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2493

plication, Transcript,
and Exhibits, Etc.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

April 30, 1962

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Losee and Stewart
P. O. Drawer 239
Artesia, New Mexico

Attention: Mr. A. J. Losee

Gentlemen:

We regret that until now, due to some rather lengthy hearings, we have been unable to answer your letter of April 18, 1962, regarding the maximum allowable assignable to the waterflood project recently authorized by Order No. R-2196 for Water-Flood Associates, Western Development Company and Yates Petroleum Company in the Artesia Pool.

After a review of the case file including the exhibits and the transcript, we concur with you that some additional acreage may be included in the waterflood project area. In the absence of unitization, as in the subject case, the first main criterion for determination of eligibility of inclusion is whether the acreage is owned by the operator or not. And secondly, if it is owned by the operator, whether the royalty is common throughout. To permit the transfer of allowables without common ownership or adequate working agreements including consent of royalty owners is beyond the intent of the allowable transfer provisions of Rule 701.

Upon showing that acreage offsetting Section 14 is owned by the applicants in this case or is covered by adequate agreements

OIL CONSERVATION COMMISSION

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including protection of varying royalty ownership, we will
reconsider the project area.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSH/1r

cc: Mr. M. L. Armstrong
Oil Conservation Commission
P. O. Drawer DD
Artesia, New Mexico

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LAW OFFICES

MAIN OFFICE 000 LOSEE AND STEWART

A. J. LOSEE
EDWARD B. STEWART

CARPER BUILDING - P. O. DRAWER 239
ARTESIA, NEW MEXICO

1962 APR 19 AM 8:17 18 April 1962

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

This will acknowledge receipt of your letter of March 27, 1962, in reference to Oil Conservation Commission order R-2196 entered in case No. 2493, approving a water flood project in the Artesia pool for Water-Flood Associates, Inc., Western Development Company of Delaware, and Yates Petroleum Corporation.

In this letter you advise that according to your calculations, when all of the injection wells have been placed on active injection, and when the Kersey & Company Sheldon No. 1 well has been unitized with the remainder of acreage, the maximum allowable which this project will be eligible to receive is 686 barrels per day. In this letter you ask that we report any error in the calculated maximum allowable.

If we limit the project to proration units within Section 14, Township 18 South, Range 28 East, then we agree with your calculation as to the maximum allowable. However, there are other producing proration units located outside of Section 14 that will be directly or diagonally offset by active injection wells located within Section 14. These producing proration units may be described as follows:

Township 18 South, Range 28 East

Section 11: S/2 SE/4 and SE/4 SW/4
Section 13: W/2 NW/4 and NW/4 SW/4
Section 15: E/2 SE/4
Section 23: NW/4 NE/4 and N/2 NW/4.

All of these proration units are not owned by the applicants in the above case. Until such time as a response is received by the flood, the assignment of an allowable to the project will not be important to our clients.

Mr. A. L. Porter, Jr.
18 April 1962
Page 2

The order entered in this case only refers to Section 14 but I would like to assume that under existing regulations, the applicants would be entitled to administrative approval of additional allowable for the above producing proration units.

If I am incorrect in my assumption that administrative approval can be received to secure a maximum allowable of 1,148 barrels per day for this project as presently authorized, please advise. Thank you for your further attention to this matter.

Very truly yours,



A. J. Losee

AJL:jat

cc: Western Development Company of Delaware
Post Office Box 427
Artesia, New Mexico

Mr. Hal C. Porter
Water-Flood Associates, Inc.
Booker Building
Artesia, New Mexico

Oil Conservation Commission
Post Office Drawer DD
Artesia, New Mexico

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 3/8/62

CASE 2493

Hearing Date 9am 2/7/62

DSN

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

Enter an order approving the water flood project as requested by applicants. Injection is to be through six wells:

water flood	State 14	# 3	SE NW 14, 18S, 28E
"	"	# 5	NW NE " " "
"	"	# 8	SE NE " " "
"	"	# 14	SE SW " " "
Western Gates	State 647	# 118	NW SW " " "
"	"	# 123	NW SE " " "

Require that injection shall be through tubing and packer, in the ~~the~~ State 14 No. 8 and the State 647 No. 123.

San Antonio

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

FEBRUARY 7, 1962

EXAMINER HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

IN THE MATTER OF:

Application of Waterflood Associates, Inc.,
Western Development Company and Yates Petrol-
eum Corporation for a waterflood project,
Eddy County, New Mexico. Applicant, in the
above-styled cause, seeks permission to in-
stitute a waterflood project in the Artesia
Pool on the State 14 and State 647 Leases
located in Section 14, Township 18 South,
Range 28 East, Eddy County, New Mexico, the
injection of water into the Grayburg forma-
tion initially will be through six wells
located on said leases, said project to be
governed by the provisions of Rule 701.

CASE NO.
2493

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will take up the next case.

MR. WHITFIELD: Case No. 2493: Application of Waterflood
Associates, Inc., Western Development Company and Yates Petroleum
Corporation for a waterflood project, Eddy County, New Mexico .

MR. LOSEE: A. R. Losee, appearing on behalf of the
applicant. We have one witness, Ma. Hal C. Porter.

(Witness sworn.)

HAL C. PORTER,



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

DIRECT EXAMINATION

BY MR. LOSEF:

Q Will you state your name, please, sir, residence and
occupation?

A My name is Hal C. Porter. I live in Artesia, New
Mexico, and I am a petroleum engineer.

Q Are you an employee of Waterflood Associates, Inc.?

A Yes, sir.

Q Have you previously testified before this Commission?

A Yes, sir.

MR. NUTTER: His qualifications are accepted.

Q (by Mr. Losee) Waterflood Associates, Western Develop-
ment Company and Yates Petroleum Corporation have filed this
application to institute a waterflood project in Section 14,
Township 18 South, Range 28 East, Eddy County, New Mexico.
Would you please explain the development history and completion
practices of wells in this field?

A Initially, the development occurred in 1952, with drill-
ing nearly constant up through 1956. In this immediate area,
the common practice of completion was to set 8 5/8 casing to a
depth of 350 to 650 feet and cement it into the salt section.
In other words, it was set in the salt section and cemented. As
a rule, a long production string was run to some point above the



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pay zone and cemented, as a rule, with 100 sacks of cement. The wells were completed in open well and the common practice was they were given a light formation fracture treatment; the size of the treatments were on the order of 10,000 gallons of oil and 15,000 pounds of sand.

Q What zones are open to production in this area?

A Zones 4, 5, and 6 of the Grayburg formation. These are commonly referred to as Loco Hills and Pretex and Premier sections.

