

CASE 2660: Application of MIDWEST  
OIL CORP. for creation of new oil  
pool and for temporary pool rules.

*24*

*Ila - I + when  
me know so signed  
order so*

-asa 110.

2660

Application, Transcript,  
Exhibits, Etc.  
all

RULE 4. The initial well on any 80-acre unit in  
said pool shall be located within either the NW/4  
or the SE/4 of the quarter section on which the  
well is located, and shall not be closer than 330  
feet to any quarter-quarter section line.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 15, 1964

EXAMINER HEARING

IN THE MATTER OF:

(Reopened and continued from the  
November 12, 1964 examiner hearing) Case No. )  
2660 being reopened pursuant to the provisions )  
of Order R-2348-A, which continued the )  
original order establishing 80-acre )  
proration units for the Middle Lane- )  
Pennsylvanian Pool, Lea County, New Mexico, for )  
an additional year. )

Case No. 2660

BEFORE:

TRANSCRIPT OF HEARING

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

PAGE 1-a

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 15, 1964

EXAMINER HEARING

IN THE MATTER OF:

(Reopened and continued from the  
November 12, 1964 examiner hearing) Case  
No. 2660 being reopened pursuant to the  
provisions of Order R-2348-A, which  
continued the original order establishing  
80-acre proration units for the Middle  
Lane-Pennsylvanian Pool, Lea County,  
New Mexico, for an additional year.

Case No. 2660

BEFORE: ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order. Case 2660.

MR. DURRETT: In the matter of Case Number 2660  
being reopened pursuant to the provisions of Order Number



R-2348-A.

MR. MORRIS: If the Examiner please, I'm Richard Morris of Seth, Montgomery, Federici & Andrews appearing on behalf of Midwest Oil which was the applicant in the original Case 2660 seeking to establish 80-acre spacing in this pool and special rules and regulations for the pool. We will have one witness, Mr. Bill Baker, and I ask that he be sworn at this time.

(Witness sworn)

MR. UTZ: Are there other appearances in this case? You may proceed.

MR. MORRIS: At the outset, Mr. Examiner, we would call your attention to the request stated in the advertisement of this case where pursuant to Midwest's request, the call of the hearing was expanded to include a consideration of the vertical limits for this pool. Since the time that that request was made, Midwest has decided that at least for the present time the vertical limits of the pool should still be the entire Pennsylvanian and we wish to draw our request for a definition of those vertical limits in this hearing and our evidence will be directed to making pertinent the 80-acre proration units for the pool and for deleting the fixed well location

requirements of the order and changing the provisions of the special rules and regulations to provide for flexible well location.

BILL D. BAKER

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Baker, will you tell us your name, by whom you are employed and in what capacity and where you're located?

A B. D. Baker, I'm employed by Midwest Oil Corporation as a petroleum engineer in Midland, Texas.

Q Have you previously testified before the New Mexico Oil Conservation Commission or one of its Examiners?

A No, sir, I have not.

Q Would you briefly outline your education and your experience in the oil industry?

A I graduated from the University of Texas in 1953 with a degree of Bachelor of Science and Petroleum Engineering, I was employed for some eleven years by Texas Pacific Oil Company in various capacities from petroleum engineering trainee to the assistant to the manager of production. Five of these years were spent in Hobbs, New Mexico. I'm both well acquainted with Lake County, I am a registered professional engineer in

New Mexico and in Texas.

Q Are you familiar with the Middle Lane Pool and the interests of the Midwest Oil Corporation in that area?

A Yes, I am.

MR. MORRIS: Are the witness's qualifications acceptable, Mr. Examiner?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Morris) If you would refer first now, Mr. Baker, to what has been marked as Exhibit Number 1 in this case and state what that is and what it shows.

A Exhibit 1 is a structural map of the Middle Lane Area. It shows the Lane Pool to the north, the South Lane Pool in the south and in the center of it the Middle Lane Pool which we'll be primarily interested in here.

Q How many wells have been drilled in the Middle Lane Pool?

A In the Middle Lane Pool there have been three wells drilled.

Q Would you point out their locations on this Exhibit Number 1?

A The discovery well was drilled in Section 14 in the northwest of the southwest quarter by the Midwest Oil Corporation which is the LLE State Number 1. The second well was drilled by Hisson Drilling Corporation in the northwest of



the northeast quarter. The third well was the Midwest State B Number 1 in the southeast of the southwest quarter.

Q Those three wells are presently classified as being in the Middle Lane-Pennsylvanian?

A Those three wells are presently classified as being in the Middle Lane-Pennsylvanian. For a little more information, they produce at a depth of approximately 9600 to 9700. The discovery well was drilled on October 8, 1962. The producing mechanism is considered to be a combination water drive and solution gas drive. The three wells have produced a total of 32,205 barrels of oil and 216,868 barrels of water.

Q And that information is shown on Exhibit 2?

MR. UTZ: How much water?

THE WITNESS: 216,868, that is the accumulative production to 11/1/64.

MR. MORRIS: If the Examiner please, this information is contained on Exhibit 2.

Q (By Mr. Morris) Referring to Exhibit Number 3, Mr. Baker, would you point out the pertinent features as shown on that exhibit which is entitled "Well Completion Data"?

A It shows the three wells as they have been completed in the Middle Lane Pool. The first is the Midwest Oil Corporation's LLE, the completion date is 10/9/64, that's a typographical error, it should be 10/8/62. It was completed

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS  
1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

PAGE

6

from the zone 9650 to 9654, the initial potential was 94 and 368 of water. The second well completed was the Hisson Drilling Company last on this Exhibit. It was completed in 10/16/63, initial potential was 296 barrels of oil with no water. However, this well produced only three months before it was abandoned due to 100 per cent water production. The third well being Midwest State B Number 1 was completed from a zone at 9676 to 9681 on 7/3/64, recompleted on 8/28/64 from a zone a little higher from 9616 to 9620.

Q Referring next to Exhibit Number 4, entitled, "Production History of the Middle Lane Pennsylvanian Pool," would you point out the features of that exhibit?

A This shows a month by month production history of the three wells with the field total given, in the last column it shows oil, water and gas production. The only well that there is much production history on is the LLE State Number 1, it has about two years' production history. The water-oil or the oil-water ratio during this production history has run in the neighborhood of 10 per cent. Not listed on the exhibit, but --

Q Now, referring to Exhibit 5, is that merely a graphic description of the same information?

A Yes, this is the same information for oil and water production shown graphically here. You can see that the water

production is approximately ten times the oil production, it has been for about the history of the pool.

Q Referring next, Mr. Baker, to Exhibit Number 6, entitled, "Core and Log Data," what does this exhibit show?

A This exhibit shows the entire producing zones that are present in the Mid-Ne-Pennsylvanian Pool as taken from the Midwest LLE Number 1 and the Midwest State B Number 1. There is a core analysis shown for the Midwest LLE Number 1, there's a log interpretation shown for this one and a log interpretation for the Midwest State B Number 1.

Q Now, has information been taken from this core analysis and from these porosity figures that have been used in later computations that will be presented here?

A Yes, we have used this information to determine net feet of pay porosity and the water saturation which are used in the following exhibit.

Q You also used the figure for permeability in subsequent exhibits?

A Yes, sir.

Q In making that permeability computation would you explain about it, please?

A This is a weighted average which is listed as 85.3. I'd like to point out that this does not include the foot from 9610 to 9611 which was 1,000 millidarcies. It does not include

the foot from 9615 to 16 which was .58 millidarcies, nor the foot from 9617 to 9618 which is 0.2 millidarcies.

Q In other words, those figures were so far out of line that it would have thrown your average off by far?

A Yes.

Q If they had been used, Mr. Baker, would it have increased the permeability, the average permeability?

A Yes, the average permeability would have been 142.5.

Q Now, referring to Exhibit 7, state what that exhibit is.

A This is an exhibit of the reservoir properties for the Middle Lane-Pennsylvanian Pool. It shows a net pay of 20 feet determined from the previous exhibit, a porosity of 6.2 per cent, water saturation of 33 per cent, permeability of 85 millidarcies, an original reservoir pressure of 3334 PSI, an original formation volume factor of 1.70 and a stock tank oil gravity of 45 degrees API.

Q Using these reservoir properties, have you made a calculation of original oil in place and recoverable oil for the Middle Lane-Pennsylvanian Pool?

A Yes, I have. Exhibit 8 shows volumetric calculations for the Middle Lane-Pennsylvanian Pool. The basic data is listed at the top of the exhibit which we have just been talking about. The calculations indicate a recoverable oil of 66.5

barrels per acre foot, recoverable oil of 1330 barrels per acre, which for 40-acre recovery would be 53,200 barrels and for 80-acre recovery would be 106,400 barrels.

Q Would you explain, Mr. Baker, upon what basis you estimate 35 per cent as the recovery factor for this pool?

A This, as you say, is an estimated recovery factor, due to the fact that this is a combination of water drive and solution gas drive, it is higher than normally used in the solution of a gas drive pool. Also, from information from the Lane-Pennsylvanian Pool which is a depleted pool, they have shown a recovery of some 36 per cent. The reservoirs are similar, so I used the figure of 35 per cent for a recovery factor.

Q Referring next to Exhibit Number 9, what is that exhibit and what does it show?

A Exhibit 9 is a rate cumulative production decline for the LLE State Number 1. This information used in this exhibit is the same production history which has been presented in a previous exhibit, Exhibit Number 4. The points on this curve are three month production averages. It declined over a constant or fairly constant rate to a cumulative production of 16,500 barrels, from there it went back up again. This is due to the Bett's pump efficiency which we have obtained for use in our well. We have not made any changes in the size of our pump

or in the well itself. This part I disregarded and it declined and that decline was present up until that time. The economic limit was 175 barrels per month and this obtained a total primarily over oil recovery of 38,530 barrels which I consider to be a minimum for this particular well. This well is completed at a depth of 9650 to 9654, in a zone which has six feet of net pay. I took the 38,530 barrels which was extrapolated from this decline curve, divided that by six feet of net pay and the 66.5 barrels per acre foot recovery which was determined from the volumetric calculations to obtain an area of 96 $\frac{1}{2}$  acres which was apparently being drained by this well at this declining rate.

Q Now, you've got your decline curve drawn from the point of cumulative production, as you say, of 16,500 barrels. If you had taken into account the subsequent point on your Exhibit Number 9 where cumulative production reached roughly 21,000 barrels, would your decline curve have been drawn in such a way as to show an ultimate cumulative production greater than 38,500?

A Yes, higher, extrapolated from that point only the same decline as had been exhibited during the previous production it would have given a much greater recovery which in turn would have resulted in a larger drainage area. This is what I consider to be a minimum for the pool.

Q In other words --

A It could in all likelihood have been much greater than this 96.

Q Have you made any economic calculations of 40-acre verses 80-acre development in this pool?

A Yes, I have. Those are shown on Exhibit 10. The total income is \$2.84 per barrel. The working interest income is 87½ per cent, the working interest is \$2.48 per barrel. Our operating costs and taxes amount to 75 cents per barrel which results in a net working income of \$1.73 per barrel. Applying this \$1.73 to a 40-acre recovery of 53,200 barrels, we have a total net income of \$92,000, and 400 barrels, we have a total income of \$184,000. The development cost of a well in this area is \$165,000, which includes the cost of drilling and pumping equipment to produce the well. On the 40-acre recovery this would result in a net loss of \$73,000, on 80-acre recovery it would result in a net profit of \$19,000.

Our ratio of income to investment we wouldn't have one on 40 acres, and on 80 acres, it is still 1.11.

Q From this, Mr. Baker, you can readily draw some conclusions concerning the economic development of this area on 40 acre versus 80 acre?

A Yes, sir, from this it's quite obvious that development cannot be justified on 40-acre spacing with the recovery of

53,000 barrels. Development can only be justified and being only profitable to us on 80-acre spacing and the profit will be small on 80 acres. Also, I would like to point out as has been shown in previous exhibits, we are effectively draining an 80 acre or greater area in this pool, and effectively and efficiently with the recovery factor of 35 per cent which seems to be true, this is what I would consider efficient drainage for this area.

Q Have 80-acre proration units and allowables been established on the Pennsylvanian Pools?

A Yes, sir, there are several in New Mexico. The following exhibit, number 11, compared the Middle Lane Pool to two other pools which are Pennsylvanian Pools on 80-acre spacing. The South Lane, which is on permanent 80 acres and the Allison Penn which has been reported is on permanent 80-acre spacing. I'm not positive whether that one is permanent or not. I would like to point out that the reservoir porosity is similar in these three pools. The porosity in the Middle Lane Pool is 6.2, in the South Lane Pool 7.9, and in the Allison Penn it's 5.15.

Q Mr. Baker, I don't think we need to detail all the information here since it's shown on the exhibit, but the reservoir characteristics of these two other pools do compare to the Middle Lane?



A Yes, sir, they are similar throughout the three pools.

MR. MORRIS: Mr. Examiner, we will have another witness to testify very briefly concerning the proportion for it with respect to the rules, so this is all we will have of this witness. We prefer to question the preparation of the exhibit.

Q (By Mr. Morris) Were Exhibits 1 through 11 prepared by you or under your direction?

A Yes, they were.

MR. MORRIS: We offer Exhibits 1 through 11 in evidence.

MR. UTZ: Without objection Exhibits 1 through 11 will be entered into the record of this case. Does that conclude your questions?

MR. MORRIS: That's all I have of this witness at this time.

CROSS EXAMINATION

BY MR. UTZ:

Q How does the net pay compare in your number, or in the Hisson well, rather, as compared to your well?

A The net pay in the Hisson well is somewhat less than we have in our wells due to the fact that the lower zone was all water, they were completed only in the upper portion of

what I have considered net pay which was approximately 12 feet.

Q What do you consider the net pay in your well?

A 20 feet, the same intervals are present in the Hisson well but the lower interval was all water and from production it appeared that the upper interval is also 100 per cent water at this time.

MR. UTZ: Are there other questions of the witness?  
The witness may be excused.

MR. MORRIS: Our next witness will be Mr. Norbert McIntyre and I neglected to ask that he be sworn at the beginning of this hearing.

NORBERT MCINTYRE

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. McIntyre, please state your name, by whom you are employed and in what capacity and where you are located.

A My name is Norbert McIntyre, I'm employed by Midwest Oil Corporation as staff geologist working southeast New Mexico.

Q Where are you located, Mr. McIntyre?

A In Midland, Texas.

Q And you have testified before this Commission and

your qualifications have been accepted and are a matter of record?

A That's correct.

Q You testified in one of the previous hearings on this case?

A Yes, that's true.

Q Would you state what Midwest's proposal is concerning the rules and regulations for the Middle Lane-Pennsylvanian Pool?

A At the present time our temporary field rules in the Middle Lane Pool are 80 acres. At this time development drilling has indicated as shown on the plate Exhibit 1 that we have drilled on the east flank and at our near oil-water contact and both the Midwest 1B State in Section 11 and also the Midwest 11 East State in Section 14 in the northwest southwest. Now, the structure as it would now appear would be defined by oil-water contact on the east in those two wells and an updip to the west to the Haskinsetal Ranch Unit in the north. Continental 9 Ranch which is in the northwest southeast of Section 9, both of which have penetrated these pay zones and found them to be tight. At this time no porosity development was presented in either one. Then, it would appear that whatever structure we may see for future developments in the future would be confined only to an area probably of 640 or

possibly slightly more than that in Section 10 and 15. The confirmation of this pool is beginning to resemble the Lane Pool to the north structurally and lithologically compares favorably. So our proposal is to request that we be granted permission to drill on 80-acre spacing nonfixed location, so that we might have a little flexibility in picking our locations on this small feature which has very little vertical closure apparently, and is quite limited in that extent.

Q Would it enter into the reasons for your proposal that the wells in this pool are relative poor wells and not top allowable production wells?

A They are, economically, so far we have found that we have something less than prolific production. However, we feel that there is a good chance further development would likely develop some production comparable to that of the Lane Pool.

Q Is the gist of it, Mr. McIntyre, that you think you're on a feature here, that is, limited area and your fairly poor wells and in order to justify further development you feel that you must have greater flexibility on your well location?

A Yes, that's correct.

Q With the exception that you just mentioned concerning the well location requirement what is your proposal concerning the present rules for the Midland Pennsylvanian Pool?

A The temporary rules that we have now?

Q Yes.

A Well, our proposal would be to change those rules to permanent rules on 80 acres of nonfixed locations.

Q Do you feel that any further development in this pool would give you any substantial better information to justify 80-acre spacing than you have at the present time?

A From a structural standpoint that's quite likely, as far as reservoir data I wouldn't say that it would.

Q Again, does the fact that the wells in this pool are not top allowable enter into the lack of reservoir data that might be obtained during the future?

A I think it very definitely does.

Q Does Exhibit Number 12 reflect the proposed rules and regulations which you request be made permanent in this pool?

A Are these the rules, I haven't read this particular set of rules right here. Are these the ones we outlined for the nonmixed pattern?

Q Yes.

MR. MORRIS: We offer Exhibit Number 12 into evidence as our proposal for the permanent rules to be adopted by the Commission for the Middle Lane-Pennsylvanian Pool on a permanent basis.

MR. UTZ: Without objection Exhibit 12 will be admitted into the record in this case.

MR. MORRIS: That's all I have of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. McIntyre, then as far as the current rules are concerned, the only change that you are requesting in those rules other than the fact that they be made permanent, is the spacing requirement?

A That's right.

Q As an engineer, do you feel that wagonwheeling in the--

A Sir, I'm a geologist, not an engineer.

Q Are you a geologist?

A Yes, sir.

Q We got a geologist testifying on rules and an engineer on spacing.

A I think a nonmixed pattern would certainly promote development in the area.

Q Do you mean from the standpoint of recovering more oil or dedicating more dry acreage?

A Well, sir, if I might, I would like to point back once more to the Lane Pool which was developed on nonmixed 80-acre pattern and which has been depleted from both the Bow and the Bow Diesel on that pattern and I would think from the information we have, just structural information, that what we will see here will most likely be the same circumstance.

Q This is going to be a pretty small pool and quite a marginal operation. How many more wells do you anticipate will be drilled?

A Now, I would say one more and based on performance of that well, possibly more. Actually what we have done so far in our exploratory drilling and development drilling is define the eastern limits of a pool which might or not exist to the west.

Q It's your intentions to move it to the west now?

A Yes.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: I have a question, please.

CROSS EXAMINATION

BY MR. DURRETT:

Q Mr. McIntyre, I should direct this question to your engineer; if you desire, I will do so. But I believe it was testified on Direct that the wells in this pool are not capable of making an 80-acre top allowable, is that right?

A No.

Q What is the 80-acre allowable?

A 5310 barrels per month, I think that's about 1768 per day.

Q About 1768 per day?

A Yes.

Q Not making that, would you make a 40-acre allowable?

A These things fluctuate, I don't know.

Q Can you answer me on that question?

A Well, the LLE will not make a 40-acre allowable, it produces approximately 35 to 40 barrels per day at best. The State B, of course, is still young, we only have some three months' production history on it. It is declining rapidly and at the present time it will make a 40-acre allowable.

Q Now?

A Yes, it will now; if it continues on its present decline it will not in the very near future.

Q Only one well involved?

A Only two producing wells.

Q Only two?

A Yes, sir.

Q And the second well you are requesting and now making a 40, which one is it?

A That is the well in Section 11, Midwest Oil Corporation State B Number 1.

Q Well, one other question I have and either one of the witnesses may answer, it would be fine. Where would you propose to drill if your 80-acre flexible spacing request is granted?

A If it were granted, someone would drill in the southeast corner of Section 10.



Q In the southeast corner of Section 10?

A I wouldn't say, well, I can't go any farther than that because of the land situation.

MR. DURRETT: That's all I need to know. Thank you.

MR. UTZ: Any other questions of the witness?

MR. MORRIS: Yes, I have a couple more questions.

REDIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. McIntyre, if a well were not drilled in the southeast, extreme southeast corner of Section 10, might a well be located in the extreme southwest corner of Section 11?

A Yes.

Q But such a well would not be possible under the present circumstances?

A That's correct.

Q Now, in each one of those two locations, would you hope to get away from the severe water problems that you have at the present time?

A Yes.

Q Now, if you could get away from the water below, would that enable you to produce or would you hope to produce a substantial higher percentage of your allowable?

A I think definitely so, our reason for drilling Midwest Number 1 State B in the location it's drilled was

**dearnley-meier reporting service, inc.**

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 10972 • PHONE 243-6491 • ALBUQUERQUE, NEW MEXICO

PAGE

22

because of this pattern to start, we would have preferred to drill a well in the southwest corner of Section 11 but because of the temporary rules we were forced to stay within that unit it was drilled.

MR. MORRIS: That's all.

