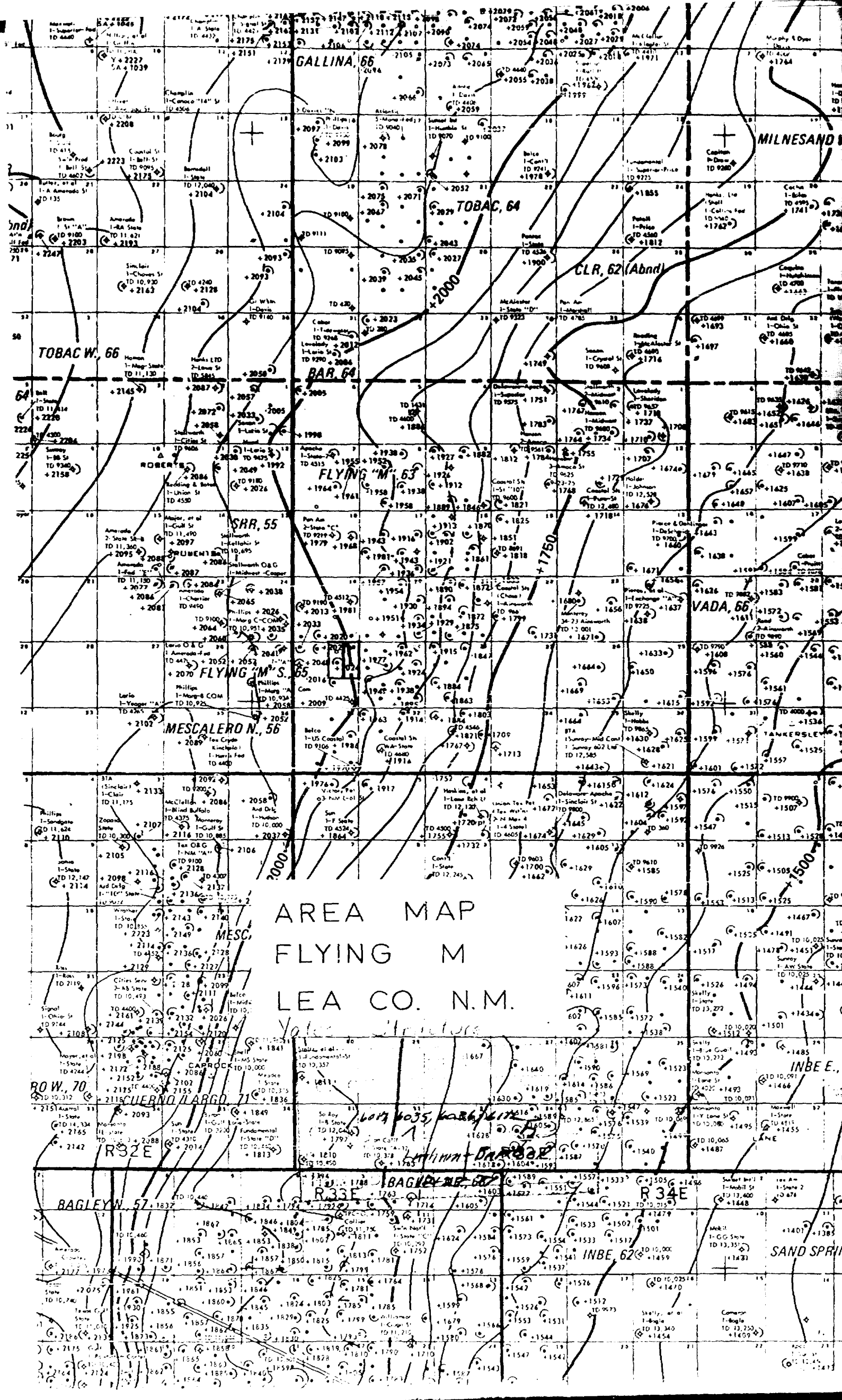
Total possible income loss \$219,762

OR. CO. 6017, 6035, 4036, 6112
 1
 1471 4 + BALCON
 Hearing Date 12-27-72

HAVES CO.

R33E





R32E

R33E

LEA CO.

