CASE 25G1: Application of WATER-FLOOD ASSOCIATES for a waterflood project in the SQUARE LAKE POOL.

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OIL CONSERVATION COMMISSION P. O. BOX 371 SANTA FE. NEW MEXICO

December 5, 1962

Mr. A. J. Loses Loses & Stewart P. O. Drawer 239 Artesia, New Mexico

Dear Sir:

Reference is made to Order No. R-2271, Case No. 2581, entered by the Commission approving Water Flood Associates, Inc., Collies Parke Waterflood Project, Square Lake Pool, Eddy County, New Mexico.

According to our calculations, when all of the authorised injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-2-3 is 168 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa fe office of the Commission and the appropriate district provation office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i. e., when active injection commences, when additional injection or producing wells are drilled, when additional wells

OIL CONSERVATION COMMISSION

P. O. BOX 871 SANTA FE. NEW MEXICO

-2-

are acquired through purchase or unitisation, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Wery truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/ir

cc: Oil Conservation Commission Artesia, New Mexico

LAW OFFICES

LOSEE AND STEWART

CARPER BUILDING - P. O. DRAWER 239

ARTESIA, NEW MEXICO

A.J. LOSEE EDWARD B. STEWART

18 December 1962

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

> Re: OCC Case No. 2581, Order No. R-2271 Collier Parke Waterflood Project, Eddy County, New Mexico

Dear Mr. Porter:

Please be advised that we agree with your calculation, when all of the authorized injection wells have been placed on active injection, the maximum allowable under the captioned project under the provisions of Rule 701-E-3 is 168 barrels per day.

With a copy of this letter, I am furnishing my client, Water-Flood Associates, Inc., with a photocopy of your letter of December 5, 1962, and requesting that they keep you advised of any changes in the status of the wells in the project area.

Very truly yours,

A. J. Losee

AJL/bk

cc Oil Conservation Commission Artesia, New Mexico

Water-Flood Associates, Inc. Artesia, New Mexico

BEFORE THE OIL COMSERVATION COMMISSION OF THE STATE OF MEW MEXICO

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

CASE No. 2581 Crder No. R-2271

APPLICATION OF WATER FLOOD ASSOCIATES, INC. FOR APPROVAL OF A WATERFLOOD PROJ-ECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 7, 1962, at Santa Fe, New Mexico, before Daniel S. Matter, Braminer 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 21st day of June, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

PIMOS:

- (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, Water Flood Associates, Inc., is the operator of the ME/4 of Section 3, Township 17 South, Range 30 East, MMPM, Eddy County, New Mexico.
- (3) That the applicant seeks approval of a waterflood project in the Square Lake Fool with the injection of water to be through its collier Parke Wells Nos. 2 and 4, located in Units B and H, respectively, of said Section 3.
- (4) That the wells in the proposed project area are in an advanced stage of depletion and should be classified as "stripper" wells.
- (5) That approval of the subject application will neither cause waste nor impair correlative rights; provided, however,

-2-CASE No. 2581 Order No. R-2271

that unless agreed to by all parties, the transfer of allowables across lease lines where royalty ownership is diverse should not be authorized.

IT IS THEREFORE ORDERED:

- (1) That the applicant, Water Flood Associates, Inc., is hereby authorised to institute a waterflood project in the Square Lake Pool with the injection of water through its Collier Parke Wells Nos. 2 and 4, located in Units B and E, respectively, of Section 3, Township 17 South, Range 30 East, EMPM, Eddy County, New Maxico.
- (2) That the waterflood project shall be governed by Rule 701, including the allowable provisions thereof.

PROVIDED HOWEVER, That unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this waterflood shall be muthorized only insofar as the transfer is made between wells having common royalty ownership.

(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 COMSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

Exmalker E. S. WALKER, Member

L. PORTER, Jr., Member & Secretary

NEWMONT CEL COMPANY

Hay 17, 1962

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Period No. 2 - MA MA Day, 3-27-30

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GOVERNOR EDWIN L. MECHEM CHAIRMAN

State of New Wexico Oil Conservation Commission

Land Commissioner E. S. Johnny Walker Member



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

O. BOX 871 SANTA PE

June 21, 1962

Re:

Mr. A. J. Loses Loose & Stowart Carper Building P. O. Braner 239 Artesia, New Mexico Case No. 2581 and 2582 Order No. B-2271 and B-2272

Applicant:

WATERFLOOD ASSOCIATES, INC.

Dear Sir:

ir/

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

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

Carbon copy of order also sent to:

Hobbs OCC ______

Artesia OCC _____

Aztec OCC _____

OTHER

Letter advising you the allowable which this project will be eligible MOTE: to receive will follow.

OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

	en de la companya de La companya de la co	Date	6/12/62
ASE	2587	Hearing Date	
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DOCKET: EXAMINER HEARING - THURSDAY - JUNE 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 2571:

Application of Randall F. Montgomery for an exception to Order R-Ill-A, or in the alternative for three unorthodox oil well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks exception to the provisions of Order R-Ill-A, insofar as it pertains to the re-entry and casing program on five plugged and abandoned wells in the Salt Lake Pool, four of which are located in Section 7, and one of which is located in Section 18, all in Township 20 South, Range 33 East, Lea County, New Mexico. Applicant further seeks permission, as an alternative request, to drill three new wells at unorthodox locations in the Salt Lake Pool as follows:

- (1) Brooks 7 Well No. 6, to be located 10 feet from the South line and 2310 feet from the East line;
- (2) Brooks 7 Well No. 7, to be located 330 feet from the South line and 1320 feet from the West line;
- (3) Brooks 7 Well No. 8, to be located 1320 feet from the South line and 1980 feet from the West line;

all in Section 7, Township 20 South, Range 33 East, Lea County, New Mexico.

CASE 2572:

Application of Tenneco Oil Company for an exception to Rule 21-a of Order No. R-1670, Basin-Dakota Gas Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks permission to commingle the gas production from two wells in the Basin-Dakota Gas Pool located on the H. O. Watson Lease in Section 22, Township 27 North, Range 12 West, San Juan County, New Mexico, as an exception to the provisions of Rule 21-a of the Rules for the prorated gas pools of Northwestern New Mexico, Order No. R-1670. Applicant proposes to install one common tank battery and separating facility and to allocate monthly gas production to each well on the basis of deliverability tests and average flowing tubing pressures.

-2-

Docket No. 17-62

CASE 2573: Application of Phillips Petroleum Company for approval of an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval to locate its Santa Fe Well No. 68 at an unorthodox oil well location in the Vacuum-Abo Pool, 1650 feet from the North line and 1090 feet from the East line of Section 34, Township 17 South, Range 35 East, Lea County, New Mexico.

CASE 2574: Application of J. Gregory Merrion and Associates for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order of the Commission force pooling all interests in the Basin-Dakota Pool in the W/2 of Section 35, Township 25 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 2375: Application of Val R. Reese & Associates, Inc. for the creation of a new oil pool and for special pool rules, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Gallup production in Township 23 North, Range 7 West, Rio Arriba County, New Mexico, and further seeks the adoption of special rules and regulations for said pool similar to the special rules presently governing the Escrito-Gallup Oil Pool which provide for 320-acre gas proration units and 80-acre oil proration units (Order No. R-1793-A).

CASE 2576: Application of Sinclair Oil & Gas Company for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Grayburg-Jackson Pool, Eddy County, New Mexico, with the injection of water to be through seven wells located on the H. E. West "A" and "B" leases in Sections 3 and 4, Township 17 South, Range 31 East; applicant proposes to operate the waterflood project under the provisions of Rule 701.

CASE 2577: Application of Newmont Oil Company for approval to drill a water injection well, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to drill the State "A" Well No. 3, to be located 1295 feet from the South line and 2615 feet from the East line of Section 36, Township 17 South, Range 29 East, Eddy County, New Mexico, for use as a water injection well in the Loco Hills Pool Waterflood Project.

CASE 2578: Application of Newmont Oil Company for approval of a development plan for the Loco Hills Waterflood Project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a plan of development for the Loco Hills Waterflood Project, Eddy County, New Mexico, which would permit

Docket No. 17-62

CASE 2578: (Continued)

the conversion of wells to water injection by stages. The applicant proposes to operate said waterflood project under the terms and conditions of Order No. R-2178 which established a buffer zone in a portion of the project area.

CASE 2579:

Application of Neil E. Salsich for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Square Lake Pool with the injection of water into the Grayburg formation of the Square Lake Pool through five wells located in Section 36, Township 16 South, Range 29 East, Eddy County, New Mexico. Applicant requests that the waterflood be governed by Rule 701 except that administrative approval is sought to allow expansion of the waterflood by the conversion of one additional well in Unit H of Section 35 prior to response from water injection.

CASE 2580:

Application of Waterflood Associates, Inc., for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Robinson Pool with the injection of water to be through six wells located in Section 35, Township 16 South, Range 31 East, Eddy County, New Mexico; applicant requests that the waterflood project be governed by Rule 701.