MR. UTZ: Any further questions of the witness? The witness may be excused. Any other statements in this case? The case will be taken under advisement.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



STATE OF NEW MEXICO     )  
                                  )   ss  
COUNTY OF BERNALILLO    )

I, JOHN ORFANIDES, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

John Orfanides  
COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2-6-6-0, heard by me on Dec 15, 1964.  
Thurman L. [Signature], Examiner  
New Mexico Oil Conservation Commission

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO



I N D E X

<u>WITNESS</u>	<u>PAGE</u>
BILL D. BAKER	
Direct Examination by Mr. Morris	3
Cross Examination by Mr. Utz	13
NORBERT MCINTYRE	
Direct Examination by Mr. Morris	14
Cross Examination by Mr. Utz	18
Cross Examination by Mr. Durrett	19
Redirect Examination by Mr. Morris	21

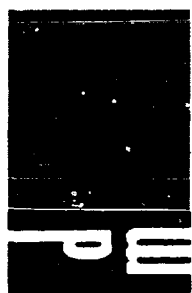
E X H I B I T S

<u>NUMBER</u>	<u>OFFERED</u>	<u>ADMITTED</u>
Exhibits 1 through 11	13	13
Exhibit 12	17	17

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



PAGE 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 12, 1964

EXAMINER      HEARING

-----  
IN THE MATTER OF: Case No. 2660 being reopened )  
pursuant to the provisions of Order No. )  
R-2348-A, which continued the original order )  
establishing 80-acre proration units for the )  
Middle Lane Pennsylvanian Pool, Lea County, )  
New Mexico, for an additional year. All )  
interested parties may appear and show cause )  
why said pool should not be developed on 40- )  
acre proration units. )  
-----

Case No. 2660

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

64 NOV 28 PM 3 56

MAIN OFFICE OCC

MR. UTZ: The hearing will come to order, please. The first case on the docket will be Case 2660.

MR. DURRETT: In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane Pennsylvanian Pool, Lea County, New Mexico, for an additional year.

MR. MORRIS: If the Examiner please, I'm Richard Morris, representing Midwest Oil Corporation, who was the original party interested in the promulgation of the special rules and regulations in the Middle Lane-Pennsylvanian Pool.

Midwest Oil Corporation requests that this case be continued until the December 1964 hearing in order that a supplementary application may be tendered to the Commission for hearing at the same time, to amend certain rules and regulations which are to be part of the rules for the Middle Lane-Pennsylvanian Pool, and an application in support of this request will be filed with the Commission within the coming week.

MR. UTZ: Mr. Morris, the note that we had in relation to this case was that they would probably want to continue it until the first Examiner Hearing in January.

MR. MORRIS: I talked with the representative of the Midwest Oil Corporation yesterday afternoon and this is the

latest thing that I know of.

MR. UTZ: You want it on the first Examiner Hearing in December?

MR. MORRIS: Please.

MR. UTZ: Case 2660 will be continued to the first Examiner Hearing in December.

STATE OF NEW MEXICO )  
 ) ss.  
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 13th day of November, 1964.

*Ada Dearnley*  
NOTARY PUBLIC - COURT REPORTER

My Commission Expires:  
June 19, 1967

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2660, heard by me on Nov. 12, 1964.  
*Thurman R. Ditt* Examiner  
New Mexico Oil Conservation Commission

## NEW MEXICO OIL CONSERVATION COMMISSION

## EXAMINER HEARING

SANTA FE, NEW MEXICOREGISTERHEARING DATE NOVEMBER 12, 1964 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Frank Gray	Caulkins Oil Co	Farmington, NM
P.V. Lawrence	Shell	Reswell, NM
R.W. Hoag	Shell	" "
V.L. King	Shell	" "
S.R. Carlson	Shell	" "
Marshall Smith	Statehouse Reporting	Santa Fe
Richard S. Morris	Peth, Montgomery,	Santa Fe
Summer H. Buell	Federici & Anderson	
CARL L. WHIGHAM	TEXACO	MIDLAND, TEX
John O. Ames	NMOCO	Hobbs
Gene Anell	Hunt Oil Co.	Dallas
Jason Kellahi	Kellahi & Fox	Santa Fe
A.L. Porter, Jr	N.M.O.C.C.	" "
Botha Kelly	Gilbert Public Utility	SF
B.F. BRAWLEY	Sunray DX Oil Co.	Hobbs, N.M.
John B. Axtell	Sunray DX Oil Co.	Hobbs, N.M.



dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 28, 1964

EXAMINER HEARING

IN THE MATTER OF: (Reopened)

In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

Case No. 2660

BEFORE: DANIEL S. NUTTER, EXAMINER.

TRANSCRIPT OF HEARING

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

PAGE 2

MR. NUTTER: We will call Case 2660.

MR. DURRETT: In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year.

If the Examiner please, I have just consulted with Mr. Bill Federici, one of the attorneys for the Applicant Midwest Oil in this case, and he is tied up in another hearing at this time and would request a continuation to the next Examiner Hearing.

MR. NUTTER: The case will be continued to the next Examiner Hearing. The hearing is adjourned.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

PAGE 3

STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 10th day of November.

*Ada Dearnley*  
NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2660, heard by me on 10/28, 1964.

*[Signature]*, Examiner  
New Mexico Oil Conservation Commission

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 9, 1963

EXAMINER HEARING

IN THE MATTER OF:

Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348, which order established temporary 80 acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year.

Case No. 2660

BEFORE: MR. ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 883-3871

ALBUQUERQUE, N. M.  
PHONE 243-6691

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 9, 1963

EXAMINER HEARING

IN THE MATTER OF:

Case No. 2660 being reopened pursuant  
to the provisions of Order No. R-2348,  
which order established temporary 80  
acre proration units for the Middle  
Lane-Pennsylvanian Pool, Lea County,  
New Mexico, for a period of one year.

CASE NO. 2660

BEFORE: MR. ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: Hearing will come to order, please. Case  
No. 2660.

MR. DURRETT: In the Matter of Case No. 2660 being  
reopened pursuant to the provisions of Order No. R-2348.

MR. MORRIS: If the Examiner please, I am Richard  
Morris of Seth, Montgomery, Federici & Andrews, of Santa Fe, New  
Mexico, representing the Midwest Oil Corporation.

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

MR. KELLAHIN: Jason Kellahin appearing on behalf of  
Hisson Drilling Company.

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



MR. UTZ: Are there other appearances? You may proceed.

MR. MORRIS: By way of explanation, by Order Number R-2348, entered on October 25, 1962, the Commission established 80 acre oil proration units in the what was designated the Middle Lane-Pennsylvanian Pool, and established special rules and regulations governing the pool. As the record of that hearing will reflect, there was one well drilled at that time, and additional development was expected. Temporary one year rule was sought, and it was granted by that order, with the expectation that further development would lead to evidence that would be sufficient to justify a permanent 80 acre order. As the testimony that we will present will show, there has been very little additional development and we have not come up with sufficient information at this time upon which would ask the Commission to make permanent the special rules and regulations established for the Middle Lane Pool. We would like to bring the Commission's attention, or bring the Commission up to date, however, on what has been done. What we think will be done, and as a basis for asking that the present orders be continued in effect for one year period.

I have one witness I would like to have sworn at this time, please.

(Witness sworn)

NEIL OWENS,

having been called as a witness herein, being first duly sworn,

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building

Albuquerque, New Mexico

Phone 243-6691

PAGE 4

was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Please state your name and your position?

A Neil Owens. I am Petroleum Engineer for Midwest Oil Corporation.

Q How long have you been with Midwest Oil Corporation, Mr. Owens?

A Five years.

Q How long have you been in the Midland office?

A That length of time.

Q Do your duties take in the activities of Midwest Oil Corporation in New Mexico?

A Yes, they do.

Q Are you familiar with the Middle Lane Pool and the geology, the engineering and the background of the exploration in that pool to date?

A Well, I am familiar with the engineering of it because I completed it myself personally, of one well in the field, but I am not familiar with the geology of the area except for our interest well.

Q Do you have prepared as an exhibit a plat showing the Middle Lane-Pennsylvanian Pool, and the area surrounding that pool?

A Yes.



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q That is marked as Exhibit Number One?

A Yes, I believe so.

Q Referring to that Exhibit Number One, would you point out the location of the Middle Lane Pool with reference to the other pools surrounding it?

A Yes. It has been established by one well in Section 14, Ten south, 33 East, and it is approximately midway between what is known as the Lane Pool and the South Lane Pool.

Q The Lane Pool being to the North and the South Lane Pool being to the South -- in the bottom of this exhibit?

A That is correct.

Q What is the acreage in green representing as shown on this exhibit?

A That represents acreage in which Midwest has a leasehold interest.

Q Now, you refer to the one well establishing this Middle Lane Pool, would you point that out and state how it is designated on this exhibit?

A It is designated as the Midwest LLE State Number One, and it is in the Southwest Quarter of Section 14.

Q Was that the discovery well in this pool?

A Yes.

Q And was that the only well in existence at the time the temporary rules were established in this pool a year ago?

A Yes.





DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q How many other wells are there in the Middle Lane-Pennsylvanian Pool at the present time?

A There is our well and one more that has recently been completed in this last week.

Q Would you point it out to the Commission on the exhibit, please?

A It is in the Northeast Quarter of Section 14.

Q How is it designated?

A Designated as the Hissom Drilling Company Midwest State.

Q Could you give a little of the background of that well, and its ownership?

A The Hissom well?

Q Yes, please.

A The Hissom well has been drilled on a farm-out from Midwest Oil Corporation, and at the time this map was prepared, it had not been completed and was drilling. But, as of yesterday, I believe, if I am not mistaken, it was potentialized, and the papers filed with the Commission.

Q Now, you say that the acreage on which the Hissom well was drilled, was farmed out from Midwest to Hissom Drilling Company?

A Yes.

Q Was other acreage also farmed out?

A Yes.

Q Generally, would you describe that acreage?



A Well, it is green, marked in green, in Section 13, in the North Half of Section 13, plus the Northeast Quarter of Section 14.

Q Now, still referring to Exhibit Number One, I see some structure indicated on that exhibit. What is that, please?

A That is the top of the -- what we designated, or our geologist designated, as the Bough "A" Pennsylvanian. It is a producing horizon. It is the producing horizon for all three fields shown on the map.

Q Now, a year ago, Mr. Owens, Midwest anticipated drilling a number of wells in this area. Could you give any reasons for the lack of development by Midwest in this pool?

A Yes. Our original discovery was unfortunately not as good a well as we anticipated.

Q Do you have some production data on that well?

A Yes, I do.

Q Has that been marked as Exhibit Number Two?

A Yes.

Q Would you state what is shown on that exhibit, please?

A All right. Our accumulative oil production as of September 1, 1963, was 9,392 barrels. Our accumulative gas production was 13,446 MCF, and accumulative production of 86,174 barrels.

Q You wouldn't consider that outstanding production data from which you could tell much about this pool, could you?

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

PAGE 8

A No. We could not. Could not justify the drilling of another well to our management, or have not been able to up to date.

Q Now, do you have any data on the Hissom well that was just completed as to its potential?

A I have some production figures on the well. It produced 296 barrels of oil on a 14/64th choke and that was on a 12 hour basis, which would be half of that figure, what it actually produced.

Q Now, if that- - those figures are indicative of what type of a well this is going to be, would that appear to you to be a good well, or not?

A Yes, that would be an excellent Bough well.

Q On that basis, would you anticipate further development in this pool within the next year?

A Yes. Midwest Oil Corporation will almost definitely do some development work.

Q At the present time, is there any actual plan of development by Midwest for further drilling in this pool?

A We have two wells budgeted for this area, after the first of the year, or during 1964.

Q Do you know whether any other interest owners in this pool plan further development, or are committed to further development in this pool?

A I understand that, from discussions, that Hissom Drilling



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

PAGE 9

Company is contemplating a well very soon offsetting their recent completion.

Q On the basis of the information presently available to Midwest Oil Corporation, would you feel justified in asking the Commission to make permanent its order, the temporary 80 acre order in this pool?

A Well, we just don't have the data to put before the Commission for permanent order probably. We would like to if - if - if we could justify it from the field around us, but we don't have the data to submit to the Commission.

Q If further development takes place as you have outlined, after the production from those other wells are analyzed, you would be in better shape at that time to perhaps justify a permanent 80 acre order?

A Yes, we certainly would.

Q How long a period of time would you say you would need before you would have such information available to you?

A Well, it would take the development of three or four more wells, which would take approximately a year.

Q All right.

MR. MORRIS: That is all I have with this witness at this time.

\* \* \* \*



EXAMINATION

BY MR. UTZ:

Q Mr. Owens, do you know where Midwest plans their next well at this time; would you have any opinion?

A No, sir. I could not. This well that has just been completed changed the picture of the situation as far as Midwest is concerned, I would assume, and we did have a well, though, tentatively located in the Northwest quarter of Section 14. Would be Northwest of the Northwest. And then, we had a well tentatively located in the Section 11, but I could not say definitely now just where we would drill our next well.

Q What type of information, after you get some more development, do you plan to bring to the Commission?

A Well, have core data, and drillstem tests data, and production data, and bottom hole pressure data, and we will probably have interference tests or pressure data.

Q And the reason that you hadn't done any more development in this pool is simply because your Number One well didn't prove out to be a very good well?

A Yes, sir, that is correct.

Q You must have done a pretty good selling job to the drilling company then, mustn't you?

A Well, it took us a long time.

MR. UTZ: Any other questions of the witness?

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

MR. DUBNETT: Yes, I have one question. Mr. Owens, considering the fact that this is a good well, you would consider not to be really a good well, it is your opinion that it is draining 30 acres?

A Well, sir, I don't have the data to say yes or no on that.

Q Well, at the time that the case originally came on, when the order was promulgated establishing 30 acre spacing, it was your opinion at that time that this well would drain 30 acres economically?

A Yes. It has been proven in the area, I think, that similar wells do. But, --

Q You don't mean similar to this well, though, do you; you mean similar wells that are better?

A We thought it was going to be.

Q Then, it is not similar, that is the point I am making?

A That is right, yes, sir.

Q Well, I guess your statement is you don't really know whether it is, or not?

A Yes, sir.

Q Draining. Well, I will ask it this way: Do you have enough information on this second well that has been completed here to have an opinion as to whether, or not it is draining 30 acres?

A I don't have any information on that well, except what



stated awhile ago.

MR. DURRETT: Thank you. That is all I have.

REDIRECT EXAMINATION

BY MR. MORRIS:

Q Another question, if I may. Mr. Owens, while you weren't the witness that testified in the previous case, is it your understanding that the 80 acre rules that were adopted at that time, were justified on the basis of the other Pennsylvanian Pools in this area?

A Yes.

Q Is the producing formation in this Middle Lane Pool the same formation as in the Lane Pool to the North and South Lane Pool to the South?

A Yes, it is.

Q From the limited information that you have available, even from your own well, here, would you or could you say that the characteristics of the formation are generally the same as the other two pools?

A Yes, they are.

MR. UTZ: What is the horizontal limits of the Middle Lane Pool at this time; do you happen to know?

MR. MORRIS: If the Commission please, I would think it would be the same as it would have been established by the order creating the pool since there has been no further development

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



except for this one well. That would be the West Half of Section 14.

MR. UTZ: Got a little reckless in that order.

MR. MORRIS: I would ask the Commission to take notice if it would, of the Order R-2353A, which was entered on June 17th of this year, making permanent the 80 acre rules in the South Lane Pool. Inasmuch as we justified our temporary rules a year ago, on the basis of a comparison with the South Lane Pool, I think it is significant in this case that the Commission felt it had sufficient information to make the South Lane rules permanent, and while we are not in a position, as I have said, before, to ask that our rules be made permanent at this time, just on the basis of what you have done in the South Lane, still we think that the action of the Commission is significant at least to give us another year to acquire information to present at further hearing.

I believe I neglected to offer our Exhibit One and Two, which I would do at this time.

MR. UTZ: Without objection, the Exhibits One and Two will be entered into the record of this case.

MR. MORRIS: That is all. I have.

\* \* \* \*

MR. UTZ: Mr. Owens, did you, or do you feel that at the end of another year, should the Commission give you another year, you will be able to bring in some evidence?

A Yes, sir.

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691





MR. UTZ: Any other questions? Witness will be excused.

Is there further testimony in this case?

MR. KELLAHIN: We would like to offer one witness, if it please the Examiner.

(Witness sworn)

R. J. HISSOM,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Ronnie Hissom.

Q Mr. Hissom, what business are you engaged in?

A We are drilling contractors and producers.

Q Under what name do you operate?

A Hissom Drilling Company.

Q Is that a corporation?

A Yes, sir.

Q What position do you hold with the corporation?

A Vice-President.

Q Have you been actively engaged in the oil business?

A Yes.

Q For what period of time?

A Since graduation from school in '59.

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q And whose?

A At what area, sir?

Q Yes.

A West Texas and New Mexico.

Q Have you worked as a drilling contractor?

A Yes, sir.

Q Have you had producing properties?

A Yes, sir.

Q And have you had experience in the Lane area?

A Yes, sir.

Q In the South Lane, the Middle Lane and the Lane Pool?

A Yes, sir. None in the Lane, the old Lane field, but in the South Lane and Middle Lane.

Q You have had operations in both of those pools?

A Yes, sir.

Q Now, do you hold an interest in the Middle Lane Pool?

A Yes, sir.

Q What interest, briefly, do you hold in that area?

A Well, we have the one well we just completed, then, I have a small working interest in the discovery well there.

Q Now, how many operators are there in this pool?

A There are two of us.

Q And then, in other words, all the operators are represented in this hearing; is that correct?

A Yes.



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q Now, you heard the testimony that has been given in this case already. Are you in agreement with that testimony?

A No, sir. I think we have got- In other words, I think we haven't got the 80 acre spacing set up, I think that we definitely need 80 acres, compared to the well we just drilling and the way it is acting and the well, drillstem tests.

Q You are in agreement with the recommendation that has been made that this order be continued for another year, insofar as the spacing is concerned?

A Yes, the 80 acre spacing.

Q Are you in agreement with the present provisions of the order, in regard to well locations?

A No, sir.

Q What is your position on that?

A Well, it is fixed spacing now, and I just don't think we are going to be able to develop the field and find out the limits of the reservoir on the fixed spacing.

Q Now, for what reason, Mr. Hissom?

A Well, the wells are expensive and we don't know which direction to go. There is three or four factors that with fixed spacing, it just hinders us.

Q In that connection, what are the well costs in this area?

A They will run from hundred forty-five to fifty thousand dollars for a flowing well, to two hundred and two hundred twenty



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

five for a pumping well.

Q You have had personal experience in that connection, have you?

A Yes, sir.

Q Have you examined the exhibit which have been offered in this case?

A Yes, sir.

Q Have you examined Midwest's Exhibit Number Two in regard to the structure?

A Yes, sir.

Q Are you in agreement with that?

A Our geologist are not in full agreement, no, sir.

Q Does that area of disagreement influence your statement in regard to the need for a flexible well location?

A Yes.

Q Why?

A Well, they have definitely got there what we might call features in the -- Without looking at it, I can't say, but on the west side of our well, I think, sir.

Q You can take a look at the exhibit.

A And we know that the original well in the field was, what the formation was at this time, in that well, and we have much better porosity and permeability and better looking section over here to the east. So, our contention is either to go east or, in other words, one location east.



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q Do you think that a flexible well location pattern would encourage development of this pool?

A Definitely, sir.

Q Are you familiar with the rules for the Lane and South Lane Pool?

A Yes, sir.

Q What is the situation?

A They are on the 80 acre spacing, but flexible locations.

Q Do you think that has encouraged the development of those pools?

A Very definitely.

Q You heard the question that was asked of the previous witness, if at the end of the year, you believe there would be sufficient information to present a case justifying the 80 acre spacing?

A If the flexible locations are changed where you can make a location of your choice on the 80 acres, I think there will be enough development, but otherwise, I don't think there will.

Q Basically, Mr. Hissom, you are in agreement with all of the testimony that has been presented here, but you do recommend that the order be changed to provide a flexible well pattern; is that correct?

A That is correct, sir.

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

A No, sir.



MR. KELIAHIN: That is all I have of the witness.

\* \* \* \*

EXAMINATION

BY MR. UTZ:

Q Mr. Hissom, where would you locate your next well if you had flexible spacing?

A It would be -- Can I look at the plat just a minute. Thank you. Would be 660 out of the Northeast. -- In other words, would be in the Northeast of the Northeast, 14.

Q After you drilled a well there, then, you would have two wells in the North Half of the Northeast Quarter. Now, what evidence would you have to show that the South Half of that Quarter would be productive of oil?

A Well, there is another tract on here, sir, that is left out of this. There is another 80 acres down here that we have and might drill there. Would be directly south, would be in the North west of the Southeast of Section 14.

Q What you are saying is that if you drilled two wells in the North Half of the Northeast Quarter and got a well, then, you would be willing to come down to the North Half of the Southeast 14, and drill a well?

A Yes, sir. In other words, we want you to know we want to try to evaluate all the acreage we can possibly evaluate.

Q Well, if you drilled a well in the Southeast and Northeast, and got a producing well, whatever you got there, you would

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



evaluating the North Half of the Southeast better than drilling in the North Half of the Northeast?

A Well, I need first to-- we need another well, sir, before I would just step out and-- I hate to-- I hate to spend the money not -- thinking I wasn't going to get a well some place. Then, I think in Section 12, those operators, if I move there, I think they will start up there some place. In other words, with this well, we ought to get quite a bit of development, but I just don't think it will develop on fixed patterns, fixed locations. Steps out are just too far. We really don't know which direction it goes.

Q You would have to agree, wouldn't you, that further a step out would either prove or disprove it at a faster rate, wouldn't it?

A Yes, sir, sure would. I know down here in this Lane field, you know, the South Lane, the development was real successful, has been real rapid down there. They found the east edge and the north, and still working on the west side over there.

Q All right.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: I have a question for clarification here. I would like to ask Mr. Kellahin. You are not proposing that the Commission consider changing the well location requirements in the order as written under the call of this docket, are you?

MR. KELLAHIN: Yes, we are proposing to change the



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

PAGE 21

requirements of the order as to well locations.

MR. DURRETT: You feel that can be done under the call of this case?

MR. KELIAMIN: I feel that the call of the case was for the purpose of considering the order as a whole, and certainly on that basis, you could consider any portion of it.