Q Will any of those zones, in your opinion, have more secondary recovery possibilities than the others?

A Well, sir, that's very hard to determine from the information we have available. However, we feel that the Premier is the most likely to pay the best in the area.

Q Will you please refer to Exhibit No. 1, what has been marked Exhibit No. 1, and explain what that portrays?

A Exhibit No. 1 is an area map showing well locations and lease ownerships in an area which extends at least three miles in each direction from Section 14. It shows the producing wells within the two-mile area.

Q As well as the names of the lessees?

A Yes, sir.

Q Please refer to what has been marked Exhibit No. 2 and explain that, please?

A Exhibit No. 2 is a project plat showing the proposed initial waterflood pattern. The injection wells are shown with



red triangles around them. The pattern is a regular five-spot pattern. The pattern will be made by converting present producing oil wells to water injection wells. The pattern will be an 80-acre five-spot.

Q Would you explain the ownership or the lessees of the respective leases as to this producing formation that is proposed in this application?

A The injection wells in the center are the producers. Initially, the pattern will be belonging to Waterflood Associates and Western-Yates. Each company will initially have one inside totally closed producing. Initially, Waterflood Associates will have four injection wells and Western-Yates will have two. Responsibility from these initial waterflooding, being applied for the lands are on a regular five-spot basis, away from this initial pattern.

Q Is it anticipated that that will be a unit operation or some other type, and if so, what type?

A We plan for this not to be a unit. It will be a co-operative waterflood with company operation cross lines, with lease line agreements between operators as to their injection wells, the relative amount of water which will be injected in two zones into which water will be injected.

Q Is Waterflood Associates and Yates Petroleum Company, have they reached an agreement as to expenses of conservation of these injection wells and on the basis of sharing the production



of the producing wells, and if that is true, what is that agreement?

A Yes, sir, the expenses of converting each operator's wells will be by the operator himself. Production of the operator's wells will belong to him, as far as the pressurizing system is concerned. It is presently planned that the Waterflood Associates will install the system, the water plant, as such, and pressure and treat the water if necessary, as a service to Western and Yates, initially.

Q Have you discussed this cooperative flood with the surrounding operators in this same field, and if so, what has your response been?

A Yes, sir, I have discussed this plan with the operators in the immediate area, and I have had acceptance and agreement from each operator and have had also from nearly every operator shown on this map to the extent that they have no objection and concur with our plans.

Q It is not from this exhibit that a lease which has been marked SPH in Section 11 and a lease marked Cursey & Company in Section 14 are direct offsets of the wells that are directly offsetting that pattern; have you obtained their written permission for this application?

A Yes, sir, I have obtained from them permission stating that they have no objection; they did not give their permission because it was not theirs to give, but they did, however, state



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that they were in accord with this plan and had no objection to it, and an agreement is under negotiation with SPH wherein a lease line agreement for injection as described previously will be made across the northeastern boundary of Section 14, and also under discussion is an agreement with Cursey & Company, whereby the well in Section 14, the Southwest of the Southeast quarter will be unitized with the Waterflood Associate's wells in the Southeast of the Southeast quarter, Section 14. So, that water may be put into Section 14, Well No. 15, when it becomes time to expand to that, and the ownership of these 40-acre tracts will share on some sort of an agreed basis, will share the oil production from Well No. 1, which is shown as Cursey & Company.

Q Is there anything else you would like to explain, with reference to this exhibit?

A Well, sir, yes, I would like to state that these same zones are being flooded, being successfully flooded in the Loco Hills, the Square Lake and Roberts Pools, and also the Artesia Pool west of here. It's being done successfully on an 80-acre or five-spot, such as we propose here.

Q Will you refer to Exhibit No. 3 and explain what it portrays?

A Exhibit No. 3 is an accumulated production map. It figures beneath the wells which are involved in this project, applied to indicate the number of barrels of oil which those wells have produced.



Q The figures are applicable on the injection and producing wells in this present application?

A Yes, sir, they were the only ones shown on this one.

Q Please refer to Exhibit No. 4 and No. 4A, at the same time, and explain what they portray?

A Figures 4 and 5 show the five wells involved in the application, which belong to Waterflood Associates, the four injection wells and one producer, and it portrays the production history of barrels per month against the months along the bottom. You will note that the production has declined to 470 barrels per month on those wells, which is an average of 3.1 barrels per day per well.

Q On Exhibit No. 4A, your production runs from 1,000 up to 2,000 and falls off down there to 55 and there is a short increase in 1955. Would you explain the reason for that on this decline curve?

A The production from '52 up through April of 1955 is from two wells, and in 1955 additional drilling occurred, and again in early 1956, additional drilling occurred. That accounts for the increase in production in '56. The curve represents all five wells.

Q The purpose of this exhibit is to show that those wells are in advanced stages of depletion, commonly referred to as "stripper wells." The production from the entire Waterflood Associates wells in there averages just slightly more than two



barrels per well per day, with no single well able to produce anywhere near the top allowable.

Q That is also for the Waterflood wells in this application; none of them are producing anywhere near the top allowable?

A No, sir. The average of the wells immediately involved here is 3.1 barrels per day per well.

Q Please refer to Exhibit No. 4B and explain what that shows.

A Exhibit 4B shows the production history of the three wells involved in the application which belong to Western Development Company and Yates. The purpose of this exhibit is to show the advanced stages of depletion of these wells. These wells have declined to a productivity rate of 2.78 barrels per day, which is in the range generally classified as "stripper wells".

Q Will either of these wells produce a top allowable?

A No, sir.

Q Do you have any idea what the maximum production from any of these three wells might be?

A I don't know exactly, but I wouldn't think any of them were capable of producing over ten barrels per day.

Q Please refer to your Exhibit 5A and 5B and explain what it portrays.

A Exhibits 5A and 5B are tabulatory oil production history which is shown graphically over 4 and 4B. It also has the total accumulated barrels of oil which these leases have produced, at



the bottom. Pardon me, not leases but these wells.

Q Well, you are referring to those included in this application for waterflood, are you not?

A Yes, sir.

Q Are these charts of the first production from the wells?

A Yes, sir.

Q Do you have, before we leave these, do you have any production history or figures on any of the wells that are not included in this application but that are offset wells belonging either to Waterflood Associates or Western-Yates?

A Yes, I do. The offset wells have been very similar to those wells that are under discussion here. They are all in advanced stages of depletion, near their economic limit.

Q Please refer to your Exhibit No. 6 and explain its meaning.

A Exhibit No. 6 is a combination of well data. It shows the names of the wells involved, the completion dates, and the perforation levels.

Q It is noted that the Waterflood's No. 7 well shows a casing program without cement. Under this application, would that well be a producer or an injection well?