CASE 2581:

Application of Waterflood Associates, Inc. for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Square Lake Pool by the injection of water to be through two wells located in the NE/4 of Section 3, Township 17 South, Range 30 East, Eddy County, New Mexico; applicant requests that the waterflood project be governed by Rule 701.

CASE 2582:

Applicant of Waterflood Associates, Inc., for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Artesia Pool by the injection of water to be through one well located in the W/2 NW/4 of Section 21, Township 18 South, Range 28 East, Eddy County, New Mexico; applicant requests that the waterflood project be governed by Rule 701.

WATER FLOOD ASSOCIATES, INC.

301 BOOKER BLDG. ARTESIA, NEW MEXICO

P. O. BOX 376 OFFICE OCC

MAY 21, 1962

1032 MM 23 MM 3: 18

New Mexico OIL Conservation Commission P. O. Box 871SANTA FE, NEW MEXICO

ATTENTION: MR. DAN NUTTER

GENTLEMEN:

PLEASE ACCEPT THIS LETTER AS THE APPLICATION OF WATER-FLOOD ASSOCIATES, ING., FOR A PERMIT FOR A WATERFLOOD PROJECT IN NE/4 SECTION 3, T-17S, R-30E, SQUARE LAKE POOL, EDDY COUNTY, NEW MEXICO. APPLICATION IS MADE FOR TWO INPUT WELLS AS SHOWN ON THE ATTACHED PLAT. THIS PATTERN IS A NATURAL EXTENSION OF THE FIVE-SPOT PATTERN ALREADY ESTABLISHED IN THE AREA BY NEWMONT OIL COMPANY'S PRESENT PROJECT IN SECTION 34, T-16S, R-30E.

SINCE THE NEWMONT PROJECT IS A CAPACITY-ALLOWABLE TYPE FLOOD, APPLICATION IS ALSO MADE FOR A BUFFER ZONE TO INCLUDE THE SUBJECT LEASE.

INJECTION WILL BE MADE INTO THE GRAYBURG-SAN ANDRES FORMATION.

THE WELLS ARE PRODUCING AT A RATE OF LESS THAN ONE BARREL PER WELL PER DAY AND ARE IN THE CLASSIFICATION NORMALLY REFERRED TO AS "STRIPPER" WELLS.

PLEASE SCHEDULE THIS MATTER FOR HEARING AT THE JUNE 7 EXAMINER S HEARING, IF POSSIBLE.

VERY TRULY YOURS,

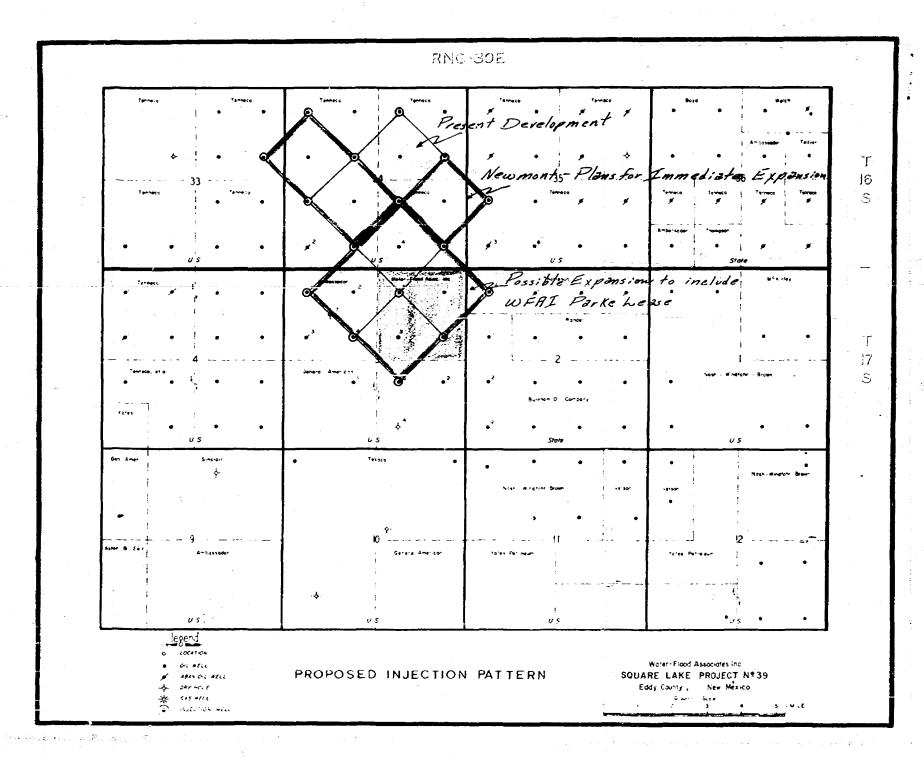
ASSOCIATES, INC.