FLYING M

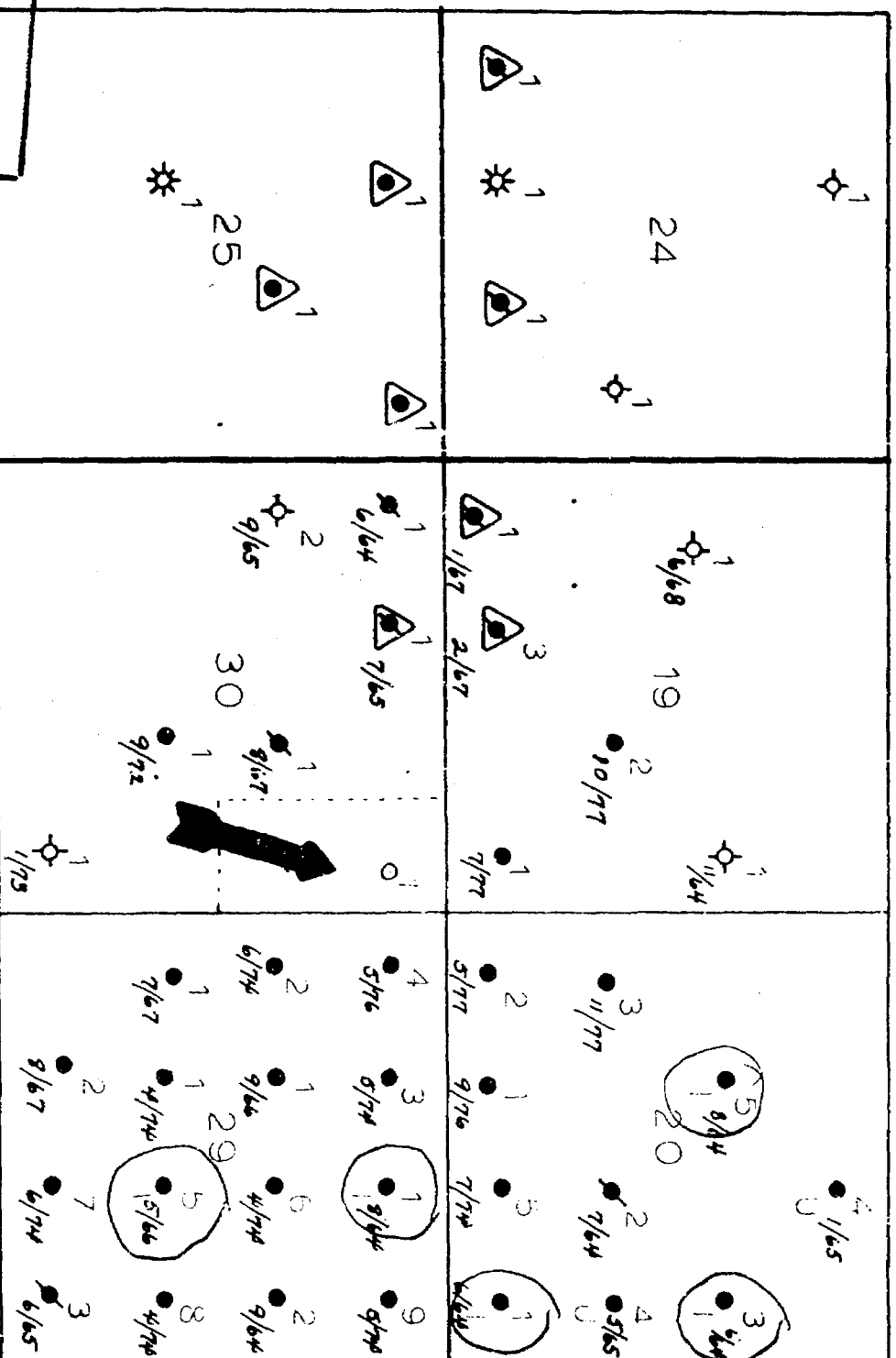
COMPLETION DATE

LOCATION

- INJECTION WELL
- SAN ANDRES PAY
- ◡ ABD, WOLFCAMP

DEC 77 JACK AHLEN

T 9 S



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 60,34035, 6086, 8112-6
Submitted by Anthony & Galt
Hearing Date 12-27-77

R32E

R33E

LEA CO.

