

CASE 2690: Application of PHILLIPS  
for assignment of special allowable  
to its MEXCO "A" WELL NO. 2.

2690

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tion, Transcript,  
// Exhib. Etc.

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 8, 1962

IN THE MATTER OF:

Application of Phillips Petroleum Company  
for a special allowable, Lea County, New  
Mexico. Applicant, in the above-styled  
cause, seeks an order authorizing the  
assignment of a special allowable to its  
Mexco "A" Well No. 2, located in Unit I  
of Section 2, Township 17 South, Range 32  
East, Maljamar Pool, Lea County, New  
Mexico. Said well offsets and has received  
a response from Boller and Nichols Water-  
flood project in said Section 2.

CASE

NO. 2690

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will take the next case, 2690.

MR. DURETTE: Case 2690. Application of Phillips  
Petroleum Company for a special allowable, Lea County, New Mexico.

MR. JONES: Mr. Examiner, I am Carl W. Jones of Midland,  
Texas, appearing for Phillips Petroleum Company, in association  
with Jason Kellahin. Mr. Kellahin could not be present today, and  
I believe the file should contain a letter in which he asks that  
his appearance in this case be noted.

MR. NUTTER: His entry of appearance is in the file.

MR. JONES: We will have one witness, Mr. D. L. Czirr,

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and we will present nine exhibits.

Mr. Examiner, the purpose of this examination is to request a capacity allowable for Phillips Petroleum Company's Mexco "A" Well Number 2, located in the NE/4 SE/4 of Section 2, Township 17 South, Range 32 East, in the Maljamar Pool of Lea County. This well is an offset to a waterflood project by Boller and Nichols which was authorized by the Commission by Order Number R-1538, dated November 27th, 1959. We believe that the subject well is within the project area of this waterflood, as defined by Paragraph E-2 of Rule 701.

We also believe that the subject of this application, and the request which it presents, is within the purview of Paragraph E-3, the last sub-paragraph of that paragraph of Rule 701, which reads:

"Nothing herein contained shall be construed as prohibiting the assignment of special allowables to wells of buffer zones after Notice and Hearing. Special allowables may also be assigned in the limited instance where it is established at a Hearing that it is imperative for the protection of correlative rights to do so."

Our witness will be Mr. D. L. Czirr.

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D. L. C Z I R R, a Witness, called by the Applicant, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. JONES:



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Q Mr. Czirr, by whom are you employed, and in what capacity?

A I am employed by Phillips Petroleum Company, Division Reservoir Engineer in our Western Division out of Midland, Texas.

Q In that capacity, does the Maljamar Pool come within your jurisdiction?

A Yes, sir.

Q Have you previously testified and had your qualifications as a petroleum engineer accepted by this Commission?

A Yes, sir.

Q Have you made a study with particular reference to the Maljamar Pool, and the well which is the subject matter of this application?

A Yes, sir, I have.

Q With special reference to the request contained in the application?

A Yes, sir.

MR. JONES: Are there any questions about his qualifications?

MR. NUTTER: No, sir.

MR. JONES: Mr. Examiner, we have Exhibits 1 through 9, which are bound in a brochure, which has been handed to you, and we also have a separate Exhibit Number 9; 1 through 8 are bound, and we have a separate Exhibit 9.

Q (By Mr. Jones) Mr. Czirr, what is the purpose and the



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reason for the subject application?

A The purpose of the application is to request a capacity allowable for the Phillips Mexco "A" Well Number 2. The well has received response from the adjacent waterflood operations to a degree that it is now capable of producing in excess of its normal scheduled allowable. We believe that it is necessary to produce this well at its capacity to prevent migration into the edge of the field which is undeveloped, and it would be not commercially recoverable, and would be lost as to the total and as to the working interest owners and royalty interest owners.

Q Now, Mr. Czirr, what is Exhibit 1, which is within the brochure?

A Exhibit 1 is a plat of a portion of the Maljamar Field, and intended to show three waterfloods that have been approved by the Commission, and the relationship of the Phillips Mexco "A" Well Number 2, which is the subject of this application in relation to the Nichols Waterflood. It shows that the well is within the waterflood area, and that it is not offset to the North or to the East.

Q Now, what is Exhibit 2?

A Exhibit 2 is a larger scale plat of the area in the vicinity of the Mexco "A" Well Number 2. Again, it shows the waterflood area is the Nichols waterflood, and the injection wells that are in operation. It shows the relationship again of the Phillips Mexco "A" Well Number 2 relative to the injection



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wells, and the fact that the Number 2 "A" is on the northern edge of the field and there is no development to the north or the east. The numbers under the wells in the vicinity of the Mexco Well Number 2 "A" are cumulative recoveries as of January 1, 1961, which shows the relative quality of different portions of the field in this immediate vicinity. The low recoveries along the northern edge confirm that this is the limit of the commercial development, in which case any oil that is moved north, or past the Number 2 "A" Well, would be lost and not commercially recoverable.

Q The subject well is of course the one indicated by that arrow on Exhibit 2, is it not?

A Yes, sir.

Q What is the status of the well shown as Well Number 1 "A" in the N/2 of Section 2?

A Phillips has three wells designated as our Mexco "A" lease. The 1 "A" which is in the SW/NW, the Number 2 "A" which is the subject of the application is in the NE/SE, and we have our Number 3 "A" in the SE/SW of the adjacent Section 1. All wells are currently pumping producers.

Q Is there any further San Andres development except to the north and the northeast and the east, other than the wells you have mentioned?

A No, sir.

Q Does the exhibit show that the subject well is directly



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offset by an injection well in what is referred to as the Nichols waterflood area?

A Yes. We carry it as Mexco Number 2 "A" water injection well.

Q What is the status of the well which is indicated as the McLaughlin Number 1 well?

A It has been plugged and abandoned, after producing some 8700 barrels of oil.

Q Do you have anything further from Exhibit 2?

A No, sir.

Q What is Exhibit 3?

A Exhibit 3 is a schematic sketch of the Mobil oil production and Mobil water injection of the wells in the immediate vicinity of the Phillips Mexco "A" Well Number 2. It shows that the Nichols Waterflood has been a success, and is going to increase the ultimate recovery from this field, and has increased the producing rates. It also shows in the upper right-hand corner, the Phillips Mexco "A" Well Number 2, and shows it has received response from the water injection in the adjacent waterflood area.

Q What is the capacity at the present time of the Phillips Mexco "A" Number 2 Well?

A It is currently capable of producing 53 barrels of oil per day; that's based on a test the first five days of this month.

Q Mr. Czirr, do you know whether or not the well has received maximum stimulation from the offsetting waterflood, or is





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there any way to tell that at the present time?

A It appears to have stabilized under the particular set of circumstances that the wells in that area are being operated. But as you can see, we only have a very short history, and it would depend upon the performance of the water input wells in the adjacent area which would have the primary effect on the producing rate of the Phillips Mexco "A" Well Number 2, as opposed to anything we can control.

Q Do you have anything further from Exhibit 3?

A No, sir.

Q What is Exhibit 4?

A Exhibit 4 is a cross-section of electro logs and sample logs from the Phillips Mexco "A" Well Number 2, shown on the right, south through the adjacent four wells, and shows the common completion intervals of these wells in this area; the fact that the wells in the waterflood area are being produced and operated from the same completion interval as is the Phillips Mexco "A" Well Number 2.

Q What are the three following exhibits, 5, 6, and 7?

A These three exhibits are decline curves for the three wells on the Phillips Mexco lease, and confirm that these three wells do define the limit of the commercial development in this area. These curves will show that none of the three wells would have paid out under primary operations, and at the present time, based on a forecast of the decline, under the primary



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performance the wells would have resulted in a loss to Phillips in excess of \$116,000.00. So we think that this confirms that it would not be practical to develop further to the north in this immediate area.

Q That includes further development on this particular lease, does it not?

A Yes.

Q That will be uneconomical?

A That will have to be our conclusion, based on our experience.

Q The same observations would apply, I take it, to other development to the north?

A Yes, sir. We feel that this defines the limit of commercial drilling.

Q Now, this lease is a State of New Mexico lease, is it not?

A Yes, sir.

Q What is Exhibit Number 8?

A Exhibit Number 8 is a tabulation of the core analysis results from two Phillips wells that were drilled along this north edge of the Maljamar field. The subject well, Mexco "A" Well Number 2, and the Mexco Well "A" 3, which is two locations east and a location south of the subject well. The previous exhibits were selected to show that the waterflooding in this area had been successful in increasing recovery, and that as a result



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of these water flood operations the Phillips Mexco "A" Well Number 2 had received response, and that it was not practical to continue development in this area, and the only feasible way to prevent migration of fluid and loss of ultimate recovery was to operate the Mexco "A" Well Number 2 at capacity.

Now, the core analyses shows that the best interval encountered in the Mexco "A" Well Number 2 was approximately from 4141 to 4700; this sand also occurs in the Mexco "A" Well Number 3, but as shown by the core analysis in the "A" 3 that it has deteriorated in quality to the extent that it did not have commercial permeability, although the sand did exist and was recognized by the person selecting the core for analysis; it had oil saturation, and so forth.

MR. NUTTER: Where, in the core analysis of the Number 3, would the correlative interval be?

A It would be approximately the same, say, 4144 to 50. It shows lower porosity, and the permeability being less than one-tenth millidarcy, which is where we cut off our measurements. The point in bringing this out is this, that the pay quality deteriorates to the north, and it does not though terminate as a person might have in a case of a fault, but has a gradual reduction in quality and over a large area could allow the migration of fluid; but in the congested flow pattern you would have around a well bore would not allow commercial saturation or recovery for additional development, but does allow



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oil to resaturate this area immediately outside of the present development.

Q (By Mr. Jones) Mr. Czirr, what is the normal allowable of this well at the present time?

A For November, it would be 37 barrels of oil.

Q Now, from your study, do you believe that any oil which is swept on this lease by the waterflood project, and which is not recovered by the subject well, will be recovered by any other well in the field?

A No, sir.

Q And if it is not recovered by this well, is it your opinion, from the state of the formation which you have described, that that oil will be irretrievably lost and not recovered?

A Yes.

Q And to that extent it would constitute waste, would it not?

A Yes, sir.

Q Do you believe that allowing the subject well a capacity allowable will result in any significant drainage from other leases of other operators?

A No, sir.

Q The oil which is swept by the subject well has already, has it not, been irretrievably lost to the other operators in the field?

A Yes. If we are operating under a 37-barrel allowable,



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and you have a higher capacity at that point, we believe that the oil will migrate and be forced to this unrecoverable area along the edge of the field.

Q And it would not, in any event, be recovered by any other operator?

A No, sir.

Q That being the case, Mr. Czirr, is it your opinion that this application is in the interest of conservation and prevention of waste?

A Yes, sir. I believe that the operation of that particular well at capacity is the only way to prevent the migration and loss of oil in this immediate area.

Q Do you believe that the correlative rights of all operators in the field, including those other than Phillips Petroleum Company, will be protected if this application is granted?

A Yes, sir.

Q Or they would not be adversely affected thereby?

A They would not be affected.

Q Do you have anything else to offer, Mr. Czirr?

A I believe not.

Q Were Exhibits 1 through 9 prepared by you, or under your supervision and direction?

A Yes, sir.

MR. JONES: We offer in evidence, Phillips Exhibits 1 through 9, and that concludes our direct presentation.



MR. NUTTER: Phillips Exhibits 1 through 9 will be admitted in evidence. Does anyone have any questions of Mr. Czirr?

CROSS-EXAMINATION

BY MR. NUTTER:

Q Does Phillips have any plans at the present time to re-enter the McLaughlin Well Number 1?

A No, not at this time. It's certainly something we would have to evaluate in the light of the performance in this immediate area.

Q Do you think that oil might be swept by that well and be irrevocably lost if it is not re-entered?

A It was not a good completion. I don't know what mechanical condition it was left in when it was abandoned. We have an investigation into that right now. If we could re-enter it for a reasonable amount of money, we believe that we could probably improve the situation there just like the other case.

Q What is the current rate of injection for the Nichols Lexco Number 2?

A It would be roughly 3700 barrels per month; I have the tabulation.

Q It appears that the average rate of injection into that well has been in the neighborhood of four to five thousand barrels per months since injection started?

A Yes, sir.

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Q Who is the owner of the well directly to the west of your Number 2 "A"?

A Mr. Kennedy is the operator, and I believe the owner; I don't know that to be a fact.

Q That's the well designated Vaughn State Number 1. Would that be the Kennedy State Number 1 that is on your exhibit?

A Yes, sir. It was drilled as the Vaughn State, and now carried in the Commission records as the Kennedy State.

Q Apparently from the production curve here, it has not received any response from the water injection program to the south?

A No, sir.

Q Do you know whether the well in the NE/SW of Section 2 is producing or not? It's shown as a temporarily abandoned well.

A It is a producing well. That is a Phillips; you are talking about the well that is the west offset to the well that is the Kennedy well?

Q Right.

A Yes, it's production is shown on Exhibit 3.

Q Which well would it be?

A The Nichols-Phillips Lexco State Number 2.

Q That's their Phillips Lexco State lease then?

A Yes, sir.

Q Has your Number 1 "A" shown any change in producing rate since the water injection program started?



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A No response from the waterflood that we could recognize.

Q Has Phillips given any consideration to the conversion, or the drilling of water injection wells in this area?

A Yes, sir.

Q What's been the outcome of that consideration?

A We have no immediate plans for any additional development in this area. By reason of our economics being so unfavorable now, that an expenditure to extend the development for producing, our injection wells would not be justified from the results we have seen so far.

Q You certainly couldn't justify it on the basis of primary recovery at any rate?

A No, sir.

Q When were the Number 1, 2, and 3 "A" Mexco State wells drilled?

A In 1960.

Q How about some of the Nichols wells further south, are they mostly about that age, or are they older wells?

A They are older wells, the late 1940's; the older development would be in the Nichols area.

Q So the difference in comparative production there is a function of time, as well as decreasing porosity and permeability to the north?

A Certainly to some extent, as shown on Exhibit 2, and that was one of the reasons we show also the ultimate primary as projected,





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because the wells had only been produced a short time, and in these three cases, in the case of the Phillips wells it would not be a direct relationship as compared to the older wells, but our ultimate, say, from Number 1 is going to be in the order of eleven to twelve thousand barrels.

Q Referring to the decline curves on Mexco "A" Number 1, the well reached a low point in August of 1961, and then had a substantial increase in production, which it declined to another low in March of '62, and had another increase in production. Were these increases due to mechanical work on the wells?

A No.

Q Setting of pumps?

A No. It was just the operation of the lease, operating three to four or five barrels a day, your swing is based on efficiency; if you change your pump and so forth, it causes a rather wide swing in production.

Q This isn't any change in reservoir status, or anything?

A Not in our judgment.

Q And the increase in production on the "A" Number 2 from approximately March or April of this year, up to the current rate, is in your opinion, due to the water injection program?

A Yes, sir.

Q How long do you think it will be before this well resumes its previous decline?

A Based on the present performance in the area, both



injection wells and producing wells, seven or eight months, something of that nature.

MR. NUTTER: Does anyone have any further questions of Mr. Czirr? He may be excused. Do you have anything further?

MR. JONES: We have nothing further, Mr. Examiner.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 2690? We'll take the case under advisement, and recess the hearing until 1:30.

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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 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 20<sup>th</sup> day of November, 1962.

Ada Dearnley  
NOTARY PUBLIC-COURT REPORTER.

My Commission Expires:  
June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Executive Hearing of Case No. 2690, heard by me on 11-8, 1962.

Asst. Sec. 1, Examiner  
New Mexico Oil Conservation Commission



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PHONE 983-3971ALBUQUERQUE, N. M.  
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<u>WITNESS</u>	<u>PAGE</u>
D. L. CZIRR	3
Direct Examination by Mr. Jones	13
Cross-Examination by Mr. Nutter	

E X H I B I T S

<u>NUMBER</u>	<u>EXHIBIT</u>	<u>MARKED</u>	<u>OFFERED</u>	<u>ADMITTED</u>
		5	12	13
Phillips #1	Plat	5	12	13
Phillips #2	Plat	7	12	13
Phillips #3	Schematic Sketch	8	12	13
Phillips #4	Cross-Section	8	12	13
Phillips #5	Decline Curves	8	12	13
Phillips #6	Decline Curves	8	12	13
Phillips #7	Decline Curves	9	12	13
Phillips #8	Tabulation	12	12	13
Phillips #9				



**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. 2690  
Order No. R-2362**

**APPLICATION OF PHILLIPS PETROLEUM  
COMPANY FOR A SPECIAL ALLOWABLE,  
LEA COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on November 8, 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 14th day of November, 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 the applicant, Phillips Petroleum Company, is the owner and operator of the Mexco "A" Well No. 2, located in Unit I of Section 2, Township 17 South, Range 32 East, NEPM, Maljamar Pool, Lea County, New Mexico.

(3) That the applicant seeks assignment of special allowable to the subject well authorizing said well to produce at its capacity.

(4) That the Mexco "A" Well No. 2 is adjacent to the Boller-Nichols Waterflood Project and has received a response from the injection of water into said waterflood project.

(5) That the Mexco "A" Well No. 2 is now capable of producing in excess of its presently assigned allowable.

(6) That the applicant should be allowed to produce its Mexco "A" Well No. 2 at its maximum capacity for a temporary

-2-  
CASE No. 2690  
Order No. R-2362

60-day period in order to avert the possibility of unrecoverable loss of oil presently being swept toward the subject well by the Boller-Nichols Waterflood Project.

(7) That unitization of the NE/4 SE/4 of Section 2, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, with acreage lying directly south thereof and in the Boller-Nichols Waterflood Project Area would tend to protect correlative rights and to eliminate the possibility of waste as the subject well would then be eligible to share in the Boller-Nichols Waterflood Project allowable.

(8) That the applicant should investigate the feasibility of restoring the McLaughlin Well No. 1, located in Unit N of Section 1, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, to production and converting the Mexco "A" Well No. 1, located in Unit N of said Section 1 to water injection in order to achieve greater ultimate recovery of oil underlying the SW/4 of Section 1, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Petroleum Company, is hereby authorized to produce its Mexco "A" Well No. 2, located in Unit I of Section 2, Township 17 South, Range 32 East, NMPM, Maljamar Pool, Lea County, New Mexico, at its maximum capacity for a temporary period not to exceed 60 days from the date of this order.

(2) That the Mexco "A" Well No. 2 shall be eligible to share in the Boller-Nichols Waterflood Project allowable at the termination of the temporary 60-day maximum capacity production period authorized in this order, provided the NE/4 SE/4 of Section 2, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, has been unitized with acreage lying directly south thereof and in the Boller-Nichols Waterflood Project Area, and provided that said unitization agreement has been approved by the Commission.