H. C. PORTER

ENGINEER

HCP:EL

CC: STATE ENGINEER



BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico

June 7, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Waterflood Associates, Inc. for approval of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a waterflood project in the Square Lake Pool by the injection of water to be through two wells located in the NE/4 of Section 3, Township 17 South, Range 30 East, Eddy County, New Mexico; applicant requests that the waterflood project be governed by Rule 701.

CASE NO. 2581

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case No. 2581.

MR. MORRIS: Application of Waterflood Associates, Inc.

for approval of a waterflood project, Eddy County, New Mexico.

MR. LOSEE: A. J. Losee, Losee and Stewart, Artesia,

New Mexico, appearing for the applicant. I have one witness, Mr.

Porter.

MR. MORRIS: Let the record show Mr. Porter was sworn in Case 2580.



HAROLD PORTER,

called as a witness, having been previously duly swern on oath, was examined and testified as follows:

(Whereupon Applicant's Exhibits 1 through 7 marked for identification)

DIRECT EXAMINATION

BY MR. LOSEE:

- Q State your name, residence, and occupation.
- A My name is Harold Porter; I reside in Artesia, New Mexico. I'm a petroleum engineer.
 - Q Have you previously testified before this Commission?
 - A Yes, sir.
- Q Please refer to Exhibit No. 1 and explain what that portrays.

A Exhibit No.lis a plat showing the area of the application, the completions marked Tenneco are now Newmont Oil Company. The plat also shows the established waterflood pattern in Section 34 in red. This is the pilot waterflood presently being operated by Newmont Oil Company. The areas marked black show the Newmont's plans for immediate expansion. As a matter of fact, they are ready to expand right now. The area outlined in yellow is Waterflood Associates W.F.A. Parke lease. The lines in green show the further possible expansion of this program to include our Parke lease and the offsetting leases.

Q Has Newmont's flood, the area marked in red, has that



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shown response to their pilot operation?

A Yes, sir, it has shown some response; however, they have been limited in the availability of water until the present time. It has not performed as well as their other flood in that same section; however, they feel, and so do we, that with additional water injection, that it will be a very satisfactory flood.

- Q Do you know if they have applied for approval to expand into this area in black?
- A Yes, sir, that area in black is already authorized by the Commission.
 - Q Please refer to Exhibit 2 and explain what that portrays
- A We do not have available any electric logs in this immediate area; however, I have a cross section which is drawn on north-south directions, as shown in the little location map down in the lower righthand corner of this Exhibit 2, and it shows the various zones that were open. It shows that the productive zones are zones 5 and 6 of the Grayburg formation. However, most of these wells have subsequently been deepened to include the Lovington Sand. They were deepened after this was drawn and it's not shown on here, but they are now deepened into the Lovington Sand.
- Q Do these zones 5 and 6 pretty well correlate across all of these existing wells?
- A Yes, sir, as you can see on the cross section, zones 5 and 6 are fairly continuous across the north-south breadth of this



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map, which the little location map shows the injection wells of Newmont to the north of our lease.

- Now, you propose to convert to injection your wells 2 and 4?
 - Yes, sir. Α
 - Well 2 is portrayed on this cross section, is it not? Q
- Yes, sir, it is. It's shown as the W. F. Dodson Parke No. 2.
- These are zones of the Grayburg formation, these zones Q 5 and 6?
 - Yes, sir, they are. Α
- And then the Lovington Sand, which you state is now open to production, is it producing in this area, the Lovington Sand?
- Yes, sir, it is. All these wells on our lease have been, I believe, with the possible exception of one. I'll discuss that further when we get to that exhibit, but I know that three of our wells have been deepened to the Lovington Sand.
 - And they are productive?
 - It is productive.
 - Please refer to Exhibit 3A and explain what that portrays.
- Exhibit 3A is a tabulation of the oil production from this lease from 1946 up through March of '62. The production has declined to where the lease is making less than 100 barrels per month, which is on the order of one barrel per day per well. That would indicate that these wells are in the advanced stage of



depletion and are commonly classed as stripper wells.