MR. DURRETT: Thank you. I just wanted to clear what your client was seeking. I have a question of the witness, also. Mr. Hassom, what is your opinion concerning the acreage that a well will drain in this pool?

A I think very definitely you can drain 80 acres with one well, sir.

MR. DURRETT: On what do you base that opinion?

A On recovery. The South Lane recovery of the other Bough field in that area.

MR. DURRETT: Do you have anything concerning this pool that you would base that opinion on?

A Well, this last well in here looks enough like the discovery well in the South Lane field that- to practically be identical, as far as the number of net feet and the section and the permeability and porosity and drillstem test.

MR. DURRETT: Now, turning to the proposition that you are proposing concerning the spacing of wells or restricted well locations. Is there anything in this pool that would indicate to you that you have different problems as far as restrictive locations





than are always involved when you have restrictive well locations?

A Well, we have never run into it before, sir, restricted you know.

MR. DURRETT: The question I am seeking to clarify is that any time you have restricted or limited well locations, it causes certain problems; in other words, the problem is you are restricted to where you drill a well?

A That is right.

MR. DURRETT: Is there anything unusual about this pool that would cause it to be different in any other way from the usual problems that arise when you have restricted well locations; that is, that the well locations be restricted?

A Yes, sir, the cost, I would say.

MR. DURRETT: You think that the cost in this pool is greater than in other pools where we have restricted well locations?

A You are not -- Yes, sir, I would say so, for the history of the Bough pay. It is not a -- never has been a real long life pay. It is not anything like the Devonian, any of those, you know, some of the others, and it costs a lot of money to find it, find a good well up there. Some of them will make 400 thousand barrels, but the average will make 200 thousand barrels. When you have got two hundred thousand dollars and two hundred thousand barrels, you got it down so close that you -- in other words, you just not going -- they are good wells, don't let me -- no mistake there, but they are just not real long life wells.



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

PAGE 23

MR. DURRETT: Thank you. I think that is all.

MR. MORRIS: I have one question I would like to ask. Mr. Hissom, are you familiar with the terms of the farm-out agreement from Midwest to your company?

A Yes, sir.

MR. MORRIS: Under the terms of that agreement to you, is it an earned acreage type of agreement?

A Yes, sir.

MR. MORRIS: What kind of a drilling obligation do you have under that?

A 90 days after the completion of one to the start of the next one.

MR. MORRIS: You have a continuous drilling obligation?

A Yes, sir.

MR. MORRIS: So, if you are going to develop this acreage, it is going to be done within the next year?

A Well, yes, sir. We will have to start a well within 90 days.

MR. MORRIS: Thank you. That is all.

\* \* \*

MR. UTZ: Your interest in changing the pattern here is so that you can drill offsets closer to each other as you try to develop the pool; is that a fair statement?

A Well, not exactly here, sir. It is more or less to find out really which way we are going with it, I think. Quite a bit



DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

PAGE 24

of acreage involved and I just right now -- we just are concerned -- kind of at a loss ourselves which way we think we ought to go. Naturally, we probably prefer to go to the east, because we will earn another -- more acreage that way.

MR. UTZ: It is your opinion that a pool can be more properly drained with wells clustered in one area creating a low pressure area and trying to drain the surrounding area, rather than be spaced more evenly throughout the pool?

A I am not an engineer, sir, but I just can't answer that question.

MR. UTZ: You would agree that under those conditions, would you not, would be much easier to dedicate questionable acreage to the well regardless of whether you might have 80 acres productive, or not?

A Yes, sir.

MR. UTZ: Any other questions of the witness? Witness may be excused. Are there any other testimony to be given in this case? Any statements?

MR. MORRIS: Just like to make one observation, if I may. Not a full fledged statement. We would ask for a continuance of the order in effect, for another year, to give us a chance to look at what further development may occur, in this pool, and try to justify a permanent order to the Commission. As Mr. Hisson testified, when I asked him a question a minute ago, he does have a continuous drilling obligation, if he is going to earn some



## DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

more acreage in the pool. He is going to have to drill two or three wells within the next year. Based on the information gained from those wells, Midwest will be in a better position to know how many wells it can drill and has testified they plan to drill at least two, but they can't say for sure where they will be. So, it would seem that based on that evidence, that we will be in a position a year from now to present a case to the Commission. At least, we will be in a better position or condition to know whether we can justify an 80 acres or not. And that is about all we can say at this time. We didn't want to come in here today without presenting any substantial evidence, try to get the Commission to enter some permanent order based upon analysis with other pools, even though we might have made that attempt. We would respectfully ask that the present order be continued for a year, either with or without the change as suggested by Mr. Hisson, with or without the change in the well location requirements. We are not opposing that change, but neither are we advocating it.

MR. DURRETT: May I ask a question, Mr. Morris? Mr. Morris, are you of the opinion that the Commission could change the well locations under the call of this docket and as advertised, the well location requirements in that order?

MR. MORRIS: Pretty limited. Never had occasion to consider it before, Mr. Durrett.

MR. DURRETT: Thank you.

MR. MORRIS: I wouldn't want to spread my legal opinion



**DEARNLEY, MEIER, WILKINS and CROWNOVER**

General Court Reporting Service

Suite 1120 Simms Building

Albuquerque, New Mexico

Phone 243-6691

PAGE 25

on the record.

MR. KELLAHIN: I, of course, have already voiced my opinion on the question. I feel that the entire order is up for consideration. We join with the proponent of this case in asking for a continuation of the order and do urge that a flexible well pattern be set up, that essentially the pool is lying between two similar pools, as the testimony shows. Of course, there is nothing to show that they are the same pool, but they well could be. But, basically, there is no reason for the Middle Lane to be developed on any different pattern than the South Lane. They are practically the same type of reservoir and the Commission has seen fit to allow flexible pattern in the South Lane. We feel that it is indicated in the Middle Lane. This is all I have.

MR. UTZ: Mr. Kellahin, do you recall what testimony was in the record on which R-2348 was written? Did Midwest recommend fixed spacing?

MR. KELLAHIN: Midwest did. My client was not a participant in that case, but they did.

MR. MORRIS: Yes, they did.

MR. UTZ: I meant to ask Mr. Hissom the question in regard to completion data on his recently completed well. Did you have any water production on that well, Mr. Hissom?

A Yes, sir. From two to ten percent water, sir, on our shake out.

MR. UTZ: Indications were that wouldn't be a good water



producer as the Midwest was?

A No, sir, sure hope not.

MR. UTZ: That is all the questions I have. The case will be taken under advisement.

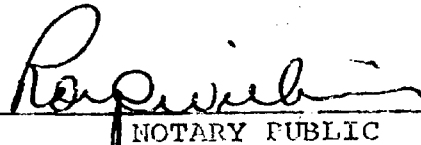
\* \* \* \*

STATE OF NEW MEXICO X

COUNTY OF BERNALILLO I

I, ROY D. WILKINS, a Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office, this 6th day of December, 1963.

  
NOTARY PUBLIC

My Commission Expires:

September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2660, heard by me on Oct. 9, 1963.

  
Examiner  
New Mexico Oil Conservation Commission

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



DRAFT

JMD/esr  
October 25, 1963

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2660

Order No. R- 2348-A

APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 9, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this            day of October, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That Order No. R-2348 dated October 25, 1962, promulgated Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool providing for 80-acre proration units and fixed well locations in said pool.

(3) That this case was reopened pursuant to the provisions of Order No. R-2348 to allow the operators in the subject pool to appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That no wells have been completed in the subject pool since the issuance of Order No. R-2348; that one well is presently drilling in the subject pool and should be completed in the near future.

CASE No. 2660  
Order No. R-2348-A

(5) That Midwest Oil Corporation seeks extension of the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool for an additional one-year period.

(6) That the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Order No. R-2348 should be extended for an additional period of time in order to allow the operators in the subject pool sufficient time to gather information concerning the reservoir characteristics of the pool.

(7) That Hissom Drilling Company seeks deletion of the fixed well location requirements of the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool as promulgated by Order No. R-2348.

(8) That the request for deletion of the fixed well location requirements should be denied as said request is not within the scope of this hearing.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool promulgated by Order No. R-2348 shall be continued in full force and effect ~~for an additional period of approximately one year.~~ *until further order of the Commission.*

(2) That the request to delete the fixed well location requirements from the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool is hereby denied.

(3) That this case shall be reopened at an examiner hearing in October, 1964, at which time the operators in the subject pool may appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.





## SKELLY OIL COMPANY

P. O. Box 1650  
TULSA 2, OKLAHOMA

### PRODUCTION DEPARTMENT

C. L. BLACKSHER, VICE PRESIDENT  
W. P. WHITMORE, MGR. PRODUCTION  
W. D. CARSON, MGR. TECHNICAL SERVICES  
ROBERT G. HILTZ, MGR. JOINT OPERATIONS  
GEORGE W. SELINGER, MGR. CONSERVATION

October 3, 1962

Re: Case 2660  
Section 14, Township 10 South,  
Range 33 East, Lea County,  
New Mexico

*Case file*

Mr. A. L. Porter, Jr.  
Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Dear Mr. Porter:

On Wednesday, October 10, 1962, the Commission Examiner will hear the application of Midwest Oil Corporation for establishment of rules for Pennsylvanian production in and about Midwest's LLE State Well No. 1, Section 14, Township 10 South, Range 33 East, Lea County, New Mexico.

This Company has acreage in the immediate area, and favors the establishment of reasonable rules governing said pool, including the provisions for 80-acre proration units and fixed well location requirements.

Yours very truly,

*George W. Selinger*

GWS:br

cc-Midwest Oil Corporation  
1700 Broadway  
Denver 2, Colorado

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 10, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Midwest Oil Corporation for the creation of a new oil pool and for the establishment of temporary special rules and regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks creation of a new oil pool for Pennsylvanian production in the vicinity of its LLE State Well No. 1, located in the NW/4 SW/4 of Section 14, Township 10 South, Range 33 East, Lea County, New Mexico. Applicant further seeks the promulgation of temporary special rules and regulations governing said pool to include provisions for 80-acre proration units and fixed well location requirements.

CASE 2660

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 2660.

MR. DURRETT: Application of Midwest Oil Corporation for the creation of a new oil pool and for the establishment of temporary special rules and regulations, Lea County, New Mexico.

MR. NUTTER: We would like to announce that this will be the last case that will be heard today. The hearing will resume at 9:00 o'clock in the morning with Case 2661.

MR. MORRIS: If the Examiner please, I am Richard Morris of the firm of Seth, Montgomery, Federici and Andrews, Santa Fe, New Mexico, appearing on behalf of the Applicant,

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 241-6691



Midwest Oil Corporation. We will have two witnesses, Mr. Norbert McIntyre and Mr. Frank Qualia. I ask that they both be sworn at this time, please.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits Nos. 1 and 2 marked for identification.)

MR. MORRIS: These exhibits are quite large. If you want several copies, we have got them. That's Exhibit 1 and 2.

At the outset, I would like to state that this is Midwest Oil Corporation's application for the creation of a new oil pool for Pennsylvanian production, lying midway, approximately, between the Lane and the South Lane Pools in Lea County. For lack of a better name we have come up with the suggested name of the Middle Lane Pool, and we'll refer to this pool by that designation throughout this hearing. If the Examiner wishes to come up with a name of his own, that will be perfectly satisfactory with us.

MR. NUTTER: I presume you are going to follow the middle of the lane policy here.

MR. MORRIS: In addition to the creation of the new pool, we are asking for temporary special rules and regulations on a one-year basis setting up 80-acre proration units; and further we're asking for fixed well location requirements which would require that the well on the 80-acre unit be either in the Northwest Quarter or the Southeast Quarter of the Quarter Section on

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



which the well is located.

NORBERT McINTYRE

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. McIntyre, will you state your name and position with Midwest Oil Corporation?

A My name is Norbert McIntyre. I am a geologist with Midwest Oil Corporation.

Q Where are you located?

A Out of Midland.

Q Would you briefly review your education and your experience in the oil business since then?

A I was graduated from Sul Ross State College with a B.S. degree in Geology, and in 1953. Since that time I have been associated with the U. S. Boundary and Water Commission for two years, working in Old Mexico, doing surface work. Then I scouted for a period of three years for Union Producing Company out of Midland. I had three years geological experience with Union Producing Company, and I have been with Midwest Oil Corporation approximately a year.

Q Are you generally familiar with the geology in the Lane-South Lane interlying areas?

A Yes, sir, I am.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Have you prepared an exhibit showing the subsurface situation in the Lane-South Lane and the area that we're going to call Middle Lane?

A Yes, sir, I have. I have here an Exhibit 1 which shows the subsurface geological interpretation which is contoured on the top of what Midwest chooses to call the Bough "A" zone, which is correlative to the pay zone, the upper pay zone in the Lane Field called Wolfcamp in that field, and which is also correlative to the pay zone in the South Lane Field which is called Bough "C" in that field.

Q So these are some variations that exist in the nomenclature of these formations in this area?

A Yes.

Q But as you'll show on your cross section, this is what we're referring to as Bough "A"?

A That is correct. This Exhibit 1 has shown here a north-south trending feature, or series of features or closures along a broad low relief structure, anticlinal structure, which according to the information we have is indicated that we have separation, vertical separation between the Middle Lane area, the Lane Pool proper, and the South Lane Field. This subsurface interpretation is further substantiated by geophysics.

Q Does this plat also show all of the wells in this area that have been completed in the Permo-Pennsylvanian?

A Yes, sir, it does. The only wells on the plat which



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

produce from zones other than the Bough "A" zone are the three structurally high wells in the Lane Pool, which are the Sunray No. 1-I, and would be in the Southeast of the Southwest of Section 36; the No. 2-F and the No. 1-F, which are in the Northwest Quarter of Section 1.

Q On the master exhibit which is before Mr. Nutter, some of the acreage is colored in yellow. Would you explain what that depicts?

A Yes, that acreage is Midwest acreage, acreage which Midwest has a mineral interest or an operating, or will be operating.

Q Will you point out the Midwest LL and E State Well No. 1?

A The Midwest LL and E State No. 1 is located in the Northwest of the Southwest Quarter of Section 14, 10 South, 33 East.

Q What is the footage description of that well from the boundary lines of the quarter section?

A It's located 2310 from the south, 660 from the west lines of the section.

Q What is your opinion concerning this well with respect to whether it is on the same or separate trends from the Lane and South Lane Pools?

A At the present time we have recently completed this well for 94.18 barrels of oil plus 368 barrels of salt water on



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325.1182

SANTA FE, N. M.  
PHONE 983.3971

ALBUQUERQUE, N. M.  
PHONE 243.6691

gas lift. Apparently we encountered approximately seven to eight feet of porosity in the Bough "A" zone. It appears also that we have a different water table than exists to the south, possibly, in that we are making such a large volume of water although we are 124 feet high to the Apache Midwest State Well in the north end of the South Lane Pool, which is located 1980 from the south and east lines of Section 23.

MR. NUTTER: Is that water-free production in the Apache Well?

A No, sir, it is not. The only gauge we have on it, it's on potential at the present time with 147 barrels of oil plus 20 percent water in 22 hours.

MR. NUTTER: That's 147 barrels of oil and 22 percent water, that's 22 percent of the total fluid?

A Right, 20 to 22 percent water.

MR. NUTTER: How about percentage-wise on the LL and E Well?

A It would be 20 percent oil and 80 percent water.

Q (By Mr. Morris) Then in answer to my question, Mr. McIntyre, you do believe that this LL and E State Well No. 1 is on a separate trend from the Lane?

A Yes, sir, I do.

Q And from the South Lane?

A That's true.

Q Would you state to the Examiner why you believe that the



Middle Lane area that you have depicted here on your Exhibit No. 1 is separate from the Lane area to the north?

A Well, to begin with, this subsurface interpretation is controlled or substantiated by geophysical work which we have done in the area before we drilled a well. In other words, we show that we have vertical separation to the south of the Midwest No. 1 LL and E State. We also show that we have vertical separation between the south edge of the Lane Pool and the Humble No. 1-AM State, which is classified as being in the Lane Pool, which appears to us to be on the north end of the structure which is roughly bounded by our well and the Humble AM State.

Q What is the situation with respect to the production of the wells in the Lane Pool at this time?

A Well, at this time only one well in the Lane Pool is on production.

Q Which one is that?

A That would be the No. 2-F, Sunray 2-F State which is in the Northeast of the Northwest of Section 1. The other wells in the pool have become depleted. Now another thing I might say in regard to this, this Humble AM State was the second well drilled in the field. However, it was next to the last well to become depleted, and it is indicated it has produced slightly over 71,000 barrels. If you will refer to the Cities Service No. 1-AY State, which is in the Northwest of the Southeast Quarter of Section 1, it produced slightly over 39,000 barrels from the same zone,

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691





although it's 57 feet higher structurally, which also indicates, supports the theory that there is separation between those two wells.

Q Is the Humble State Well No. 11, or the Humble State Well in Section 11 producing at the present time?

A No, sir, it is not. It became depleted in about August, 1960.

Q In your opinion, why do you believe that separation exists between the Middle Lane area and the South Lane area as shown on your map?

A As shown on the map here, and this farther -- I will substantiate this statement with the cross section Exhibit 2 later on in the discussion. However, the T. F. Hodge No. 1 Humble State which is located 660 from the south and 1800 from the west lines of Section 26 in the South Lane Pool had a net porosity of 16 feet. Going north to the Hodge No. 2 Humble State which is now in the process of being completed, we express north dip, and we lose porosity to approximately nine feet in that well. We've lost seven feet of porosity.

Continuing northward to the Apache Midwest State, which is 1980 south and east, Section 23, we've expressed increased dip or approximately 101, this well is approximately 101 feet low to the discovery well in the field and has, according to logs, only six feet of porosity. So we have indications of north dip here plus the fact that we are losing our porosity.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



If you will refer to Hodge Tenneco State Well in the southeast corner of Section 22, which is immediately to the west of the Apache Midwest State, that well had no effective porosity in the Bough zone, which farther substantiates the fact that we are losing porosity and we are expressing north dip off of the South Lane Field.

Q Does your geophysical data confirm your opinion in this area?

A Yes, it does. We ran a line, after the discovery well in the South Lane Field, from the Lane Field through the area surrounding Midwest Louisiana Land and Exploration State No. 1, down to discovery well in the South Lane and on the basis of what we saw, we drilled LL and E State, which substantiated what we had seen.

Q Do you have any evidence of the lithologic change moving from your South Lane up to the Middle Lane area?

A Yes, sir, we do. We have in the Middle Lane area and in the Midwest LL and E State, we have a zone of porosity which we choose to call the Bough "D" zone which produces in the three crest wells in the Lane Field. It was dually completed from what they called Wolfcamp-Penn which we call the "A" zone in the "D" zone.

MR. NUTTER: The crest wells would be the 1-I and the 2-F?

A The 2-F and the 1-F. They produce somewhere in excess

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.  
PHONE 243-6691

SANTA FE, N. M.  
PHONE 983-3971

FARMINGTON, N. M.  
PHONE 325-1182



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

of 50,000 barrels from that zone. That would be the "D" zone, which is present in our well but which is not present in any well south of our well in the Apache Midwest State, or any well in the field. So we do have a definite lithological change between our well and the Apache Midwest State, which further indicates that there is probably separation and different environmental conditions existing there.

Q (By Mr. Morris) Now the area that we're referring to as the Middle Lane area, would you say that that extended from the Midwest LL and E State Well primarily north and northeast, and possibly a little bit to the south?

A Yes, sir, I believe that's substantially what we have.

Q That's the general area that we are talking about?

A In other words, we feel that any anomaly or feature that we have is roughly bounded by the Humble 1-AM and the Midwest LL and E State.

Q You have structural control backed up by your geophysical data to give you your boundaries of the pool to the northeast and to the southwest?

A That's correct.

Q What about the western side, to the west of the subject well?

A Well, there again we have used geophysics to control our subsurface interpretation. However, approximately a mile and a half to the west and to the northwest, you'll see the Haskins



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-8891

Land Ranch Unit No. 1 in Section 4, and a mile south of that well the Continental 9 Ranch No. 1, which is 19 East, Section 9. These wells encountered Bough lime, but had no porosity and no permeability and were plugged. We can start from the most northerly well in the Lane Pool, which is Skelly Hobbs, go over to Section 35, the Skelly Cross, which is 330, 1980 east of Section 35, include these two wells that I mentioned, the Haskins Land Ranch and Continental 9 Ranch, go south to Section 22 out of the southeast corner, the Hodge Tenneco State; in all of these wells they encountered no effective porosity or no pay, which indicates that we do have a permeability barrier which is at least partially responsible for our accumulation.

Q What about on the eastern side of this area?

A Well, there again we have no control outside of trendology and geophysics, which control this.

Q So we have to say that at the present time the extent of the pool to the east is indefinite?

A That's true. That's correct.

Q Whereas you do have fairly strong feelings about the western flank of the pool being cut off somewhere not too far west of your well?

A That's correct. In other words, we perforated four feet and we have about eight feet overall porosity, which is considerably less than existed in the Lane Pool or the structural high wells in the South Lane. We feel like we



are approaching porosity pinchout somewhere to the west. We feel like possibly within a half a mile, from what we see on geophysics.

Q Referring now to what has been marked Exhibit 2, being your cross section, would you explain what that shows?