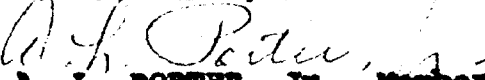
(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
EDWIN L. MECHEM, Chairman

  
E. S. WALKER, Member

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

esx/



PHILLIPS PETROLEUM COMPANY  
BARTLESVILLE, OKLAHOMA

November 28, 1962

Water Flood Associates, Inc.  
2211 Continental National Bank Building  
Fort Worth 2, Texas

Attention Mr. Curtis McBroom

Maljamar Pool,  
Lea County, New Mexico  
Proposed Inclusion of Phillips  
No. 2 Muxee "A", NE/4 SE/4  
Sec. 2-173-32E, in Beller-Michals  
Waterflood Project

Gentlemen:

On October 22, 1962, Mr. M. C. Porter of Water Flood Associates, Inc., and Mr. Robert Kennedy of Kennedy Oil Company met with Mr. F. C. Morgan of Phillips' Hobbs District Office to discuss various possibilities of cooperative action to accomplish equitable water flooding of our separate properties in the subject pool. At the time, Phillips Muxee No. 2 had responded to water injection in the Nichols-Phillips Lease State No. 2, SE/4 SE/4 Section 2-173-32E, and Phillips had sought relief from the New Mexico Oil Conservation Commission in granting a special allowable from this well to prevent loss of oil to the depleted edge of the reservoir to the north. Subsequent to our hearing on November 8, 1962, the Commission issued Order No. E-1062 granting capacity allowable for a period of 60 days on the Muxee "A" No. 2. The order also provided "That the Muxee "A" Well No. 2 shall be eligible to share in the Beller-Michals Waterflood Project allowable at the termination of the temporary 60-day maximum capacity production period authorized in this order, provided the NE/4 SE/4 of Section 2-T173-32E, NE/4 SE/4, Lea County, New Mexico, has been unitized with acreage lying directly south thereof and in the Beller-Michals Waterflood Project Area, and provided that said unitization agreement has been approved by the Commission."

We recognize that unitization of the Muxee "A" No. 2 and the Kennedy State No. 1-2, NW/4 SE/4 Section 2-T173-32E, with the Beller-Michals Water Flood Project would be desirable, but at this stage of the waterflood operation it may be very difficult to accomplish on the basis of the usual parameters.

Water Flood Associates, Inc.  
Maljamar Pool  
November 23, 1962  
Page No. 2

We will appreciate receiving your comments as to the possibility of unitizing our properties, and any suggestions you may have as to some equitable basis of participation.

Yours very truly,

*Jack Turner*

Jack Turner, Manager  
Engineering Division

TAM:WFO

cc: Mr. Leonard Nichols  
Maritime Securities Bldg.  
Dallas, Texas

Mr. H. C. Porter  
Water Flood Associates, Inc.  
301 Becker Bldg.  
Artesia, New Mexico

Mr. Robert E. Kennedy  
Kennedy Oil Company  
P. O. Box 151  
Artesia, New Mexico

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico  
Attn: Mr. D. S. Hutter



**WATER FLOOD ASSOCIATES, INC.**

301 BOOKER BLDG.  
ARTESIA, NEW MEXICO

P. O. BOX 376

PHONE SH 6-6032

DECEMBER 17, 1962

PHILLIPS PETROLEUM COMPANY  
BARTLESVILLE, OKLAHOMA

ATTENTION: JACK TARNER

RE: MALJAMAR POOL, LEA COUNTY,  
NEW MEXICO. UNITIZATION  
PROPOSAL OF PHILLIPS NO. 2  
MEXCO A, NE/4 SE/4, SECTION  
2-17-32 WITH THE BOLLER  
NICHOLS FLOOD

GENTLEMEN:

OUR FORT WORTH OFFICE HAS REFERRED YOUR LETTER OF NOVEMBER 28, 1962,  
TO ME FOR HANDLING.

AS YOU HAVE MENTIONED THE UNITIZATION OF THIS LEASE AND THE KENNEDY STATE  
NO. 2 (NW SE SECTION 2) WITH OUR DEVELOPED AREA WOULD BE VERY DIFFICULT.  
WE CAN SEE NO WAY IN WHICH IT WOULD BE POSSIBLE.

KENNEDY OIL COMPANY HAS CONTACTED YOUR HOBBS OFFICE REGARDING A UNITIZA-  
TION OF YOUR WELL WITH HIS SINGLE WELL WHEREIN THE CONVERSION OF HIS WELL  
TO INJECTION WOULD BE POSSIBLE. WE ARE IN FAVOR OF THIS TYPE ARRANGEMENT  
DUE TO THE SIMPLICITY OF BEING BETWEEN ONLY TWO OPERATORS, AND NOT  
INCLUDING THE ACREAGE ALREADY UNDER FLOOD.

IF THERE IS ANY FURTHER PLAN YOU WISH TO DISCUSS, PLEASE LET US KNOW.

VERY TRULY YOURS,

WATER FLOOD ASSOCIATES, INC.

Original Signed by H. C. Porter

H. C. PORTER  
SUPERINTENDENT

HCP:EL

CC: ROBERT B. KENNEDY - ARTESIA, NEW MEXICO  
PHILLIPS PETROLEUM COMPANY - HOBBS, N. M.  
OIL CONSERVATION COMMISSION - SANTA FE, N. M.  
CURTIS MCBROOM - FORT WORTH, TEXAS  
ROBERTS CORRESPONDENCE FILE



PHILLIPS PETROLEUM COMPANY

P. O. Box 2105  
Hobbs, New Mexico

October 17, 1962

*Case 2690*

In re: Application for Special Allowable - Phillips Petroleum  
Company Mexco "A" No. 2 - Maljamar Pool, Lea County, New Mexico

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter

Dear Sir:

Confirming verbal conversation with you on October 16, 1962, Phillips Petroleum Company hereby makes application for the approval of a special allowable on its Mexco "A" No. 2. In support of this application, we wish to state the following:

1. That Phillips Petroleum Company's Mexco "A" No. 2, located in the NE/4 SE/4 of Section 2, T17S, R32E, Lea County, New Mexico, was completed on June 26, 1960, at a total depth of 4423'. The attached Exhibit "A" shows the location of this well on the Phillips Petroleum Company Mexco "A" Lease together with the location of offset wells.
2. That the subject well has 5-1/2" casing set at 4443' with 200 sacks cement. The well is currently producing oil from the Grayburg-San Andres formation.
3. That Boller and Nichols received approval from the New Mexico Oil Conservation Commission on November 27, 1959, in Order No. R-1538 to institute a waterflood project adjacent to our Mexco "A" Lease.
4. That production from the subject well has been stimulated in excess of top allowable as a result of the offset water injection operations.
5. That the granting of this application is in the interest of conservation.

DOCKET MAILED

Date 10-26-62

*Q*

October 17, 1962  
Page 2

Therefore, Phillips Petroleum Company requests that the Oil Conservation Commission grant a hearing on this application for a special allowable.

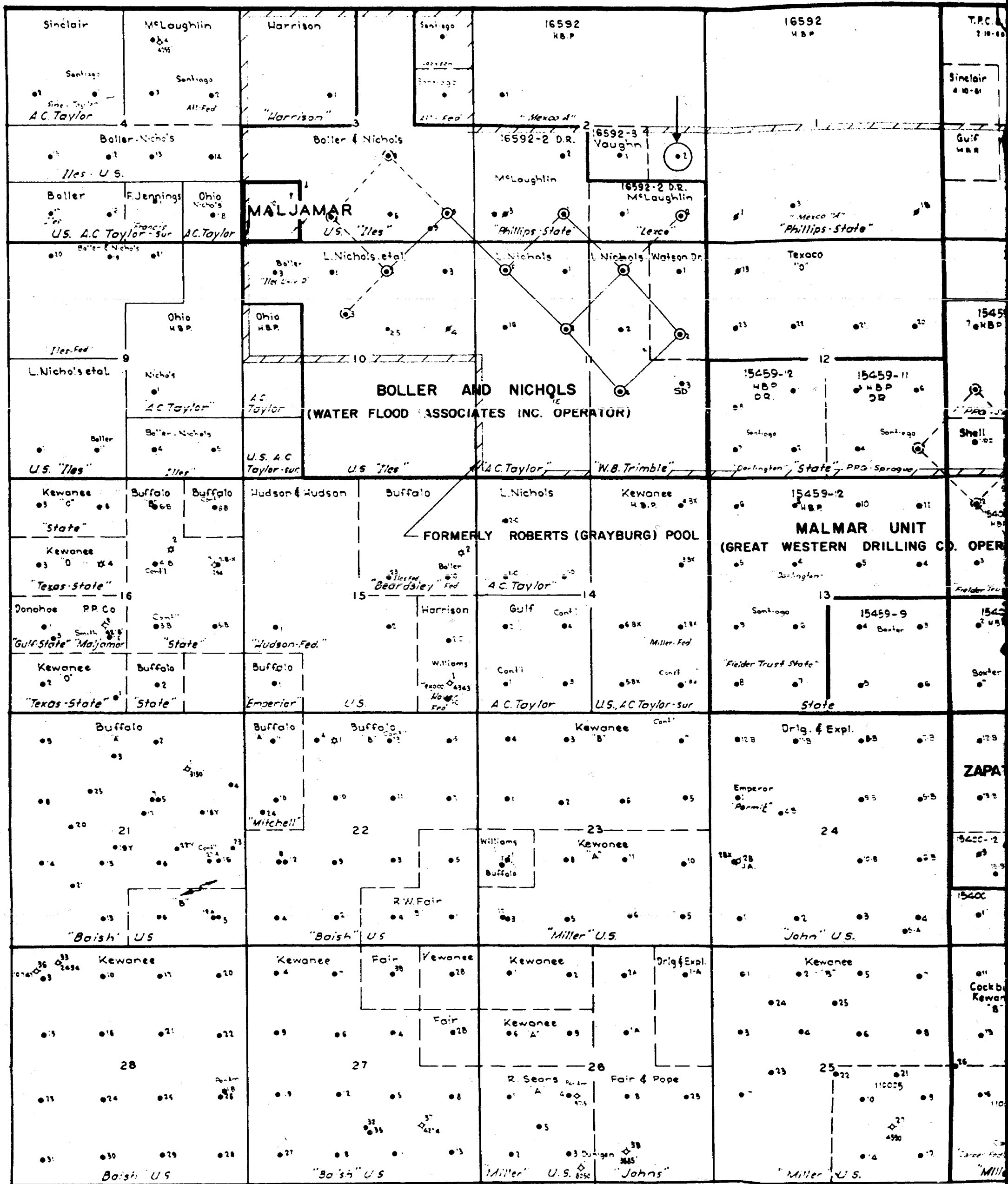
Respectfully submitted,

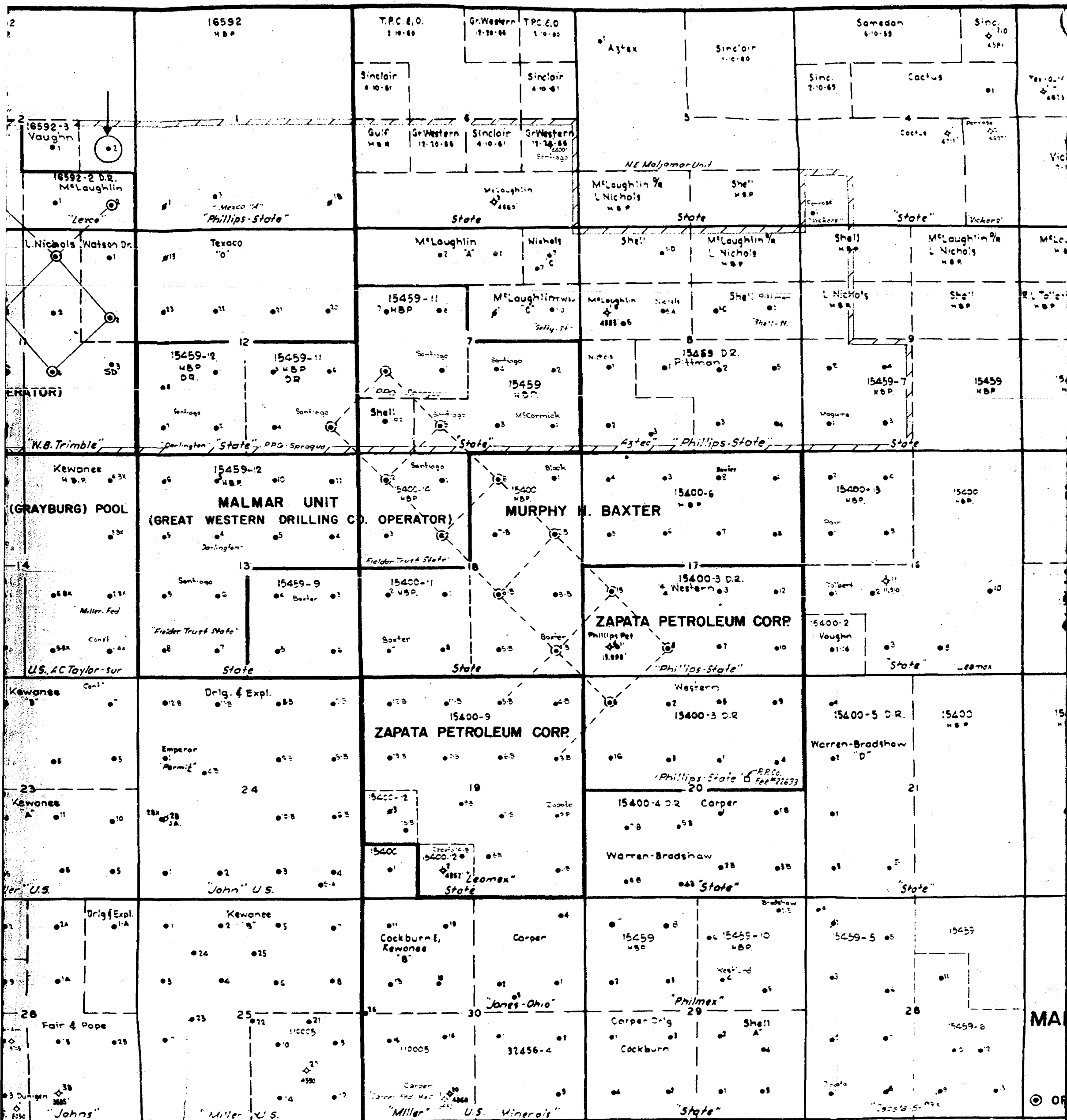
PHILLIPS PETROLEUM COMPANY

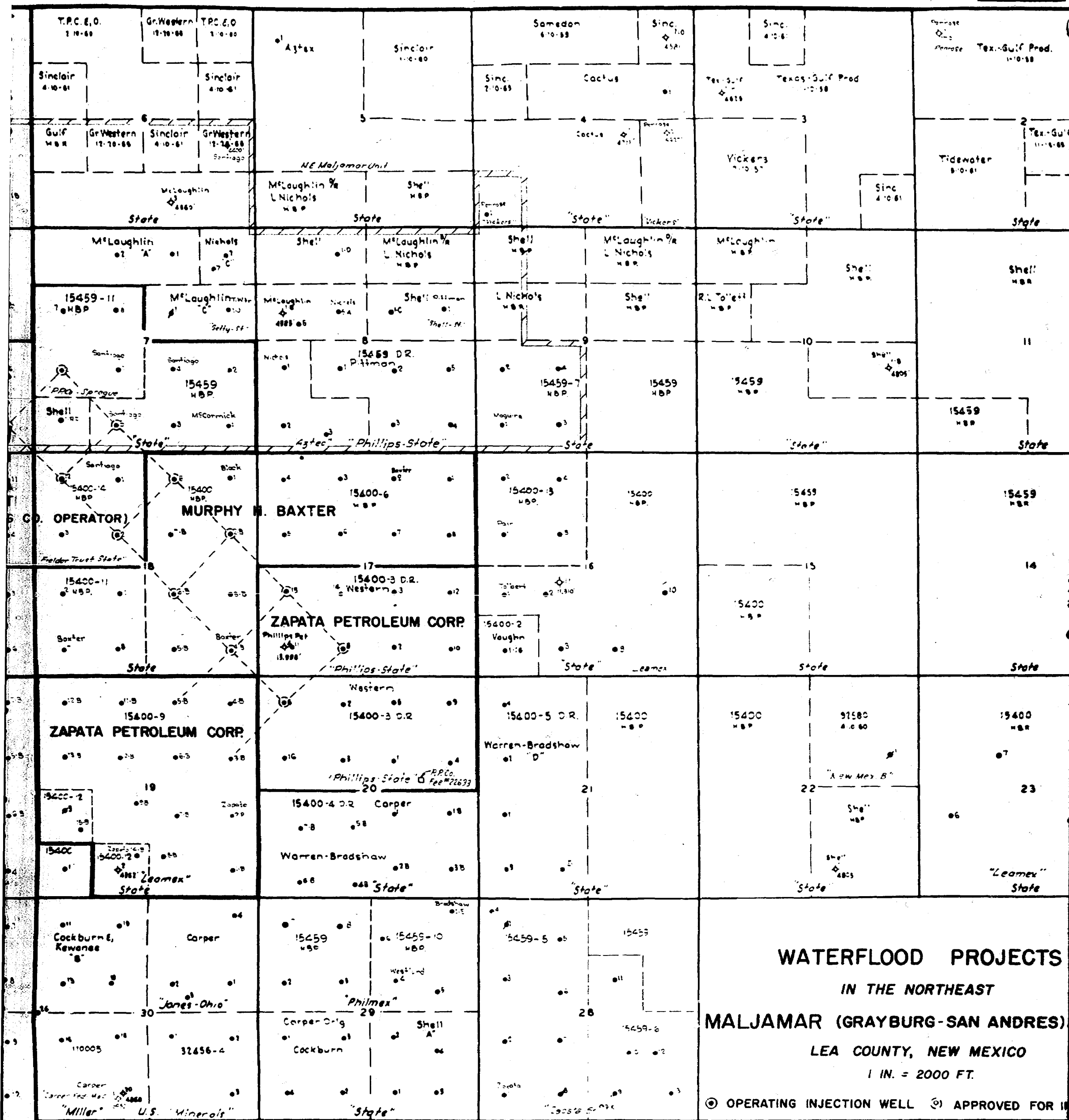
*W. C. Rodgers*  
W. C. Rodgers  
District Superintendent  
Production Department

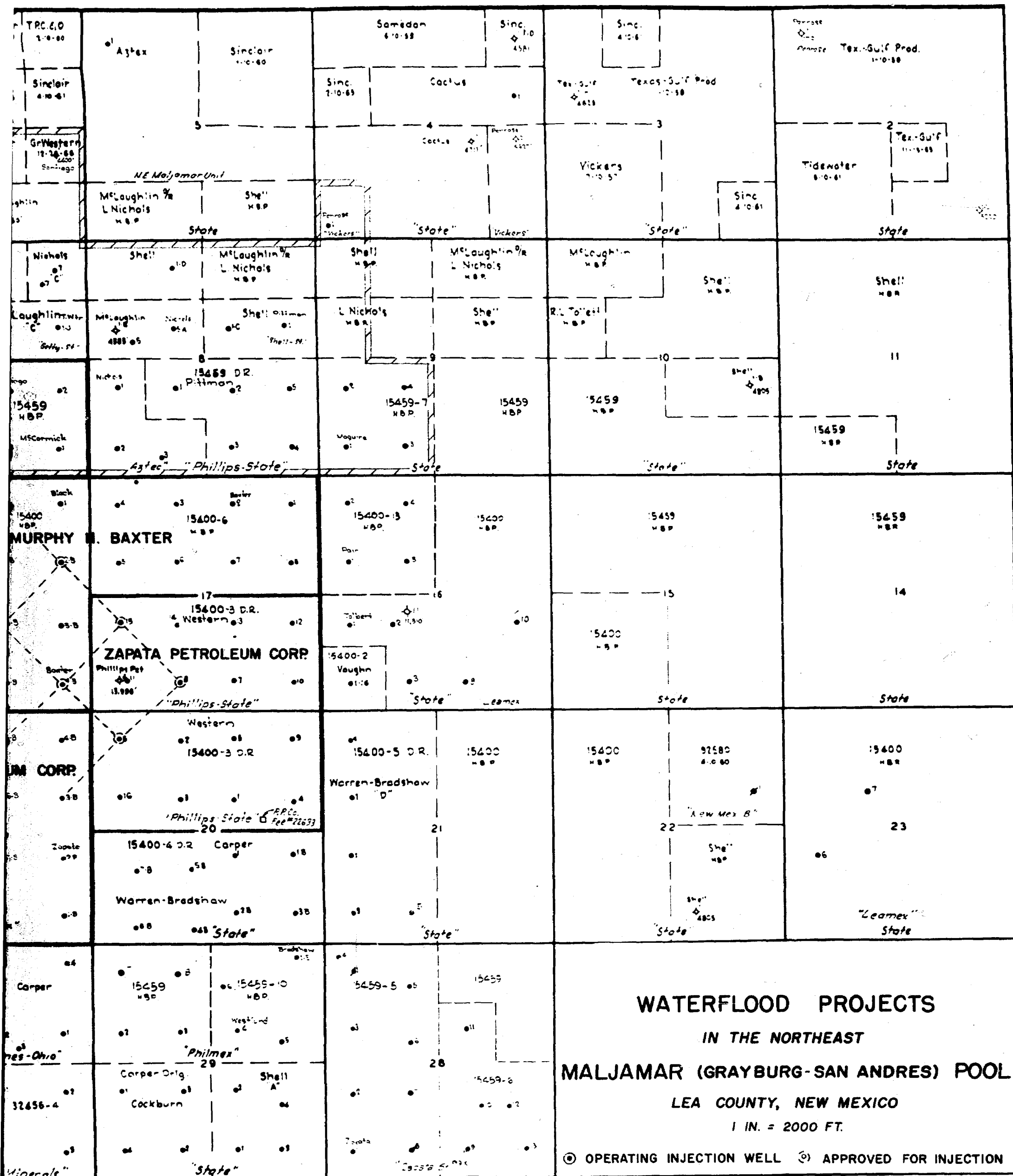
FCM:wma  
Attach.

cc: New Mexico Oil Conservation Commission  
Hobbs, New Mexico  
Attach.









OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 11/13/62

CASE 2690

Hearing Date 11/8/62 9am

DSN @ SF

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

Enter an order authorizing PPLCo  
an allowance for  
~~to produce~~ its Mexco A # 2, located  
in the NE/4 SE/4 Sec 2, T17S, R32E  
Maljamar Pool, Lea County, New Mexico,  
~~at a rate~~ equal to its capacity ability  
to produce for a period not to  
exceed 60 days. Provide that  
the well's allowance shall revert  
to 42 bbls per day at the end of  
60 days, unless the NE/4 SE/4 of Sec  
2 has been unitized with the  
acreage to the South and the  
unitization has been approved by the  
Commission, <sup>at which time the well would</sup>  
~~the well would~~ ~~upon such unitization,~~  
~~the well would receive 42 bbls per day~~  
~~and~~ be eligible to share in the  
project allowance.

Staff Member



Base the order upon the possibility of causing waste and the violation of correlative rights, but suggest in the findings that the unitization of the properties would ~~avoid~~ avert both.

Also include a finding that PPLCo should investigate the feasibility of restoring the McLaughlin No 1 in Unit M of Sec 1-17-32 to production and converting the Mexco "A" #3 in Unit N of 1-17-32 to water injection.

JASON W. KELLAHIN  
ROBERT E. FOX

KELLAHIN AND FOX  
ATTORNEYS AT LAW  
54W EAST SAN FRANCISCO STREET  
POST OFFICE BOX 1713  
01 SANTA FE, NEW MEXICO

TELEPHONES  
983-9396  
982-2991

November 6, 1962

Oil Conservation Commission  
P. O. Box 781  
Santa Fe, New Mexico

Gentlemen:

Enclosed find Entry of Appearance in regard to the application of Phillips Petroleum Company, Case No. 2690, for filing.

Very truly yours,

*Jason W. Kellahin*  
JASON W. KELLAHIN

jwk:mas  
enclosure  
cc/enclosure: Mr. Carl Jones

BEFORE THE OIL CONSERVATION COMMISSION

OF

THE STATE OF NEW MEXICO

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY FOR A SPECIAL ALLOWABLE,  
LEA COUNTY, NEW MEXICO.

Case No. 2690

ENTRY OF APPEARANCE

Come now Kellahin & Box, P. O. Box 1713, Santa Fe, New  
Mexico, and enter their appearance in the above-captioned  
case on behalf of Phillips Petroleum Company in association  
with Mr. Carl Jones, a member of the Texas Bar.

Jason W. Kellahin  
JASON W. KELLAHIN

BEFORE EXAMINER BUTTER	
OIL CONSERVATION	COMMISSION
EXHIBIT NO.	<u>A</u>
CASE NO.	<u>2745</u>

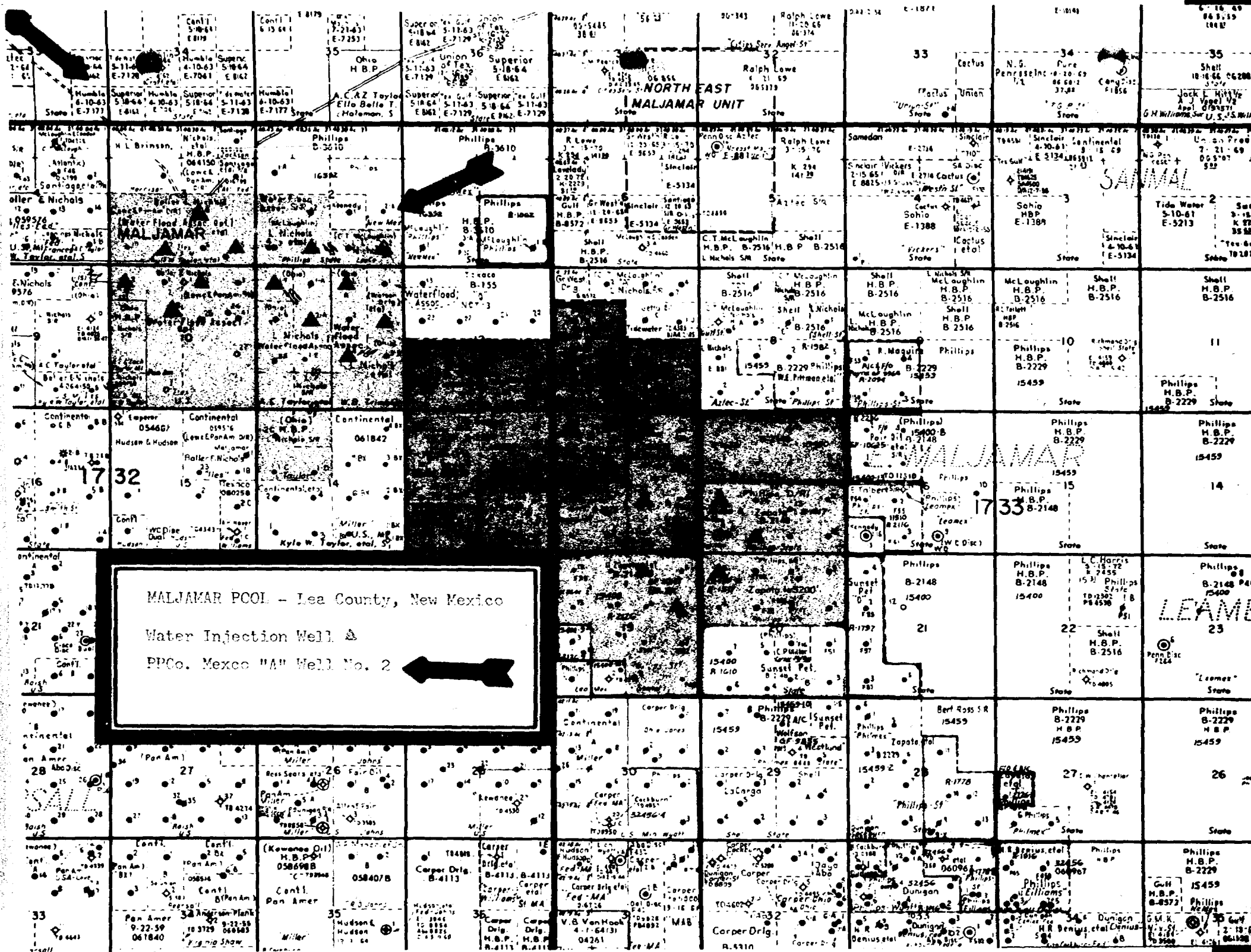
PHILLIPS PETROLEUM COMPANY'S APPLICATION FOR A CAPACITY  
ALLOWABLE FOR THE PHILLIPS' MEXCO "A", WELL NO. 2, UNIT  
I, SECTION 2, TOWNSHIP 17-S, RANGE 32-E, MALJAMAR POOL,  
LEA COUNTY, NEW MEXICO

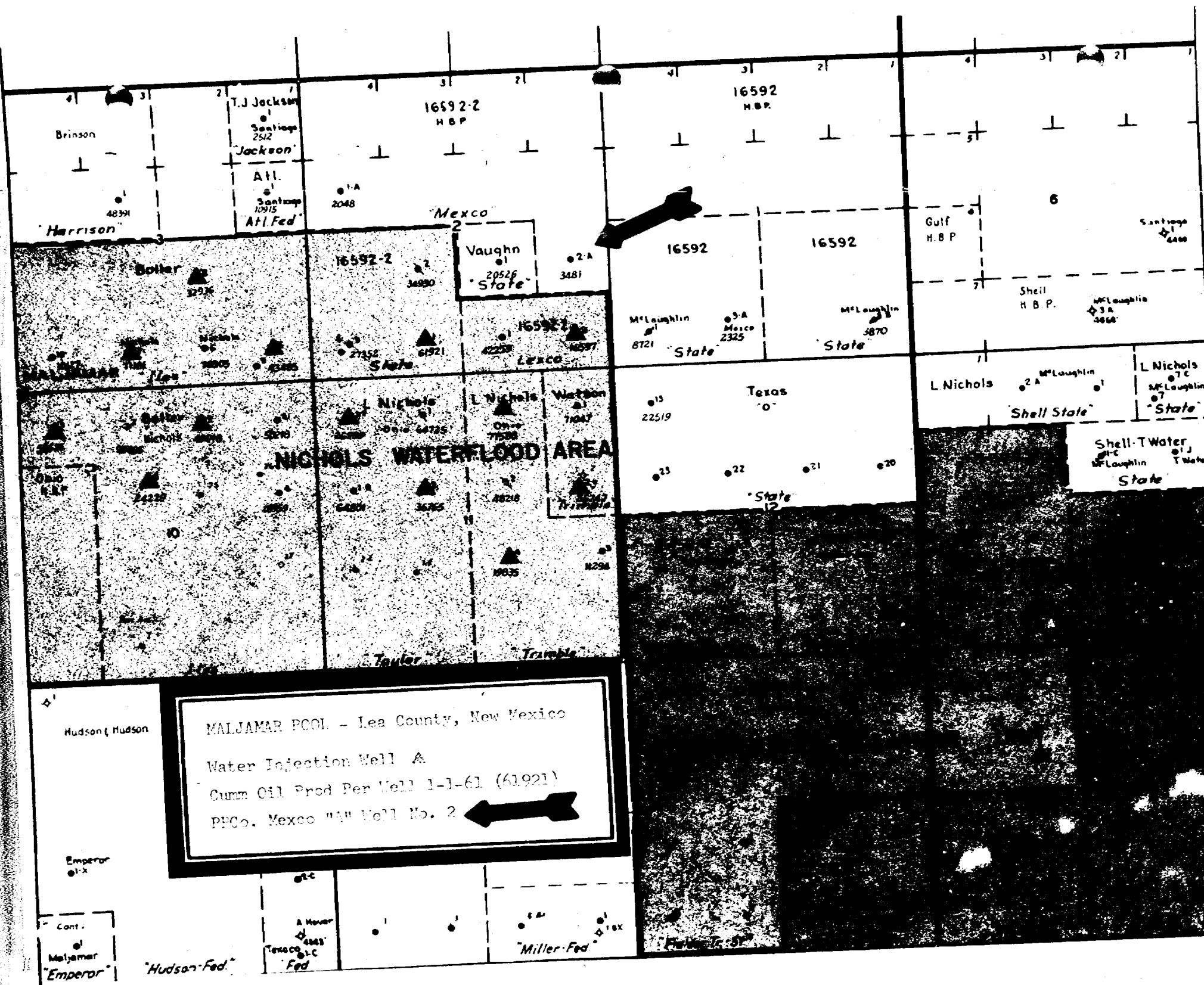
CASE NO. 2745

January 28, 1963

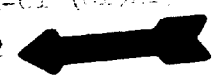
Summary of Exhibits

- Exhibit No. 1 - A plat of the Maljamar area of Lea County showing the waterflood projects, and the injection wells in the vicinity of the Phillips' Mexco "A" Well No. 2
- Exhibit No. 2 - A plat of the maljamar area in the vicinity of the Phillips' Mexco "A", Well No. 2, showing the waterflood projects and the injection wells in operation. This plat also shows the cumulated production from the wells in this area as of January 1, 1961.
- Exhibit No. 3 - A schematic sketch showing the oil producing rates and water injection rates of wells in the vicinity of the Phillips' Mexco "A" Well No. 2.
- Exhibit No. 4 - A cross section through the Phillips' Mexco "A" Well No. 2, and the wells to the south showing the common completion intervals of these wells.
- Exhibit No. 5 - A decline curve for the Phillips' Mexco "A" Well No. 1.
- Exhibit No. 6 - A decline curve for the Phillips' Mexco "A" Well No. 2.
- Exhibit No. 7 - A decline curve for the Phillips' Mexco "A" Well No. 3.
- Exhibit No. 8 - Core analysis summary, Phillips' Mexco "A" Wells No. 2 and No. 3.
- Exhibit No. 9 - Phillips' letter of November 28, 1962 to Waterflood Associates, Inc., relative to inclusion of Phillips' Mexco "A" Well No. 2 in the Boller-Nichold waterflood project.
- Exhibit No. 10 - Waterflood Associates, Inc., letter of December 17, 1962 relative to unitization of Phillips' Mexco "A" Well No. 2 with the Boller-Nichols waterflood.





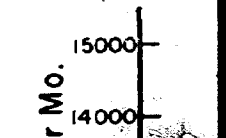
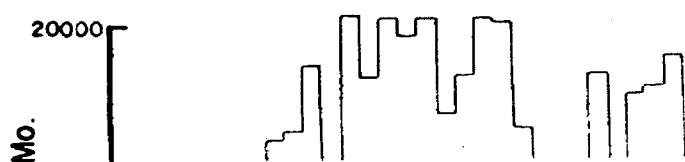
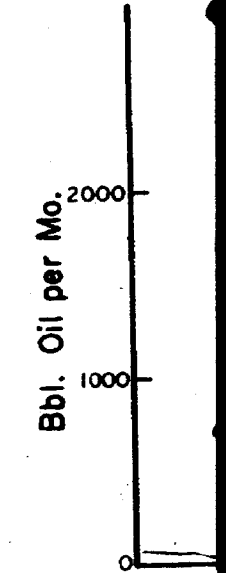
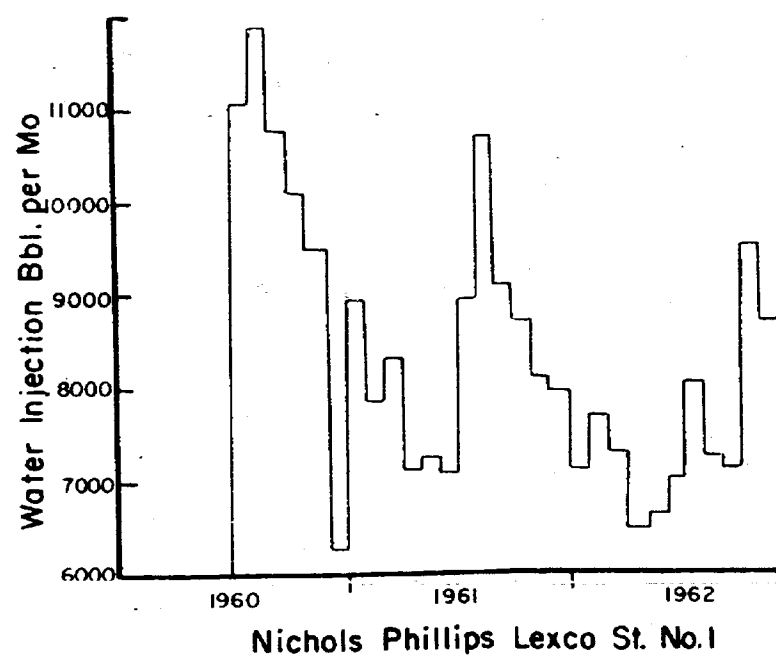
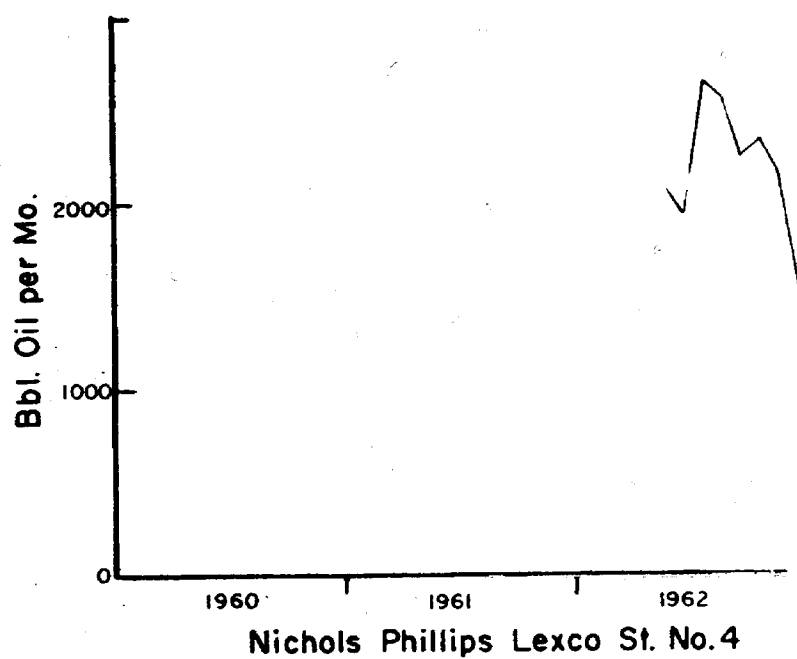
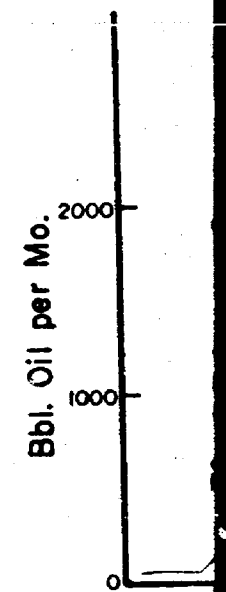
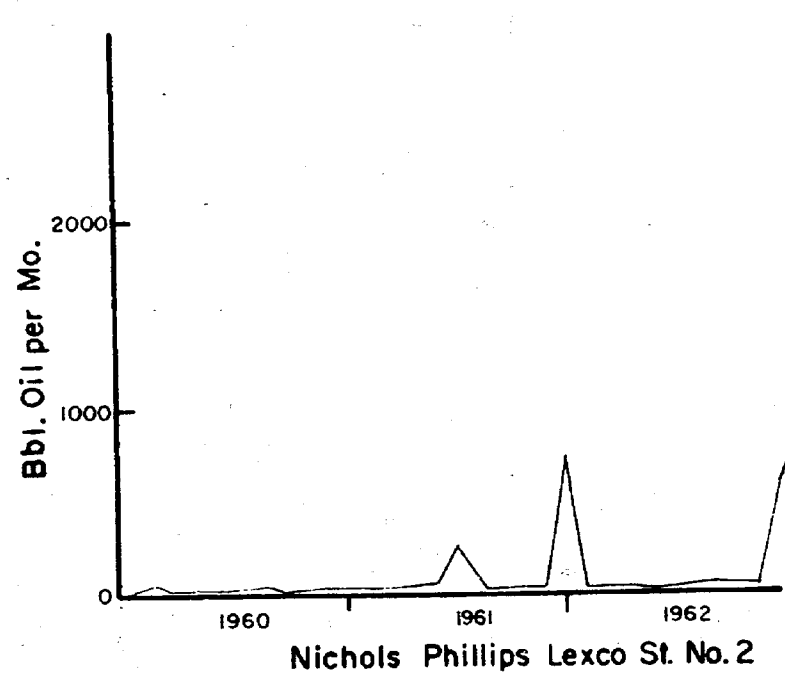
MALJAMAR POOL - Lea County, New Mexico  
Water Injection Well A  
Cum Oil Prod Per Well 1-1-61 (61921)  
PFCo. Mexco "A" Well No. 2