A That is a producer.

Q Western-Yates Well No. 123 is shown with a 5/8-inch set at 345 without cement and there is a notation that there was no water in the hole. Where did you obtain the information that



there was no water in the hole?

A That was recorded on the driller's log at the time it was being drilled. Also on this exhibit, Waterflood Associates Well No. 8 shows no cement behind the 8 5/8.

Q Before we leave this exhibit and while this casing program is present, would you explain what type of program you intend for the casing program of the injection wells and what type for the producing wells?

A For the injection wells, we would like to inject down the casing. It is noted that, as a rule, surface pipe is set in to the salt and cemented, long strings set immediately above the pay and cemented. Any fresh water which might be present in the area are protected by strings of casing and two cement jobs, with the exception of the injection wells, where the surface pipe is not cemented. In the case of the surface pipe not being cemented, we plan to run tubing with a packer and set the packer down below the top of the cement, behind the long strings. We feel that where the surface pipe is cemented that adequate protection will be given to any water which might be present in the area.

Q What wells will that type of injection program be used on, the last one you mentioned with tubing and packer?

A The wells for tubing and packer will be used on Waterflood Associates State No. 14, No. 8, and Western-Yates State 647 No. 123, both of which have no cement behind the surface pipe.



Q Have you directed a letter to the State Engineers Office and received a copy of their reply over the signature of Frank Irby, dated February 2, 1962?

A Yes, sir, I have.

Q Have you talked to Mr. Irby subsequent to your receipt of this letter?

A Yes, sir, I have. Mr. Irby stated that he would prefer injection be made through tubing and packer set at a reasonable depth below the top of the cement, outside the production string. In that event, his office offered no objection to the granting of this application. I talked to Mr. Irby yesterday; he was in Carlsbad and I talked to him over the phone. He said he would not be able to be present here today. I discussed our situation with him and he said that upon a receipt of further information that he would withdraw this letter and would make further recommendations to the Commission on this matter. He stated to me that I might state for him here that he had no objection to other methods of injection as long as the water which might be present in the area were properly protected. I agreed to send Mr. Irby further information regarding our well completion plans and he agreed to write another letter to the Commission stating his position on the matter, after he had reconsidered the other fields in the area where we were going down the casing, or in the Loco Hills, Square Lake and the Roberts, with the same type of well completion. We plan to leave it and utilize it,



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with the surface pipe open to the atmosphere. In the event we do get a leak, water should come immediately to the surface and we will know to take immediate steps.

Q Do you feel like this casing program for your injection wells will satisfactorily protect any shallow water in this area?

A Yes, sir, it will.

Q Would you explain what type of casing program you would propose for the producing wells in this application?

A The producing wells are completed just like the injection wells. In other words, they have surface pipe set into the salt and cemented the long string above the pay and cemented it. No changes are planned for the general casing program for the producers. In the event that this well, Waterflood Associates No. 7, where there is no cement in the long string, no water was encountered there, and this well has been producing since 1955 without -- with no leak of any water into the well or without any hydrocarbides coming up around the casing. Therefore, it is assumed that this well is satisfactorily equipped to continue producing in the same method or manner.

Q Please refer to your Exhibit No. 7 and state what that portrays.

A Exhibit No. 7 is a letter from Cisco Pipeline Company in Breckenridge, Texas. They state that they have plenty of water available for this waterflood and they are presently preparing a contract for negotiations between them and Waterflood Associates



as representing the operators here, to make water available for this waterflood.

Q Do you have a similar letter from Caprock Water Company?

A Yes, sir, I have a letter from Caprock Company that states that they are in a good position to furnish water and have water available, also.

Q Are one of these sources the ones in which you intend to secure your water for this program?

A Yes, sir.

Q From your knowledge of those two companies' operations, do they have available to them a sufficient volume of water to furnish you with what you will need in this application?

A Yes, sir. Cisco Pipe Company has agreed to furnish water up to a rate of 5,000 barrels a day, which will be in excess of our demands. As to Caprock Company's quantities, they have not said how much; they do say they have sufficient water available. They have talked to them about our requirements.

Q Do you feel like the quality of the water will be such that it can satisfactorily be used in this waterflood program?

A Yes, sir. The water which Cisco Pipe Company has is presently being used by the Graridge waterflood, the Artesia, which is located about three miles south and west of here. It is quite satisfactory there and no reason it will not be satisfactory here. I have seen the analysis on the water; it is mildly corrosive, however, sufficient character to meet our



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purposes here. The water which Caprock Company proposes to furnish us, according to them, comes from a shallow water bed about eight miles north of here. I have seen an analysis of the water and it is very good water.

Q Would you explain what your anticipations are on the initial rate, the injection rate, and pressure would be?

A We anticipate the initial rate of injection of approximately 200 barrels per day, the well head pressure, on the order of 1200 pounds. This information is based on the experience of the other operators in the area and their rates and pressures.

Q That was 1200 pounds, PSI?

A Yes.

Q At the well head?

A Yes.

Q After your fillup is reached in this reservoir, would your injection rate reduce or change?

A Yes, sir, it will have to be reduced because our withdrawal which will probably be -- it's all according to how much water is being produced with the oil. Chances are they will have to be injection rates which will have to be reduced after fillup.

Q Are there any logs or courses of this reservoir immediately available?

A Not in the immediate area, no. There is very little data available today of the engineer work on it. As far as our recovery is concerned, we anticipate we will recover 1.25 times



our primary production.

Q Is that 1.25 oil that you would not otherwise recover except in a similar program to this?

A Yes, sir, this oil could not be recovered by primary methods.

Q You notified the State Land Office and State Engineers Office of your application?

A Yes, sir. Exhibit No. 8 is a letter to the State Land Office notifying them of this application, and Exhibit No. 9 is a letter to the State Engineers Office notifying them of the application.

Q The letters which you mentioned from Cursey & Company and SPH offering no objections to this --

MR. LOSEE: Will they be marked Exhibits 10 and 11?

MR. NUTTER: They will be marked.

Q (by Mr. Losee) Will this program promote conservation and prevent waste of natural resources?

A Yes, sir.

Q With the exception of the correspondence which are Exhibits 9 through 11, were the other exhibits prepared by you or under your supervision?

A Yes, sir, they were prepared by me and Mr. Davenport, with Western Development Company, together.

MR. LOSEE: The Applicant would move for the introduction of Exhibits Nos. 1 through 11, Applicant's Exhibits 1 through



11 be admitted in evidence.

MR. NUTTER: Applicant's Exhibits Nos. 1 through 11 will be admitted in evidence.