FLYING M

IP

T 9 S

LOCATION

INJECTION WELL

SAN ANDRES PAY

ABD, WOLFCAMP

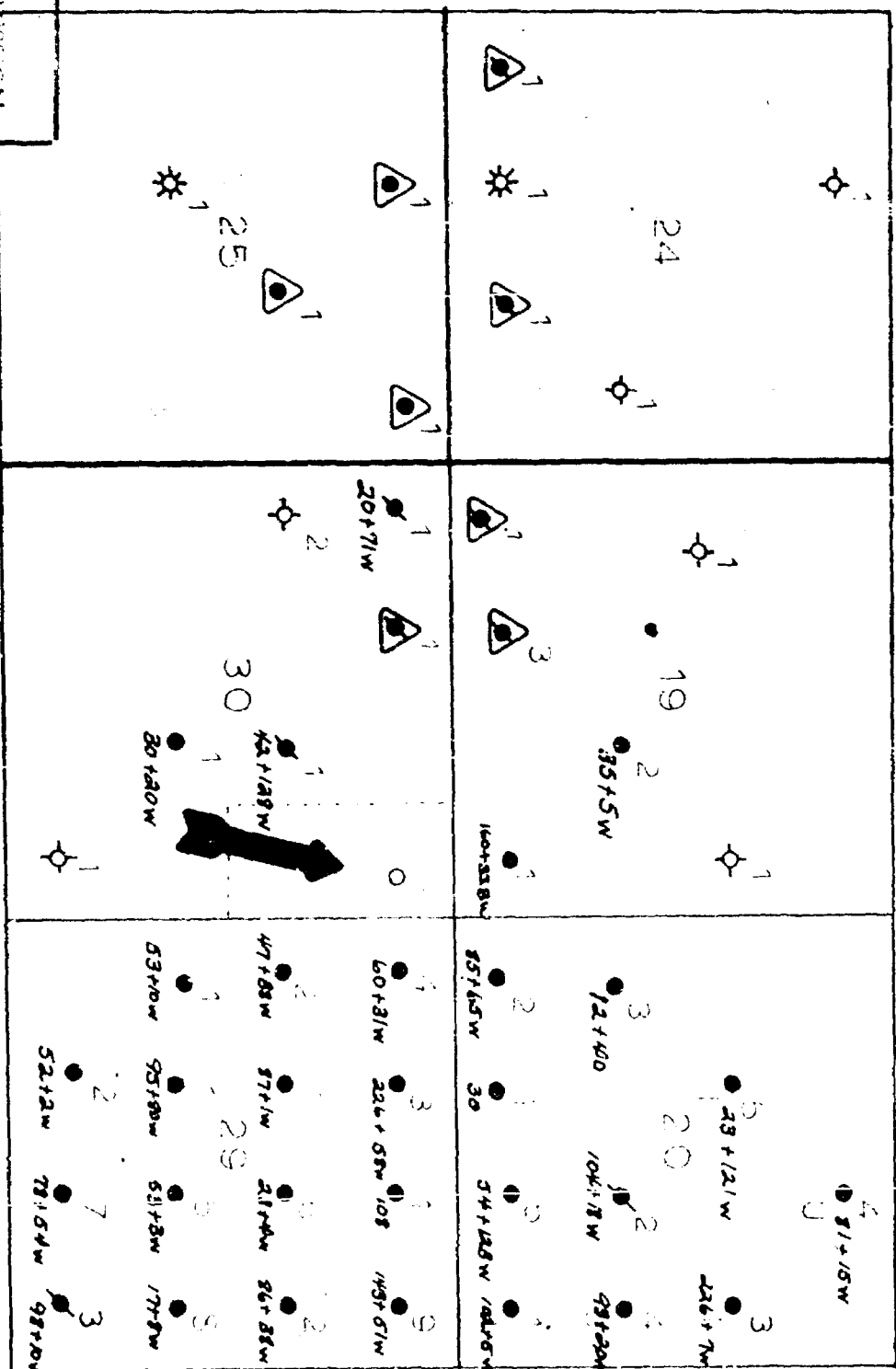
DEC 77 JACK AHLEN

LITORE THE
OIL CONSERVATION COMMISSION

Case No. 6017, 6085, 6086, 6112 7

Submitted by Littellman & Byron

Hearing Date 12-27-78



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LEA CO.

FLYING M

CUM. PRODUCTION
TO 4/1 77

GAZANDRES

LOCATION

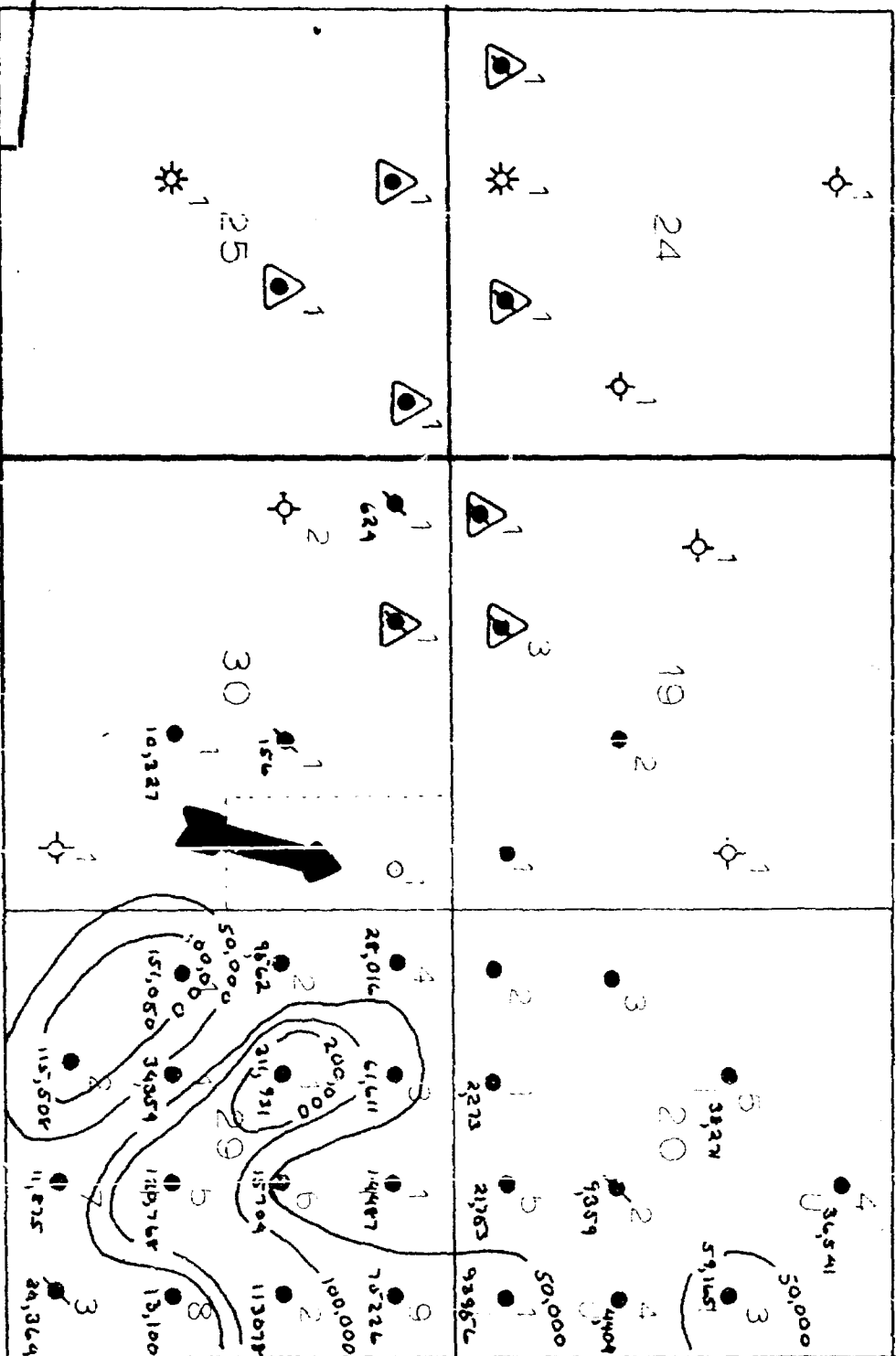
INJECTION WELL

• SAN ANDRES PAY

ABD, WOLFCAMP

DEC 77 JACK AHLEN

50-4



Cum Pro

**ELIMINATE THE
OIL CONSERVATION COMMISSION**

6077 6035, 6036, 6112
C339 N.

Submittal No. 41

Attribution Error

12-27-72

R32E

R33E

LEA CO.

FLYING M

AVE. DALL FDN.