A That's a north-south cross section extending from the most northerly well drilled in the Lane Pool, which was plugged and abandoned, through the Lane Pool, including the Sunray No. 1-I in the Southeast of the Southwest of 36; thence down into Section 1 to the Midstates, and it's later referred to as the Tenneco Lane Ranch Unit Well, which is 1980 from the south and west of Section 1. Thence to the Humble AM State which we have depicted as being on the north side of the feature or the Middle Lane feature. Thence down to Section 14 to the Midwest LL and E State. These things are not very clear on this small reproduction; however, that will continue on down to the Apache Midwest State Well, thence to the T. F. Hodge No. 1 Humble State, which is the discovery well in the South Lane. This will show the summation that we've attempted to give this Bough zone, and this is based on a section which was brought from the Allison Field down to Jenkin and down into this area. The original, I think Socony Mobil zoned this thing at the onset of this Bough, and that's what I've tried to keep in touch with.

Q Would you point out here what you have shown as the Bough "A" zone, which is called something else in the other two

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.  
PHONE 243-6691

SANTA FE, N. M.  
PHONE 983-3971

FARMINGTON, N. M.  
PHONE 325-1182



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

pools?

A Yes. On the cross section, the No. 2 well on the section, the No. 1 State I, you will notice I have -- the upper pay zone, it was a dual well producing from what we called the Bough "A" and "D" zone. The upper pay zone is the Bough "A" zone and that will carry across and that is the producing horizon both in the Midwest LL and E State and the Middle Lane area, and also down to the south in the Apache Midwest State and T. F. Hodge Humble State, down in the South Lane Pool. You'll notice that as we approach these what we show to be low areas or synclinal areas or re-entrance, we lose a considerable amount of porosity.

Q Is that the lithology change you were talking about?

A No, sir. That was just thrown in to indicate that what appears to be in our lower, structural lower wells, we do lose porosity.

Q Point out, if it appears upon this exhibit, what you referred to as the change in lithology as you moved from the South Lane up into the Middle Lane area.

A On the cross section, the "D" zone as shown in your first four wells, actually the first five wells on the section, you will see in the "D" zone and especially in the Sunray No. 1 State I, which is the second well on the section, a well-defined zone of porosity in this "D" zone and which in fact did produce in the Lane Pool. It continues on to the Midstates No. 1 Lane Unit, also had porosity in that zone as did the Humble State AM,



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

and also Midwest. Actually we perforated that zone and attempted a completion, but we got salt water, 52 barrels of salt water in 15 hours. On to the south in the Apache Midwest State and in the Hodge No. 1 Humble State, we had no porosity development in that correlative zone. In fact, it appears that we had a higher shale to lime ratio in the wells in the South Lane Pool than we encountered either in our well or in the wells in the Lane Pool.

Q Then would you say that the additional data shown on this cross section confirms your opinion with respect to separation existing between the Middle Lane and the Lane Pools on the north, and the Middle Lane and the South Lane on the south?

A Yes, sir, it does.

Q Also in this Exhibit 2, I believe you have the potentials on these wells shown at the top in red for reference, don't you?

A Yes, I do.

Q Do you have anything further you'd care to add to your testimony?

A No, I believe not.

MR. MORRIS: That's all we have of this witness, Mr. Nutter.

MR. NUTTER: Any questions of Mr. McIntyre?

CROSS EXAMINATION

BY MR. NUTTER:

Q In your opinion, Mr. McIntyre, I believe I understood



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

you correctly to say that you feel that Humble State AM Well was in a separate pay or producing section from the Lane Field?

A No, sir. I said it's separated by vertical separation from the field, although it's included in the field, I believe that it's producing from another reservoir.

Q That's what I meant.

A Yes, sir.

Q That the Humble State AM is producing from a separate reservoir than say the Tenneco Lane Unit well which is the nearest well to it from the Lane Pool?

A Yes, sir, that is correct.

Q Also do you feel that the lithological change or the structural change has occurred between the Hodges Humble State Well in the South Lane and the Apache Midwest State?

A No, sir.

Q Or has that change occurred north of the Apache?

A Yes.

Q So the Apache would go in the South Lane?

A Right.

Q And then rightfully, in your opinion, the Midwest LL and E and the Humble State AM would be the only two wells in this new pool?

A In the new pool at present, yes, sir.

Q They would just about be on the north limit and the south limit of the pool?





**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

A Yes, we bounded it by that and our geophysics pretty well bears that out.

Q In other words, you are talking about running from the synclinal low between Well No. 5 and 6 on your cross section, the center of that synclinal low to the center of the synclinal low between the 3 and the 4?

A Yes, sir, that's correct. Production figures pretty well bear out the fact that the Humble State AM is likely producing from another reservoir, although the same formation, another reservoir, in that it did produce longer. It was the second longest well in the field, I believe.

Q What happens to those wells in the North Lane when they become depleted? Do they go to water?

A They go to water. Yes, water drive. In fact, they go to water over a period of a month.

Q And there are only three wells on the crest -- no.

A There's only one producing.

Q There's only one well?

A Right. That's the No. 2-F is producing at the present time.

Q That's probably the highest well in the pool, then?

A It's not as high as the 1-I. It's a few feet lower than the 1-I, I believe.

Q Seven feet, it looks like, as far as the top of the pay is concerned.



A They moved on down the hole and completed in another zone, but for our purposes here, for the Bough formation, why, it has all become depleted except in that one well.

Q In your opinion, Mr. McIntyre, would the orange contour line, being at 5500 feet, just about define the limits of the Middle Lane Pool?

A No, sir. That was put on there only to better express the subsurface there. It wasn't put on there -- actually these wells defy pinning them down as far as an oil-water contact. We are 124 feet higher than Apache's wells, yet we are making more water than they are. I think it's a trapped water, if you could call it that, below small or thin permeability barriers within the reservoir itself. Until you produce that water off, you will make a lot of water on these wells.

Q Does Midwest contemplate drilling some more wells in Sections 11 and 14?

A Yes, sir, we do.

Q As a geologist, what in your opinion should be, if we assume that the limits of the pool should be based on the LL and E Well on the south and the Humble State AM on the north, in your opinion geologically what should the limits of the pool at this time be, as far as the north and south limits are concerned?

A That would be about it. It's quite possible that we could move south from our well and make another well. However, we would be more inclined to go to the north and east.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3571

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Stay between those two?

A If we get approval, we can go ahead and develop this thing by stepping out to the north and east and evaluate our acreage as we go. In other words, right now we are not sure about our reservoir conditions, what we can expect to find. Quite possibly we could move downdip from that well and make another well. I don't believe we're having water table problems there. I believe it's water that is trapped within the formation there, that we will be able to produce oil in time.

Q It has been characteristic, I happen to know, of several cases --

A Yes, sir.

Q -- where production has cleared up the water in some of these zones similar to this.

A Along those lines, you will note there the Hodge No. 2 Humble State down to the south in the South Lane Field is not completed. It's making about 90 percent water, ten percent oil on tests right now, whereas the Apache Midwest State, which is 40 feet lower structurally was only making 20 percent water and 80 percent oil, 147 barrels of oil and 20 percent water.

Q Has the water-oil ratio changed on your LL and E Well?

A It's improving since our initial test. It was 95 percent initially.

Q Now it's down to 80. Over what cumulative production and what length of time?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

A That's only been two weeks. See, we were swabbing it and we put it on gas lift so we could move a large volume of fluid and try to produce that water. We hope to repotential it.

Q So maybe that's been a couple or 3,000 barrels of oil?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. McIntyre?

MR. MORRIS: I have a couple of questions I forgot to ask him.

REDIRECT EXAMINATION

BY MR. MORRIS:

Q In this Middle Lane area, what is the ownership of the land in there, is it Federal, State?

A It's all State. It's all State, in fact, all the acreage, according to the latest maps that we can see, all the acreage in 10 South, 33 East is Federal. Possibly a few tracts.

Q Federal or State?

A State, pardon me.

Q I don't know whether you stated them or not, but would you give again the perforations of your LL and E Well?

A Yes, sir. It is 9650 to 54. That would be in the "A" zone. That would be the correlative zone which produces both in the north in the Lane and the South Lane Pool.

MR. MORRIS: That's all.

MR. NUTTER: If there's no further questions of the witness, he may be excused.



(Witness excused.)

MR. NUTTER: We'll recess the hearing until 9:00 o'clock in the morning.

(Whereupon, the hearing was recessed.)

\* \* \* \* \*

MORNING SESSION  
Thursday, October 11, 1962

(Whereupon, the hearing was resumed at 9:00 o'clock A.M.)

MR. NUTTER: The hearing will come to order, please. Mr. Morris, I believe we're in the midst of a case for Midwest.

MR. MORRIS: If the Examiner please, I believe Mr. Norbert McIntyre had just been excused, and at this time we will call our next witness, Mr. Frank Qualia, and I believe he's already been sworn.

FRANK QUALIA

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Qualia, will you state your name and position for the record, please?

A Frank Qualia, District Engineer for Midwest in Midland.

MR. NUTTER: How do you spell your name, please?

A Q-u-a-l-i-a.

Q (By Mr. Morris) Will you briefly state your education

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

and experience in the oil business?

A I was graduated from the University of Texas in 1949 with a Bachelor of Science in Petroleum Engineering, worked for the Texas Railroad Commission for two and a half years, worked for Slickerson Oil Company for two years, Sinclair Oil and Gas for two years, and then Midwest Oil Corporation.

Q How long have you been with Midwest Oil?

A For eight years.

Q Are you generally familiar with the Lane area of Lea County, New Mexico?

A Yes, sir.

Q You are familiar with Midwest's application in this case?

A Yes, sir.

MR. MORRIS: Are Mr. Qualia's qualifications acceptable?

MR. NUTTER: Yes, sir, they are. Please proceed.

Q (By Mr. Morris) Mr. Qualia, have you prepared a series of exhibits concerned with the Lane Pool from which you will draw certain similarities between that pool and the Middle Lane Pool?

A Yes, sir.

(Whereupon, Applicant's Exhibits 3 through 8 marked for identification.)

Q Referring to what has been marked as Exhibit No. 3, will you state to the Examiner what that is, please?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

A Exhibit No. 3 is a tabulation of the performance history of the Lane Wolfcamp Pool. It was stated yesterday that the correlation of the zone producing in the Lane Wolfcamp Pool carries across to the Midwest LLE State No. 1, and that is the same zone from which Midwest is producing their LLE State No. 1. The performance history as tabulated here shows production by months of water, oil, and also the bottomhole pressure history of that pool.

Q Is there anything in particular that you can summarize from this exhibit?

A Yes, sir, I would like to point out that the Lane Wolfcamp Pool has declined in oil production, while the water production has risen considerably. This denotes one point that I would like to make, and that is the mechanism for production in the Lane Wolfcamp Pool is water drive.

Q Do you have anything further you would like to point out with respect to this exhibit?

A That's all.

Q Referring now to what has been marked as Exhibit No. 4, which is one of two performance curves, will you state what that shows?

A Yes. Exhibit No. 4 shows a plot of bottomhole pressure, oil production and water production, against time. You will note that the original bottomhole pressure in the Lane Wolfcamp Pool was 3516, that the latest bottomhole pressure taken, which was in



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

July of 1959, was 2960. I would also note the decrease in oil production accompanied by an increase in water production.

Q Do you have anything further you want to point out with respect to this exhibit?

A That's all.

Q Referring to Exhibit No. 5, which is the second of the performance curves, state what that shows.

A This is a plot of bottomhole pressure and oil production rate against cumulative oil production. Again we show -- this is merely another plot and again we show the decline in bottomhole pressure from 3516 at the beginning of production to 2960 at the later stages of depletion in the field.

Q Anything further with respect to Exhibit 5?

A No, sir.

Q Refer now to what has been marked as Exhibit 6, bottomhole pressure history of the Lane Pool. Would you summarize the information there?

A The data here is merely a tabulation of the bottomhole pressures that we were able to obtain from the operators in the Lane Wolfcamp Field.

Q Referring now to what has been marked as Exhibit No. 7, would you call this a summary sheet on the Lane Pool, drawing some conclusions from the Exhibits 3, 4, 5, and 6?

A Yes, sir.

Q Would you explain that, please?





**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

A All right. The discovery well in the Lane Wolfcamp Pool was the Sunray Mid-Continent State of New Mexico "F" No. 1. Original bottomhole pressure, as stated before, is 3516; the bottomhole pressure at depletion was 2960. The bubble point of the crude oil was 3388. The formation volume factor was 1.828. The spacing was 80 acres. The relatively small decline in bottomhole pressure along with a decrease in oil production accompanied by an increase in water production indicates that water drive was the primary source of energy in this reservoir.

Nine wells were completed in this field and have produced an accumulated volume of 1,015,160 barrels of oil for an average of 112,800 barrels each. Examination of the logs of the productive wells in the pool showed an average porosity zone of 10.3 feet per well. Applying 80-acre drainage, the average well had 824 acre feet of net pay. This results in a recovery factor of 137 barrels per acre foot.

Q Why have you presented here this case history of the Lane Pool, when what we're here to talk about today is the Middle Lane area?

A Very little information is available in this new field, what we refer to as the Middle Lane Pool. Therefore, this case history, which is very closely related and is a field producing from the same zone in the same area, it is felt that this history can be applied to the Middle Lane Pool.

Q In other words, the same producing characteristics that



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

you've shown in the Lane Pool, you also expect to find in the Middle Lane?

A Yes, sir.

Q It's the same producing formation?

A That is correct.

Q Both of them are water drive pools?

A That is correct.

Q Now the Lane Pool is prorated on 80-acre units?

A That's right.

Q Then it would be normal to expect that this pool, the Middle Lane Pool, could also be efficiently drained and developed on 80-acre units?

A That's correct.

Q Referring now to what has been marked Exhibit 8, will you state what that shows?

A This is merely a summary of the information available on the Midwest LLE State No. 1. The location of that particular well is 660 feet from the west line and 2310 feet from the south line, Section 14, 10 South, 33 East, in Lea County, New Mexico. We set 5-1/2 inch casing at 9835, cemented with 265 sacks of Incore cement mixed with 265 sacks of Diamix "A". Completion was attempted in the Bough "D" Zone at 9782 to 86. The well was acidized with 250 gallons and swabbed 4-1/2 barrels of salt water per hour with no show of oil or gas. These perforations, 9782 to 86, were squeezed and the Bough "A" Zone 9650 to 54 was perforated



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

and tested 15 barrels of fluid per hour, 20 to 40 percent oil. The original bottomhole pressure of the Bough "A" Zone was 3334 PSI at a minus 5438, which is the midpoint of our perforations. The date of this pressure was September 28, 1962. If the pressure is extrapolated back to a minus 5387, which is the datum of the Lane Pool pressures, it would be 3310 PSI.

On October 8, 1962, the well was potentialized on gas lift for 94.18 plus 368 barrels of water in a 24-hour period. The gas-oil ratio was 1432, gravity was 45.0, corrected. The average porosity in the Bough "A" Zone in this well was 5.0 percent. This information was obtained from core analysis. The average permeability was 14.99 millidarcys, which was also obtained from core analysis.

What is called the Wolfcamp producing zone in the Lane Pool is correlative to what Midwest calls its Bough "A" Zone in its discovery well in Section 14. It is therefore felt a fair assumption that the reservoir from which Midwest's LLE State No. 1 is producing will perform similar to the Lane Wolfcamp Pool.

An average development well drilled to 9850 feet should cost approximately \$162,000. Assuming the average well to have the same recovery as the average well in the Lane Wolfcamp Pool, that is, 112,800 barrels, the total income per average well would be \$233,496. Subtracting the cost of the well, the net profit is \$71,496. It is hoped that more pay and wise and prudent development in this area will result in better return per dollar invested.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Now you've given some figures there on what you expect or what the economics would be in this area on 80-acre spacing, based on information from the Lane Pool. If this area were developed on 40-acre spacing, what would your economics look like then?

A We can do that by merely dividing the income in half and the income would therefore be \$116,000, approximately. That would leave a net loss of \$46,000 per well.

Q Even on 80-acre development, the profit to investment ratio is not as large as would be desired, is it?

A That's correct.

Q Let's make some conclusions here if we can, Mr. Qualia. First let me ask you if you've heard Mr. McIntyre's testimony yesterday afternoon.

A Yes, sir.

Q Do you agree with his testimony that the acreage surrounding Midwest's LLE State Well No. 1, and what we have referred to as the Middle Lane area, that that is a separate pool from either the Lane or the South Lane?

A Yes, sir.

Q Is it also your opinion that the LLE State Well No. 1 is producing from the same formation as the producing formation in the Lane Pool?

A Yes, it is.

Q I think you've already stated that.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

A Yes.

Q Now the Oil Conservation Commission, in setting up 80-acre units in the Lane Pool, found that the Lane Pool could be efficiently drained and developed on 80-acre proration units. Do you believe that the area around the LLE State Well No. 1 can also be efficiently drained and developed on 30-acre spacing?

A Yes, sir.

Q And economically it's your belief that the area has to be spaced on 80-acre?

A Yes, sir.

Q What rules do you propose for the Middle Lane Pool, Mr. Qualia?

A We have asked for temporary rules and those rules being the same as what applies in the South Lane Pool, with the exception of Rule 4.

MR. MORRIS: For the Commission's information, the South Lane Pool rules were established by Order No. R-2258.

Q (By Mr. Morris) You say with the exception of Rule 4. What does Rule 4 pertain to?

A Rule 4 pertains to the location of the well on 80-acre tracts.

Q Do you have something to offer as an alternative to that Rule 4?

A Yes, sir.

Q Would you read your proposal for the Rule 4 to be



substituted in the South Lane Pool Rules as applied to the Middle Lane Pool?

A We propose that the initial well on any 80-acre unit in said pool shall be located within either the Northwest Quarter or the Southeast Quarter of the Quarter Section on which the well is located, and shall not be closer than 330 feet to any quarter quarter section line.

Q Why do you make this proposal for what we might call fixed well location requirements in this pool?

A We believe that this will result in more orderly development of the oil pool and it will also prevent Midwest from having to protect itself with a line of wells or a row of wells along the west side of its acreage.

Q What would happen under a flexible pattern if a flexible pattern were adopted in this pool, Mr. Qualia? What are your fears in that regard?

A As I have just stated, it might result in Midwest having to protect itself with offset wells on the west side of its acreage.

Q Whereas otherwise what would the normal plan of development for Midwest be?

A As we stated, we would like to have the Rule 4 changed so that we would have a fixed pattern resulting in orderly development.

Q What I mean, Mr. Qualia, is let's assume for the moment

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

that the Commission grants our application here and sets up a fixed pattern adopting our Rule 4, what will be Midwest's development? Will it be to the north, to the northeast? What would Midwest do rather than having to go over and protect its west line?

A We will develop probably in a northeasterly direction.

Q Do you feel that that also will tend not only to more orderly development of the pool but more rapid development of the pool?

A Yes, sir, we do.

Q Let's talk a little bit more, Mr. Qualia, about why you believe you are going to have to go over to your west line and protect that against offset operators. Why do you believe that the offset operators along the west line of your leases will crowd in towards your acreage?

A Well, there are possibly two reasons. First of all, production has been established in our LLE State No. 1, and crowding in toward production is a common practice in the oil field. The other one is that the geological structural conditions as we know them in the area might be favorable so that an operator, an offset operator would or could drill a row of wells virtually on 40-acre spacing along the west line of our acreage.

Q In other words, not only would they be crowding in toward your proven production, but they would also be crowding the west line of your acreage for structural reasons?

A Yes, sir.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Which in turn would cause you to have to drill a line of offsetting wells right up the west side of your acreage?

A That is correct.

Q Were Exhibits 3 through 8 prepared by you or under your direction?

A Yes, sir.

MR. MORRIS: At this time, Mr. Examiner, we offer those exhibits. I'm not sure that I offered Exhibits 1 and 2 previously. If not, I also offer them at this time.

MR. NUTTER: Midwest's Exhibits 1 through 8 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 8 entered in evidence.)

MR. MORRIS: That concludes the direct examination of Mr. Qualia.

MR. NUTTER: Does anyone have any questions of Mr. Qualia?

MR. DURRETT: Yes, sir, I have one question.

CROSS EXAMINATION

BY MR. DURRETT:

Q Concerning this proposed Rule 4, I believe you stated on direct examination that you felt that if your rule was not adopted, an offset operator might come in and drill wells virtually on 40-acre spacing on your west side?

A Yes, sir.





**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Do you feel that would be economical for them to do that?

A Personally, I don't think it would.

Q You think there's a very good probability of them doing so if it would not be economical?

A I think there's a possibility that they would.

Q But if they did, you wouldn't think it would pay, probably?

A There are certain aspects in this pool that we don't know all the answers to. In other words, if we do have a water drive mechanism and the pool is efficiently drained with water drive, it is possible that a well could be an economical venture on 40 acres, provided that the water drive mechanism is in effect. In other words, if the particular well that we're talking about, hypothetical well we are talking about, the well on 40 acres on the west side of the pool is drilled and encounters enough pay to make a well, it is possible that it could drain quite an extensive area with water drive.

Q But you wouldn't feel that 40-acre spacing would be economical as far as your company is concerned, even on your west side?

A The economics, the economic picture doesn't look good on 40-acre spacing.

MR. DURRETT: Thank you.

BY MR. NUTTER:



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q You stated that this pool had certain characteristics that were similar to the Lane Pool, and that the Commission had found that the Lane Pool could be efficiently and economically developed on 80-acre proration units and spacing. Now, the pool has been depleted evidently; is there any evidence that this was an economic and efficient depletion of the pool?

A Yes, sir. If you will refer to Exhibit No. 4, you will notice that the oil production peaked in 1957 at approximately 38,000 barrels, and is now producing at the rate of approximately, oh, say two or three hundred barrels as an average, barrels per month is what we're talking about here; and that the water production has risen to a very high figure. As a matter of fact, the oil production in the pool now comes from only one well. That is the Sunray Mid-Continent State "F" No. 2. The pool has been drained and water has encroached on every well that had production in the Lane Field. Therefore, it is assumed and it is thought that the pool has been depleted and that it has been totally drained.