Q (by Mr. Losee) Mr. Porter, do you have anything else to explain to the Examiner?

A Yes, sir. I would like to re-emphasize the fact that we had very little reservoir data, practically none, available to us. From the performances of the floods in the area, we feel that, from the other flooding in the same zones in the area, we feel that this area will waterflood successfully. The recoveries have been fairly good, and based upon that, we offer this as being probably a successful waterflood. I believe that is Applicant's case.

MR. NUTTER: Does anyone have any questions from Mr. Porter?

MR. MORRIS: Yes.

CROSS EXAMINATION

BY MR. MORRIS:

Q Mr. Porter, does Western Development Company or Waterflood Associates or Yates have any present intentions of expanding the flood from Section 14 into the surrounding sections?

A Yes, sir, we do. We plan an expansion program as soon as we have the results from this present pattern.

Q Which way will that flood be expanded?

A It is planned to expand in all directions, to include



this immediate area, the wells in Section 11, 12, 13, 14, 23, 34, and 15, eventually.

Q If the flood is expanded in that manner, will you attempt to conduct operations on acreage that is not under lease to either Waterflood Associates or Hondo, or Western-Yates or the present application in this case?

A We would attempt to do that.

Q Would you attempt to obtain an operating agreement or form a unit including all of the acreage in that that would be a normal sort of expansion from this area, or would you expand the flood on your own acreage?

A We expect to expand the flood to acreage of all the operators in here. Either we may purchase their interests or they may do it on the cooperative basis with us, or possibly some of them don't want to operate their own waterflood. We may operate for them. We do not plan to do it as a one-unit. We plan to do it on a cooperative, using lease-line agreements and balance the flood on cross-lease lines.

Q As I understand your application, Mr. Porter, you wish to be subject to the provisions of the Rule 701, including the allowable provision?

A Yes, sir.

Q That rule will also govern the expanding of the project area?

A I believe the rule reads it may be expanded by adminis-



trative moves or otherwise, on certain conditions or by hearing. The chances are that we will come back for further hearing for expansion.

Q Mr. Porter, I hand you this document and ask you if this is the letter from Mr. Irby, dated February 2, that you referred to in your direct examination?

A Yes, sir, it is.

Q Mr. Losee, do you have any objection to this being made a part of the record?

MR. LOSEE: I have no objection.

MR. MORRIS: That is all I have.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Porter, in expanding this flood, on each operation as currently laid out, have you made special provisions protecting any violations in royalty ownership?

A Yes, sir. We will, by our lease line agreement, whereby we balance our flood out across lease lines, by offsetting injection wells with producers on royalty owners. They would be protected just as the operators will be by that.

Q In other words, in payment, his royalty would be there. There is actually not going to be transferred any monies or funds, just that you anticipate for a given amount of oil pushed across the line, it will reciprocate oil pushed back from the other line?



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A Yes, sir, that is the only way you can economically flood across the lease line. You could, of course, drill wells right down the line. That would be very uneconomical, and this is the accepted practice in waterflooding everywhere that they do it.

Q There is no pooling of monies or transferring of monies in the unitization?

A No, sir.

Q The water that Cisco Pipeline Company has offered you, is it fresh water?

A No, sir, it is not. It is mildly salty. I don't have the figures with me. It is salty. I don't know the exact content of salt.

Q Now, does Cisco Water System furnish the water at the present time for the Artesia pools?

A Yes, sir, it furnishes to three that I know of, belonging to the Graridge Corporation.

Q And the salty water is compatible with Graridge Corporation?

A Yes, sir.

Q Caprock is offering a fresh water supply?

A It is not what you would call palatable water; however, it is a better quality than Cisco's.

Q Would it be compatible with your needs, in your opinion?

A Yes, sir. In my opinion, it will be.



Q Now, you have given, on Exhibit 6, the casing program for eight wells, being six injection wells and two closed producing wells. Are the casing programs on the wells which are outside these two five-spots similar?

A Yes, sir. I did not include that as a part of the exhibit; however, I do have Waterflood Associates casing program before me here. They are similar.

Q You do not anticipate, on any of the producing wells, any particular revision of the present casing program is going to be necessary?

A No, sir. I don't anticipate any. There is a possibility that on the injection wells, we may have to cement liners if we want to inject peripheral, one zone at a higher rate than the other. However, the producing wells should be very good as they are.

Q These three pays you will be flooding are included in this open hole interval. Have each of these injection wells, are some of the wells going to have to be deepened to hit the third pay?

A Yes, sir. Now, we do not have a log. We plan to run logs on key wells in the area, several wells, in order to gain more information as to the extent of the different sands and which ones are open in this well and when we do that, we will determine whether or not the wells need to be deepened.

Q As far as your present plans are concerned for these



six injection wells, you will inject down casing, with the exception of two wells which do not have cement behind the 8 5/8 inch?

Q We feel like the surface weight will be sufficient, with the two strings of casing and the two cement jobs. However, as additional steps, we are willing to go ahead and put liners -- pardon me, not liners, but packers, and tubing into the wells where the 5/8 surface is, that is the 8 5/8, or it is not cemented if the Commission requires.

MR. NUTTER: Are there any further questions?

REDIRECT EXAMINATION

BY MR. LOSEE:

Q Mr. Porter, going back to the type of cooperative flood that you proposed, when you say that you are going to balance the wells, is it your intention in both the proposed application and the expansion of this flood, that wells will be balanced so that a lease will have a like number of producing and injection wells or if it is on a 40-acre lease, that 40-acre lease will be common with the lease adjoining, so that each of the lessees, as well as all the operators, will receive a like share of the oil that they are now receiving from the primary source?

A Well, where we have one 40-acre tract, we intend to unitize it to an adjoining 40-acre tract in order that the interest holder in the well will be based upon a participating fact in the forty acres. By balancing, I mean that along the lease



line, you will have an injection well on one side of the line, offsetting a producing well on the other side, and in the next one, it will be just the opposite; you will have an injection well on this side and a producer offsetting the injection well on the other side, whereby, oil from this injection well will be pushed across, the balance by similar push from the other side.

Q Under this program, each of the royalty owners would receive their proportionate share of oil recovered from this type flood?

A Yes, sir. He would receive the oil coming from the wells he has interest in.

MR. LOSEE: That is all.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Porter, this Exhibit No. 14, which is a state lease, seems to be divided into single leases. Do you know anything about the beneficiary, as far as the State Land Office is concerned, for each of the state lands?

A Yes, Mrs. Ray checked that just a little while ago, and everything in Sections 14, 13 -- the west half of 13, is the same beneficiary, being the University.

Q That was 14, 13, the west half of 13; how about 15? Did you go into that with her?