SAN ANDRES

DEC 76 OR 1976

LOCATION

LOCATION WELL

SAN ANDRES PAY

WELL CAMP

DEC 77 JACK AHLEN

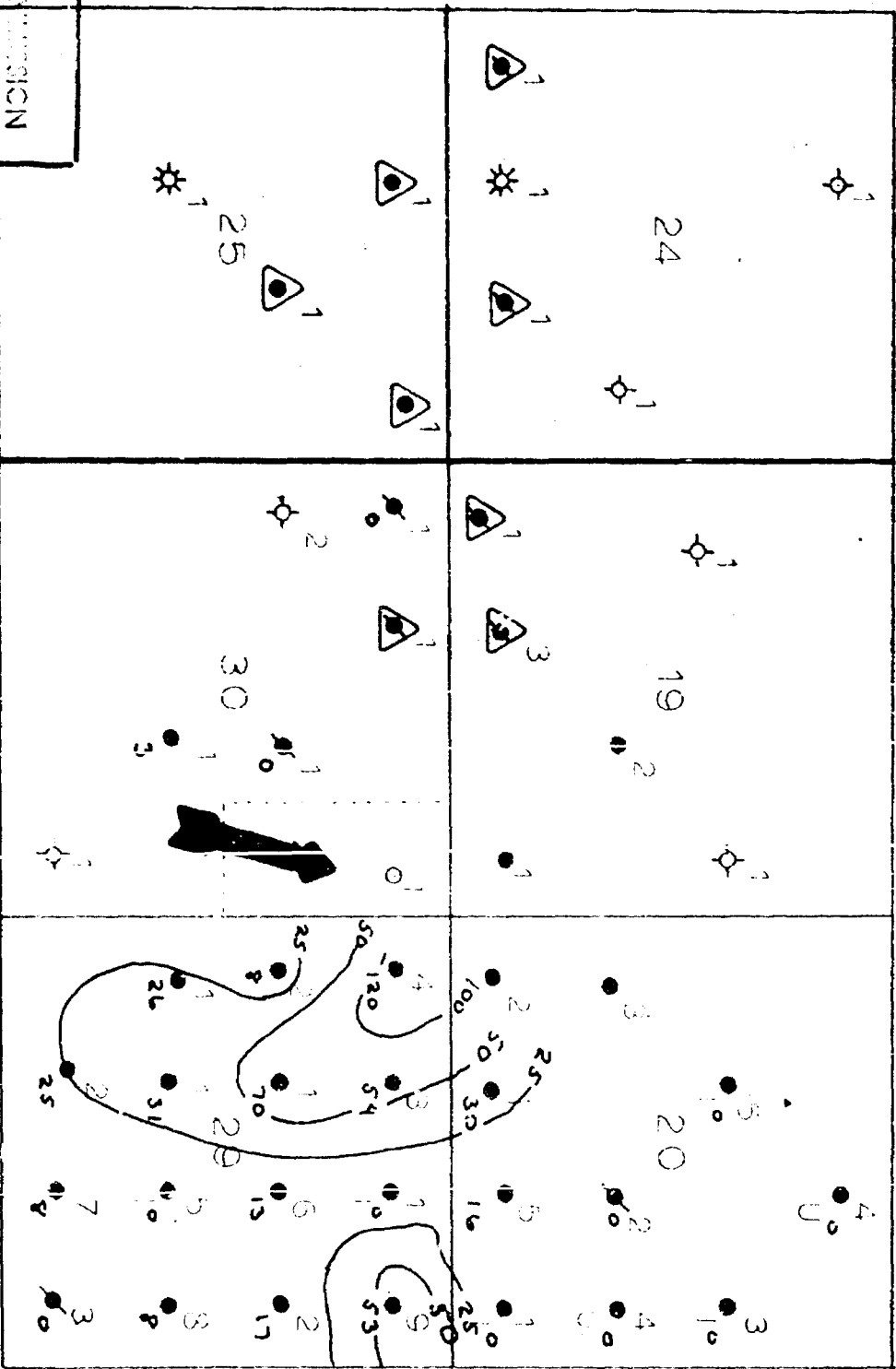
T 9 S

PROTECT THE
OIL COMPANY'S INTERESTS

Case No. *1077 1035, 1036, 6112-9*

Subject *San Andres Pay*

Hearing Date *12-27-77*



*1976
Pay*

R32E

R33E

LEA CO.