# WELL PERFORMANCE

## NICHOLS WATER-FLOOD

MALJAMAR GRAYBURG-SAN AN  
LEA CO. NEW MEXICO



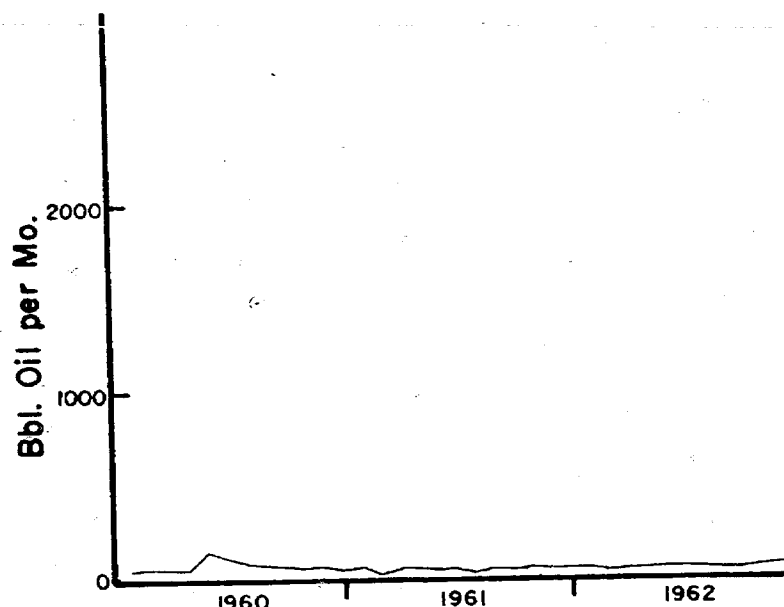


# PERFORMANCE

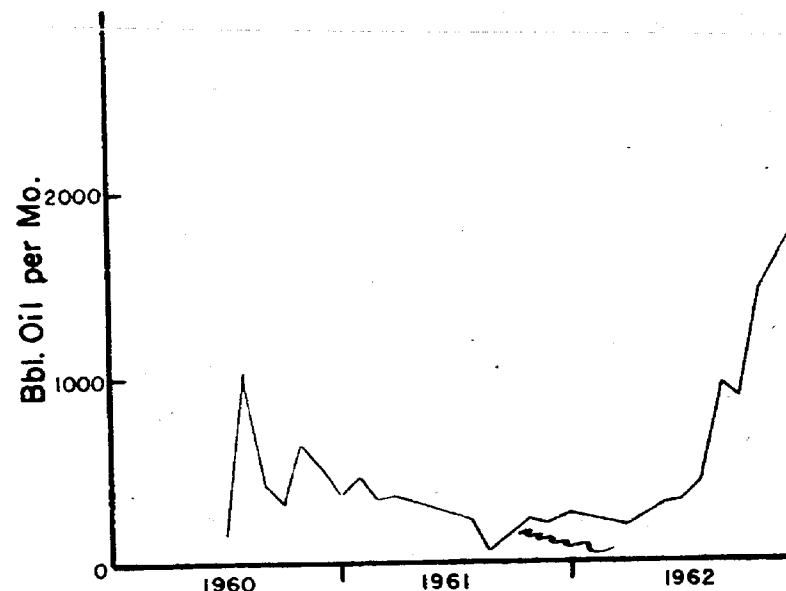
## WATER-FLOOD AREA

### GRAYBURG-SAN ANDRES POOL

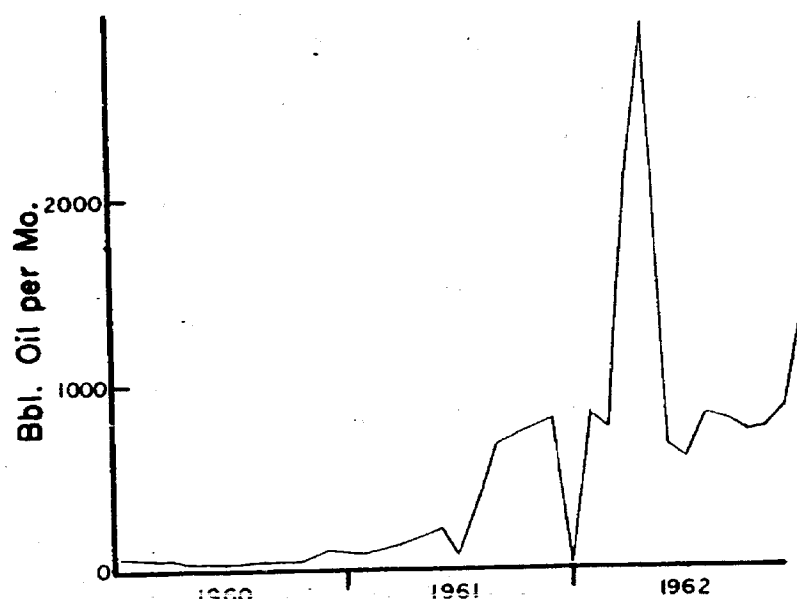
#### LEA CO. NEW MEXICO



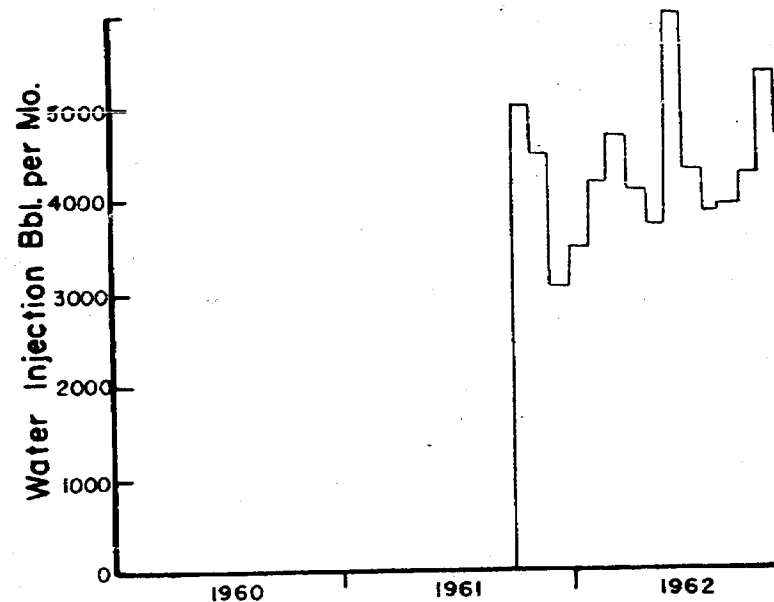
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Phillips Mexco "A" 2



Nichols Phillips Lexco St. No. 1

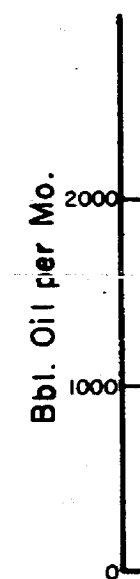
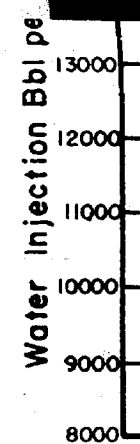
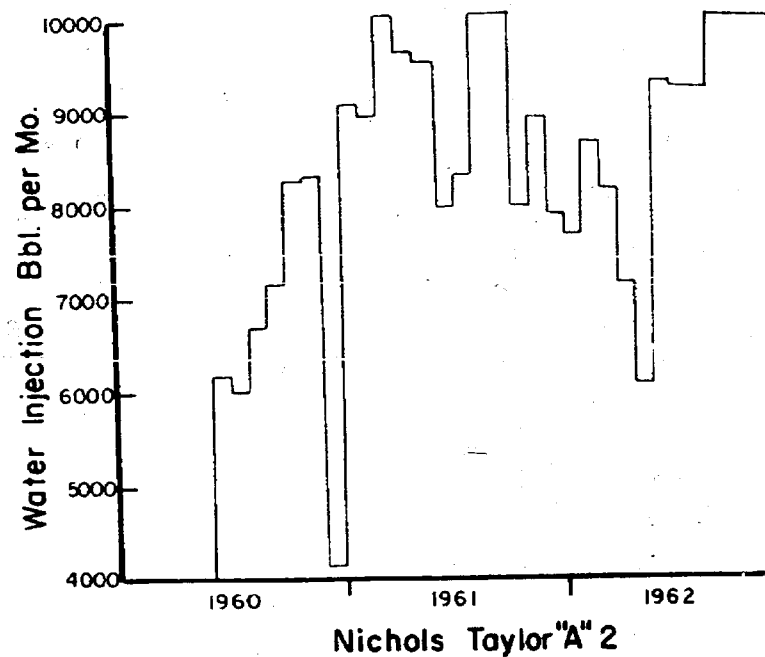
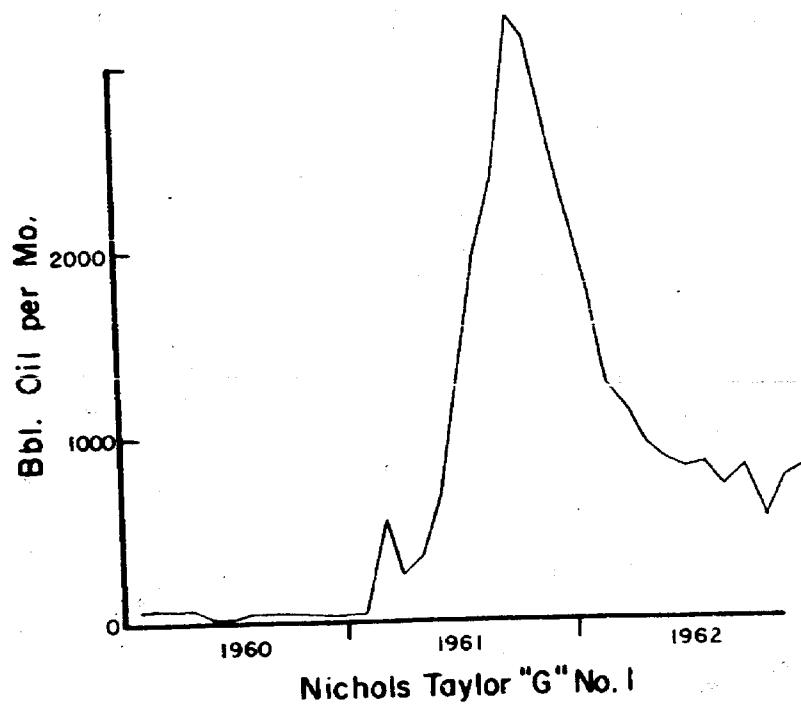
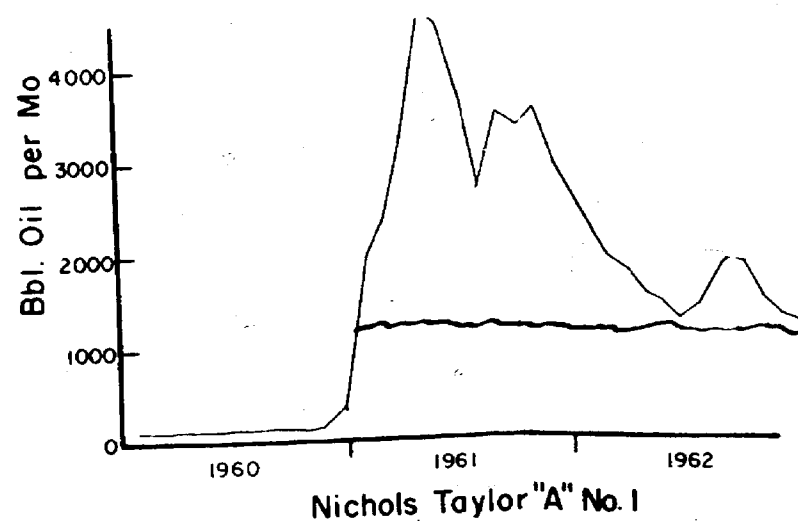
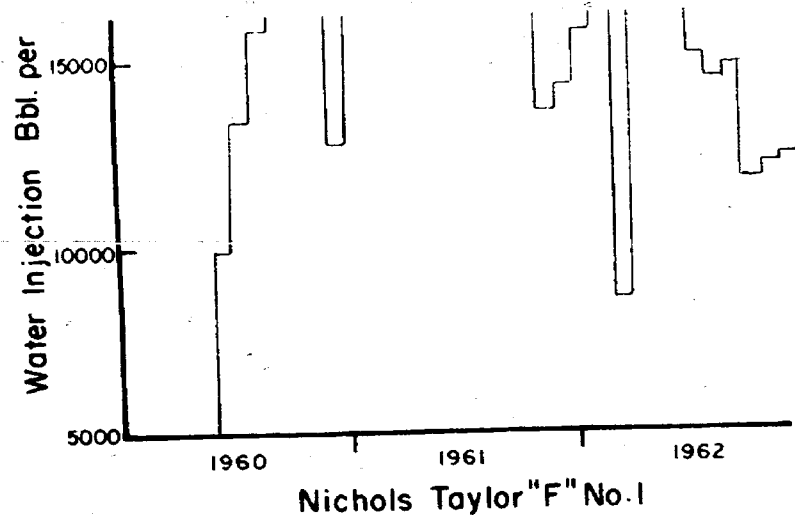