A No, sir, I didn't check that.

Q So, actually, even though those are separate leases



the beneficiary in these two and a half sections are identical?

A Yes, sir.

Q And the Cursey No. 40 will be unitized with the Waterflood in the Southeast of the Southeast of 14?

A Yes, sir. That is our plan.

MR. NUTTER: Are there any further questions?

Mr. Porter, you may be excused.

(Witness excused.)

Does anyone have anything they wish to offer in Case 2493?

MR. ASTON: As an interest holder under the lease originally, which were sold to Waterflood Associates, I would like to commend them for the diligence with which they approached the area agreement, which I think is a stronger approach toward correlative rights. This has not always been the case in some of the past waterfloods, and we wish to concur with them on their application.

MR. NUTTER: If there is nothing else to be offered in this case, we will take the case under advisement and adjourn the Hearing.

(Hearing adjourned at 12:00 o'clock.)

* * * *



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss.

I, CECIL LANGFORD, 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 was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.


NOTARY PUBLIC

My Commission Expires:



GOVERNOR
EDWIN L. MECHEM
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

March 14, 1962

Re: CASE NO. 2493

ORDER NO. R-2196

APPLICANT:

Waterflood Associates, Inc.
Western Development Company
and Yates Petroleum Corporation

Mr. A. J. Losee
Carper Building
Artesia, New Mexico

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

OTHER

**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. 2493
Order No. R-2196**

**APPLICATION OF WATERFLOOD ASSOCIATES
INC., WESTERN DEVELOPMENT COMPANY AND
YATES PETROLEUM CORPORATION FOR A
WATERFLOOD PROJECT, EDDY COUNTY, NEW
MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 7, 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 March, 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 applicants, Waterflood Associates, Inc., Western Development Company and Yates Petroleum Corporation, seek permission to institute a waterflood project in the Artesia pool on the State 14 and State 647 Leases located in Section 14, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, with the injection of water into the Grayburg formation initially to be through six wells located on said leases.
- (3) That the proposed waterflood project should be authorized and should be governed by the provisions of Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowables; provided, however, that the injection of water through the State 14 Well No. 8 and State 647 Well No. 123, located respectively in the SE/4 NE/4 and the NW/4 SE/4 of said Section 14 should be through tubing and packer.

-2-

CASE No. 2493
Order No. R-2196

IT IS THEREFORE ORDERED:

(1) That the applicants, Waterflood Associates, Inc., Western Development Company and Yates Petroleum Corporation, are hereby authorized to institute a waterflood project in the Artesia Pool on the State 14 and State 647 Leases located in Section 14, Township 18 South, Range 28 East, NEPM, Eddy County, New Mexico, by the injection of water into the Grayburg formation initially to be through the following-described wells:

Waterflood Associates-State 14 Well No. 3, SE/4 NW/4;
Waterflood Associates-State 14 Well No. 5, NW/4 NE/4;
Waterflood Associates-State 14 Well No. 8, SE/4 NE/4;
Waterflood Associates-State 14 Well No. 14, SE/4 SW/4;
Western-Yates-State 647 Well No. 118, NW/4 SW/4; and
Western-Yates-State 647 Well No. 123, NW/4 SE/4;

all in said Section 14.

PROVIDED HOWEVER, That the injection of water through the said Waterflood Associates-State 14 Well No. 8 and Western-Yates-State 647 Well No. 123 shall be through tubing and packer.

(2) That the operation of the waterflood herein authorized shall be governed by Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowances.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

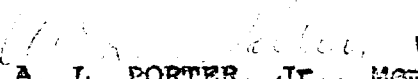
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

esr/



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

February 2, 1962

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Water-Flood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation which seeks to institute a water flood in Section 14, Township 18 South, Range 28 East.

I have been unable to find any information in the application or in the illustrations attached thereto concerning the method of injection. Provided that injection is made through tubing and packer with the packer set a reasonable depth below the top of the cement outside the production string, this office offers no objection to the granting of the application.

It is noted that these wells are completed as open holes in the producing formation. I am doubtful that good control of the injection can be obtained by injection into an open hole completion. However, I am sure that your staff has given careful consideration to this question and that control and protection will be adequately provided in your order.

Yours truly,

S. E. Reynolds
State Engineer

FEI/ma
cc-F. H. Hennighausen
Western Development Co.

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division



MAIN OFFICE 000
1962 FEB 13 AM 9:08

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

February 12, 1962

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the Application of Water Flood Associates, Inc., Western Development Company and Yates Petroleum Corp., which seeks to institute a water flood operation in Section 14, Township 18 South, Range 28 East in Eddy County, New Mexico and to my letter on that subject dated February 2, 1962 on which hearing has already been held.

After discussing this with Mr. Nutter, who was the Examiner at the hearing, I have reached the conclusion that this office will offer no objection to the injection of water through the casing provided the surface casing is cemented well into the salt section and the 4½ inch casing has been cemented from the shoe up to a point well above the perforations in the casing. In each case where these two conditions do not prevail, we do object to the injection of water through the casing and suggest that it be injected through tubing and packer with the packer set well below the top of the cement outside the 4½ inch casing. Naturally, we object to any injection whatsoever if the 4½ inch casing is not adequately cemented either at total depth or immediately above the producing formation.

FEJ/ma
cc-Marion Spitler
Western Development Co.
Artesia, N. M.

A. J. Losee
Artesia, N. M.

H. C. Porter
Artesia, N. M.

F. H. Hennighausen
Roswell, N. M.

Yours truly,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

WATER FLOOD ASSOCIATES, INC.

301 BOOKER BLDG.
ARTESIA, NEW MEXICO

P. O. BOX 376

FEBRUARY 8, 1962

PHONE SH 6-6032

1962 FEB 9 PM 1 26

**STATE ENGINEER
SANTA FE, NEW MEXICO**

**ATTENTION: MR. FRANK IRBY, CHIEF
WATER RIGHTS DIVISION**

**RE: CASE 2493 HEARD BEFORE EXAMINER,
OIL CONSERVATION COMMISSION,
7 FEBRUARY, 1962. APPLICATION
OF WATER FLOOD ASSOCIATES, INC.,
WESTERN DEVELOPMENT COMPANY AND
YATES PETROLEUM CORPORATION FOR
A WATER FLOOD PROJECT IN SECTION
14, T18S, R28E, EDDY COUNTY.**

DEAR MR. IRBY:

WITH REFERENCE TO THE ABOVE CASE AND MY TELEPHONE CALL TO YOU WHILE YOU WERE IN CARLSBAD ON 6 FEBRUARY, I STATED DURING MY TESTIMONY THAT YOU SAID THAT YOU HAVE NO OBJECTION TO METHODS OF INJECTION, OTHER THAN THROUGH TUBING AND PACKER, AS LONG AS ANY FRESH WATER WHICH MIGHT BE PRESENT IS ADEQUATELY PROTECTED. I REFER YOU TO A LETTER FROM WESTERN DEVELOPMENT COMPANY DATED JANUARY 26, 1962, WITH ATTACHED WELL COMPLETION DATA.