FLYING M

AVERAGE DAILY OIL

OCTOBER 77

T 9 S

LOCATION

INJECTION WELL

SAN ANDRES PAY

ABD, WOLFCAMP

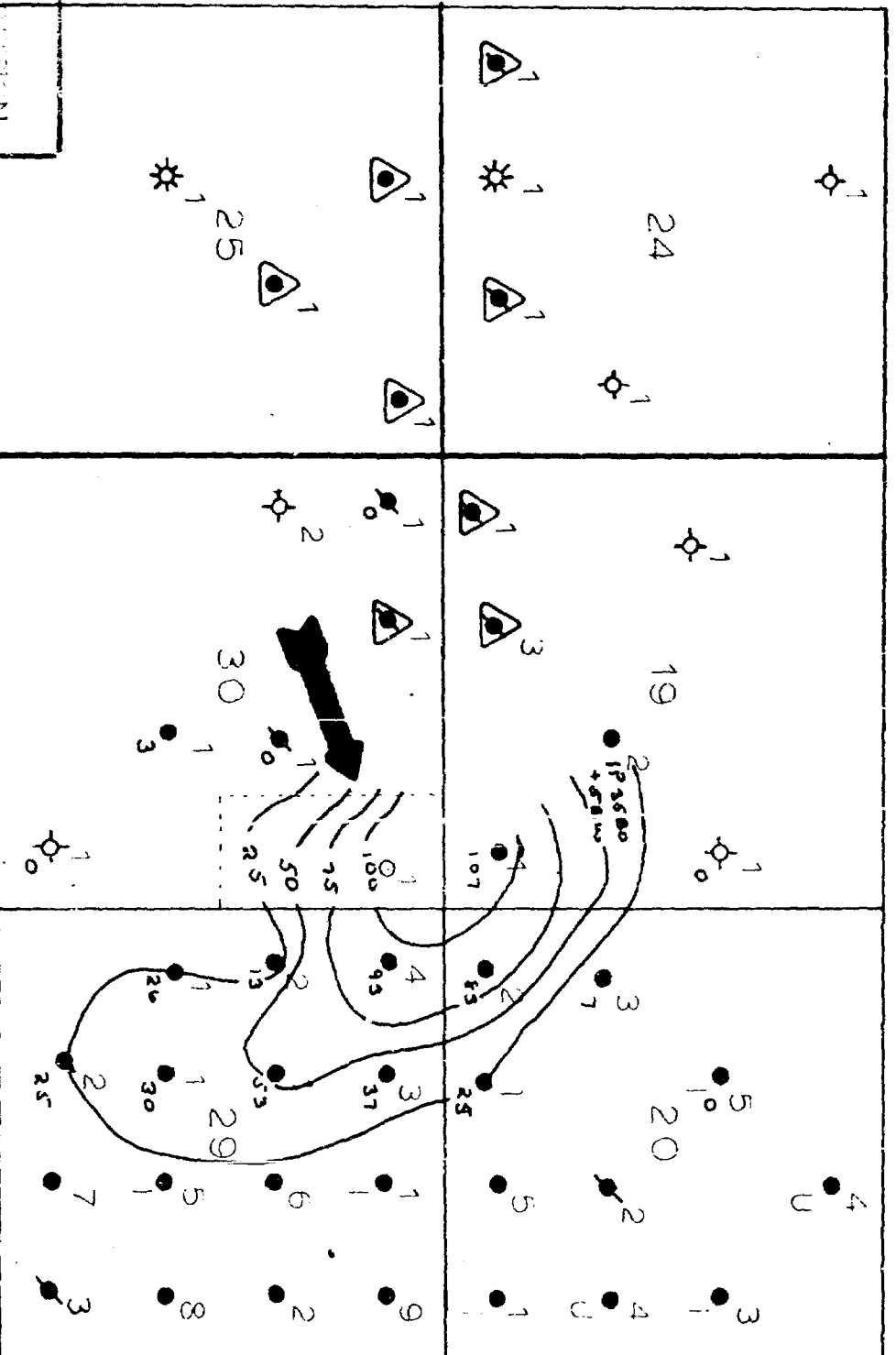
DEC 77 JACK AHLEN

OIL COMPANY

Case No. 4 10

Submitted by Leahman + BAKER

Hearing Date 12-22-77



Oct 11 1977

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LEA CO.

FLYING
M

STRUCTURE

TOP POROSITY

o CCATION

• SECTION WELL

● STY ANDRES PAY

ABD, WOLTCAM?