Q What about the individual cumulative productions for these various wells? Do you have those?

A No, sir, I don't have those figures with me.

Q Now the average has been 112,000, I believe you stated?

A Yes, sir.

Q That's for nine wells. That doesn't include the Humble State AM No. 1, I presume?



FARMINGTON, N. M.  
PHONE 325-1182

DEARNLEY-MEIER REPORTING SERVICE, Inc.

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6091

A Yes, sir, those figures do include the Humble.

Q Although Mr. McIntyre's testimony yesterday was that this well properly should not be included in the Lane Pool?

A That's correct.

Q Mr. McIntyre also mentioned that the Cities Service Well had a cumulative total of about 39,000, and that a couple of those Sunray wells had something like 300,000. Is there that much disparity between the high cumulative and low cumulative on these various wells?

A It's my recollection that no well in the pool produced 300,000 barrels.

Q I may have misunderstood Mr. McIntyre.

MR. NUTTER: Do you recall what that figure was, Mr. McIntyre?

MR. MCINTYRE: Yes, sir, that was cumulative production in those three wells from both the "A" and "D" zones.

MR. NUTTER: That's for the two zones?

MR. MCINTYRE: Yes. When I said in excess of 30,000 barrels, that is from the "D" zone. This Bough "A" zone or Wolfcamp, as I referred to it, these figures are based on that zone. Those figures I gave yesterday were for both zones.

MR. NUTTER: Do you know what the figures are for the single zone?

MR. MCINTYRE: No, I don't have it with me. We have the cumulative production from these wells.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

MR. NUTTER: Were these wells dually completed in the two zones?

MR. McINTYRE: Yes.

MR. NUTTER: It was classified as Lane-Wolfcamp and Lane-Pennsylvanian?

MR. McINTYRE: Yes.

Q (By Mr. Nutter) You do have a core in the zone that you are talking about here, the Bough "A" zone?

A Yes, we do.

Q It indicates a porosity of something like five percent. I believe one of your exhibits indicated?

A That's correct. Exhibit No. 8.

Q Have you made a volumetric estimate or computation of the oil in place--

A No, sir.

Q -- based on that porosity?

A I have not.

Q What is the water saturation from the core analysis?

A The core analysis water saturation seemed to be very unreliable; however, we turned to log analysis rather than a core analysis for our information there. The water saturation is approximately 45 percent, based on electrical log computations.

Q 45 percent?

A Yes, sir.

Q What about the formation volume factor? What would that



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

run in this pool?

A Again we do not have that information specifically on this well. However, we are assuming that we have a crude oil that is very akin to the crude oil in the Lane Wolfcamp Pool, and that formation volume factor is 1.828. We do not have a bottomhole sample analysis yet.

Q And you don't know the solution GOR, either?

A No, sir, we don't. We do plan to obtain all this information later after more development.

Q If the Commission should enter a temporary order, you would have that information available say a year later?

A Yes, sir.

Q With the additional wells being drilled?

A Yes, we do plan to take a bottomhole sample.

MR. NUTTER: Any further questions?

MR. MORRIS: I have a couple more.

# REDIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Qualia, about how many wells do you plan to drill in the next year in this pool? Can you give an estimate?

A We would probably drill maybe three or four wells.

Q So you would have better information and calculations as to oil in place, and be able to substantiate one way or another the 80-acre proration units?

A Yes, sir.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q I don't want to leave the state of the record in any confusion here with respect to our position with respect to the development along the west flank of our acreage. Where you stated that your offset operators along the west side would develop on a row of 40's going up the west side of your acreage, did you mean by that that they would actually develop on 40-acre proration units?

A No, sir, I didn't mean to imply that. I meant that if the 80-acre units are laid in a flat position --

Q Running east-west?

A -- running east and west, then it is possible to have a row of wells virtually on 40-acre spacing along the west line of our acreage.

Q In other words, laying the 80's in an east-west direction abutting the west flank of your acreage there, under a flexible pattern the wells could be drilled right along your west line, which would amount to development on 40-acre basis?

A Yes, sir.

Q You feel that this would be objectionable, one, because you would have to drill offset wells?

A Yes, sir, we would have to meet those offsets.

Q Is there also some question as to whether running the 80-acre units in an east-west direction, is there some question because of structure as to whether all of that 80 might be productive or not?



A Definitely there is some question there.

MR. MORRIS: I believe that's all.

MR. NUTTER: Any further questions of Mr. Qualia?  
He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Morris?

MR. MORRIS: That's all I have.

MR. NUTTER: Does anyone have anything they wish to  
offer in Case 2660? We will take the case under advisement.

\* \* \* \* \*

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, ADA DEARNLEY, Notary Public in and for the County  
of Bernalillo, State of New Mexico, do hereby certify that the  
foregoing and attached Transcript of Hearing was reported by me  
in stenotype, and that the same is a true and correct record of  
said proceedings to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 29th day of October,  
1962, in the City of Albuquerque, County of Bernalillo, State of  
New Mexico.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 2660  
heard by me on 10/11/62.

*Ada Dearnley*  
NOTARY PUBLIC

*W. H. H. H.*, Examiner  
New Mexico Oil Conservation Commission  
My Commission Expires:  
June 19, 1963.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.  
PHONE 243-8891

SANTA FE, N. M.  
PHONE 983-3971

FARMINGTON, N. M.  
PHONE 325-1182



DRAFT

JMD/esr  
October 22, 1962

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2660

Order No. R- 2348

APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
October 10, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter,  
Examiner duly appointed by the Oil Conservation Commission of New  
Mexico, hereinafter referred to as the "Commission," in accordance  
with Rule 1214 of the Commission Rules and Regulations.

NOW, on this \_\_\_\_\_ day of October, 1962, the Commission,  
a quorum being present, having considered the application, the  
evidence adduced, and the recommendations of the Examiner,  
Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That a new oil pool for Pennsylvanian production should  
be created and designated the Middle Lane-Pennsylvanian Pool. This  
pool was discovered by the Midwest Oil Corporation Louisiana State  
Well No. 1, located in Unit L, Section 14, Township 10 South, Range  
33 East, NMPM, Lea County, New Mexico. The top of the perforations  
is at 9782 feet.

(3) That Midwest Oil Corporation seeks the promulgation of  
temporary special rules and regulations for the Middle Lane-  
Pennsylvanian Pool to provide for 80-acre proration units and  
fixed well location requirements.

(4) That the evidence presented concerning the reservoir  
characteristics of the Middle Lane-Pennsylvanian Pool justifies



the establishment of 80-acre proration units in said pool for a temporary one year-period.

(5) That the evidence establishes that the Middle Lane-Pennsylvanian Pool can presently be efficiently and economically drained on 80-acre proration units.<sup>(6)</sup> That the evidence establishes that the subject pool should be developed with fixed well location requirements in order to protect correlative rights.

(7) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(8) That this case should be reopened at an examiner hearing in October, 1963, at which time the operators in the subject pool should appear and show/~~cause~~ by a preponderance of the evidence why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Middle Lane-Pennsylvanian Pool consisting of the following-described area:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM  
Section 14: W/2

(2) That special rules and regulations for the Middle Lane-Pennsylvanian Pool are hereby promulgated as follows, effective November 1, 1962.

SPECIAL RULES AND REGULATIONS  
FOR THE  
MIDDLE LANE-PENNSYLVANIAN POOL

RULE 1. Each well completed or recompleted in the Middle Lane-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the Middle Lane-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or re/~~re~~completed in the Middle Lane-Pennsylvanian Pool shall be located on a unit containing 80

acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Secretary-Director may *grant* an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Middle Lane-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the Middle Lane-Pennsylvanian Pool shall be located in the NW/4 or the SE/4 of a governmental *quarter* section and shall not be located closer than 330 feet to a governmental quarter-quarter *section*/line.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the Middle Lane-Pennsylvanian Pool shall be assigned an 80-acre proportional factor of 4.77 for allowable purposes, and in the event ~~that~~ there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in October, 1963, at which time the operators in the subject pool may appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That any operator desiring to dedicate 80 acres to a

well in the Middle Lane-Pennsylvanian Pool shall file a new Form C-128 with the Commission on or before November 1, 1962.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 10, 1962

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

---

The following cases will be heard before Daniel S. Nutter, Examiner or  
Elvis A. Utz, alternate examiner:

- CASE 2647: (Continued)  
Application of Carper Drilling Company for a tubingless completion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Baetz Well No. 1, located in the SE/4 SW/4 of Section 35, Township 14 South, Range 27 East, Chaves County, New Mexico, as a tubingless gas well completion producing through perforations from 8182-8270' in 2 7/8 inch casing.
- CASE 2654: Application of Carper Drilling Company for the creation of a new gas pool and for temporary special rules and regulations, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool to be designated the Buffalo Valley-Pennsylvanian Gas Pool for its Baetz Well No. 1, located in the SE/4 SW/4 of Section 35, Township 14 South, Range 27 East, Chaves County, New Mexico. Applicant, further seeks the establishment of temporary special rules and regulations governing said pool, including provisions for 320-acre gas units.
- CASE 2655: Application of Martin Yates III and S. P. Yates for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order force pooling all mineral interests in the Lusk-Strawn Pool to form a 160-acre oil proration unit comprising the NE/4 of Section 30, Township 19 South, Range 32 East, Lea County, New Mexico, to be dedicated to a well to be drilled in the NE/4 NE/4 of said Section 30.
- CASE 2656: Application of Western Development Company for a secondary recovery project, East Millman Queen-Grayburg Field, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a secondary recovery project in the East Millman Queen-Grayburg Field, with the injection of water into the Queen and Grayburg formations initially to be through 16 wells, located in Sections 11, 14, 15, 22 and 23, Township 19 South, Range 28 East, Eddy County, New Mexico, said project to be governed by the provisions of Rule 701.

- CASE 2657: Application of Odessa Natural Gasoline Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks establishment of a 320-acre non-standard gas proration unit comprising the SE/4 of Section 23 and the NE/4 of Section 26, Township 25 South, Range 37 East, Justis Gas Pool, Lea County, New Mexico, to be dedicated to its Carlson "A" Well No. 1 located in Unit P of said Section 23.
- CASE 2658: Application of Cabot Corporation for temporary special rules and regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order promulgating temporary special rules and regulations for the North Bagley-Pennsylvanian Pool, Lea County, New Mexico, including provisions for 80-acre proration units.
- CASE 2659: Application of Cabot Corporation for the creation of a new oil pool and the establishment of temporary rules and regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool to be designated the North Bagley-Wolfcamp Pool for its Humble State Well No. 1, located in the NW/4 NW/4 of Section 23, Township 11 South, Range 33 East, Lea County, New Mexico. Applicant further seeks establishment of temporary rules and regulations governing said pool including provisions for 80-acre proration units.
- CASE 2660: Application of Midwest Oil Corporation for the creation of a new oil pool and for the establishment of temporary special rules and regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Pennsylvanian production in the vicinity of its LLE State Well No. 1, located in the NW/4 SW/4 of Section 14, Township 10 South, Range 33 East, Lea County, New Mexico. Applicant further seeks the promulgation of temporary special rules and regulations governing said pool to include provisions for 80-acre proration units and fixed well location requirements.
- CASE 2661: Application of Pan American Petroleum Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion (conventional) of its Southland Royalty "A" Well No. 2, located in Unit B of Section 9, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce

-3-

Docket No. 29-62

Examiner Hearing - Wednesday October 10, 1962

oil from the Drinkard and Blinebry formations and gas from the Tubb formation through parallel strings of tubing.

CASE 2662:

Application of Pan American Petroleum Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion (conventional) of its South Mattix Unit Well No. 14, located in Unit K of Section 15, Township 24 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce gas from the Fowler Paddock and an undesignated Tubb pool, and oil from an undesignated Blinebry pool through parallel strings of tubing.

CASE 2663:

Application of Arnold H. Bruner for permission to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to directionally drill his Federal Intex Well No. 1, the surface location of which is in the center of the NW/4 SE/4 of Section 8, Township 9 South, Range 37 East, Allison Pennsylvanian Pool (extension), Lea County, New Mexico. Target for said directionally drilled well would be 100 feet from the North and West lines of the NW/4 SE/4 of said Section 8.

CASE 2664:

Application of Southwest Production Company for a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Davis Federal Well No. 1, located in Unit L of Section 24, Township 26 North, Range 11 West, San Juan County, New Mexico, as a dual completion with production of oil from the Gallup zone and production of gas from the Dakota zone to be through parallel strings of 1 1/4-inch tubing.

199/

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date Oct 15, 1962

CASE 2660

Hearing Date 9 am 10-10-62

DSN @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order creating the Middle Lane Pennsylvanian pool comprising the W $\frac{1}{2}$  Sec 14, Twp 10 S, Rge 33 E, Lea Co.

Pool was discovered by Midwest Oil Corporation Louisiana St well no 1 located in Unit C, Sec 14. It was

Completed ~~Oct 8, 1962~~

The top of the perms is @ 9782 feet.

Provide one 80 acre Temp Pool establishing 80 acre proportion units which may be the N $\frac{1}{4}$  S $\frac{1}{4}$  E $\frac{1}{2}$  or W $\frac{1}{2}$  of a govt'l quarter section.

Provide that wells shall be located in either the NW $\frac{1}{4}$  or the SE $\frac{1}{4}$  of the quarter section and may not be closer than 330 ft to a quarter quarter section line

~~the the Lane Wolfcamp Pools as a guide~~ Call for another hearing in Oct 63. Make order effective Nov 1, 1962 w/ new C-128's due by that time. Establish 80-acre proportional factor of 4.77.

R-2253, S. Lane

Perm Pools may be used as a guide.

Van Dusen  
Staff Engineer

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2554  
Order No. R-2253

APPLICATION OF T. F. HODGE FOR  
THE CREATION OF A NEW OIL POOL  
AND FOR THE ESTABLISHMENT OF  
TEMPORARY RULES, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 10, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner, duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 7th day of June, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That a new oil pool for Pennsylvanian production should be created and designated the South Lane-Pennsylvanian Pool. This pool was discovered March 26, 1962, by the T. F. Hodge Humble-State Well No. 1, located in Unit N of Section 26, Township 10 South, Range 33 East, NMPM, Lea County, New Mexico. The top of the perforations is at 9667 feet.
- (3) That T. F. Hodge seeks the promulgation of temporary special rules and regulations for the South Lane-Pennsylvanian Pool, to provide for 80-acre proration units.
- (4) That the evidence presented concerning the reservoir characteristics of the South Lane-Pennsylvanian Pool justifies the establishment of 80-acre proration units in said pool for a temporary one-year period.
- (5) That the information presently available and presented as evidence indicates that the South Lane-Pennsylvanian Pool can be efficiently and economically drained on 80-acre proration units.



-2-

CASE No. 2554  
Order No. R-2253

(6) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(7) That this case should be reopened at an examiner hearing in June, 1963, at which time the operators in the subject pool should be prepared to appear and show cause why the South Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the South Lane-Pennsylvanian Pool, consisting of the following-described area:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM  
Section 26: SW/4

(2) That special rules and regulations for the South Lane-Pennsylvanian Pool are hereby promulgated as follows, effective July 1, 1962.

SPECIAL RULES AND REGULATIONS FOR THE  
SOUTH LANE-PENNSYLVANIAN POOL

RULE 1. Each well completed or recompleted in the South Lane-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the South Lane-Pennsylvanian Pool, and not nearer to nor within the limits of another designated Pennsylvanian Pool shall be spaced, drilled, operated and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the South Lane-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2 or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

-3-

CASE No. 2554  
Order No. R-2253

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the South Lane-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. The initial well on any 80-acre unit in said pool shall be located within 150 feet of the center of either quarter-quarter section or lot in the 80-acre unit. Any subsequent additional well on the 80-acre unit shall be located within 150 feet of the center of the other quarter-quarter section or lot in the unit.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the South Lane-Pennsylvanian Pool shall be assigned an 80-acre proportional factor of 4.77 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in June, 1963, at which time the operators in the subject pool may appear and show cause why the South Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF NEW MEXICO

APPLICATION OF MIDWEST OIL CORPORATION }  
FOR THE CREATION OF A NEW OIL POOL AND }  
FOR THE ESTABLISHMENT OF TEMPORARY }  
SPECIAL RULES AND REGULATIONS GOVERNING }  
SAID POOL, LEA COUNTY, NEW MEXICO.

No. 2660

DOCKET MAILED

A P P L I C A T I O N

~~DO~~ Comes now MIDWEST OIL CORPORATION, 1500 Wilco Building, Midland, Texas, by its attorneys, SETH, MONTGOMERY, FEDERICI & ANDREWS, and applies to the OIL CONSERVATION COMMISSION OF NEW MEXICO for an Order creating a new oil pool for Pennsylvanian production in Lea County, New Mexico, and establishing temporary rules and regulations governing said pool, including provisions for development of the pool on 80 acre production units, and in support thereof states:

1. That the applicant, MIDWEST OIL CORPORATION, is now in the process of completing its LLE State Well No. 1 in the Northwest quarter, Southwest quarter of Section 14, Township 10 South, Range 33 East, N.M.P.M., Lea County, New Mexico. Completion of this well will be attempted in the Bough "D" section of the Pennsylvanian formation with perforation at an approximate depth of from 9,782 to 9,786 feet. Should completion in this zone be nonproductive, completion will be attempted in the Bough "A" zone.

2. Due to the location of the subject well, approximately midway between the Lane and South Lane pools, and due to the known structure of this area, the subject well is anticipated to produce at rates comparable to those of wells in the South Lane pool.

DOCKET MAILED

Date 7/28/62

Accordingly, applicant desires to have established special rules and regulations for this pool at an early date in its development, which rules should provide for 80-acre proration units.

3. That the applicant believes that a better spacing pattern can be obtained and that the ultimate recovery of oil from the pool will be enhanced by well location requirements in the special rules and regulations requiring the original well on each 80-acre unit to be located either in the Northwest or the Southeast quarter of the quarter section in which the well is located.

4. That inasmuch as limited information concerning the reservoir characteristics of this pool will be available at the hearing of this matter, applicant requests that the special rules and regulations adopted for this pool be on a temporary one year basis, at the end of which time applicant and other interested parties should be permitted to appear and present additional evidence concerning the pool characteristics.

WHEREFORE, MIDWEST OIL CORPORATION requests that this matter be set down for hearing before the Commission, or one of its Examiners, and that following said hearing an Order be entered by the Commission creating the new oil pool and establishing temporary special rules and regulations as set forth in this application.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By Richard S. Morris  
Attorneys for Midwest Oil  
Corporation  
Santa Fe, New Mexico

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 9, 1963

9:00 A. M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, examiner, or Daniel S. Nutter as alternate examiner:

CASE 2888: (Continued from the September 4, 1963 examiner hearing)

Application of the British American Oil Producing Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Jalmat Deep Unit Area comprising 10,568.81 acres of State land in Townships 21 and 22 South, Range 35 East, Lea County, New Mexico.

CASE 2903: (Continued from the September 25, 1963 examiner hearing)

Application of Coastal States Gas Producing Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Gulf State Well No. 1, located in Unit F of Section 20, Township 17 South, Range 36 East, Lea County, New Mexico, to produce oil from the Double-A Abo Pool and an undesignated Lower Leonard pool through parallel strings of tubing.

CASE 2907: (Continued from the September 25, 1963 examiner hearing)

Application of Penroc Oil Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Indian Hills-Upper Pennsylvanian Gas Pool underlying Section 19, Township 21 South, Range 24 East, Eddy County, New Mexico.

CASE 2908: (Continued from the September 25, 1963 examiner hearing)

Application of Penroc Oil Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Morrow Section of the Pennsylvanian formation underlying Section 19, Township 21 South, Range 24 East, Indian Hills Field, Eddy County, New Mexico.

CASE 2910: (Continued from the September 25, 1963 examiner hearing)

Application of Big (6) Drilling Company for extension of an existing oil pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the Scharb Bone Spring Oil Pool to comprise the W/2 of Section 5, all of Section 6, and the N/2 of Section 7, Township 19 South, Range 35 East, Lea County, New Mexico, and for special rules therefor, including 80-acre spacing and proration units to comprise any two contiguous 40-acre tracts, and for fixed well locations.

CASE 2911: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Francis L. Harvey & Capital Counsellors and all other interested parties to appear and show cause why the Francis L. Harvey & Capital Counsellors Bunce-Federal Well No. 1, located 1586 feet from the North line and 1503 feet from the East line of Section 19, Township 29 North, Range 10 West, San Juan County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

CASE 2912: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Tamanaco Oil Company and all other interested parties to appear and show cause why the Tamanaco El Poso Ranch Well No. 11, located 680 feet from the South line and 2080 feet from the West line of Section 11; the Tamanaco Pound Ranch Well No. 14 located 740 feet from the North line and 1850 feet from the West line of Section 14, and the Tamanaco Pound Ranch Well No. 27 located 330 feet from the North line and 1501 feet from the East line of Section 27, all in Township 28 North, Range 1 East, Rio Arriba County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

CASE 2913: Application of Gulf Oil Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 280 acre non-standard gas proration unit comprising the NW/4, W/2 NE/4 and NW/4 SE/4 of Section 29, Township 23 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its C. E. LaMunyon Well No. 4, located in Unit D of said Section 29.