THE INJECTION WELLS APPLIED FOR AND THE OTHER WELLS IN THE AREA ARE, AS A RULE, COMPLETED WITH 8 5/8" OR 7" SURFACE CASING SET AND CEMENTED THROUGH THE OCHOA SERIES INTO THE SALT SECTION. THERE ARE CERTAIN EXCEPTIONS WHERE THE SURFACE CASING IS SET BUT NOT CEMENTED SUCH AS OUR STATE 14 NO. 8 AND WESTERN-YATES STATE 647 NO. 123. IN ALL THE PROPOSED INPUT WELLS, LONG STRING (PRODUCTION CASING) IS SET ABOVE THE PAY AND CEMENTED. WITH THE EXCEPTION OF THE TWO WELLS MENTIONED ABOVE, ANY WATER WHICH MAY BE PRESENT IS PROTECTED BY TWO CEMENT JOBS AND TWO STRINGS OF CASING. WE WISH TO BE ABLE TO INJECT DOWN THE PRODUCTION CASING IN THESE WELLS. WHERE THE SURFACE CASING IS NOT CEMENTED, WE ARE WILLING TO INJECT THROUGH TUBING AND PACKER, IF YOU AND THE COMMISSION DESIRE. HOWEVER, WHERE NO CEMENT WAS USED ON SURFACE CASING, NO WATER WAS ENCOUNTERED DURING DRILLING AND IT WOULD SEEM UNNECESSARY TO DO THIS INASMUCH AS NO WATER IS PRESENT.

STATE ENGINEER
FEBRUARY 8, 1962

PAGE - 2

I TOLD MR. NUTTER THAT YOU HAD AGREED TO RECONSIDER YOUR REQUIREMENTS FOR TUBING AND PACKER BASED ON THIS ADDITIONAL INFORMATION AND THAT YOU WOULD CONFER WITH HIM PRIOR TO THE ISSUANCE OF AN ORDER. I WISH TO THANK YOU FOR YOUR TIME AND ATTENTION TO THIS MATTER AND TO ASSURE YOU THAT WE WISH TO WORK WITH YOU IN PROTECTING OUR WATERS IN THIS AREA. I WAS DISAPPOINTED THAT I DID NOT HAVE THE OPPORTUNITY TO DISCUSS THIS WITH YOU IN PERSON.

VERY TRULY YOURS,
WATER FLOOD ASSOCIATES, INC.

Original Signed by H. C. Porter

H. C. PORTER
VICE PRESIDENT

HCP:EL

CC: MR. DAN NUTTER
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

MARION SPITLER
WESTERN DEVELOPMENT COMPANY
ARTESIA, NEW MEXICO

A. J. LOSEE
CAMPER BUILDING
ARTESIA, NEW MEXICO

oil wells in the Basin-Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, including a provision defining an oil well in said pool as a well having a gas-oil ratio of 30,000 to 1, or less, and producing liquid hydrocarbons with a gravity of 49⁶ API, or less; applicant seeks rules establishing 160-acre oil proration units and fixing well location requirements for said wells. Applicant further seeks the establishment of the four following non-standard oil proration units, all in Township 28 North, Range 13 West, San Juan County:

E/2 of Section 10, comprising 137.58 acres;
W/2 of Section 10, comprising 137.78 acres;
E/2 of Section 11, comprising 137.78 acres;
W/2 of Section 11, comprising 137.58 acres;

CASE 2492:

Application of Western Development Company and Yates Petroleum Corporation for a waterflood in the Artesia Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Artesia Pool on the State 648 Lease located in Section 10, Township 19 South, Range 28 East, Eddy County, New Mexico; the injection of water into the Grayburg formation initially will be through six wells located on said lease, said project to be governed by the provisions of Rule 701.

CASE 2493:

Application of Waterflood Associates, Inc., Western Development Company and Yates Petroleum Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Artesia Pool on the State 14 and State 547 Leases located in Section 14, Township 18 South, Range 28 East, Eddy County, New Mexico; the injection of water into the Grayburg formation initially will be through six wells located on said leases, said project to be governed by the provisions of Rule 701.

NO. 4-62

DOCKET: EXAMINER HEARING - WEDNESDAY, FEBRUARY 7, 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, as alternate examiner:

- CASE 2487: Application of Gulf Oil Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its W. A. Ramsay (NCT-C) Well No. 3, located 1650 feet from the South line and 330 feet from the West line of Section 36, Township 24 South, Range 37 East, Lea County, New Mexico, as a triple completion (conventional), in the North Justis-Ellenburger, North Justis-Fusselman and North Justis-McKee Pools with the production of oil from all zones to be through parallel strings of 2 3/8-inch tubing.
- CASE 2488: Application of Texaco Inc., for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its State "R" NCT-4 Well No. 1, located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, as a dual completion (tubingless) in an undesignated Drinkard pool and an undesignated Abo Pool with the production of oil from both zones to be through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- CASE 2489: Application of Caulkins Oil Company for an amendment of Rule 5, Order No. R-1191, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Rule 5 of the Special Rules and Regulations for the South Blanco-Tocito Oil Pool, Order No. R-1191, to permit bottom hole pressure tests on all wells to be taken annually during the month of October of each year instead of semi-annually as Rule 5 presently prescribes.
- CASE 2490: Application of O. H. Randel for a 50-acre non-standard oil proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to establish a 50-acre non-standard oil proration unit in the Abo formation, comprising Lot 3 and the North 702 feet of Lot 4, all in Section 19, Township 17 South, Range 31 East, Eddy County, New Mexico, said unit to be dedicated to a well to be drilled at a location 1629 feet from the South line and 537 feet from the West line of said Section 19.
- CASE 2491: Application of D. W. Falls, Inc., for the promulgation of special rules governing oil wells in the Basin Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, and for four non-standard oil proration units. Applicant, in the above-styled cause, seeks the promulgation of special rules governing

OFFICE USE
 ELECTION COMMISSION
 MAY 15 AM 11 45
 MEXICO

IN THE MATTER OF THE APPLICATION OF
WATERFLOOD ASSOCIATES, INC., WESTERN
DEVELOPMENT COMPANY OF DELAWARE
AND YATES PETROLEUM CORPORATION FOR
A WATERFLOOD PROJECT IN THE ARTESIA
POOL, EDDY COUNTY, NEW MEXICO.