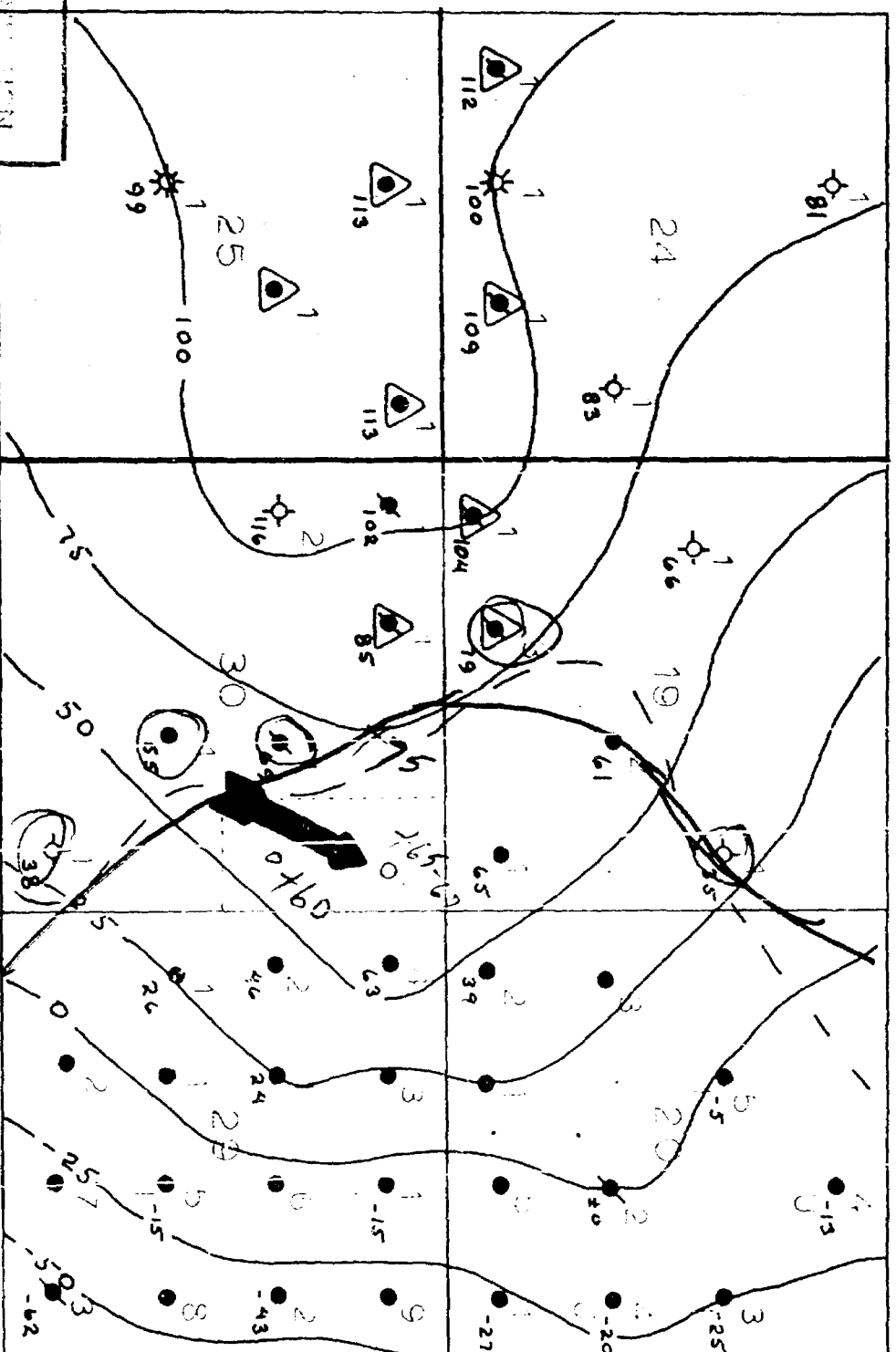
DEC 77 JACK AHLEN

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 07-10-2001 BY 60322 UCBAW

6017, 6025, 6036, 6112
Cone 21, 22, 23.

Subj: Am. Indians & Eskimos

Hearing Date 12-27-77



R32E

R33E

LEA CO.

FLYING M

STRUCTURE

TOP 7% POROSITY

LOCATION

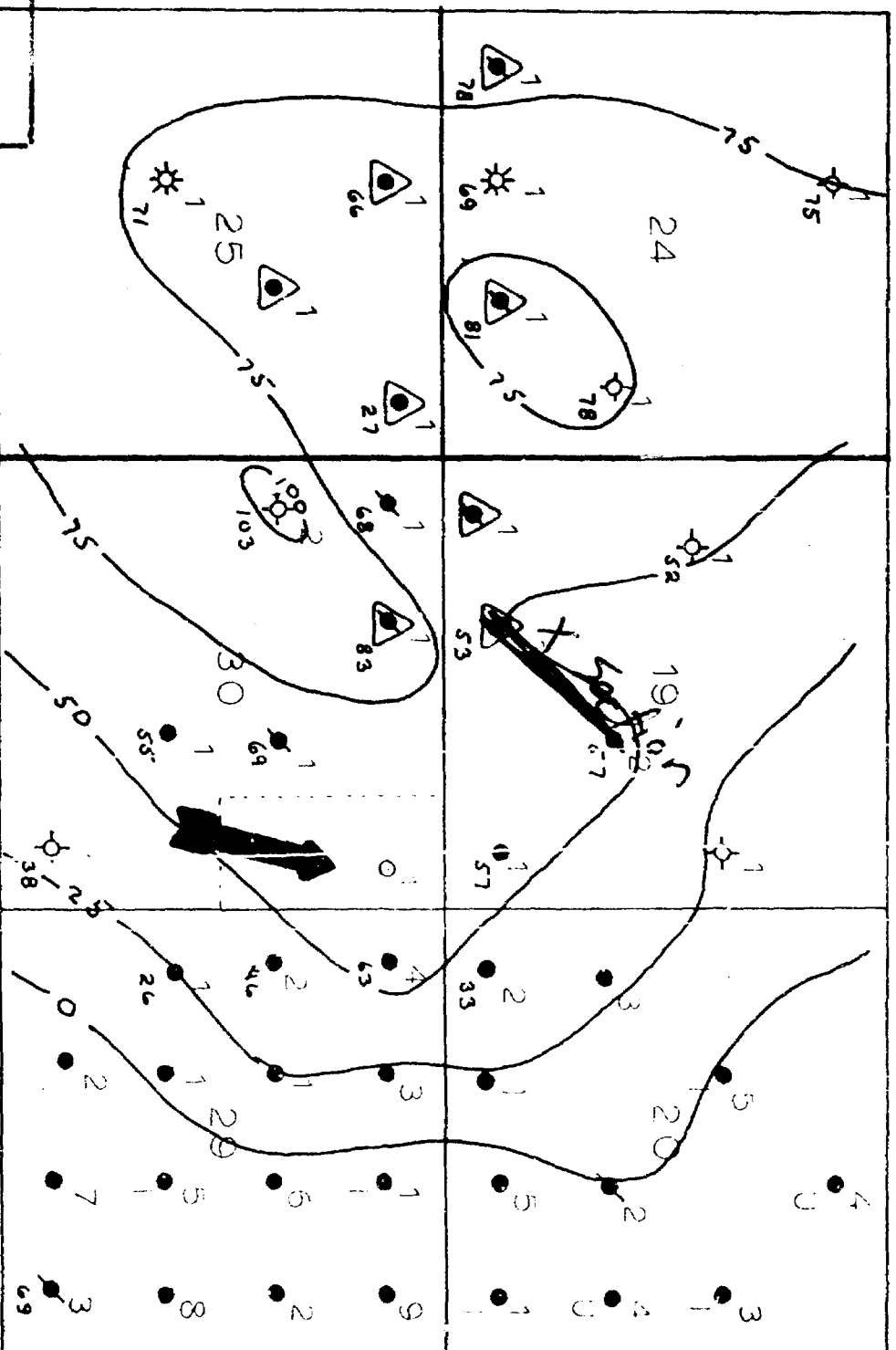
INJECTION WELL

SAN ANDRES PAY

ABD, WOLFCAMP

DEC 77 JACK AHLEN

T 9 S



OIL COMPANY LOCATION

Core No.