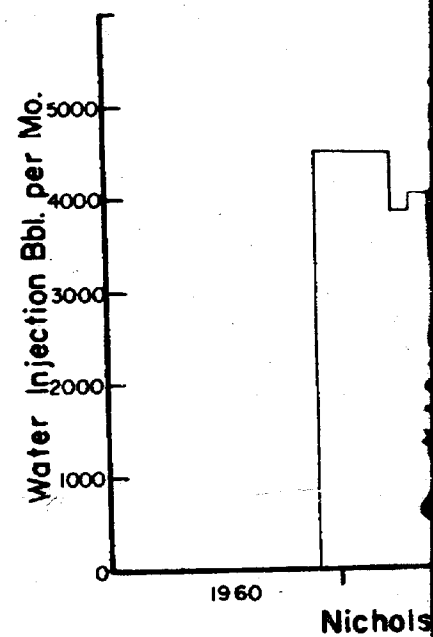
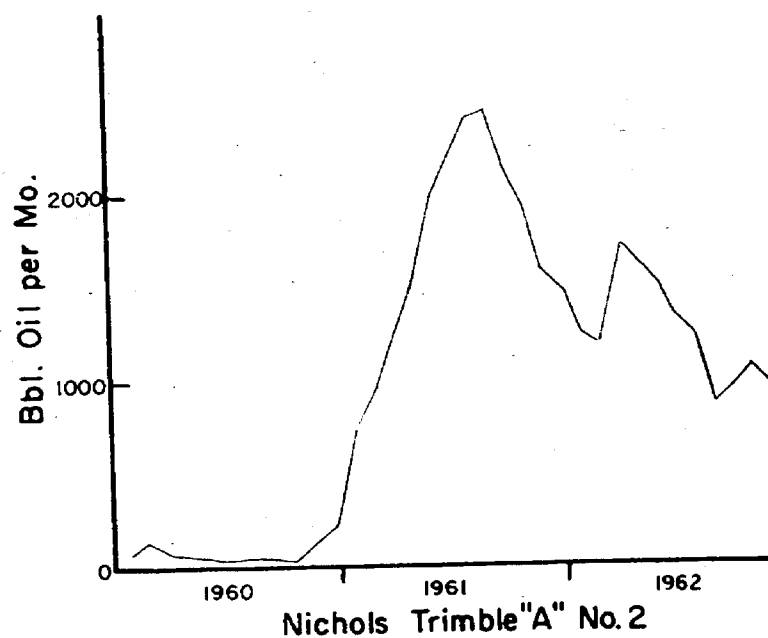
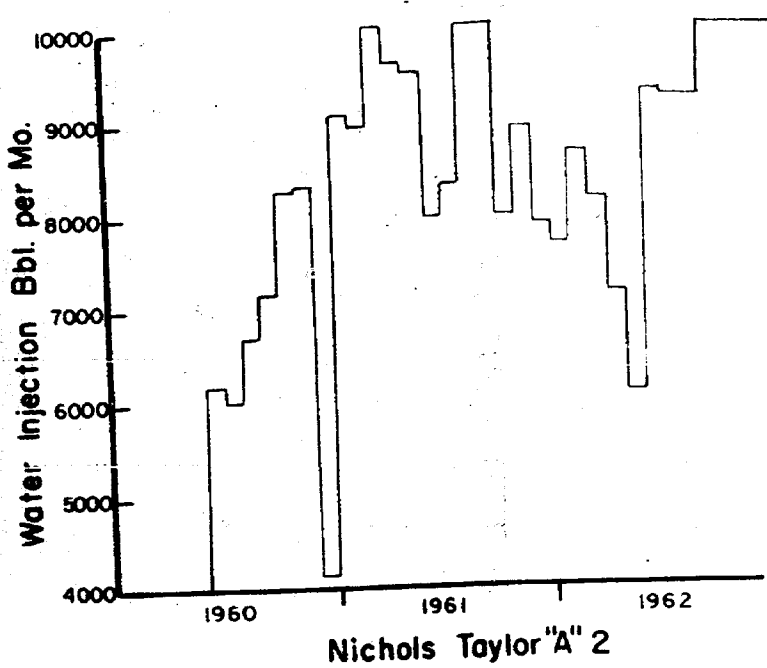
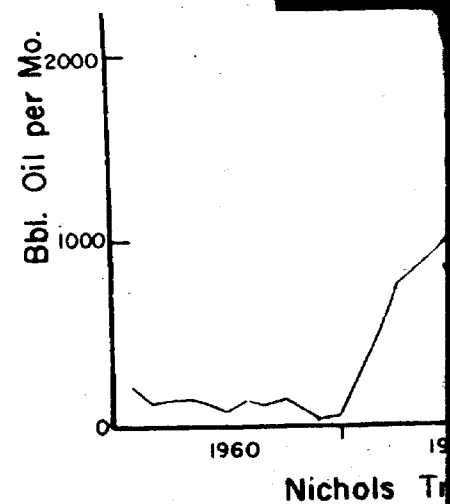
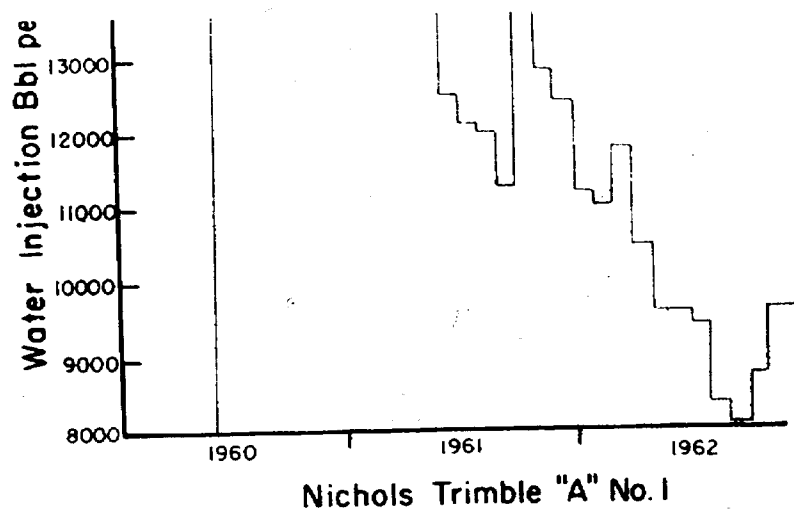
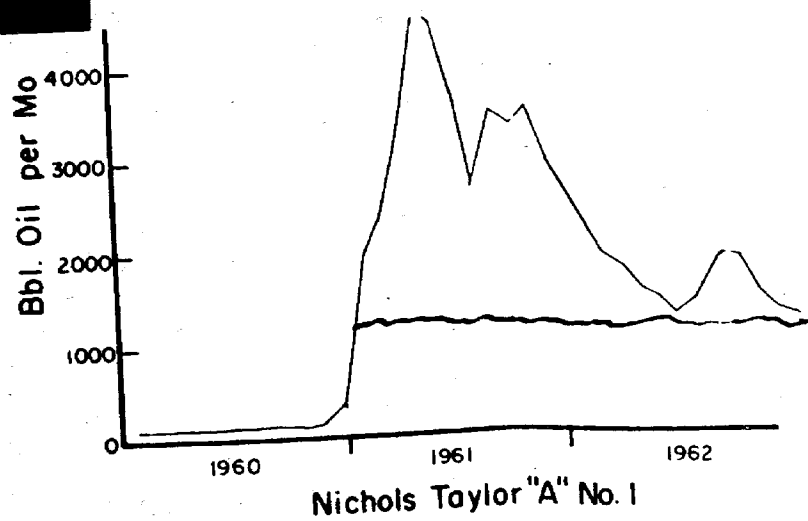
Nichols Phillips Lexco St. No. 2

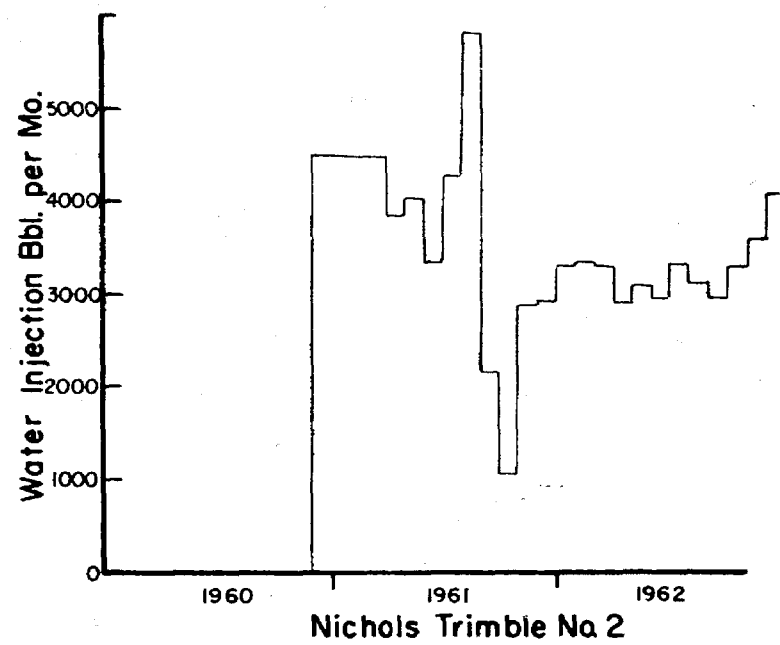
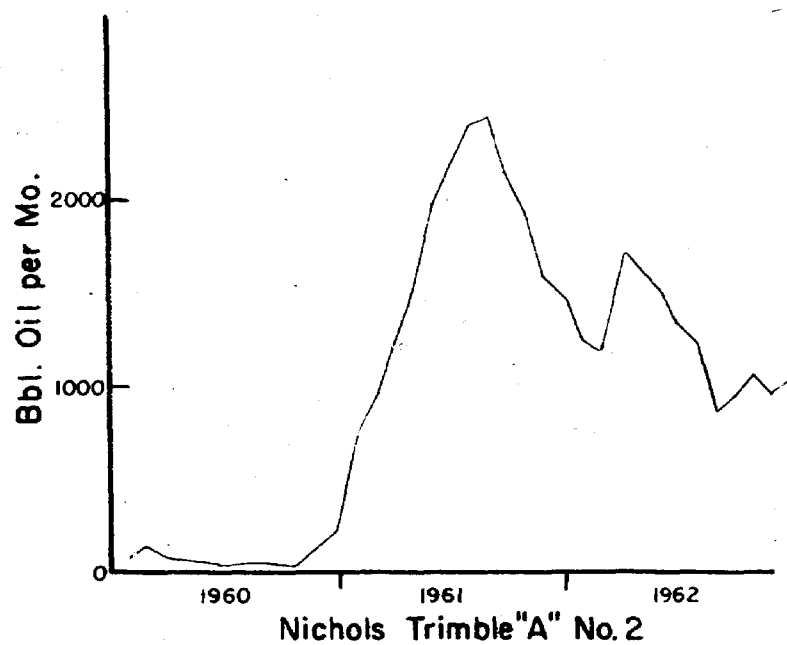
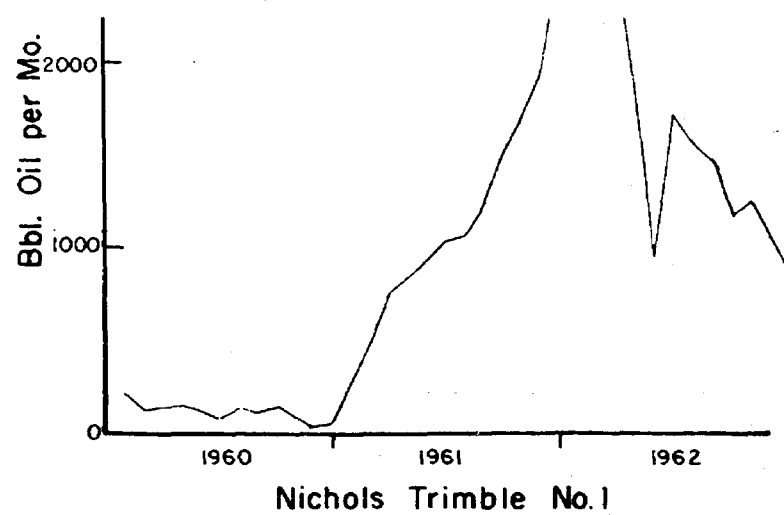
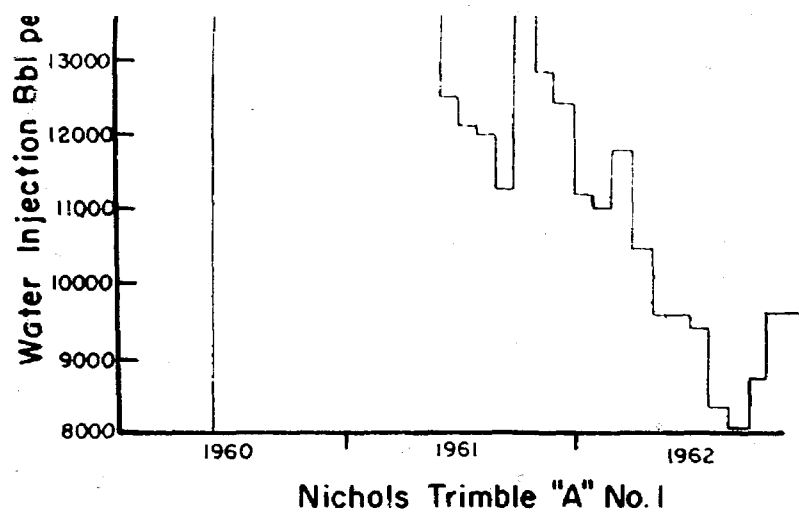


1962  
St. No. 2

1962  
St. No. 1



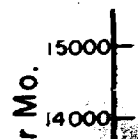
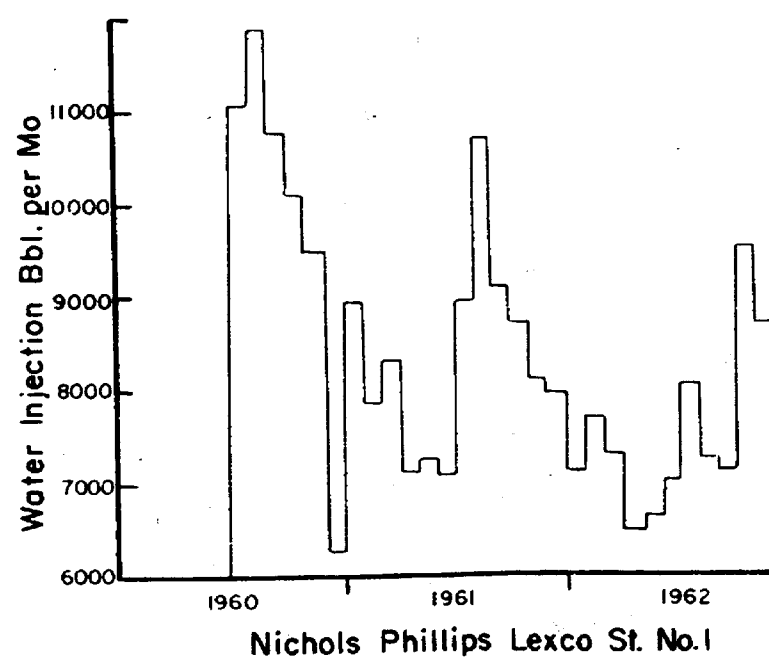
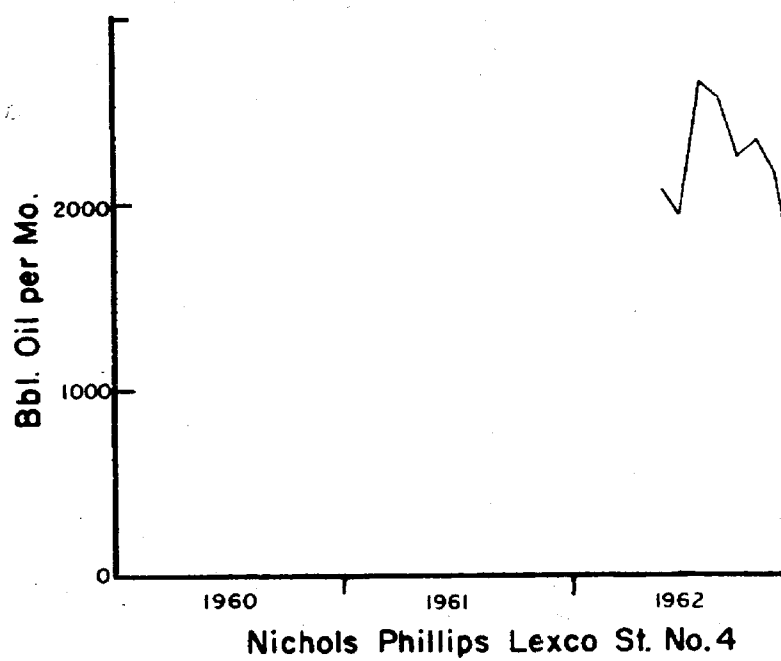
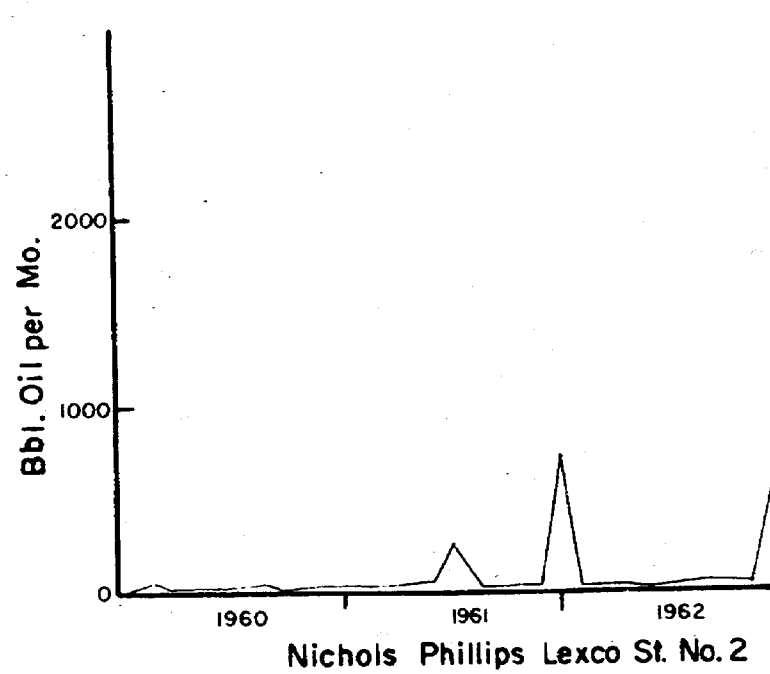


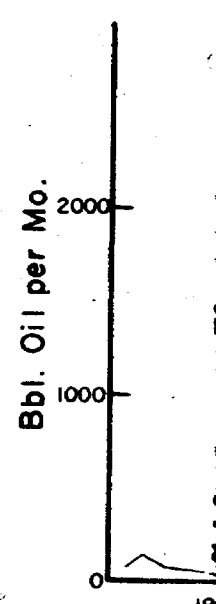
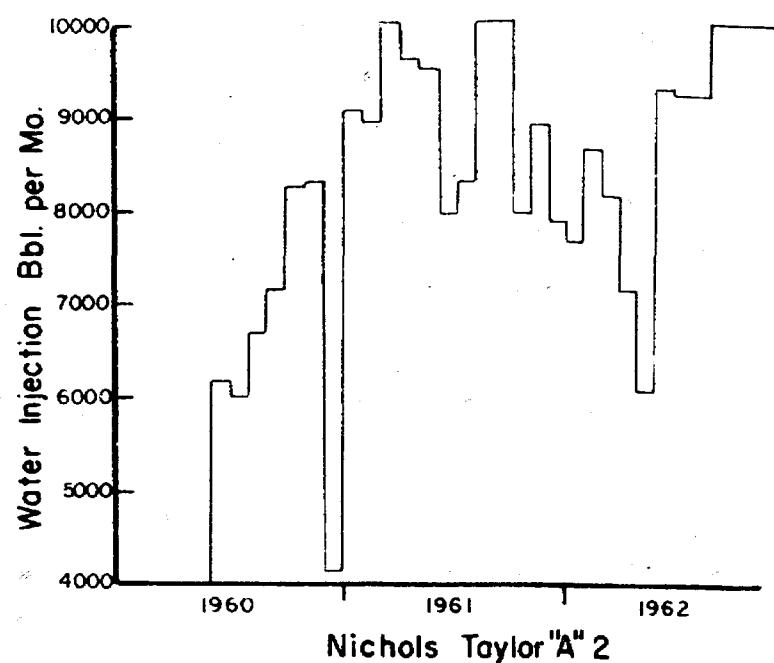
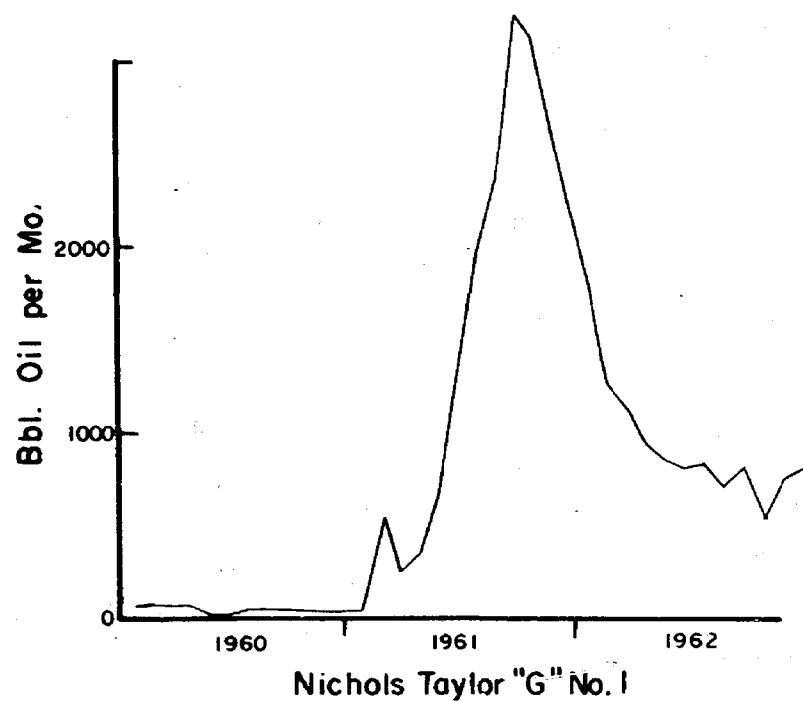
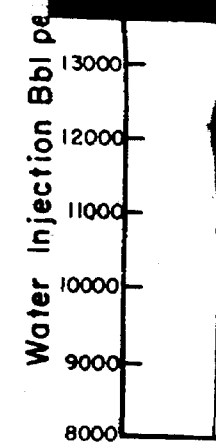
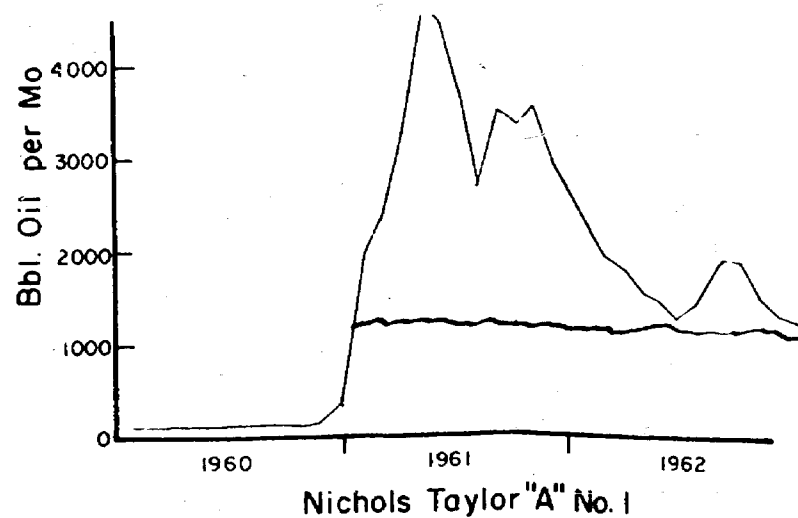
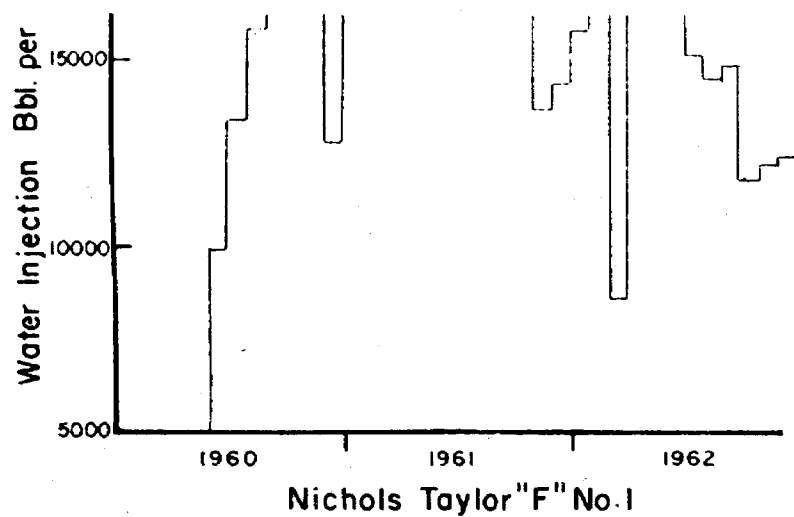