CASE 2660: (Reopened) In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348, which order established temporary 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2678: (Reopened) In the matter of Case No. 2678 being reopened pursuant to provisions of Order No. R-2359, which order established temporary 160-acre proration units for the East Saunders Permo-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2659: (Reopened) In the matter of the Case No. 2659 being reopened pursuant to the provisions of Order No. R-2347, which order established temporary 80-acre proration units for the North Bagley-Wolfcamp Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2658: (Reopened) In the matter of Case 2658 being reopened pursuant to the provisions of Order No. R-2346, which order established temporary 80-acre

proration units for the North Bagley-Upper Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2914:

Application of Humble Oil & Refining Company for an exception to Rule 107 (d) 1, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce oil from the Gallup formation through 4½-inch casing without tubing from its Navajo Tribe Tract 12 Well No. 1, located in Unit B of Section 19, Township 29 North, Range 15 West, San Juan County, New Mexico.

CASE 2915:

Application of Franco Western Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the South Seven Rivers Unit Area comprising 4,480 acres, more or less, of State, Federal and Fee lands in Township 20 South, Ranges 24 and 25 East, Eddy County, New Mexico.

GOVERNOR  
EDWIN L. MECHAM  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission

LAND COMMISSIONER  
E. S. JOHNNY WALKER  
MEMBER



STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

P. O. BOX 871  
SANTA FE

October 25, 1962

Mr. Richard S. Morris  
Seth, Montgomery, Federici & Andrews  
Attorneys at Law  
Box 828  
Santa Fe, New Mexico

Re: Case No. 2660  
Order No. R-2348  
Applicant:  
Midwest Oil Corporation

DOCKET MAILED

Dear Sir:

Date 9-27-62

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC X

Artesia OCC       

Aztec OCC       

OTHER



Case 7660

Heard 10-8-63

Rec. 10-8-63,

1. Grant a 1 yr. extension for Midwest, for all provisions of ~~Order~~ R-2348. In order to give ample time to evaluate the pool after the completion of the Mission - Midwest # B-14-105-33E.
  2. Denie Missions request for deletion of fixed spacing in the pool. Because of no jurisdiction.
  3. Require that Midwest present proof of 80 Hc. Damage in Aug 1964 or the pool will reset to 40 Hc spacing.
- Shackelford

DOCKET: EXAMINER HEARING - THURSDAY - NOVEMBER 12, 1964

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner.

CASE 3129: (Continued from the October 13, 1964 Examiner Hearing).  
Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Wilson Deep Unit Area comprising 3360 acres, more or less, of State and Fee lands in Township 21 South, Range 34 East, Lea County, New Mexico.

CASE 3138: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider exempting certain oil pools in Lea, Chaves, Roosevelt and Eddy Counties, New Mexico, from the gas-oil ratio testing requirements of Rule 301 of the Commission Rules and Regulations. The following pools will be considered for exemption:

ARTESIA DISTRICT

Atoka-San Andres	Leo-Queen-Grayburg, South
Atoka-Grayburg	Leslie Spring-San Andres
Benson-Yates, East	Linda-San Andres
Bitter Lakes-San Andres, South	Loco Hills-San Andres, South
Bitter Lakes-San Andres, West	Logan Draw-San Andres
Brown, Q. Gbr.	Malaga-Delaware
Brushy Draw-Delaware	McMillan Seven Rivers-Queen, East
Canyon-Wolfcamp	Millman-Seven Rivers, East
Carlsbad-Delaware	Palmillo-Seven Rivers
Cass Draw-Delaware	Parallel-Delaware
Cave (Gbr.)	Pecos-Delaware
Case-San Andres, West	Pecos-San Andres
Cedar Lake-Cisco	Penasco-San Andres
Chisum-Devonian	Penasco-Wolfcamp
Corral Canyon-Delaware	Quahada Ridge-Delaware
Cotton Draw-Brushy Canyon	Red Hills- Yates
Coyote-Queen	Red Lake-Queen-Grayburg, East
Dark Canyon-Delaware	Red Lake-Seven Rivers, South
Dayton-Abo	Remuda-Wolfcamp
Dayton-Grayburg, East	Round Tank-San Andres
Dayton-San Andres, West	Saladar-Yates
Diablo-San Andres	Sand Tank-Queen
Dog Canyon-Grayburg	Shugart-Bone Springs
Dos Hermanos, Yates-Seven Rivers	Shugart-Wolfcamp
Eagle Creek-San Andres	Square Lake Grayburg-San Andres, North
Empire Paddock	Sulphate Draw-Delaware
Empire-Yates-Seven Rivers, E.	Twin Lakes-Devonian
Four Mile Draw-San Andres	U. S. Delaware
Fren Paddock	Welch-Delaware
Hackberry-Seven Rivers	White Ranch Siluro-Devonian
Hackberry-Yates, North	White Ranch-Devonian, West
L. E. Ranch-San Andres	Windmill-San Andres

November 12 Examiner Hearing

HOBBS DISTRICT

Baish-Wolfcamp, North	Hume-Queen, West
Baum-Wolfcamp	Jenkins-Devonian
Bishop Canyon-Queen	Jenkins-San Andres
Bowers-Seven Rivers	King-Wolfcamp
Caprock-Wolfcamp, East	Lea-Yates
CLR-San Andres	Littman-San Andres
Corbin-Queen, South	Lone-Wolfcamp
Corbin-Yates	Lovington-San Andres
Crossroads-Mississippian	Lovington-San Andres, West
Crossroads-San Andres, West	Lynch-Yates, Middle
Dollarhide-Queen	Pearl-Pennsylvanian
Dublin-Devonian	Querecho Plains-Bone Springs
Echols-Devonian, East	Querecho Plains-Delaware
Echols-Devonian, North	Querecho Plains-Yates
Edson-Pennsylvanian	Teague-Devonian
Elliott-Abo	Teague-Ellenburger
Field Ranch-Wolfcamp	Teague Simpson
Gladiola-Wolfcamp, South	Warren-Abo
Hume-Queen	Williams-Pennsylvanian, North
	Young-San Andres

CASE 3139: Application of Shell Oil Company for a dual completion and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to its Livingston Well No. 7 located in Unit V of said Section 3. Applicant further seeks approval of said well as a dual completion (conventional) to produce oil from the Drinkard Pool through 2-3/8 inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus.

CASE 3140: Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech B Well No. PD-123 to be located 700 feet from the North line and 1800 feet from the East line of Section 7, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce gas from the South Blanco-Pictured Cliffs Pool through 1-1/4 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 2-3/8 inch tubing.

CASE 3141: Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech C Well No. D-144 to be located 990 feet from the North line and 1,090 feet from the East line of Section 12, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce oil from the South Blanco-Tocito Pool through 2-3/8 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 1-1/4 inch tubing.

November 12 Examiner Hearing

CASE 3142: Application of N. B. Hunt for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 280-acre non-standard gas proration unit comprising the SW/4, W/2 SE/4, and SE/4 SE/4 of Section 21, Township 21 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to his Wantz Well No. 2 located in Unit L of said Section 21. In the event all of said acreage is not approved for said Well No. 2, applicant seeks approval of another non-standard unit comprising the remaining acreage to be dedicated to his Wantz Well No. 1 in Unit A of said Section 21.

CASE 3143: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its H. H. Harris Well No. 2 located in Unit O of Section 35, Township 12 South, Range 38 East, Lea County, New Mexico, as a dual completion (combination) to produce oil from the Bronco Wolfcamp Pool through 2-7/8 inch casing and to produce oil from the Bronco Siluro-Devonian Pool through tubing in a parallel string of 3-1/2 inch casing cemented in a common well bore.

CASE 3144: Application of Texaco Inc. for force-pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Drinkard Pool underlying the SE/4 of the SW/4 of Section 17, Township 22 South, Range 38 East, Lea County, New Mexico.

CASE 3145: Application of Sunray DX Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State "AS" Well No. 1 located in Unit G of Section 29, Township 11 South, Range 33 East, Lea County, New Mexico, as a dual completion to produce oil from the Pennsylvanian formation through tubing and to dispose of produced salt water down the production-intermediate casing annulus into the San Andres, Glorieta, and Tubb formations from 3840 feet to 8600 feet.

CASE 2660: (Reopened and continued from the October 28th Examiner Hearing)  
In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
C. E. JOHNNY WALKER  
MEMBER

P. O. BOX 871  
SANTA FE

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

October 30, 1963

Re: Case No. 2660  
Order No. R-2348-A  
Applicant:

Mr. Richard Morris  
Seth, Montgomery, Federici & Andrews  
Attorneys at Law  
Post Office Box 828  
Santa Fe, New Mexico

DOCKET MAILED

Reopened (Midwest Oil Corp.)

Date 10-15-64

Dear Sir:

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

lr/

Carbon copy of order also sent to:

Hobbs OCC x

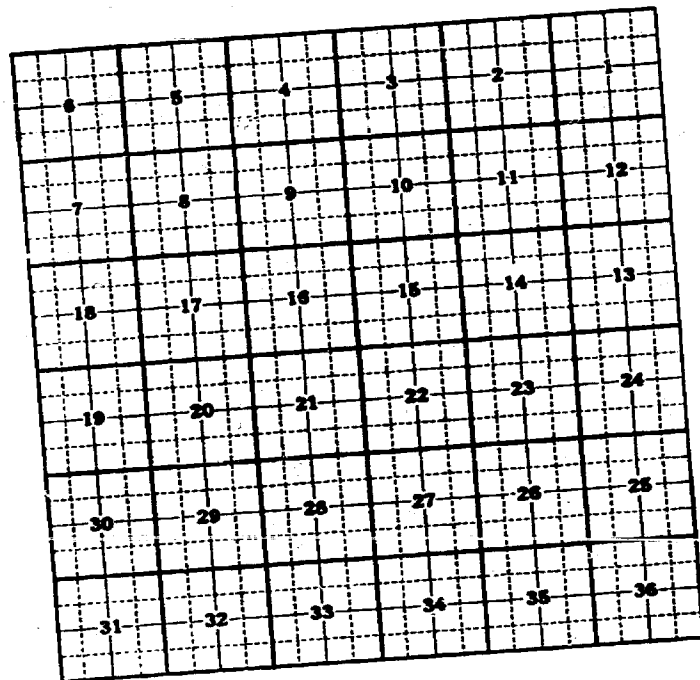
Artesia OCC       

Astec OCC       

OTHER Mr. Jason Kallahin

Name  
Address  
Remarks:

Ph.



T ..... R ..... State  
or County .....

Case 7662

Wm. D. Matson.

Midwest Oil

Corp.

Requests continuance  
to let examination in Jan.  
and will write

letter requesting  
advertisement

of amendment  
to pool rules.

## DOCKET: EXAMINER HEARING - TUESDAY - DECEMBER 15, 1964

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE

BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

- CASE 3154: (Continued from the November 24th examiner hearing)  
Application of Atlantic Refining Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Culwin Queen Unit Area comprising 820 acres, more or less, of State and Federal lands in Townships 18 and 19 South, Ranges 30 and 31 East, Eddy County, New Mexico.
- CASE 3155: (Continued from the November 24 examiner hearing)  
Application of Atlantic Refining Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Shugart Pool in its Culwin Queen Unit Area by the injection of water into the Queen formation through six injection wells in Section 36, Township 18 South, Range 30 East, Section 31, Township 18 South, Range 31 East, Section 1, Township 19 South, Range 30 East, and Section 6, Township 19 South, Range 31 East. Eddy County, New Mexico.
- CASE 3163: Application of Gulf Oil Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 28, and the NE/4 NE/4 of Section 33, Township 21 South, Range 37 East, Blinbry Gas Pool, Lea County, New Mexico. Said unit to be dedicated to its J. N. Carson Well No. 6 located in Unit P of said Section 28.
- CASE 3164: Application of Gulf Oil Corporation for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its W. A. Ramsay (NCT-A) waterflood project, South Eunice Pool, to include one additional water injection well to be located approximately 1320 feet from the South and West lines of Section 34, Township 21 South, Range 36 East, Lea County, New Mexico.
- CASE 3165: Application of Sam Boren & Major & Giebel Oils for a non-standard proration unit, Lea County, New Mexico. Applicants, in the above-styled cause, seek approval of a 104.18 acre non-standard oil proration unit comprising all of lots 1 and 2 of Section 1, Township 11 South, Range 33 East, South Lane Pool, Lea County, New Mexico, to be dedicated to a well to be drilled within 150 feet of the center of said lot 1.
- CASE 3166: Application of Tenneco Oil Company for four non-standard proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the following four non-standard oil proration units in the South Lane Pool:
- Unit No. 1, 93.61 acres comprising the E/2 SE/4 and Lot 1 of Section 6, dedicated to applicant's State "E" Well No. 1 located in Unit P of Section 6;
- Unit No. 2, 93.24 acres comprising the W/2 SE/4 and Lot 2 of Section 6, dedicated to applicant's State "E" Well No. 2 located in Unit J of Section 6.



Unit No. 3, 92.87 acres comprising the E/2 SW/4 and Lot 3 of Section 6, dedicated to applicant's State "F" Well No. 1 located in Unit K of Section 6;

Unit No. 4, 81.76 acres comprising Lots 4, 5, and 6 of Section 6, dedicated to a well to be drilled 100 feet North of the center of Lot 5 of Section 6, all in Township 11 South, Range 34 East, Lea County, New Mexico.

CASE 3167: Application of IMC Drilling Mud, a division of International Minerals and Chemical Corporation for an amendment of Rule 107. Applicant, in the above-styled cause, seeks an amendment to Rule 107 of the Commission Rules and Regulations to provide an administrative procedure whereby oil-base casing packing material could be used in lieu of a portion of the portland cement normally used in cementing oil well casing.

CASE 3168: Application of Jake L. Hamon 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, Glorieta and Yeso formations through the open hole interval from 5000 feet to 9000 feet in its Fannye M. Holloway Well No. 1 located in Unit B of Section 13, Township 17 South, Range 38 East, South Knowles Devonian Pool, Lea County, New Mexico.

CASE 3169: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the E/2 of Section 14, Township 29 North, Range 11 West, San Juan County, New Mexico.

CASE 3170: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the E/2 of Section 8, Township 30 North, Range 13 West, San Juan County, New Mexico.

CASE 3171: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 23, Township 29 North, Range 11 West, San Juan County, New Mexico.

CASE 3172: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 21, Township 29 North, Range 10 West, San Juan County, New Mexico.

CASE 3173: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 31, Township 30 North, Range 12 West, San Juan County, New Mexico.

December 15th Examiner Hearing

- CASE 3174: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the N/2 of Section 28, Township 29 North, Range 10 West, San Juan County, New Mexico.
- CASE 3175: Application of Pan American Petroleum Corporation for an amendment of Order No. R-2424, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2424, Special Pool Rules for Fowler Blinebry Pool to provide a limiting gas-oil ratio for oil wells in said pool of 6000 cubic feet of gas per barrel of oil.
- CASE 3176: Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (tubingless) of its C. C. Fristoe "b" (NCT-2) Well No. 9, located in Unit C of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, to produce oil from the Langlie Mattix, Justis Blinebry and North Justis Tubb-Drinkard Fools through 2-7/8 inch casing cemented in a common wellbore.
- CASE 3177: Application of Sinclair Oil & Gas Company for an amendment of Order No. R-1148, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1148, which order authorized a 160-acre non-standard Tubb gas pool proration unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 of Section 26, Township 21 South, Range 37 East, Lea County, New Mexico, to be dedicated to its J. R. Cone Well No. 1 located in Unit M of said Section 26. Applicant seeks the rededication of said unit and the allowable accrued thereto to its J. R. Cone Well No. 2 located in Unit L of said Section 26.
- CASE 3178: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) A Unit Area comprising 16,895 acres, more or less, of Federal, State and Fee lands in Townships 6 and 7 South, Ranges 25 and 26 East, Chaves County, New Mexico.
- CASE 3179: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) B Unit Area comprising 20,456 acres, more or less, of Federal, State and Fee lands in Township 7 South, Range 26 East, Chaves County, New Mexico.
- CASE 3180: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) C Unit Area comprising 15,081 acres, more or less, of Federal, State and Fee lands in Townships 7 and 8 South, Range 25 East, Chaves County, New Mexico.
- CASE 3181: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) D Unit Area comprising 15,925 acres, more or less, of Federal, State and Fee lands in Township 8 South, Ranges 25 and 26 East, Chaves County, New Mexico.

December 15th Examiner Hearing

CASE 3182: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) E Unit Area comprising 12,323 acres, more or less, of Federal, State and Fee lands in Townships 8 and 9 South, Range 25 East, Chaves County, New Mexico.

CASE 3183: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) F Unit Area comprising 22,049 acres, more or less, of Federal, State and Fee lands in Townships 8 and 9 South, Ranges 25 and 26 East, Chaves County, New Mexico.

CASE 2660: (Reopened and continued from the November 12, 1964 examiner hearing) In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units. Midwest Oil Corporation also requests that the Middle Lane-Pennsylvanian Pool Rules, in addition to being made permanent, be amended to provide the definition of the vertical limits of said pool and the deletion of the fixed well location requirements as provided by said Order No. R-2348.

CASE 3184: Application of Benson-Montin-Greer Drilling Corporation for an amendment of Order No. R-2565, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2565 to permit the shutting-in of wells for interference tests, to permit the accumulation and transfer of back allowables for said shut-in wells, and to permit a transfer well to produce its own allowable plus a transferred allowable up to 100% of 1 top unit allowable for the Puerto Chiquito-Gallup Oil Pool at anytime during the period of one year after the original assignment of said allowable.

# MIDWEST OIL CORPORATION

1500 WILCO BUILDING

MIDLAND, TEXAS

November 11, 1964

GENERAL OFFICES  
1700 BROADWAY  
DENVER 2, COLORADO

NOV 16 1964  
DIVISION OFFICE  
1206 CONTINENTAL NATIONAL  
BANK BUILDING  
FORT WORTH 2, TEXAS

*Re: Nutt*

Mr. D. S. Nutter  
New Mexico Oil Conservation Commission  
State Land Office Building  
Santa Fe, New Mexico

Case No. 2660  
Order N R-2348-A  
Middle Lane Pennsylvanian Pool  
Lea County, New Mexico

Dear Sir:

In the matter of Case No. 2660 which is to be re-opened to consider the temporary establishment of 80 acre proration units by Order No. R-2348-A, Midwest Oil Corporation respectfully requests a continuance to a later date and also requests that the scope of this hearing be broadened to provide for the consideration of the following items.

1. The establishment of 80 acre proration units.
2. The deletion of fixed well location requirements as provided for by Order No. R-2348.
3. The definition of vertical limits.
4. The establishment of permanent rules.

Since a continuance is requested only to provide for the discussion of additional rules it is our desire that it be re-scheduled at the earliest possible date available on your docket.

Thank you for the consideration and instructions which you have given us in this matter.

Very truly yours,

DOCKET MAILED

*C. F. Qualia*

C. F. Qualia  
District Production Superintendent

Date 12-4-64  
*[Signature]*

CGQ:vf

Case 7660

Heard. 12-15-64

Rec. 12-17-64

5. Lane. 150 center, Rule 4 either  
Lane. 330' or either

1. Grant Midwest a perminate 80 A. order for the Middle Lane - Perm. oil Pool. R-2348.
2. Change Rule 4 to read: Each well drilled in the Middle Lane - Perm. Oil Pool may be located on either  $\frac{1}{4}$   $\frac{1}{4}$  sec of the acre ~~area~~ <sup>proportional</sup> unit and shall not be located closer than 330 ft. to the governmental  $\frac{1}{4}$   $\frac{1}{4}$  sec. line.

Thos A. [Signature]

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
C. B. JOHNNY WALKER  
MEMBER

P. O. BOX 871  
SANTA FE

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

December 28, 1964

Mr. Richard S. Morris  
Seth, Montgomery, Federici &  
Andrews  
Attorneys at Law  
Post Office Box 2307  
Santa Fe, New Mexico

Re: Case No. \_\_\_\_\_  
Order No. 2660  
Applicant: R-2348-B

MIDWEST OIL CORP.

Dear Sir:

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC \_\_\_\_\_

Artesia OCC \_\_\_\_\_

Astec OCC \_\_\_\_\_

OTHER \_\_\_\_\_

DRAFT

JMD/esr

Dec. 21, 1964

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:

CF Subj. \_\_\_\_\_

CASE No. 2660

Order No. R- 2348-B

APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
December 15, 1964, at Santa Fe, New Mexico, before Examiner  
Elvis A. Utz.

NOW, on this \_\_\_\_\_ day of December, 1964, the Commission,  
a quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That by Order No. R-2348, dated October 25, 1962, tem-  
porary Special Rules and Regulations were promulgated for the  
Middle Lane-Pennsylvanian Pool, Lea County, New Mexico.

(3) That by Order No. R-2348-A, dated October 30, 1963,  
said temporary Special Rules and Regulations were continued in  
full force and effect for an additional one-year period.

(4) That pursuant to the provisions of Order No. R-2348-A,  
this case was reopened to allow the operators in the subject pool  
to appear and show cause why the Middle Lane-Pennsylvanian Pool  
should not be developed on 40-acre proration units.

(5) That the applicants also seek amendment of the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool to delete the requirement that wells be located in the NW/4 or the SE/4 of a governmental quarter section.

(6) That due to the limited size of the subject pool and the erratic nature of the Pennsylvanian formation in this area, the Special Rules and Regulations should be amended as proposed by the applicant.

(7) That the evidence establishes that one well in the Middle Lane-Pennsylvanian Pool can efficiently and economically drain and develop 80 acres.

(8) That the Special Rules and Regulations promulgated by Order ~~No. R-2348~~ <sup>and No. R-2348-A,</sup> as amended by this order, will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

(9) That to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order ~~No. R-2348~~ <sup>and No. R-2348-A,</sup> as amended by this order, should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That Rule 4 of the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Orders No. R-2348 and No. R-2348-A is hereby amended to read in its entirety as follows:

RULE 4. Each well shall be located no nearer than 330 feet to any governmental quarter-quarter section or lot line.