A P P L I C A T I O N


Come now applicants, Waterflood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation for an order approving a waterflood project in a portion of the Artesia Pool, Eddy County, New Mexico, in the vicinity of Section 14, T-18S, R-28E, Eddy County, New Mexico, and in support thereof would show:

1. That applicants are owners and operators of said leases as outlined above.
2. That the leases in question have declined to a depleted state of primary production.
3. That the leases in question can be waterflooded on a lease-line agreement between operators, thus recovering oil otherwise unobtainable by primary production.

Wherefore, applicants pray that this application be set for hearing before the Commission's duly appointed examiner, that appropriate notice thereof be given, and that upon hearing an order be entered granting applicants approval to waterflood a portion of the Artesia Pool as described above.

Respectfully submitted,

WATERFLOOD ASSOCIATES, INC.


H. G. Porter
Vice-President

WESTERN DEVELOPMENT COMPANY
of Delaware
and
YATES PETROLEUM CORPORATION

M. E. Spitler
Chairman of the Operating Co

Western Development
Company of Delaware



1962 JAN 24 AM 8:16

P. O. BOX 427 ARTESIA, NEW MEXICO

January 22, 1962

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

Attention: Mr. Richard S. Morris, General Counsel

Ref: Proposed Waterflood
Sec. 14, T-18-S, R-28-E
Eddy County, New Mexico

Dear Sir:

Please find enclosed a proposed project plat for the waterflood application submitted jointly by Waterflood Associates, Inc., Western Development Company of Delaware, and Yates Petroleum Corporation.

We plan to inject water into the Grayburg formation. Anticipated initial injection rates and pressure are 200 barrels of water per day per well at 1150 PSI.

The casing program on the six proposed injection wells is as follows:

Waterflood Associates, Inc., State 14 No. 3
8 5/8" @ 512' /50 sacks and 5 1/2" @ 2528' /100 sacks
Waterflood Associates, Inc., State 14 No. 5
8 5/8" @ 327' /100 sacks and 7" @ 2424' /150 sacks
Waterflood Associates, Inc., State 14 No. 8
8 5/8" @ 355' /no cement and 7" @ 2385' /100 sacks
Waterflood Associates, Inc., State 14 no. 14
6 5/8" @ 409' /50 sacks and 7" @ 2285' /100 sacks
Western-Yates, State 647 No. 118
10 3/4" @ 647' /200 sacks and 7" @ 2427' /100 sacks
Western-Yates, State 647 No. 123
8 5/8" @ 345' /no cement and 7" @ 2451' /100 sacks

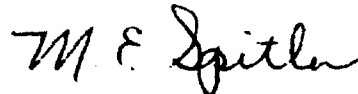
Page 2

Waterflood Associates, Inc. and Western-Yates plan to inject water on a lease line agreement. Water is available either from Cisco Pipeline Company or Caprock Water Company.

There were no radioactivity logs run on the subject wells.

Yours very truly,

WESTERN DEVELOPMENT COMPANY
of Delaware

A handwritten signature in cursive script, appearing to read "M. E. Spitler".

M. E. Spitler
General Manager

MES:cm

OIL CONSERVATION COMMISSION

P. O. BOX 871
SANTA FE, NEW MEXICO

Jan 24 93

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P
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January 15, 1962

*Robert
Mackin*

Mr. M. E. Spittler
P. O. Box 427
Artesia, New Mexico

Dear Mr. Spittler:

The Commission is in receipt of two applications for waterflood projects, one on behalf of Waterflood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation, and the other on behalf of Western Development Company of Delaware and Yates Petroleum Corporation.

Reference is made to Paragraph B of Commission Rule 701 concerning the method of making application for approval of a waterflood. This rule requires that plats, logs, casing programs and other pertinent information be submitted to the Commission along with the application for hearing. It will be appreciated if you will submit this information as soon as possible to supplement these two applications.

An examiner hearing is tentatively scheduled for February 7, at which time your cases will be docketed.

Very truly yours,

RICHARD S. MORRIS
Attorney

BSM/CSL

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 15, 1962

Mr. W. E. McKinley
908 West Fifth Street
Roswell, New Mexico

Dear Mr. McKinley:

In accordance with your recent request to be notified of the date of hearing upon an application of Waterflood Associates, Inc. for a waterflood project in Township 18 South, Range 28 East, Eddy County, New Mexico, please be advised that such an application was received by the Commission on this date, and will be set for hearing on February 7, 1962.

AN official notification of hearing will be sent to you in the near future.

Very truly yours,

RICHARD S. MORRIS
Attorney

RSM/ear

CC: Mr. M. E. Spitler
P. O. Box 427
Artesia, New Mexico

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WATERFLOOD ASSOCIATES, INC.

Oil Production History - State 14 Lease, Wells No. 3, 5, 7, 8 & 16

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
January		749	1,182	863	2,553	2,513	1,446	865	661	538
February		1,745	979	798	1,876	2,138	1,260	757	463	472
March		2,280	1,210	848	1,739	2,180	1,380	911	707	512
April		1,498	1,117	782	1,899	2,202	1,454	747	633	476
May		1,691	1,101	2,719	2,493	2,179	1,526	810	696	510
June		1,552	1,002	3,149	3,531	2,158	1,363	745	625	527
July		1,480	981	3,017	3,617	2,111	1,198	750	609	541
August		1,486	961	2,810	3,493	1,845	1,127	677	570	561
September	1,037	1,396	935	3,064	3,312	1,709	1,018	770	547	502
October	971	1,366	926	2,547	2,978	1,648	1,064	819	562	477
November	878	1,181	869	2,626	2,607	1,438	911	787	553	
December	1,001	1,124	634	2,487	2,651	1,542	863	798	536	
Annual Total	3,887	17,548	11,897	25,710	32,749	23,663	14,610	9,461	7,212	5,116
Cumulative Total	3,887	21,435	33,332	59,042	91,791	115,454	130,064	139,525	146,737	151,853

BEFORE EXAMINER NOTAR
OIL CONSERVATION COMMISSION
EXHIBIT NO. 57
CASE NO. 21172

EXHIBIT NO. 5-A

WESTERN-YATES

Oil Production History - State 647 Lease, Wells No. 118, 119 & 123

	1954	1955	1956	1957	1958	1959	1960	1961
January		2,619	724	744	373	292	573	282
February		1,795	723	663	340	232	464	267
March		1,790	791	547	518	278	437	296
April		1,461	568	571	482	245	376	259
May	144	1,451	768	606	401	430	377	267
June	906	1,295	855	636	305	242	320	251
July	2,287	1,273	690	667	256	223	364	247
August	1,840	1,184	684	441	182	199	337	254
September	1,494	1,353	310	470	270	451	325	242
October	1,392	876	650	449	314	486	344	191
November	1,316	1,140	646	422	280	514	289	259
December	2,344	997	665	380	262	731	299	252
Annual Total	11,723	17,234	8,074	6,596	3,983	4,323	4,505	3,067
Cumulative Total	11,723	28,957	37,031	43,627	47,610	51,933	56,438	59,505