# WELL PERFORMANCE

## NICHOLS WATER-FLOOD

MALJAMAR GRAYBURG-SAN AN  
LEA CO. NEW MEXICO

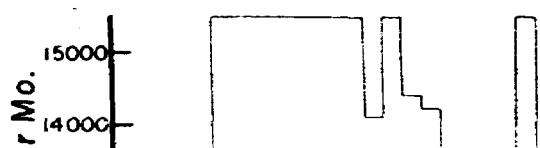
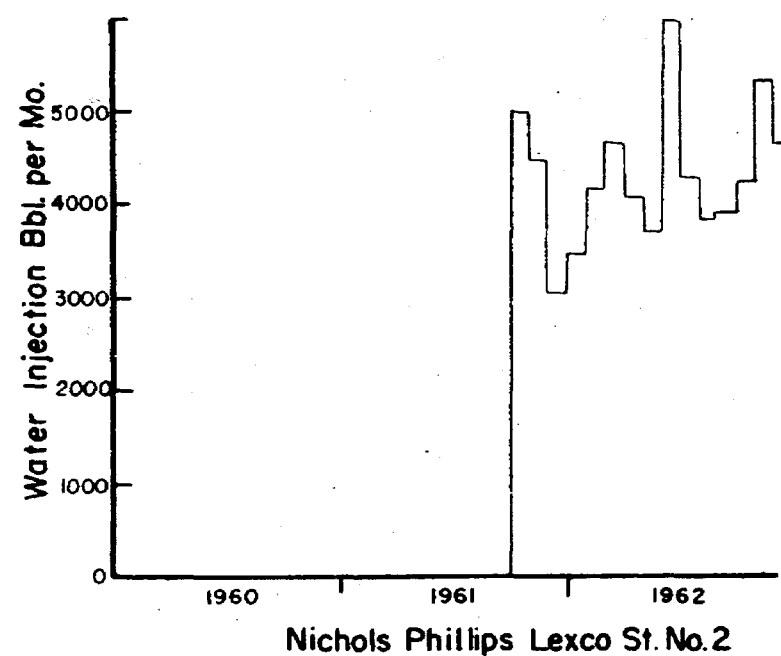
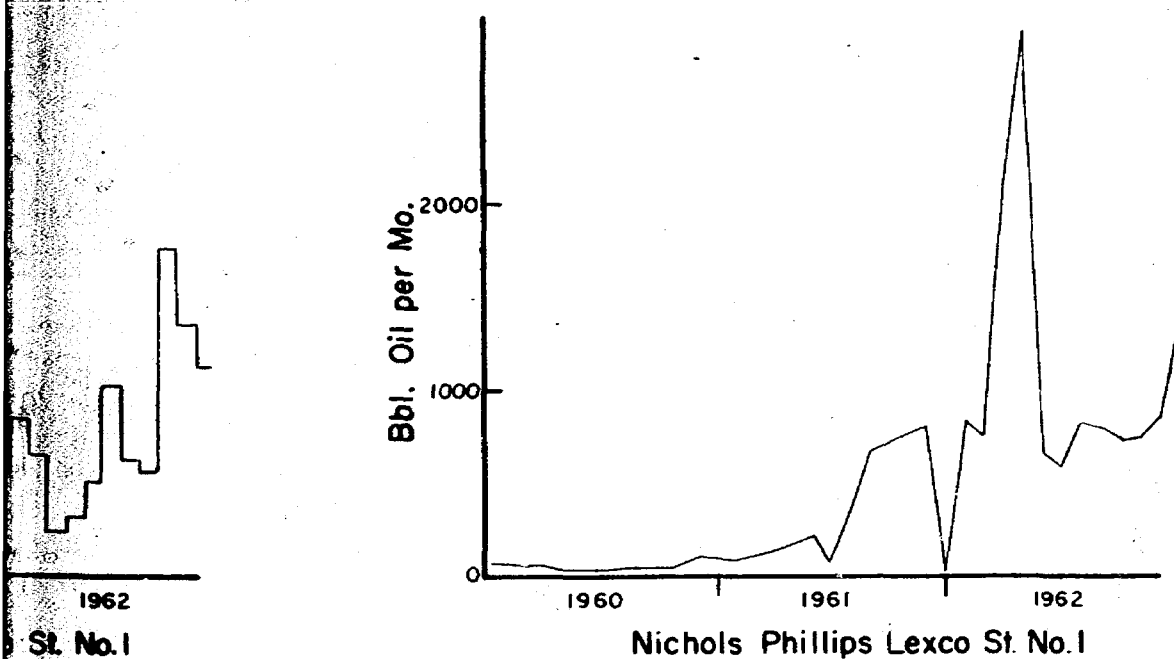
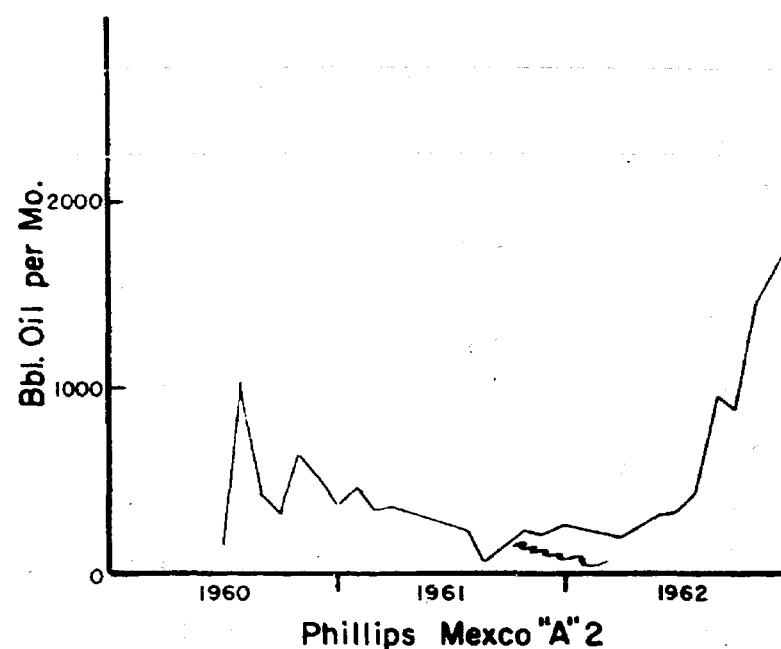
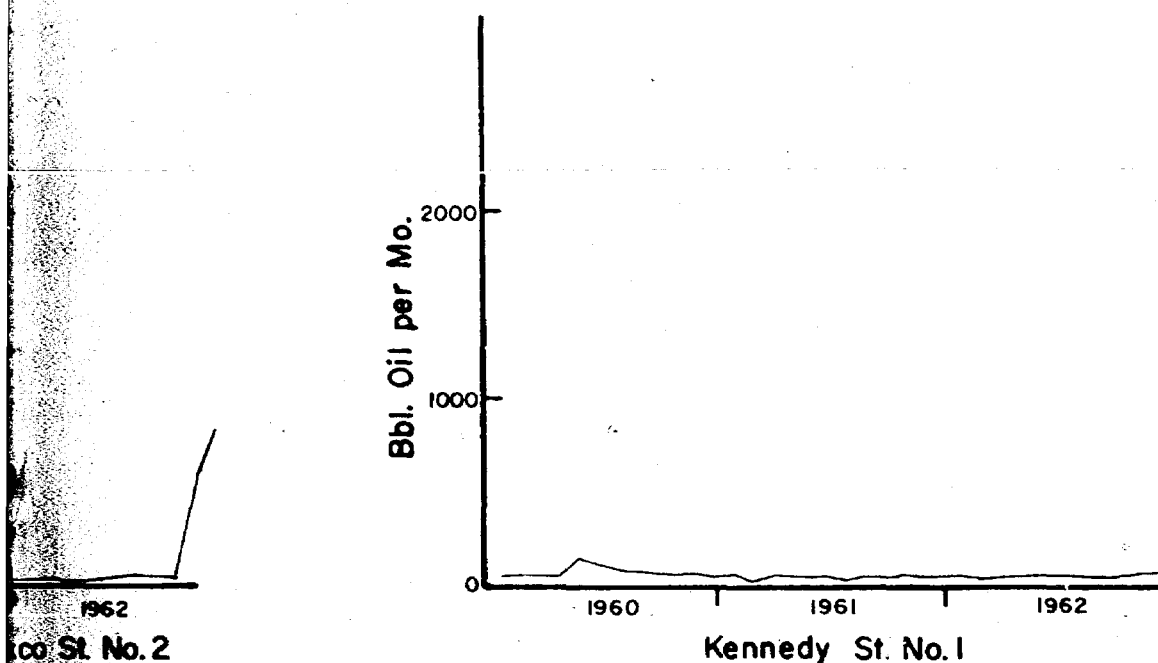