-3-

CASE No. 2660

Order No. R-2348-B

(2) That the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Orders No. R-2348 and No. R-2348-A, as amended by this order, are hereby continued in full force and effect until further order of the Commission.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2660  
Order No. R-2348

APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 10, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 25th day of October, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That a new oil pool for Pennsylvanian production should be created and designated the Middle Lane-Pennsylvanian Pool. This pool was discovered by the Midwest Oil Corporation Louisiana State Well No. 1, located in Unit L, Section 14, Township 10 South, Range 33 East, NNPM, Lea County, New Mexico. The top of the perforations is at 9782 feet.

(3) That Midwest Oil Corporation seeks the promulgation of temporary special rules and regulations for the Middle Lane-Pennsylvanian Pool to provide for 80-acre proration units and fixed well location requirements.

(4) That the evidence presented concerning the reservoir characteristics of the Middle Lane-Pennsylvanian Pool justifies the establishment of 80-acre proration units in said pool for a temporary one year-period.

-2-

CASE No. 2660

Order No. R-2348

(5) That the evidence establishes that the Middle Lane-Pennsylvanian Pool can presently be efficiently and economically drained on 80-acre proration units.

(6) That the evidence establishes that the subject pool should be developed with fixed well location requirements in order to protect correlative rights.

(7) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(8) That this case should be reopened at an examiner hearing in October, 1963, at which time the operators in the subject pool should appear and show by a preponderance of the evidence why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

**IT IS THEREFORE ORDERED:**

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Middle Lane-Pennsylvanian Pool consisting of the following-described area:

**TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM**  
**Section 14: W/2**

(2) That special rules and regulations for the Middle Lane-Pennsylvanian Pool are hereby promulgated as follows, effective November 1, 1962.

**SPECIAL RULES AND REGULATIONS  
FOR THE  
MIDDLE LANE-PENNSYLVANIAN POOL**

**RULE 1.** Each well completed or recompleted in the Middle Lane-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the Middle Lane-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

**RULE 2.** Each well completed or recompleted in the Middle Lane-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the E/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Middle Lane-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the Middle Lane-Pennsylvanian Pool shall be located in the NW/4 or the SE/4 of a governmental quarter section and shall not be located closer than 330 feet to a governmental quarter-quarter section line.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the Middle Lane-Pennsylvanian Pool shall be assigned an 80-acre proportional factor of 4.77 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in October, 1963, at which time the operators in the subject pool may appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That any operator desiring to dedicate 80 acres to a well in the Middle Lane-Pennsylvanian Pool shall file a new Form C-128 with the Commission on or before November 1, 1962.


(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

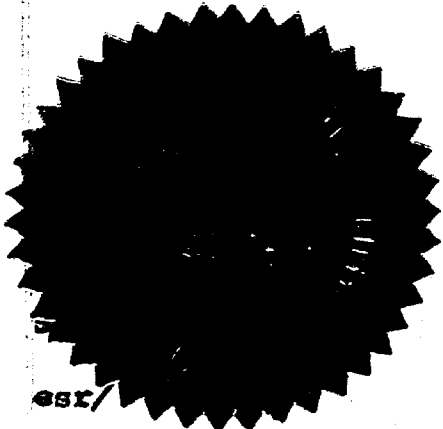
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
EDWIN L. MECHEM, Chairman

  
E. S. WALKER, Member

  
A. L. PORTER, Jr., Member & Secretary



esr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2660  
Order No. R-2348-A

APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 9, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 30th day of October, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That Order No. R-2348 dated October 25, 1962, promulgated Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool providing for 80-acre proration units and fixed well locations in said pool.

(3) That this case was reopened pursuant to the provisions of Order No. R-2348 to allow the operators in the subject pool to appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That no wells have been completed in the subject pool since the issuance of Order No. R-2348; that one well is presently drilling in the subject pool and should be completed in the near future.

-2-

CASE No. 2660  
Order No. R-2348-A

(5) That Midwest Oil Corporation seeks extension of the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool for an additional one-year period.

(6) That the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Order No. R-2348 should be extended for an additional period of time in order to allow the operators in the subject pool sufficient time to gather information concerning the reservoir characteristics of the pool.

(7) That Hisson Drilling Company seeks deletion of the fixed well location requirements of the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool as promulgated by Order No. R-2348.

(8) That the request for deletion of the fixed well location requirements should be denied as said request is not within the scope of this hearing.

**IT IS THEREFORE ORDERED:**

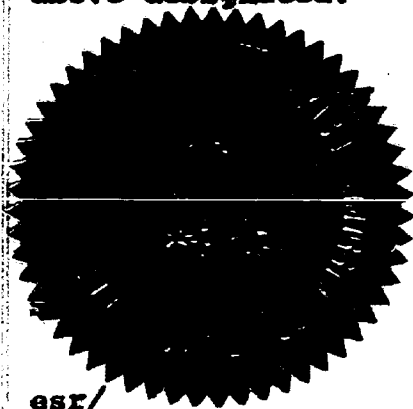
(1) That the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool promulgated by Order No. R-2348 shall be continued in full force and effect until further order of the Commission.

(2) That the request to delete the fixed well location requirements from the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool is hereby denied.

✓ (3) That this case shall be reopened at an examiner hearing in October, 1964, at which time the operators in the subject pool may appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

~~DONE~~ at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*E. S. Walker*  
E. S. WALKER, Member

*A. L. Porter, Jr.*  
A. L. PORTER, Jr., Member & Secretary

esr/

**BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:**

CASE No. 2660  
Order No. R-2348-B

**APPLICATION OF MIDWEST OIL CORPORATION  
FOR THE CREATION OF A NEW OIL POOL AND  
FOR THE ESTABLISHMENT OF TEMPORARY  
SPECIAL RULES AND REGULATIONS, LEA  
COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on December 15, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 28th day of December, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS:**

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-2348, dated October 25, 1962, temporary Special Rules and Regulations were promulgated for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico.

(3) That by Order No. R-2348-A, dated October 30, 1963, said temporary Special Rules and Regulations were continued in full force and effect for an additional one-year period,

(4) That pursuant to the provisions of Order No. R-2348-A, this case was reopened to allow the operators in the subject pool to appear and show cause why the Middle Lane-Pennsylvanian Pool should not be developed on 40-acre proration units.

-2-  
CASE No. 2660  
Order No. R-2348-B

(5) That the applicant also seeks amendment of the Special Rules and Regulations for the Middle Lane-Pennsylvanian Pool to delete the requirement that wells be located in the NW/4 or the SE/4 of a governmental quarter section.

(6) That due to the limited size of the subject pool and the erratic nature of the Pennsylvanian formation in this area, the Special Rules and Regulations should be amended as proposed by the applicant.

(7) That the evidence establishes that one well in the Middle Lane-Pennsylvanian Pool can efficiently and economically drain and develop 80 acres.

(8) That the Special Rules and Regulations promulgated by Orders No. R-2348 and No. R-2348-A, as amended by this order, will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

(9) That to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Orders No. R-2348 and No. R-2348-A, as amended by this order, should be continued in full force and effect until further order of the Commission.

**IT IS THEREFORE ORDERED:**

(1) That Rule 4 of the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Orders No. R-2348 and No. R-2348-A is hereby amended to read in its entirety as follows:

**RULE 4.** Each well shall be located no nearer than 330 feet to any governmental quarter-quarter section or lot line.

(2) That the Special Rules and Regulations governing the Middle Lane-Pennsylvanian Pool promulgated by Orders No. R-2348 and No. R-2348-A, as amended by this order, are hereby continued in full force and effect until further order of the Commission.



-3-

CASE No. 2660

Order No. R-2348-B

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*Jack M. Campbell*

JACK M. CAMPBELL, Chairman

*E. S. Walker*

E. S. WALKER, Member

*A. L. Porter, Jr.*

A. L. PORTER, Jr., Member & Secretary

esr/

LANE WOLFCAMP POOL  
LEA COUNTY, NEW MEXICO

DISCOVERY WELL: Sunray Mid-Continent New Mexico State No. 1

ORIGINAL BHP: 3516 PSI

BOTTOM HOLE PRESSURE HISTORY: See performance curves and tabulations

BHP AT DEPLETION: 2960 PSI

BUBBLE POINT OF LANE WOLFCAMP CRUDE OIL: 3388 PSI

FORMATION VOLUME FACTOR OF LANE WOLFCAMP CRUDE OIL: 1.823

SPACING: 80 acres

RESERVOIR DATA AND INTERPRETATIONS: The relatively small decline in Bottom Hole Pressure along with a decrease in oil production accompanied by an increase in water production indicates that water drive was the primary source of energy in this reservoir.

OIL RECOVERY: Nine wells were completed in this field and have produced an accumulated volume of 1,015,160 barrels of oil for an average of 112,800 barrels each. An examination of the logs of the productive wells in the pool showed an average porosity zone of 10.3 feet per well. Applying 80 acre drainage, the average well had 824 acre feet of net pay. Dividing 824 into 112,800 gives an average of 137 barrels per acre foot recovery.

PRODUCTIVE LIFE OF FIELD: 5 years

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 2660

MIDWEST LLE STATE NO. 1  
DISCOVERY IN BOUGH "A" ZONE

LOCATION: 660' FWL & 2310' FSL of Section 14, T-10-S, R-33-E, Lea County,  
New Mexico.

COMPLETION INFORMATION: Set 5½" casing at 9835' and cemented with 265 sax of Incore cement mixed with 265 sax of Diamix "A". Completion was attempted in the Bough "D" Zone at 9782-86. Acidized with 250 gallons and swabbed 4½ barrels of salt water per hour with no show of oil or gas. Squeezed perforations 9782-86 and perforated the Bough "A" Zone 9650-54 with 2 jet shots per foot. Swabbed 15 barrels of fluid per hour, 20-40% oil. Began installing gas lift equipment.

BOTTOM HOLE PRESSURE TEST: Original BHP of the Bough "A" Zone was 3334 PSI @ -5438 datum which is midpoint of perforations. Date of pressure - September 28, 1962. If the pressure is extrapolated back to -5387 (datum of Lane Pool pressures), it would be 3310 PSI.

POTENTIAL TEST: October 8, 1962 - gas lifted 94.18 BO plus 368 BW in 24 hours. G.O.R. 1432, gravity 45.0 degree (corrected)

AVERAGE POROSITY: 5.0% (9650-58 from core analysis)

AVERAGE PERMEABILITY: 14.99 MD (9650-58 from core analysis)

RESERVOIR DATA AND INTERPRETATIONS: What is called the Wolfcamp producing zone in the Lane Pool is correlative to what Midwest calls its Bough "A" Zone in its discovery well in Section 14. It is therefore felt a fair assumption that the reservoir from which Midwest's LLE State No. 1 is producing will perform similar to the Lane Wolfcamp Pool.

ECONOMICS: An average development well drilled to 9850' should cost approximately \$162,000. Assuming the average well to have the same recovery as the average well in the Lane Wolfcamp Pool - (112,800 barrels), the total income per average well would be \$233,496. Subtracting the \$162,000 cost to drill and equip the well, the net profit is \$71,496 per well. It is hoped that more pay and wise and prudent development in this area will result in better return per dollar invested.

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 8  
CASE NO. 2660

*Water sat core unreliable  
etc log comp  
= 45%*

LANE WOLFCAMP POOL  
LEA COUNTY, NEW MEXICO  
PERFORMANCE HISTORY

YEAR	MONTH	NO. WELLS	OIL PROD. (bbls.)	CUMULATIVE OIL PROD. (bbls.)	WATER PROD. (bbls.)	CUMULATIVE WATER PROD. (bbls.)	B.H.P. (PSI) @ -5387
1955	Dec.	1	3,431	3,431	0	0	3,516
1956	Jan.	1	4,687	8,118	0	0	3,512
	Feb.	2	4,937	13,055	0	0	3,444
	Mar.	2	5,570	18,625	0	0	
	Apr.	2	6,634	25,259	7,891	7,891	3,487
	May	2	7,039	32,298	0	7,891	
	June	3	6,594	38,892	0	7,891	3,479
	July	3	10,398	49,290	10,339	18,230	3,494*
	Aug.	3	10,345	59,635	10,580	28,810	3,463*
	Sept.	5	12,514	72,149	1,400	30,210	3,440*
	Oct.	5	20,113	92,262	7,000	37,210	3,428*
	Nov.	5	23,220	115,483	6,000	43,210	
	Dec.	5	20,962	136,444	9,788	52,998	
1957	Jan.	7	28,865	165,309	24,760	77,758	
	Feb.	7	32,924	198,233	25,473	103,231	3,341
	Mar.	7	37,824	236,057	29,486	132,717	3,260
	Apr.	7	37,310	273,367	30,076	162,793	
	May	7	36,654	310,021	30,421	193,214	
	June	7	30,143	340,164	28,645	221,859	3,177
	July	7	32,724	372,888	21,545	243,404	
	Aug.	7	32,184	405,072	28,905	272,309	3,165
	Sept.	8	32,482	437,554	21,089	293,398	3,214
	Oct.	8	34,967	472,521	22,828	316,226	
	Nov.	9	31,842	504,363	25,237	341,463	
	Dec.	9	33,236	537,599	19,769	361,232	3,032*
1958	Jan.	9	31,808	569,407	18,559	379,791	
	Feb.	9	25,442	594,849	26,527	406,318	
	Mar.	9	21,689	616,538	15,708	422,026	2,936
	Apr.	9	24,393	640,931	37,127	459,153	
	May	9	23,876	664,807	39,509	498,662	
	June	8	18,486	683,293	12,154	510,816	2,977
	July	7	20,667	703,960	28,491	539,307	
	Aug.	7	20,559	724,519	37,019	576,326	2,958
	Sept.	7	19,836	744,355	32,723	609,049	
	Oct.	7	22,397	766,752	24,011	633,060	
	Nov.	7	21,518	788,270	21,716	654,776	
	Dec.	7	20,846	809,116	26,252	681,028	
1959	Jan.	7	11,268	820,384	20,900	701,928	
	Feb.	7	13,057	833,441	8,500	710,428	
	Mar.	7	13,155	846,596	11,000	721,428	
	Apr.	7	14,196	860,792	21,415	742,843	
	May	7	13,464	874,256	12,112	754,955	
	June	6	12,513	886,769	20,064	775,019	
	July	6	10,012	896,781	8,030	783,049	
	Aug.	5	13,871	910,652	16,591	799,640	2,960
	Sept.	5	10,540	921,192	12,625	812,265	
	Oct.	4	14,527	935,719	14,703	826,968	
	Nov.	4	13,037	948,756	1,412	828,380	
	Dec.	3	13,537	962,293	13,546	841,926	
1960	Jan.	3	8,770	971,063	15,590	857,516	
	Feb.	3	7,508	978,571	16,419	873,935	
	Mar.	3	4,992	983,563	12,888	886,823	
	Apr.	3	4,425	987,988	19,189	906,012	
	May	3	1,874	989,862	21,760	927,772	
	June	3	2,149	992,011	22,016	949,788	
	July	3	2,218	994,229	24,097	973,885	
	Aug.	1	1,831	996,060	23,460	997,345	
	Sept.	1	1,455	997,515	15,575	1,012,920	

	Sept.	1	145	996,205	13,375	1,012,920
	Oct.	1	0	996,205	0	1,012,920
	Nov.	1	974	997,179	7,800	1,020,720
	Dec.	1	636	997,815	13,000	1,033,720
1961	Jan.	1	933	998,748	11,860	1,045,580
	Feb.	1	783	999,531	13,900	1,059,480
	Mar.	1	1,330	1,000,861	15,780	1,075,260
	Apr.	1	1,282	1,002,143	18,900	1,094,160
	May	1	937	1,003,080	18,100	1,112,260
	June	1	1,133	1,004,213	16,900	1,129,160
	July	1	923	1,005,136	15,500	1,144,660
	Aug.	1	1,051	1,006,187	16,000	1,160,660
	Sept.	1	1,044	1,007,231	21,200	1,181,860
	Oct.	1	825	1,008,056	31,000	1,212,860
	Nov.	1	545	1,008,601	22,500	1,235,360
	Dec.	1	1,274	1,009,875	31,000	1,266,360
1962	Jan.	1	1,127	1,011,002	3,100	1,269,460
	Feb.	1	882	1,011,884	27,000	1,296,460
	Mar.	1	638	1,012,522	30,000	1,326,460
	Apr.	1	139	1,012,661	7,000	1,333,460
	May	1	914	1,013,575	38,600	1,372,060
	June	1	1,072	1,014,647	30,000	1,402,060
	July	1	513	1,015,160	26,000	1,428,060

\* Average of two or more pressures

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3  
CASE NO. 2660

LANE WOLF CAMP POOL  
LEA COUNTY, NEW MEXICO  
BOTTOM HOLE PRESSURE HISTORY  
DATUM (-5387)

DATE	SUNRAY MID-CONT. STATE "P" #1	SUNRAY MID-CONT. STATE "P" #2	SUNRAY MID-CONT. STATE "I" #1	SUNRAY MID-CONT. STATE "I" #2	AZTEC OILGAS STATE "LM" #1	AZTEC OILGAS STATE "LM" #2	HUMBLE OIL & REFG. CO. STATE "AM" #1
12-12-55	3,516						
1-30-56	3,512						3,444
2-25-56							
4-17-56	3,487						
6-9-56	3,479						
7-1-56	3,479						
7-11-56			3,510				
8-3-56			3,514				
8-7-56	3,412						
9-3-56			3,405				
9-12-56	3,426				3,489		
9-19-56							
10-9-56	3,422		3,426	3,436			
2-16-57			3,341	3,239			
3-4-57	3,282				3,177		
6-6-57							
8-4-57	3,167		3,163				
9-19-57							
12-6-57		3,020					
12-14-57							
3-18-58							
6-20-58	2,977						
8-29-58					2,958		
8-1-59	2,960						

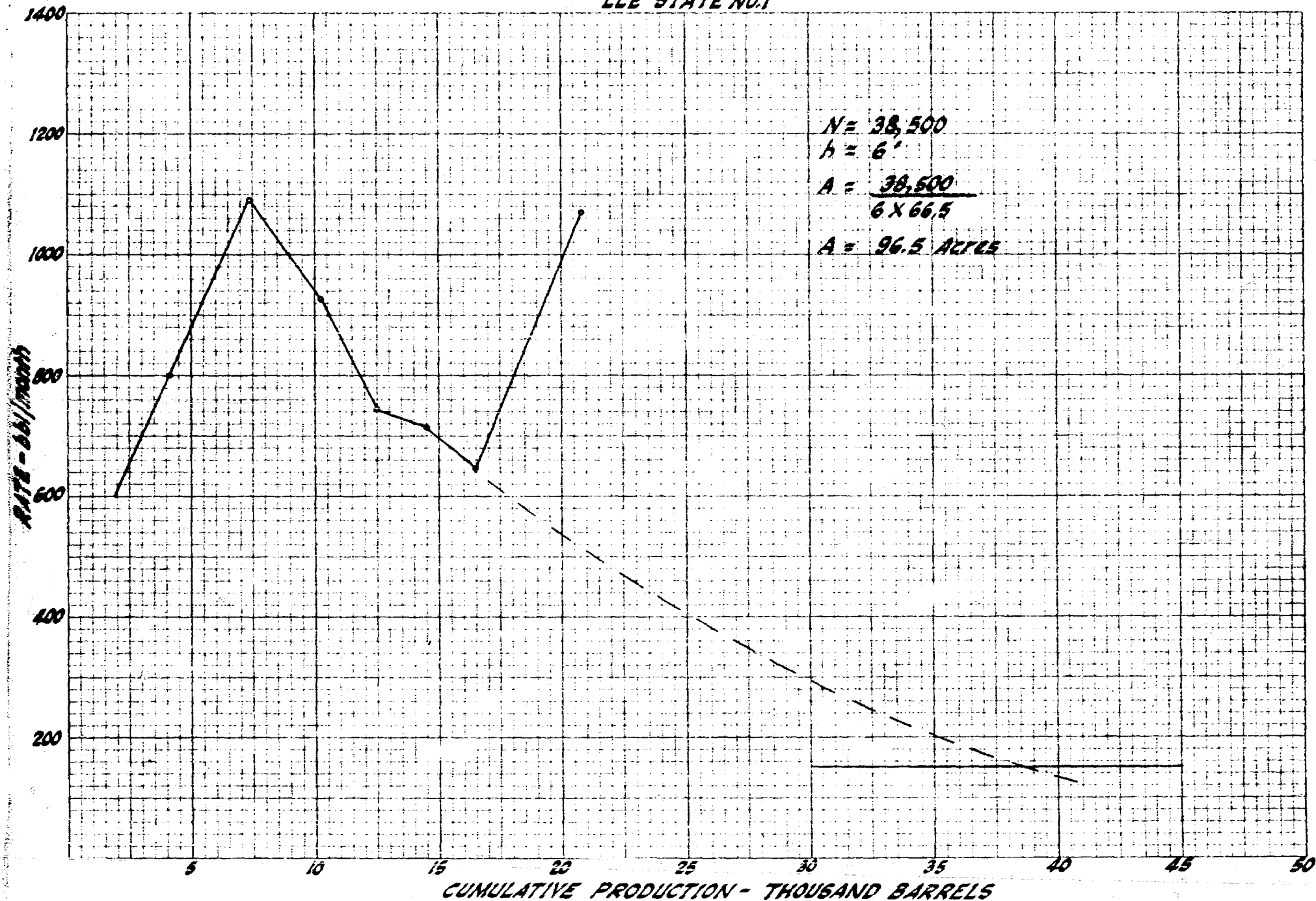
BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 6  
CASE NO. 2660

ND. 340R-10 DIETZGEN GRAPH PAPER  
10 X 10 PER INCH

EUGENE DIETZGEN CO.  
MADE IN U. S. A.