EXHIBIT NO. 5-B

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
DATE NO. 2493

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**BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION**

~~11~~ EXHIBIT NO. 6
CASE NO. 272

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CISCO PIPE LINE COMPANY

Post Office Box 788

BARCKENRIDGE, TEXAS

January 2, 1962

Water Flood Associates, Inc.
301 Booker Building
Artesia, New Mexico

ATTENTION: Mr. Hal Porter

Dear Mr. Porter:

As was discussed earlier this week, Cisco Pipe Line Company has available through its Red Lake Water System sufficient excess volumes of water above its present requirements to supply the quantities you indicated would be necessary for your entire water-flood project in Sections 11, 12, 13, 14, 15, 23, and 24, T-18S, R-28E, Eddy County, New Mexico.

We are presently preparing a contract between Cisco Pipe Line Company and Water-Flood Associates relative to making said water available.

Yours very truly,

CISCO PIPE LINE COMPANY


R. L. Elliott
President

RLE:vkW

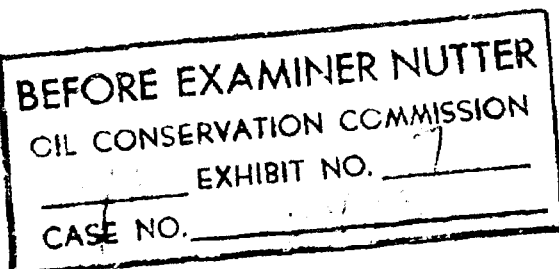


EXHIBIT NO. 7

CAPROCK WATER COMPANY

P. O. BOX 607

ARTESIA, NEW MEXICO

February 5, 1962

Waterflood Associates, Inc.
P.O. Box 376
Artesia, New Mexico

Attention: Mr. Harold C. Porter, Mgr.
Subject: Proposed Waterflood S14-T18S-R28E
Artesia Pool, Eddy County, N.M.

Dear Mr. Porter:

In connection with the proposed waterflood operations in the subject area, Caprock Water Company has available ample water supplies of a suitable character for waterflooding and is in a position to furnish water for the proposed waterflood immediately.

Very truly yours,

Caprock Water Company

H. N. Morgan
by H. N. Morgan, Manager

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	8
CASE NO.	246

Western Development Company of Delaware

P O BOX 427 ARTESIA, NEW MEXICO

January 26, 1962

Commissioner of Public Lands
State Land Office
P.O. Box 791

Attention: Mr. Ted Bilberry

Ref: Proposed Waterflood
Section 14, T-18-S, R-28-E
Eddy County, New Mexico

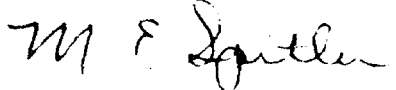
Dear Sir:

Water-Flood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation have made a joint application to the New Mexico Oil Conservation Commission to waterflood a portion of the Artesia Pool in Section 14, T-18-S, R-28-E, Eddy, County, New Mexico. This application has tentatively been set for hearing February 7, 1962.

Enclosed are two copies of the application and exhibits that will be presented to the Commission at the hearing.

Yours very truly,

WESTERN DEVELOPMENT COMPANY
of Delaware



M. E. Spitler
General Manager

MES:cm

cc: Yates Petroleum Corporation
309 Carper Building
Artesia, New Mexico

Water-Flood Associates, Inc.
P.O. Box 376
Artesia, New Mexico

EXHIBIT NO. 8

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	8
CASE NO.	2470

**Western Development
Company of Delaware**



P. O. BOX 427 ARTESIA, NEW MEXICO

January 26, 1962

State of New Mexico
State Engineer Office
Santa Fe, New Mexico

Ref: Proposed Waterflood
Section 14, T-18-S, R-28-E
Eddy County, New Mexico

Dear Sir:

Water-Flood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation have made a joint application to the New Mexico Oil Conservation Commission to waterflood a portion of the Artesia Pool in Section 14, T-18-S, R-28-E, Eddy County, New Mexico. This application has tentatively been set for hearing February 7, 1962.

Enclosed is one copy of the application and exhibits that will be presented to the Commission at the hearing.

Common completion practice, when these wells were drilled, was to set 8 5/8" OD surface casing from 325 to 650', 5 1/2" or 7" OD production casing from 2285 to 2519' and complete openhole. Most of the surface casing was cemented, however, in some wells driller's logs indicate no water in the hole and in some of these instances surface casing was not cemented. There is not a sufficient quantity of water available in the area for a waterflood project, therefore, present plans are to purchase water from a pipe line source.

Yours very truly,

WESTERN DEVELOPMENT COMPANY
of Delaware

M. E. Spittler
General Manager

MES:cm

cc: Water-Flood Associates, Inc.
Yates Petroleum Corporation

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	9
CASE NO.	2423

S. P. YATES
OIL OPERATOR AND PRODUCER
DRILLING CONTRACTOR
311-313 CARPER BUILDING
ARTESIA, NEW MEXICO

6 February 1962

Mr. A. L. Porter, Jr.
Secretary-Director
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

I have received a copy of the application of Waterflood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation for a water flood project on their leases in Section 14, Township 18 South, Range 28 East, N.M.P.M.

As the owner of an offset lease in Section 11 of said township and range, I have no objection to the granting of the authority prayed for in said application.

Very truly yours,


S. P. Yates

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	16
CASE NO.	7942

KERSEY & COMPANY
DRILLING AND OIL PRODUCTION
Phone BH 6-8671 • P. O. Box 305 • 808 W. Grand
ARTESIA, NEW MEXICO

January 3, 1962

Re: Sheldon #1
SW/4 SE/4 Section
14, T18S, R28E
Eddy County, New Mexico

Water-Flood Associates, Inc.
Booker Building
Artesia, New Mexico

Attention: Mr. Hal Porter

Gentlemen:

This letter authorizes you to present the data on our well in Section 14, T18S, R28E, to the New Mexico Oil Conservation Commission in connection with your proposed water-flood for this area. We are in accord with your flood plan.

Yours very truly,

KERSEY & COMPANY

Harold Kersey
Harold Kersey

HK:cg