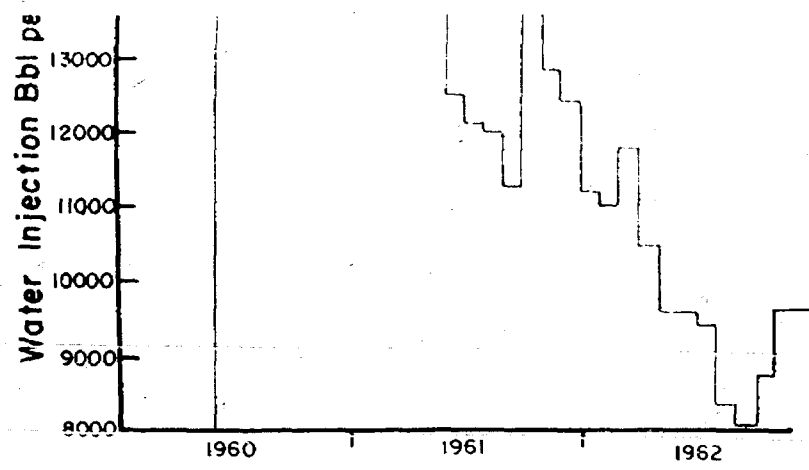


# PERFORMANCE

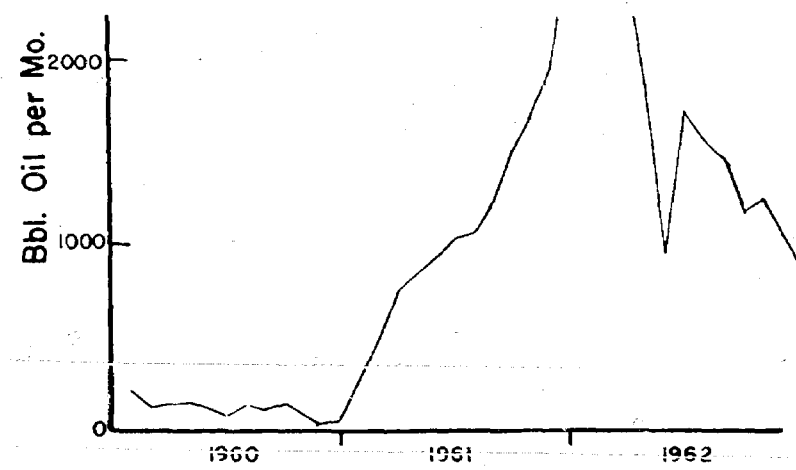
## S WATER-FLOOD AREA

AR GRAYBURG-SAN ANDRES POOL  
LEA CO. NEW MEXICO

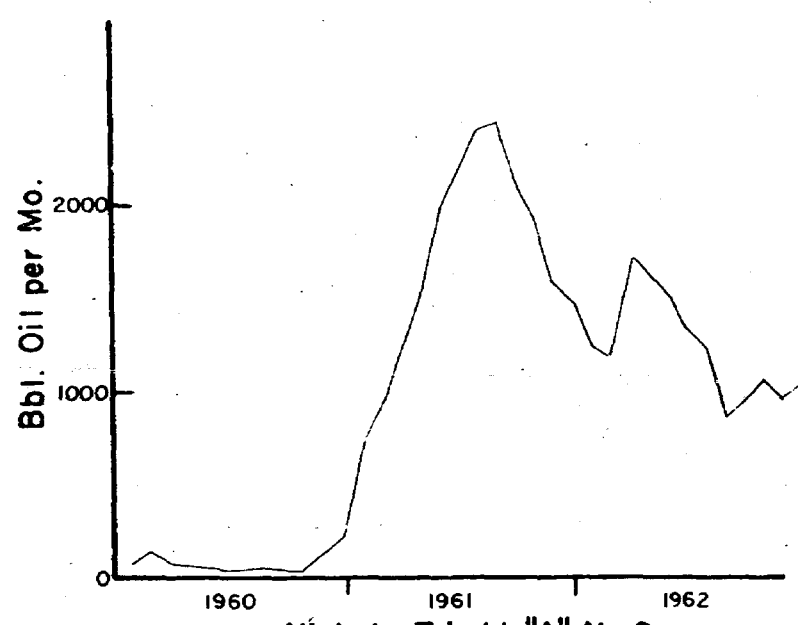




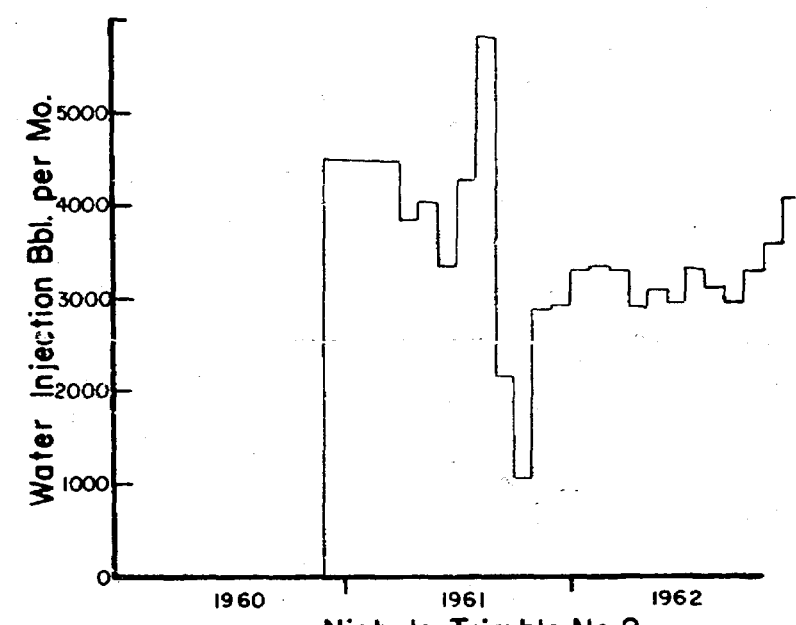
Nichols Trimble "A" No. 1



Nichols Trimble No. 1



Nichols Trimble "A" No. 2

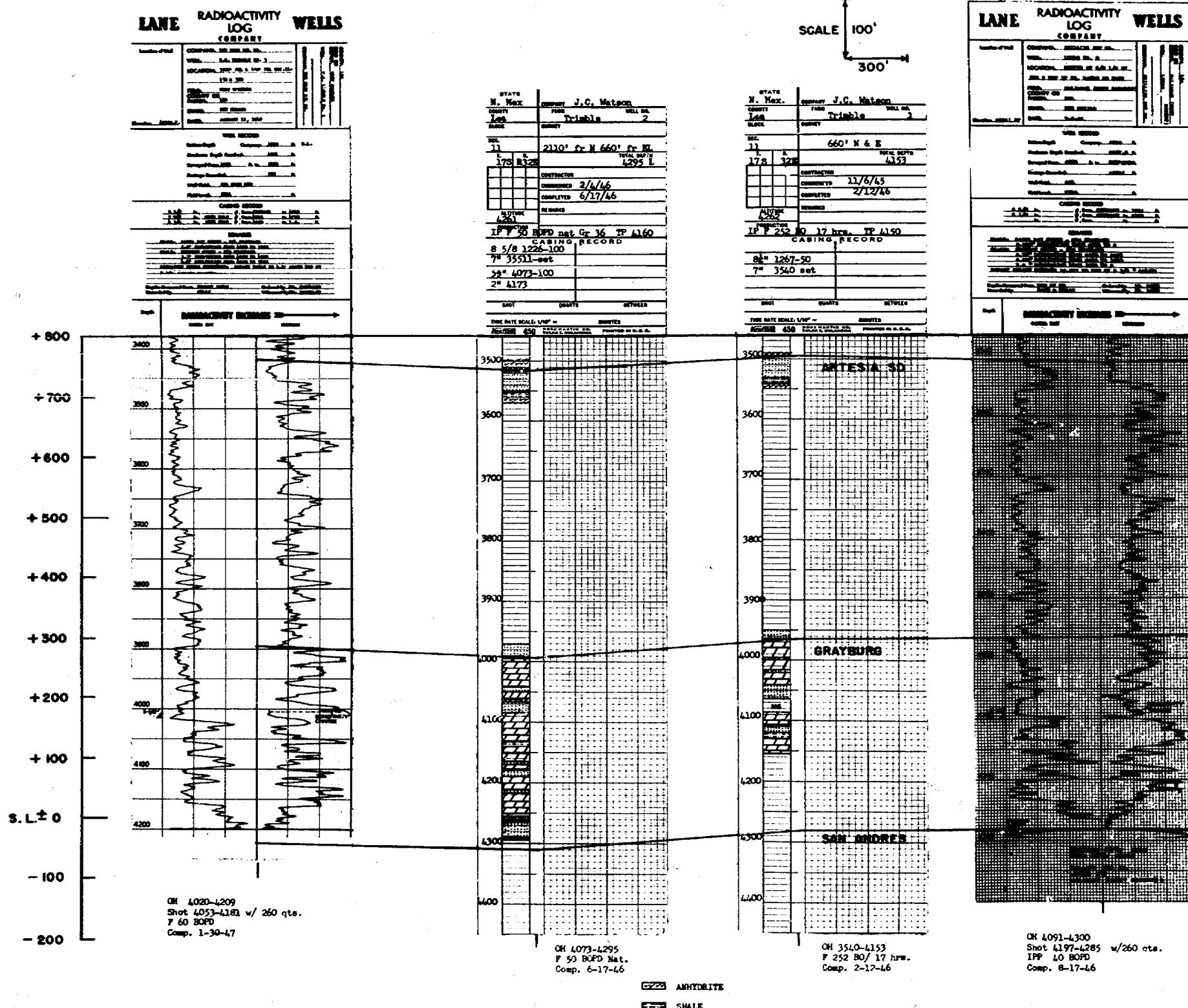


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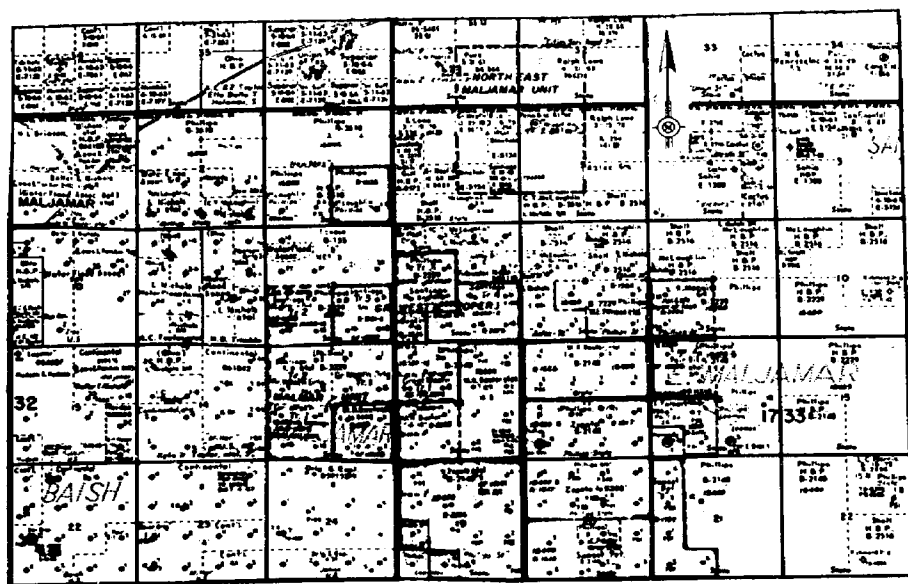


GEOLOGY BY: J. C. VAUGHN

**A**  
**SOUTH**



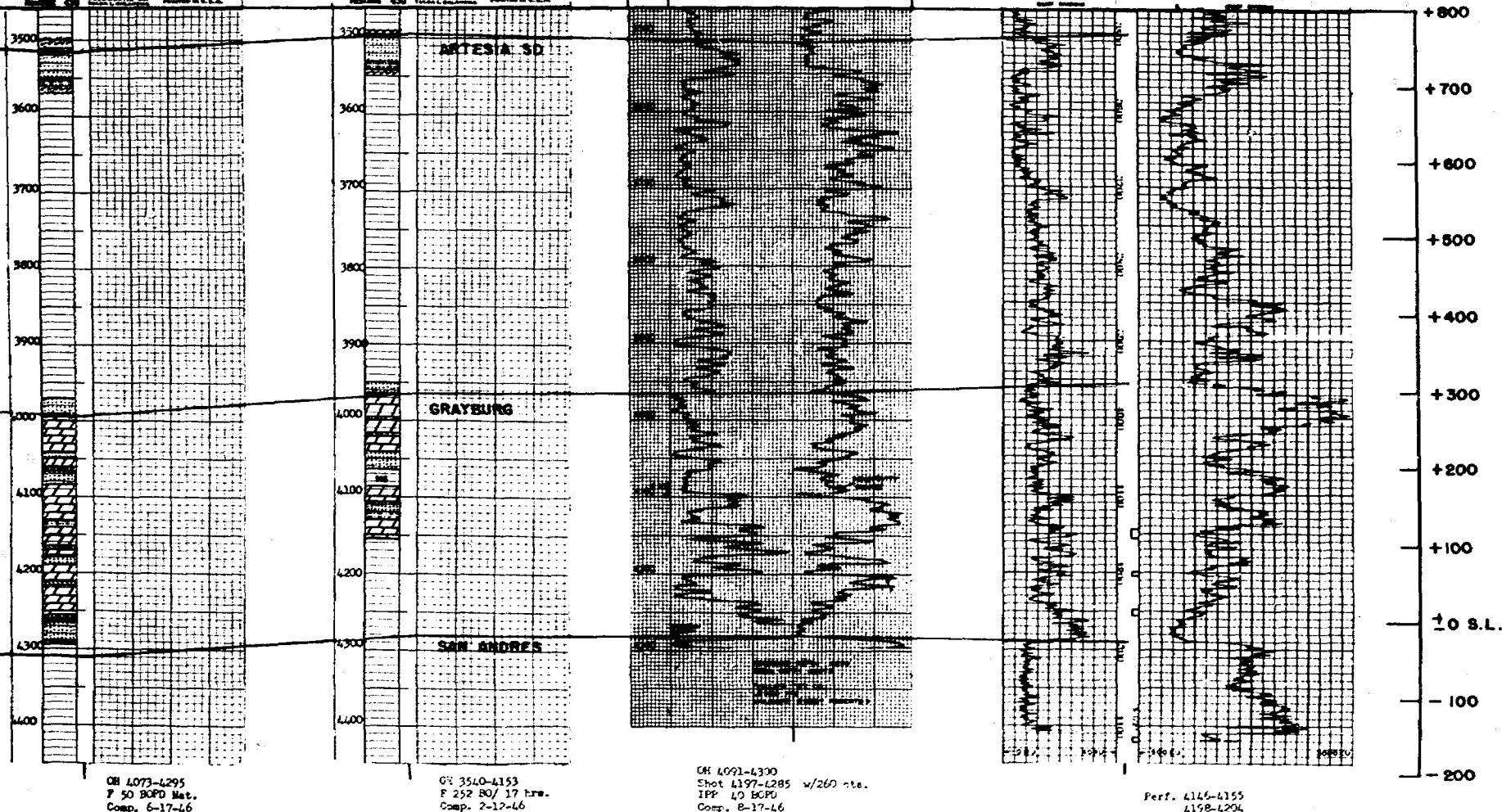
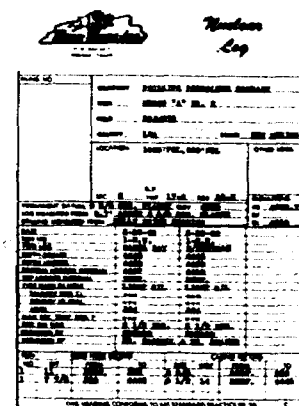
XXXX SAND  
XXXX DOLOMITE



SCALE 4000'

**GEOLOGY BY: J. C. VAUGHN**

A graphic scale bar consisting of a vertical line segment labeled '100'' and a horizontal line segment labeled '300'' meeting at a right angle. The word 'SCALE' is written to the left of the vertical segment.


[illegible][illegible]

OH 4073-4295  
P 50 BOPD Mat.  
Comp. 6-17-46

G# 3540-4153  
F 252 BO/ 17 Tre.  
Comp. 2-12-66

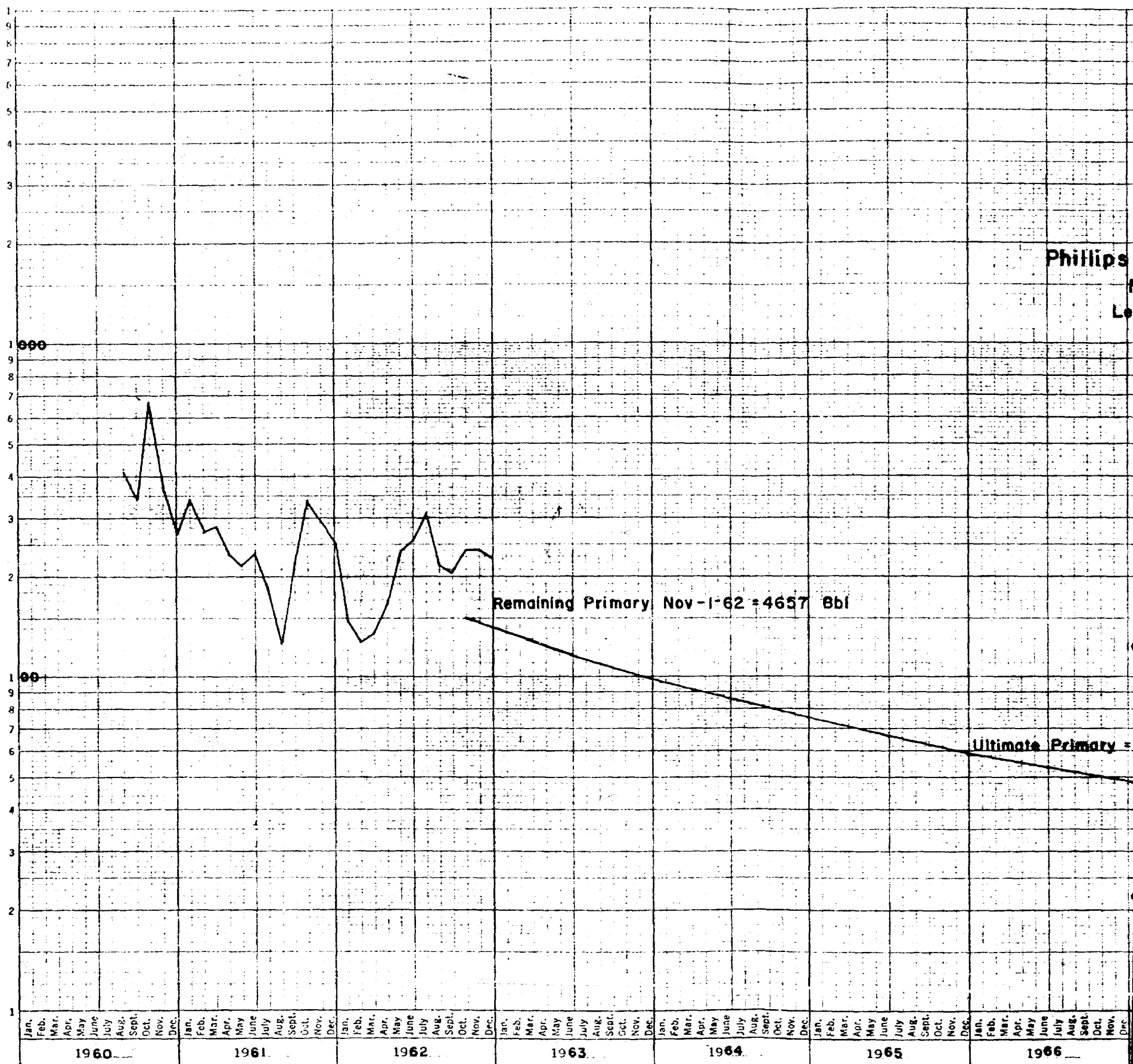
OH 4091-4300  
Shot 4197-4285 w/260 nts.  
IPP 40 BOPU  
Comp. 8-17-46

Perf. 4145-4155  
4158-4204  
4208-4253  
4415-4422  
Frac. 40,000 • 73,000  
IPP: 66, 100, 200, 1149, 347 72y.  
Cores 408-40.

 ANHYDRITE  
 SHALE

K&E 10 YEARS BY MONTHS 359-205L  
X 3 CYCLES  
KREUPPEL & ESSER CO. MADE IN U.S.A.

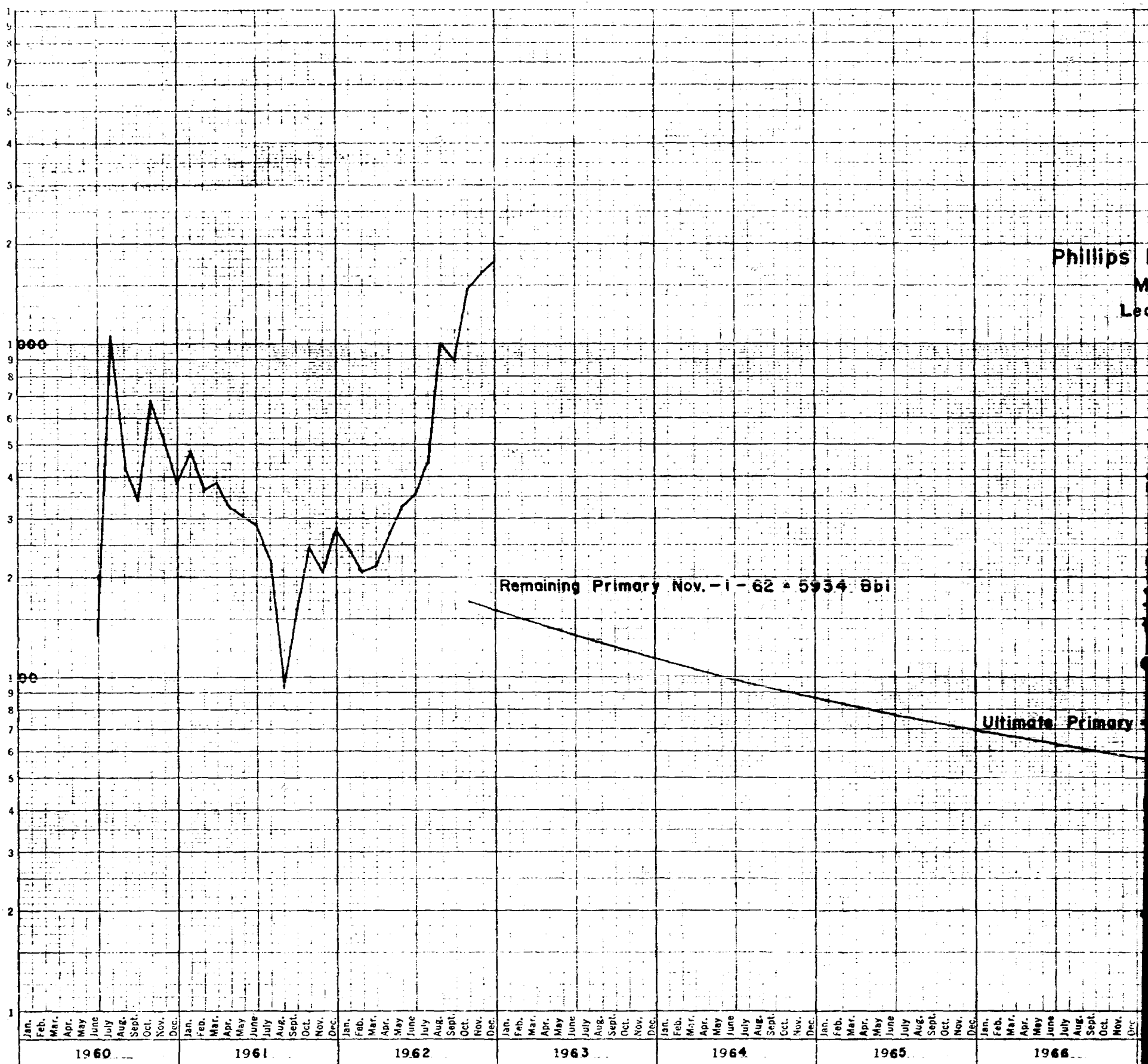
# Oil Production Bbl Per Month





K-E 10 YEARS BY MONTHS 359-205L  
X 3 CYCLES  
KEUPPEL & ESSER CO. MADE IN U.S.A.