1017, 1035, 1096, 1112, 1122

Submitted by KATHARINE BURTON

Headed Date 12-27-22

AUTHORITY FOR EXPENDITURE

Date December 13, 1977

Operator E. L. Latham, Jr. and Roy G. Barton Jr.

Location 660 FNL & 460 FEL Sec. 30, T-9-S, R-33-E

Field Flying "M" SA

Lease Cash

Well No. 1

Depth 4500'

County Lea

State N'M Spudded

Date Potential Test

INTANGIBLE DEVELOPMENT EXPENDITURES:

	<u>Estimate</u>	<u>Actual</u>
<u>Drilling Expenditures:</u>		
1. Survey of location and elevation	\$ 228.80	\$
2. Roads and Dirt Work	4,849.00	
3. Mud, Chemicals, Additives & Oil	3,500.00	
4. Hauling	4,500.00	
5. Cement and Cementing <u>1800' of 8 5/8" Circ.</u> <u>4500' of 4 1/2"</u>	7,150.00	
6. Electrical Logging	7,500.00	
7. Drilling, including daywork	55,575.00	
8. Geological Services	1,000.00	
9. Tool Rental	4,100.00	
10. Surface & Intermediate Casing	10,980.00	
11. Miscellaneous	3,000.00	
Total Drilling Expenditures	\$ 102,382.80	
<u>Completion Expenditures:</u>		
1. Acidizing or Fracturing	6,150.00	
2. Perforating Expense	1,818.00	
3. Testing Expense	500.00	
4. Servicing Unit	4,200.00	
5. Miscellaneous	3,000.00	
Total Completion Expenditures	\$ 15,668.00	
TOTAL INTANGIBLE DEVELOPMENT EXPENDITURES	\$ 118,050.80	
<u>Equipment Expenditures:</u>		
1. Oil String Casing	13,050.00	
2. Tubing	9,035.50	
3. Sucker Rods	4,300.00	
4. Pumping Equipment	14,750.00	
5. Lines		
6. Tanks & Treater	14,900.00	
7. Separators, Casinghead, Tubinghead	1,125.00	
8. Miscellaneous Fitting & Valves	10,000.00	
Total Equipment Expenditures	\$ 67,160.50	
TOTAL EXPENDITURES FOR WELL	\$ 185,211.30	

4017, 4035, 4036, 4112
LATHAM & BARTON
12-21-77

Previous Aug 77
10% ± increase

Approved

Company

Date

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

NOV - 9 1977

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NOS. 6017
6035
6036
Order No. R-5579

APPLICATION OF E. L. LATHAM, JR., AND
ROY G. BARTON, JR., FOR COMPULSORY
POOLING OR 40-ACRE SPACING, LEA COUNTY,
NEW MEXICO; AND, APPLICATION OF SOUTHERN
UNION SUPPLY CO., FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.

ORDER

THIS MATTER having come before the Oil Conservation Commission of the State of New Mexico on the Motion of Southern Union Supply Company, requesting the Oil Conservation Commission of the State of New Mexico to issue its Order suspending all activities authorized by Order No. R-5579, entered by the Oil Conservation Commission of the State of New Mexico on November 22, 1977, including, but not limited to, the drilling of a well in the Northeast Quarter of the Northeast Quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$) of Section Thirty (30), Township Nine (9) South, Range Thirty-Three (33) East, N.M.P.M., pending a hearing de novo in the above styled cause before the Oil Conservation Commission of the State of New Mexico, and the Commission being duly advised and informed in the

premises, finds:

1. On November 22, 1977, the Oil Conservation Commission of the State of New Mexico, after having considered the testimony presented by the parties and the recommendations of the examiner, entered its Order, No. R-5579, which Order has adversely affected the rights and interests of Southern Union Supply Company.

2. On or about December 7, 1977, Southern Union Supply Company filed a written Application with the Oil Conservation Commission of the State of New Mexico requesting the above styled cause be heard de novo.

3. Pursuant to the laws of the State of New Mexico, the Oil Conservation Commission of the State of New Mexico is empowered to stay or suspend the operation of its Order.

IT IS, THEREFORE, ORDERED, ADJUDGED AND DECREED as follows:

1. All activities authorized by Order No. R-5579, entered by the Oil Conservation Commission of the State of New Mexico on November 22, 1977, including, but no limited to, the drilling of a well in the Northeast Quarter of the Northeast Quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$) of Section Thirty (30) Township Nine (9) South, Range Thirty-Three East, N.M.P.M., shall be suspended pending a hearing de novo in the above

styled cause by the Oil Conservation Commission of the State
of New Mexico.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

By _____

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 NOS. 6017
6035
6036
Order No. R-5579

APPLICATION OF E. L. LATHAM, JR., AND
ROY G. BARTON, JR., FOR COMPULSORY
POOLING OR 40-ACRE SPACING, LEA COUNTY,
NEW MEXICO; AND, APPLICATION OF SOUTHERN
UNION SUPPLY CO., FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.

APPLICATION FOR HEARING de Novo

COMES NOW Applicant, Southern Union Supply Company,
by and through its attorney of record, and makes application
to the Oil Conservation Commission of the State of New
Mexico for a hearing de Novo, in accordance with the provisions
of N.M.S.A., §65-3-11.1 (1953 Comp.).

In support of this Application, Applicant states:

1. On September 14, 1977, the above-styled cause
came on for hearing before Oil Conservation Commission
Examiner, Richard L. Stamets.

2. On November 22, 1977, the Oil Conservation Commission
of the State of New Mexico entered its Order in the above-
styled cause; said order being premised upon the testimony
offered by the parties during the hearing of September 14, 1977

SEP - 9 1977
SER. DIV. CO.

and upon the recommendation of Examiner, Richard L. Stamets.