2660

PRODUCTION HISTORY  
MIDWEST OIL CORPORATION  
LLE STATE NO. 1



MIDWEST LLE STATE NO. 1  
DISCOVERY IN BOUGH "A" ZONE

LOCATION: 660' FWL & 2310' FSL of Section 14, T-10-S, R-33-E, Lea County,  
New Mexico.

COMPLETION INFORMATION: Set 5½" casing at 9835' and cemented with 265 sax of Incore cement mixed with 265 sax of Diamix "A". Completion was attempted in the Bough "D" Zone at 9782-86. Acidized with 250 gallons and swabbed 4½ barrels of salt water per hour with no show of oil or gas. Squeezed perforations 9782-86 and perforated the Bough "A" Zone 9650-54 with 2 jet shots per foot. Swabbed 15 barrels of fluid per hour, 20-40% oil. Began installing gas lift equipment.

BOTTOM HOLE PRESSURE TEST: Original BHP of the Bough "A" Zone was 3334 PSI @ -5438 datum which is midpoint of perforations. Date of pressure - September 28, 1962. If the pressure is extrapolated back to -5387 (datum of Lane Pool pressures), it would be 3310 PSI.

POTENTIAL TEST: October 8, 1962 - gas lifted 94.18 BO plus 368 BW in 24 hours. G.O.R. 1432, gravity 45.0 degree (corrected)

AVERAGE POROSITY: 5.0% (9650-58 from core analysis)

AVERAGE PERMEABILITY: 14.99 MD (9650-58 from core analysis)

RESERVOIR DATA AND INTERPRETATIONS: What is called the Wolfcamp producing zone in the Lane Pool is correlative to what Midwest calls its Bough "A" Zone in its discovery well in Section 14. It is therefore felt a fair assumption that the reservoir from which Midwest's LLE State No. 1 is producing will perform similar to the Lane Wolfcamp Pool.

ECONOMICS: An average development well drilled to 9850' should cost approximately \$162,000. Assuming the average well to have the same recovery as the average well in the Lane Wolfcamp Pool - (112,800 barrels), the total income per average well would be \$233,496. Subtracting the \$162,000 cost to drill and equip the well, the net profit is \$71,496 per well. It is hoped that more pay and wise and prudent development in this area will result in better return per dollar invested.

Case 2660



LANE WOLFCAMP POOL  
LEA COUNTY, NEW MEXICO

DISCOVERY WELL: Sunray Mid-Continent New Mexico State No. 1

ORIGINAL BHP: 3516 PSI

BOTTOM HOLE PRESSURE HISTORY: See performance curves and tabulations

BHP AT DEPLETION: 2960 PSI

BUBBLE POINT OF LANE WOLFCAMP CRUDE OIL: 3388 PSI

FORMATION VOLUME FACTOR OF LANE WOLFCAMP CRUDE OIL: 1.828

SPACING: 80 acres

RESERVOIR DATA AND INTERPRETATIONS: The relatively small decline in Bottom Hole Pressure along with a decrease in oil production accompanied by an increase in water production indicates that water drive was the primary source of energy in this reservoir.

OIL RECOVERY: Nine wells were completed in this field and have produced an accumulated volume of 1,015,160 barrels of oil for an average of 112,800 barrels each. An examination of the logs of the productive wells in the pool showed an average porosity zone of 10.3 feet per well. Applying 80 acre drainage, the average well had 824 acre feet of net pay. Dividing 824 into 112,800 gives an average of 137 barrels per acre foot recovery.

PRODUCTIVE LIFE OF FIELD: 5 years

*Case 2660*

*47*

GENERAL POOL INFORMATION

MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

LOCATION: N/2 & SW/4 of Section 14 & SW/4 of Section 11, T-10-S, R-33-E  
DEPTH: Approximately 9600-9700  
NUMBER OF WELLS: 2 producing wells - 1 abandoned well  
DATE OF DISCOVERY: October 8, 1962  
PRODUCING MECHANISM: Combination water drive and solution gas drive  
ACCUMULATIVE PRODUCTION: 32,205 barrels of oil and 216,868 barrels of water to 11/1/64.

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	<u>2</u>
CASE NO.	<u>2660</u>

FIELD HISTORY

MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

LOCATION: Section 14, T-10-S, R-33-E, Lea County, New Mexico

NUMBER OF WELLS: 1 producing well, 1 drilling well

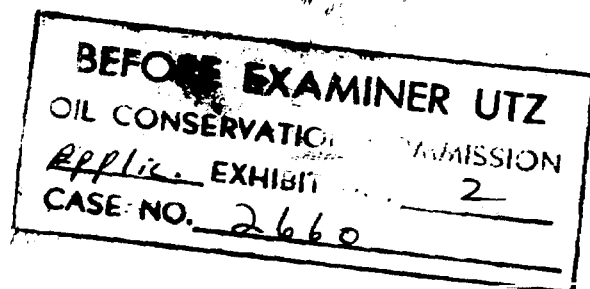
DEPTH: Approximately 9650'

DATE OF DISCOVERY: October 8, 1962

PRODUCING MECHANISM: Solution Gas Drive plus Water Drive

PRODUCTION DATA

AS OF SEPTEMBER 1, 1963: Cumulative Oil Production 9392 BBLS  
Cumulative Gas Production 13,446 MCF  
Cumulative Water Production 86,174 BBLS



MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

WELL COMPLETION DATA

OPERATOR	WELL	ELEVATION K.B.	COMPLETION DATE	PERFORATIONS	INITIAL OIL	POTENTIAL WATER
MIDWEST OIL CORP.	LL&E State No. 1	4214	10-8-62	9650-9654	94	368
MIDWEST OIL CORP.	State "B" No. 1	4221	7-3-64 8-23-64	9676-9681 9616-9620	192 175	150 330
HISSON DRILG. CO.	Midwest State No. 1	4219	10-16-63	9700-9709	296	0

<b>BEFORE EXAMINER UTZ</b>	
<b>OIL CONSERVATION COMMISSION</b>	
EXHIBIT NO.	3
CASE NO.	2660

# PRODUCTION HISTORY

## MIDDLE LANE PENNSYLVANIAN POOL LEA COUNTY, NEW MEXICO

YEAR	MIDWEST OIL CORPORATION LLE STATE NO. 1			MIDWEST OIL CORPORATION STATE "B" NO. 1			HISSOM DRILLING COMPANY MIDWEST STATE NO. 1			FIELD TOTAL		
	OIL	WATER	GAS	OIL	WATER	GAS	OIL	WATER	GAS	OIL	WATER	GAS
1962												
Oct.	472	2676	673							472	2676	673
Nov.	873	7706	1250							873	7706	1250
Dec.	444	3699	636							444	3699	636
	1789	14,081	2559							1789	14,081	2559
1963												
Jan.	308	2919	441							308	2919	441
Feb.	1273	12,412	1823							1273	12,412	1823
Mar.	814	8348	1166							814	8348	1166
Apr.	1089	10,389	1559							1089	10,389	1559
May	711	7189	1018							711	7189	1018
June	1482	13,449	2122							1482	13,449	2122
July	1097	9873	1571							1097	9873	1571
Aug.	829	746	1187							829	746	1187
Sept.	850	8075	1217							850	8075	1217
Oct.	749	7116	1073							749	7116	1073
Nov.	870	8265	1246							870	8265	1246
Dec.	604	5738	865							604	5738	865
	10,676	94,519	15,288							10,676	94,519	15,288
1964												
Jan.	601	5709	861				120	3000	-	721	8709	861
Feb.	643	6108	921				183	4575	-	826	10,683	921
Mar.	900	8550	1289				349	-	-	1249	8550	1289
Apr.	861	8180	1233				Abandoned			861	8180	1233
May	525	4988	752							525	4988	752
June	547	5197	783							547	5197	783
July	1343	12,757	1923	895	8503	1539				2238	21,260	3462
Aug.	1004	954	1437	326	310	561				1330	1264	1998
Sept.	946	8987	1355	5021	10,350	8653				5977	19,337	10,008
Oct.	990	9405	1418	76	10,695	7699				5466	20,100	9117
CUMULATIVE	20,825	179,435	29,819	10,728	29,858	18,452	652	7575		32,205	216,868	48,271

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 4  
CASE NO. 2660

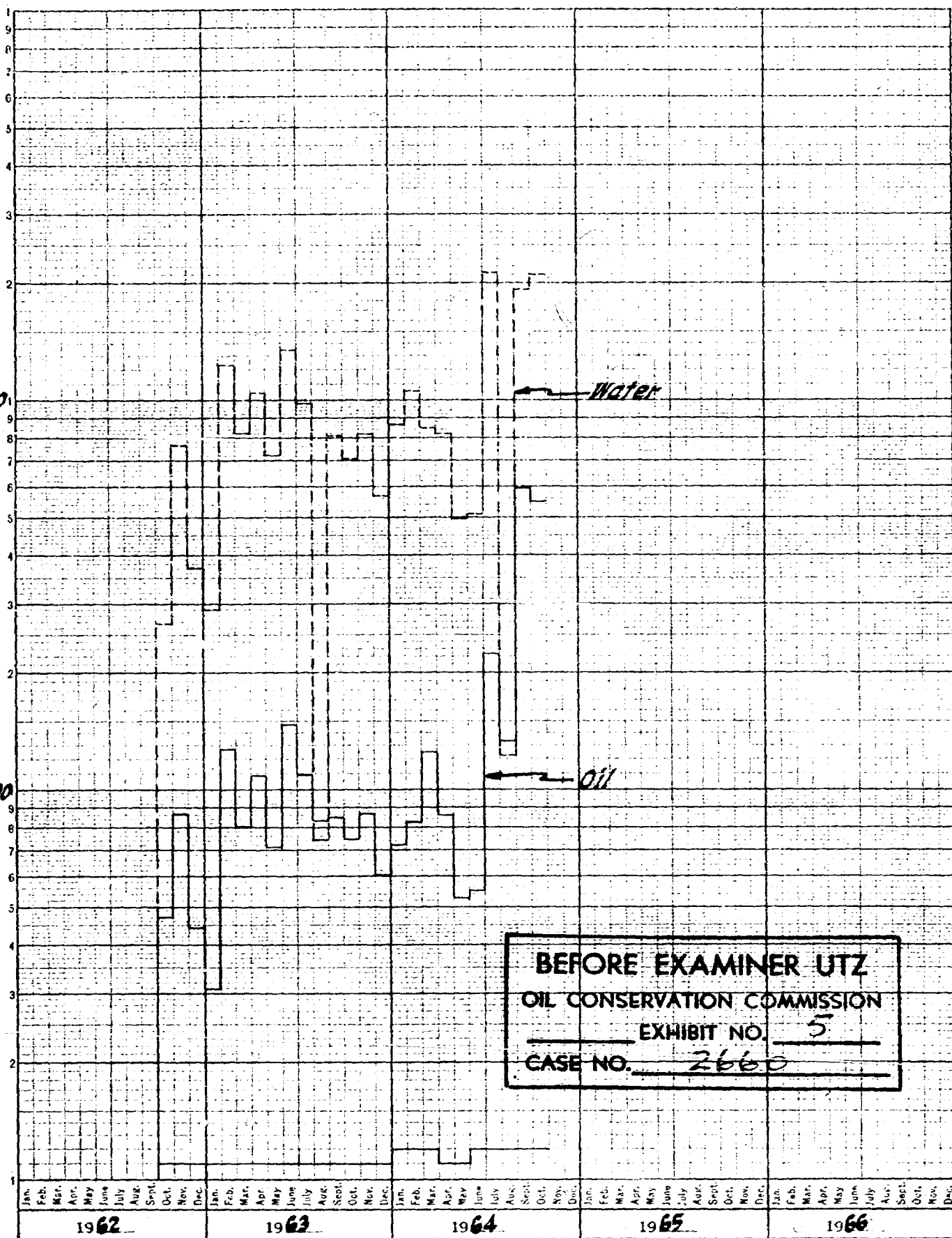
**PRODUCTION HISTORY**  
*Middle Lane Pennsylvanian Pool*  
*Lea County, New Mexico*

**K&E** 5 YEARS BY MONTHS 359-195  
 X 3 CYCLES  
 KEUFFEL & ESSER CO. MADE IN U.S.A.

**PRODUCTION - bbl/month**

10,000

1000



**NUMBER OF PRODUCING WELLS**

CORE AND LOG DATA  
MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

WELL	CORE ANALYSIS			LOG	
	DEPTH	Sw	K	LOG	Sw
<u>Midwest LLE No. 1</u>					
9598-99				7	
9599-00				8	17
9606-07				6.5	
9607-08				5.3	28
9608-09				4.0	
9610-11	5.8	39.3	1000	3.8	
9611-12	3.2	31.2	1.3	5.4	
9612-13	7.4	24.3	101	5.8	
9613-14	8.7	31.2	431	5.8	
9614-15	5.4	33.3	104	5.7	31
9615-16	4.5	29.9	0.58	6.1	
9616-17	4.6	28.3	64	5.5	
9617-18	4.5	29.6	0.62	5.2	
9618-19	5.5	31.4	39	-	
9650-51	6.7	49.3	40	5.0	
9651-52	6.8	26.5	20	6.5	
9652-53	No recovery			8.0	
9653-54	No recovery			7.5	45
9654-55	5.9	22.0	17	6.0	
9655-56	3.9	33.3	24	4.5	
<u>Midwest State B No. 1</u>					
9616-17				5.8	
9617-18				6.7	
9618-19				7.3	
9619-20				8.0	32
9620-21				6.9	
9621-22				5.9	
9625-26				5.1	
9626-27				6.5	33
9627-28				6.0	
9628-29				4.9	
9630-31				5.0	
9631-32				5.4	32
9632-33				5.9	
9633-34				5.9	
9675-76				4.0	
9676-77				6.7	
9677-78				8.1	
9678-79				4.6	
9679-80				7.9	
9680-81				8.1	
9681-82				5.6	
Averages	5.8	31	85.3	6.2	33

**BEFORE EXAMINER UTZ**  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 6  
CASE NO. 2660

RESERVOIR PROPERTIES  
MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

NET PAY	20 feet
POROSITY	6.2 %
WATER SATURATION	33 %
PERMEABILITY	85 millidarcies
ORIGINAL RESERVOIR PRESSURE	3334 P. S. I.
ORIGINAL FORMATION VOLUME FACTOR	1.70
STOCK TANK OIL GRAVITY	45 degree API

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 2660



OIL RECOVERY CALCULATIONS  
MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

**BASIC DATA:**

Porosity	6.2%
Water Saturation	33 %
Formation Volume Factor	1.70
Recovery factor	35 %
Net pay	20 feet

**CALCULATIONS:**

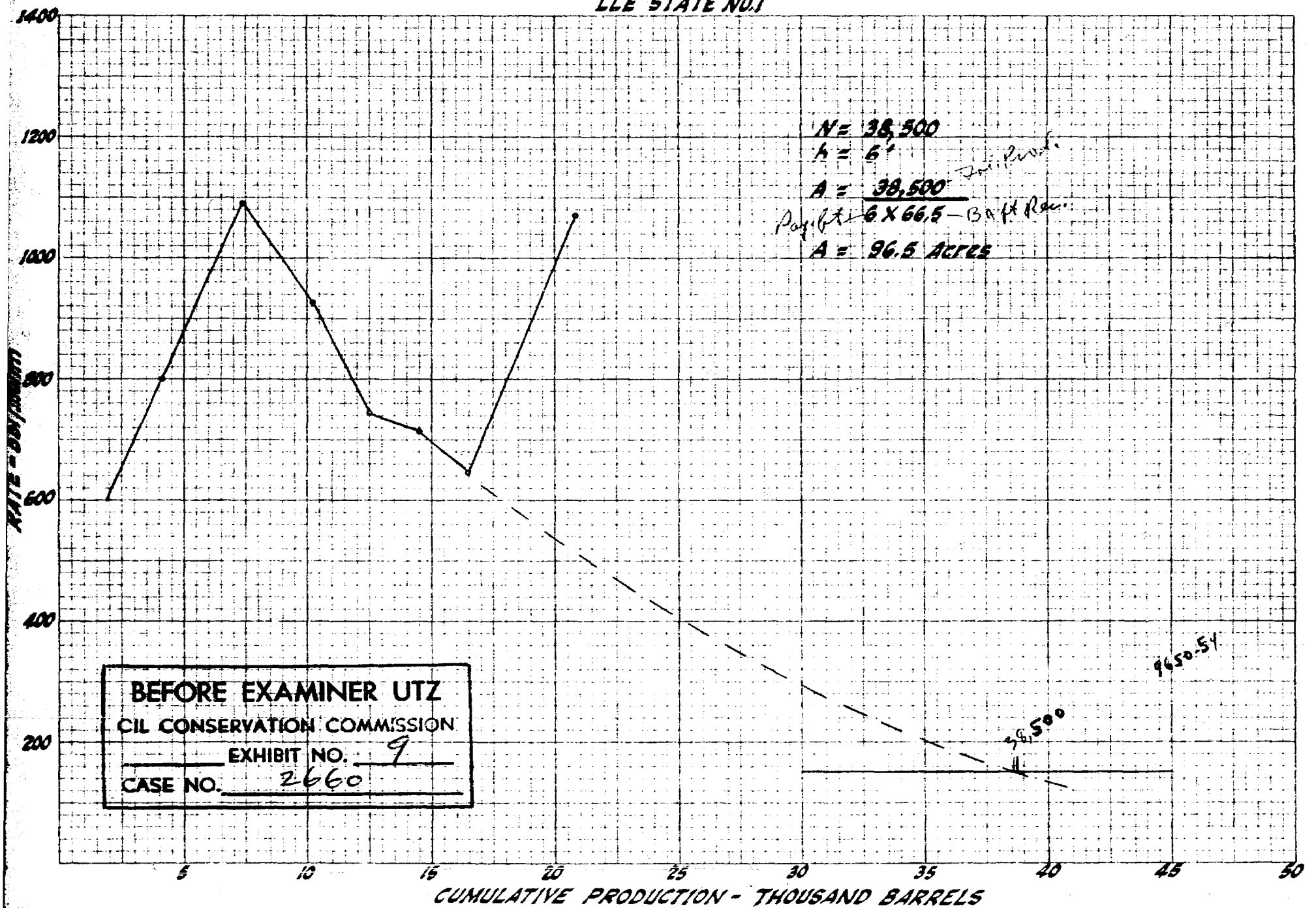
Original Oil in Place	= $\frac{(7758) (\emptyset) (1-S_w)}{FVF}$
	= $\frac{(7758) (0.062) (1-0.33)}{1.70}$
	= 190 bbl./acre foot
Recoverable Oil	= Original Oil in Place X Recovery Factor
	= 190 X 0.35
	= 66.5 bbl/acre-ft
Recoverable Oil/Acre	= 66.5 X Net Feet of Pay
	= 66.5 X 20
	= 1330 barrels/acre
40 Acre Recovery	= 53,200 barrels
80 Acre Recovery	= 106,400 barrels

**BEFORE EXAMINER UTZ**  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 8  
CASE NO. 2660

NO. 340R-10 DIETZGEN GRAPH PAPER  
10 X 10 PER INCH

EUGENE DIETZGEN CO.  
MADE IN U. S. A.

**PRODUCTION HISTORY  
MIDWEST OIL CORPORATION  
LLE STATE NO. 1**



ECONOMICS

MIDDLE LANE PENNSYLVANIAN POOL  
LEA COUNTY, NEW MEXICO

TOTAL INCOME	\$2.84/bbl.	
WORKING INTEREST INCOME (87.50%)	2.48/bbl.	
OPERATING COSTS AND TAXES	0.75/bbl.	
NET WORKING INTEREST INCOME	1.73/bbl.	
OIL RECOVERY	<u>40 acres</u> 53,200	<u>80 acres</u> 106,400
TOTAL NET INCOME	92,000.	184,000.
DEVELOPMENT COST PER WELL	165,000.	165,000.
NET PROFIT PER WELL	(73,000.)	19,000.
RATIO OF INCOME TO INVESTMENT		1.11

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 10  
CASE NO. 2660

# COMPARISON OF RESERVOIR PROPERTIES

	MIDDLE LANE	SOUTH LANE	ALLISON PENN
	6.2	7.9	5.15
Porosity	85	1069	107
Permeability	33	25	25
Water Saturation	1432	1390	1517
Original Gas-Oil Ratio	3334	3473	3518
Original Bottom Hole Pressure	1.70	1.76	1.78
Original Formation Volume Factor	45	47.5	48
Oil-Gravity			

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 11  
CASE NO. 2660

PROPOSED RULES AND REGULATIONS  
FOR THE  
MIDDLE LANE PENNSYLVANIAN POOL

- RULE 1.** Each well completed or recompleted in the Middle Lane Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the Middle Lane-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2.** Each well completed or recompleted in the Middle Lane-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.
- RULE 3.** For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.
- RULE 4.** Any well drilled in the Middle Lane Pennsylvanian Pool shall not be located closer than 330 feet to a governmental quarter-quarter section line.
- RULE 5.** An 80-acre proration unit (79 through 81 acres) in the Middle Lane-Pennsylvanian pool shall be assigned an 80-acre proportional factor of 4.77 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	12
CASE NO.	2660