# Oil Production Bbl Per Month

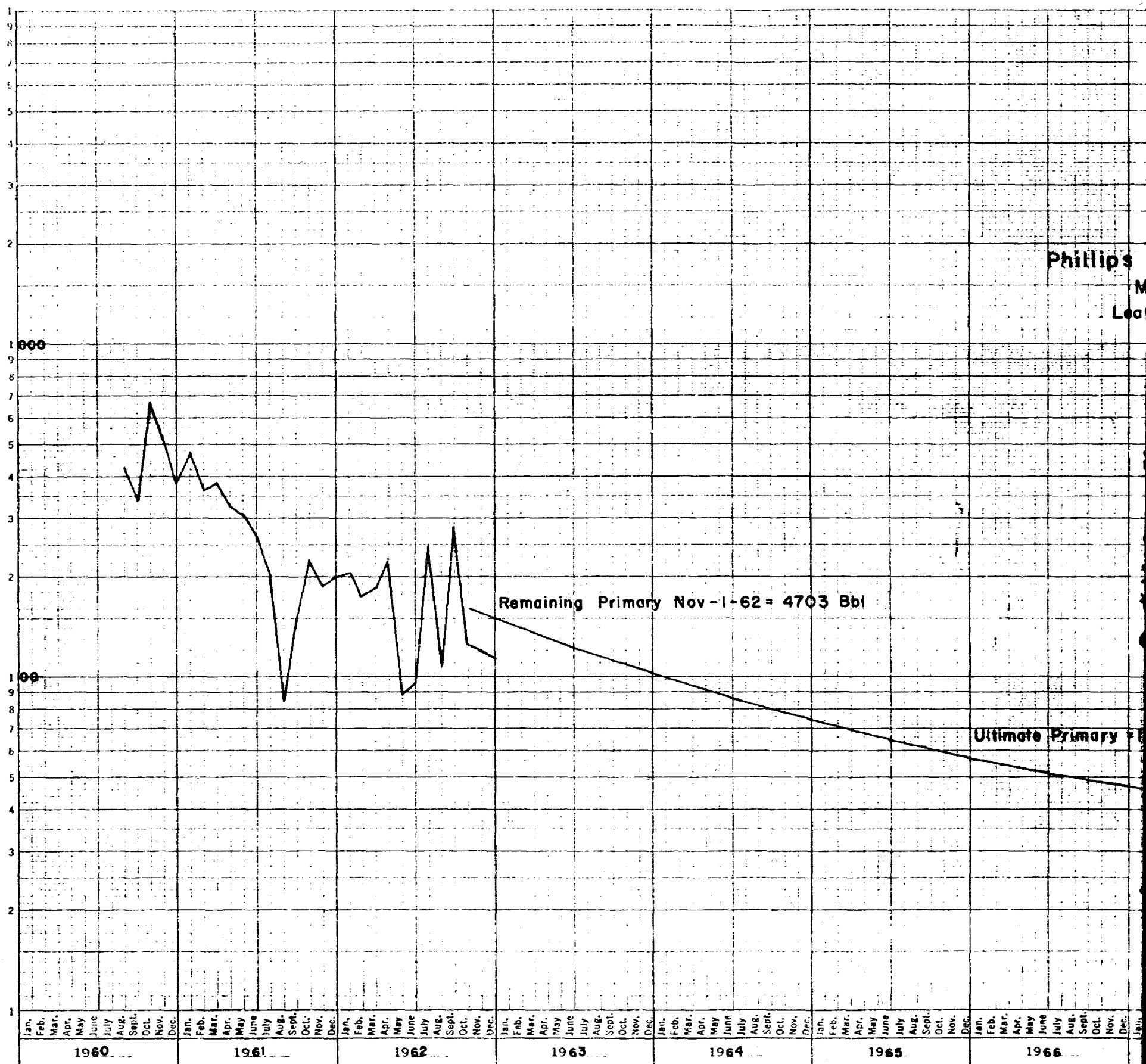






K&E 10 YEARS BY MONTHS 359-205L  
X 3 CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

# Oil Production Bbl Per Month



Phillips  
M  
Lea

Ultimate Primary =





CHALK CANYON  
CHALK

Phillips  
Mexico "A" 2

Depth	Permeability MP	Porosity %
4101-02	0	3.9
4102-03	0	6.8
4103-04	0	7.0
4104-05	0	6.9
4105-06	209.0	26.0
4106-07	17.0	24.1
4107-08	10.0	14.8
4108-09	25.0	19.0
4109-10	122.0	23.3
4110-11	156.0	23.4
4111-12	3.6	17.0
4112-13	0	12.7
4113-14	.7	13.5
4114-15	5.6	23.4
4115-16	1.0	15.7
4116-17	0	17.6
4117-18	0	5.1
4118-19	0	6.7
4119-20	0	6.1
4120-21	0	3.9
4121-22	0	8.6
4122-23	0	8.8
4123-24	.4	10.7
4124-25	.5	9.2
4125-26	0	3.8
4126-27	0	3.5
4127-28	0	10.6
4128-29	0	10.7
4129-30	.1	12.5
4130-31	.7	14.4

13.0' with measurable permeability  
permeability less than .1 ml shown as 0

Phillips  
Mexico "A" 3

Depth	Permeability MP	Porosity %
4105-06	0	6.2
4106-07	0	7.3
4107-08	0	4.5
4108-09	0	7.3
4109-10	.1	11.2
4110-11	0	9.0
4111-12	0	10.3
4112-13	0	6.7
4113-14	0	6.2
4114-15	0	6.8
4115-16	0	2.3
4116-17	0	3.2
4117-18	0	4.4
4118-19	0	6.7
4119-20	0	7.6
4120-21	0	12.4
4121-22	0	9.6
4122-23	.1	10.3
4123-24	0	7.1
4124-25	0	8.0
4125-26	0	8.9
4126-27	0	8.6
4127-28	0	7.2
4128-29	0	9.8
4129-30	0	10.5
4130-31	.1	9.6
4131-32	0	8.0
4132-33	0	9.4
4133-34	0	4.7
4134-35	0	3.8
4135-36	0	10.5
4136-37	.1	13.9
4137-38	7.4	16.1
4138-39	23.0	19.5
4139-40	.5	19.6
4140-41	1.5	15.9
4141-42	3.1	15.0
4142-43	.1	12.8
4143-44	0	8.7
4144-45	0	7.5

10' with measurable permeability  
permeability less than .1 ml shown as 0

Perkins

November 21, 1962

Water Flood Associates, Inc.  
2211 Continental National Bank Building  
Fort Worth 2, Texas

Attention Mr. Curtis McGroom

McJannet Pool,  
Lee County, New Mexico  
Proposed Inclusion of Phillips  
No. 2 Lease "A", NE 1/4, SW 1/4  
Sec. 2-T17N-32E, in Holler-Nichols  
Waterflood Project

Gentlemen:

On October 22, 1962, Mr. H. C. Porter of Water Flood Associates, Inc., and Mr. Robert Kennedy of Kennedy Oil Company met with Mr. E. G. Long of Phillips' Hobbs District Office to discuss various possibilities of cooperative action to accomplish expedient water flooding of one separate property in the subject pool. At the time, Phillips Lease No. 2 had responded to water injection in the Nichols-Phillips Lease State No. 2, SE 1/4, SW 1/4, Section 2-T17N-32E, and Phillips had sought relief from the New Mexico Oil Conservation Commission in granting a special allowable from this well to prevent loss of oil to the depleted edge of the reservoir to the north. Subsequent to our hearing on November 8, 1962, the Commission issued Order No. R-2363 granting capacity allowable for a period of 60 days on the Lease "A" No. 2. The order also provided "That the Lease 'A' Well No. 2 shall be eligible to share in the Holler-Nichols Waterflood Project allowable at the termination of the temporary 60-day maximum capacity production period authorized in this order, provided the NE 1/4, SW 1/4 of Section 2-T17N-32E, T17N, Lee County, New Mexico, has been unitized with acreage lying directly south thereof and in the Holler-Nichols Waterflood Project Area, and provided that said unitization agreement has been approved by the Commission."

We recognize that unitization of the Lease "A" No. 2 and the Kennedy State No. 1-2, NE 1/4, SW 1/4, Section 2-T17N-32E, with the Holler-Nichols Water Flood Project would be desirable, but at this stage of the waterflood operation it may be very difficult to accomplish on the basis of the usual parameters.

Water Flood Associates, Inc.  
201 Parker Bldg.  
November 31, 1962  
Page No. 2

We will appreciate receiving your comments as to the possibility of  
unitizing our properties, and any suggestions you may have as to some  
equitable basis of participation.

Yours very truly,

*Jack Turner*

Jack Turner, Manager  
Engineering Division

TAM:YFG

cc: Mr. Leonard Nichols  
Mercantile Securities Bldg.  
Dallas, Texas

Mr. H. C. Porter  
Water Flood Associates, Inc.  
201 Parker Bldg.  
Artesia, New Mexico

Mr. Robert B. Kennedy  
Kennedy Oil Company  
P. O. Box 151  
Artesia, New Mexico

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico  
Attn: Mr. D. S. Rutter

bcc: Messrs. J. N. Perkins  
W. C. Rodgers

301 BOOKER BLDG.  
ARTESIA, NEW MEXICO

DECEMBER 17, 1962.

RE: MALJAMAR POOL, LEA COUNTY,  
NEW MEXICO. UNITIZATION  
PROPOSAL OF PHILLIPS NO. 2  
MEXCO A, NE/4 SE/4, SECTION  
2-17-32 WITH THE BOLLER  
NICHOLS FLOOD

H. C. PORTER  
SUPERINTENDENT

CC: ROBERT B. KENNEDY - ARTESIA, NEW MEXICO  
PHILLIPS PETROLEUM COMPANY - HOBBS, N. M.  
OIL CONSERVATION COMMISSION - SANTA FE, N. M.  
CURTIS MCBROOM - FORT WORTH, TEXAS  
ROBERTS CORRESPONDENCE FILE

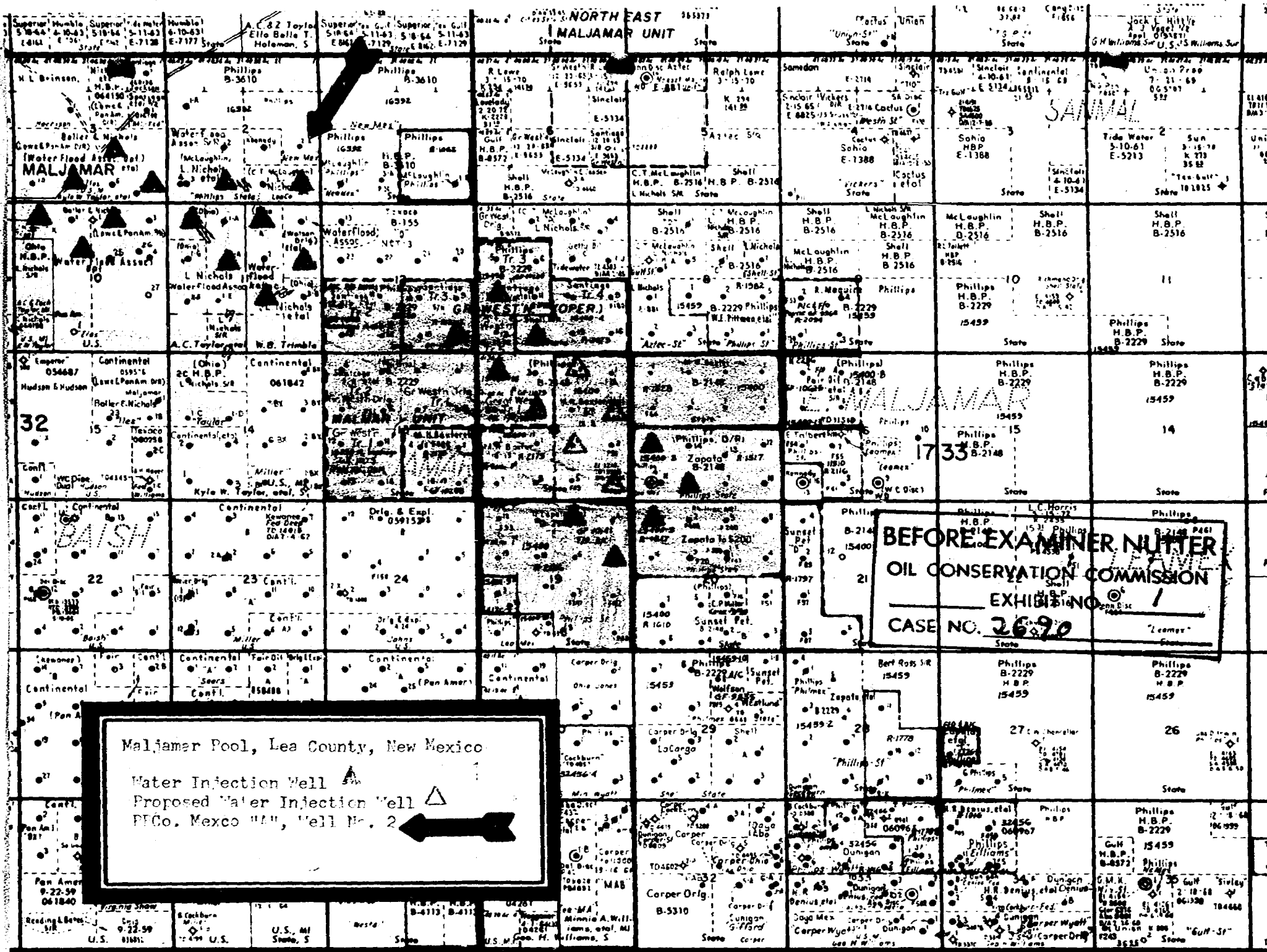
PHILLIPS PETROLEUM COMPANY'S APPLICATION FOR A CAPACITY  
ALLOWABLE FOR THE PHILLIPS' MEXCO "A", WELL NO. 2, UNIT  
I, SECTION 2, TOWNSHIP 17-S, RANGE 32-E, MALJAMAR POOL,  
LEA COUNTY, NEW MEXICO.

CASE NO. 2690

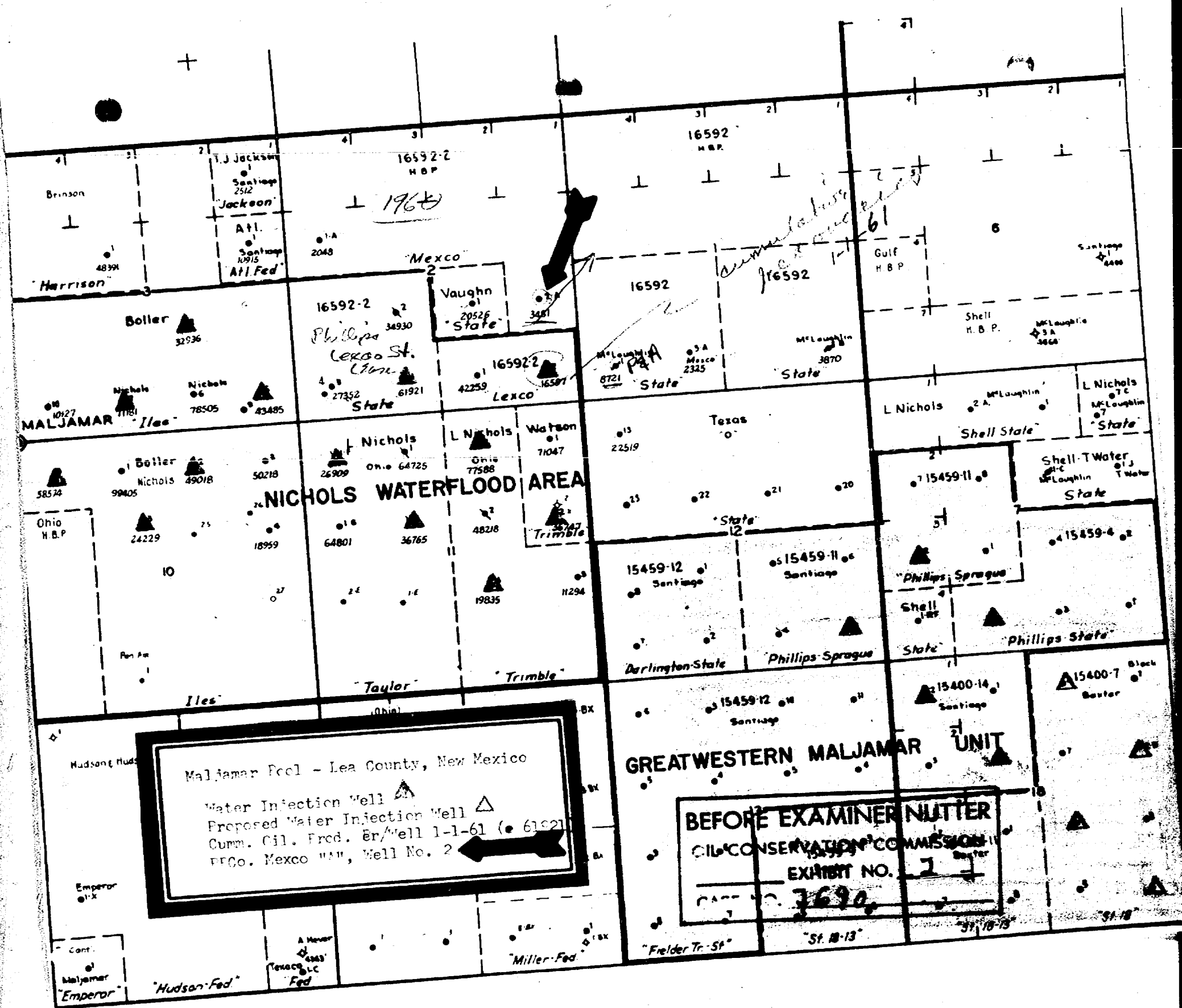
NOVEMBER 8, 1962

Summary Of Exhibits

- Exhibit No. 1: A plat of the Maljamar area of Lea County showing the waterflood project, and the injection wells in the vicinity of the Phillips' Mexco "A", Well No. 2.
- Exhibit No. 2: A plat of the Maljamar area in the vicinity of the Phillips' Mexco "A", Well No. 2, showing the waterflood projects and the injection wells in operation. This plat also shows the cumulated production from the wells in this area as of January 1, 1961.
- Exhibit No. 3: A schematic sketch showing the oil producing rates and water injection rates of wells in the vicinity of the Phillips' Mexco "A", Well No. 2.
- Exhibit No. 4: A cross section through the Phillips' Mexco "A", Well No. 2, and the wells to the south showing the common completion intervals of these wells.
- Exhibit No. 5: A decline curve for the Phillips' Mexco "A", Well No. 1.
- Exhibit No. 6: A decline curve for the Phillips' Mexco "A", Well No. 2.
- Exhibit No. 7: A decline curve for the Phillips' Mexco "A", Well No. 3.
- Exhibit No. 8: Core Analysis Summary Phillips' Mexco "A", Wells No. 2 and No. 3







CORE ANALYSIS  
SUMMARY

Phillips  
Mexico "A" 2

Depth	Permeability MD	Porosity %
4010-02	0	3.9
4102-03	0	6.8
4103-04	0	7.0
4139-40	0	8.9
4140-41	209.0	26.0
4144-42	17.0	24.1
4142-43	10.0	14.8
4143-44	25.0	19.0
4144-45	128.0	23.3
4145-46	156.0	23.4
4146-47	3.6	17.0
4192-93	0	12.7
4193-94	.7	13.5
4194-95	5.6	23.4
4195-96	1.0	15.7
4196-97	0	17.6
4215-16	0	5.1
4216-17	0	6.7
4217-18	0	6.1
4218-19	0	3.9
4219-20	0	8.6
4220-21	0	8.8
4221-22	.4	10.7
4222-22.5	.5	9.2
4228-29	0	3.8
4229-30	0	3.5
4243.5-44	0	10.6
4244-45	0	10.7
4245-46	.1	12.5
4246-46.5	.7	14.4

13.0' with measurable permeability  
permeability less than .1 md shown as 0

**BEFORE EXAMINER NUTTER**  
OIL CONCESSION COMMISSION

EXHIBIT NO. 8  
CASE NO. 2690

Phillips  
Mexico "A" 3

Depth	Permeability MD	Porosity %
4105-06	0	6.2
4106-07	0	7.3
4107-08	0	4.5
4108-09	0	7.3
4109-10	.1	11.2
4110-11	0	9.0
4111-12	0	10.3
4112-13	0	6.7
4113-14	0	6.2
4114-15	0	6.8
4144-45	0	2.2
4145-46	0	3.2
4146-47	0	4.8
4147-48	0	6.7
4148-49	0	7.6
4149-50	0	12.8
4199-4200	0	9.6
4200-01	.1	10.2
4201-02	0	7.1
4202-03	0	6.9
4237-38	0	8.9
4238-39	0	8.8
4239-40	0	7.2
4248-49	0	9.8
4249-50	0	10.5
4272-73	.1	9.6
4273-74	0	8.0
4274-75	0	9.4
4361-62	0	4.7
4362-63	0	3.8
4419-20	0	10.5
4420-21	.1	13.9
4421-22	7.4	16.1
4422-23	20.0	19.5
4423-24	.5	13.6
4424-25	1.5	13.9
4425-26	5.1	15.0
4426-27	.1	12.8
4427-28	0	8.7
4428-29	0	7.5

10' with measurable permeability  
permeability less than .1 md shown as 0