3. Said Order has adversely affected the rights and interests of Applicant herein.

WHEREFORE, Applicant requests the Oil Conservation Commission of the State of New Mexico to set aside a date on which the above-styled cause shall be heard de Novo.

TANSEY, ROSEBROUGH, ROBERTS & GERDING, PC.
P. O. Box 1020
Farmington, New Mexico 87401

By Tommy Roberts
Attorney for Applicant

I hereby certify that I have ~~mailed~~ *delivered*
a copy of the foregoing pleading to
opposing counsel of record, Donald G.
Stevens.

Dated: December 9, 1977

Tommy Roberts

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 NOS. 6017
6035
6036
Order No. R-5579

APPLICATION OF E. L. LATHAM, JR., AND
ROY G. BARTON, JR., FOR COMPULSORY
POOLING OR 40-ACRE SPACING, LEA COUNTY,
NEW MEXICO; AND, APPLICATION OF SOUTHERN
UNION SUPPLY CO., FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.

M O T I O N

COMES NOW Southern Union Supply Company, by and through
its attorneys of record, and move the Oil Conservation Commission
of the State of New Mexico as follows:

1. For an order suspending all activities authorized by
Order No. R-5579 entered in Case Nos. 6017, 6035, and 6036, on
November 22, 1977, including, but not limited to, the drilling of
a well in the Northeast Quarter of the Northeast Quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$)
of Section Thirty (30), Township Nine (9) South, Range Thirty-Three
(33) East, N.M.P.M., pending a hearing on these cases de novo.

As grounds for said Motion, Southern Union Supply Company
states:

1. On September 14, 1977, the above-styled cause came on
for hearing before the Oil Conservation Commission Examiner,
Richard L. Stamets.

2. On November 22, 1977, the Oil Conservation Commission of the State of New Mexico, after having considered the testimony presented by the parties and the recommendations of the Examiner, entered its Order, No. R-5579, which Order has adversely effected the rights and interests of Southern Union Supply Company.

3. On or about December 7, 1977, pursuant to New Mexico Statutes Annotated §65-3-11.1, 1953 Compilation, Southern Union Supply Company filed a written Application with the Oil Conservation Commission of the State of New Mexico, requesting the above-styled cause be heard de Novo.

4. Should the drilling of a well in the Northeast Quarter of the Northeast Quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$) of Section Thirty (30), Township Nine (9) South, Range Thirty-Three (33) East, N.M.P.M., be permitted to commence prior to a hearing on this matter in a de Novo proceeding, Southern Union Supply Company would be denied the procedural remedies set forth in the laws of the State of New Mexico.

5. Such a denial of procedural remedies would constitute a violation of due process of law and would result in irreparable harm and injury to Southern Union Supply Company.

WHEREFORE, Southern Union Supply Company moves the Oil Conservation Commission to issue its Order suspending all activities authorized by Order No. R-5579, entered by the Oil Conservation Commission of the State of New Mexico on November 22, 1977, including, but not limited to, the drilling of a well in the NE $\frac{1}{4}$ NE $\frac{1}{4}$

of Section 30, T-9-S, R-33-E, N.M.P.M., pending a hearing de Novo
on the above-styled cause by the Oil Conservation Commission of
the State of New Mexico.

TANSEY, ROSEBROUGH, ROBERTS & GERDING, PC
Post Office Box 1020
Farmington, New Mexico 87401

BY: Tommy Roberts
Attorney for Southern Union Supply Co.

I hereby certify that I have ~~mailed~~ *delivered*
a copy of the foregoing pleading to
opposing counsel of record, Donald G.
Stevens.

Dated: December 7, 1977

Tommy Roberts

Dockets Nos. 2-78 and 3-78 are tentatively set for hearing on January 18 and February 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - DECEMBER 27, 1977

OIL CONSERVATION COMMISSION - 9 A.M. - CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6017: (DE NOVO)

Application of E. L. Latham, Jr. and Roy G. Barton, Jr., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6035: (DE NOVO)

Application of Southern Union Supply Co., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the N/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6036: (DE NOVO)

Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for compulsory pooling of a standard or a non-standard oil proration unit and an unorthodox location, or in the alternative, 40-acre spacing, Lea County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests in the Flying M-San Andres Pool underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location for said pool within 200 feet of the center of the NE/4 NE/4 of said Section 30, or an order pooling only the NE/4 NE/4 of Section 30 to form a non-standard 40-acre unit to be dedicated to the aforesaid well. In the alternative, applicants seek the amendment of the Flying M-San Andres Pool Rules to provide for 40-acre spacing, and seek an order pooling the aforesaid NE/4 NE/4 of Section 30 as a standard unit for said pool to be dedicated to a well to be drilled at a standard location thereon.

Also to be considered in each of the above cases, will be the cost of drilling and completing the proposed well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of the applicant in each case as operator of the well and a charge for risk involved in drilling said well.

Upon application of Southern Union Supply Company, the above cases will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6112: Application of E. L. Latham, Jr., and Roy G. Barton, Jr., for an order requiring Latham and Barton or Southern Union Supply Company to commence the drilling of a Flying M-San Andres well in Unit A of Section 30, Township 9 South, Range 33 East, Lea County, New Mexico, on or before January 31, 1978; further, to require that all working interest income after payout of the aforesaid well be placed in escrow pending any subsequent appeal, or in the alternative to require the curtailment or shutting in of all wells within one half mile radius of the aforesaid Unit A pending completion of said well.

T/C Don Stevens

✓ ① Can't hear on 21 or 22

② Hearing in mid-Jan.

③ Revise application to chg
1-31-78 to 2-28-78.

red n buss.

15th - arguments

Jimmy 325-1801