- Q Based on your cumulative figure of 117,619 barrels for these four wells, that would mean that each well had produced approximately 29,000 barrels of primary oil?
 - A Yes, sir, that's pretty close.
 - Q Refer to Exhibit 3B and explain what it portrays.
- A Exhibit 3B is merely a graphical presentation of the data on 3A. It shows the production decline and the cumulative oil curve; the drastic drop in this production started in January, '62, due to mechanical failures in one of our wells, and it hasn't been remedied due to the fact we propose to start water flooding this lease and we will remedy at that time. But nevertheless, it is on a fairly low production rate.
 - Q Please refer to Exhibit 4 and explain what it portrays.
- A Exhibit 4 shows the well data for each well on the lease and is self-explanatory, I believe. All of our wells, as I was discussing before, have been deepened with the exception of Well No. 4, and Well No. 4 will be deepened to include the Lovington Sand. The wells applied for for injection are Wells No. 2 and 4, and these wells each have 8 5/8th casing set at 500 and 495 feet respectively and each cemented with 50 sacks. This is deep enough to be cemented into the salt section, and $5\frac{1}{2}$ -inch production casing in each instance is set at 2840 feet and 2850 feet respectively and cemented with a hundred sacks. This gives a calculated cement top on the production string of roughly 1450 feet.



LEGOUEROUE, N. W.

Therefore, we have two strings of casing and two cement jobs, which would give ample and satisfactory protection for any surface water in the area which might possibly be in the area.

The lower part of this exhibit reflects the treatment given to the well?

A yes, sir, that's correct. It shows the stimulations and the initial potential in barrels per day, present productive date in barrels per day. As you can see, it's on the order of one barrel per well per day. Well No. 3 is plugged and abandoned and will have to be redrilled as a producer. The proposed casing program for that well will be the same as these others.

- Q What is the source of your water?
- A We have made arrangements to purchase pressured water from Newmont Oil Company's plant to the north.
 - Q Will that supply be adequate for your project?
- A Yes, sir, they have an adequate and satisfactory water source. They are getting their water from the Yucca Water Pipeline Company.
- Q By what method do you propose to inject the water into these two wells?
 - A We propose to inject water down the casing.
 - Q Will your system be closed?
- A Yes, sir, our injection system will be closed, as nearly all of them are in this part of the country.
 - Q What will your initial injection rates be?

PHONE 325

DLAI

A It's estimated that we'll start out at about 500 barrels a day and our maximum pressures injecting at the rate that we think it will be necessary, will be around 1500 psi.

Q Do you feel like your program of injecting down the casing will protect any water that might be present in the area?

A Yes, sir, we have a casing program which should satisfactorily protect any shallow water which might be in the area. Even if we had a leak in our long string above the top of the cement, we would still have the 8 5/8ths casing, which is cemented to protect the shallow water.

- Q Have you notified the State Engineer's Office of your application?
- A Yes, sir, and as Exhibit 5, we have a letter to the State Engineer's Office giving him the particulars in this case.
 - 9 Have you discussed this application with him?
 - A Yes, sir, I have.
- Q Have you notified the United States Geological Survey, the royalty owner under your lease, of the application?
- Yes, sir, I have a letter dated June 4 to the USGS, USGS at Artesia, which explains this application and this hearing, and I have discussed this with him and he has indicated that the royalty owner will not object to this injection.
- Q Have you received any correspondence from any operator conducting flood in this area?
 - Yes, sir, our offset operator to the north, Newmont Oil



OUEROUE, N. M.

REPORTING SERVICE,

Company, has sent a letter which says that they support our application as it is presented with our Parke 2 and 4 as injection wells. I have also contacted our other offset operators and we are in the process of discussing with them the conversion of their wells on the same pattern to go ahead and balance out across lease lines, and fulfill the full pattern here that needs to be.

In your opinion, would this project waterflood that you request promote conservation of natural resources and prevent their waste?

Yes, sir, there's no question about it; we do have secondary reserves here which will be recoverable by this method which otherwise would be wasted and would not be recoverable by primary means.

What ratio of secondary to primary oil do you anticipate recovering in this project?

It's very difficult to say; however, based on the other waterflood in this same area, the same zones, which Newmont is conducting east of here, I would say we'll get between one and one-and-a-quarter times our primary recovery.

Did you prepare Exhibits 1 through 4 or were they pre-Q, pared under your direction?

Yes, sir. Α

Exhibits 5, 6 and 7 are copies of letters you have mailed or letters that you have received?

Yes, sir.



MR. LOSEE: The Applicant moves the introduction of Exhibits 1 through 7.

MR. NUTTER: Applicant's 1 through 7 will be entered in the record.

(Whereupon Applicant's Exhibits 1 through 7 entered in evidence.)

MR. LOSEE: I have no further questions at this time.

MR. NUTTER: Are there any questions of the witness?

CROSS EXAMINATION

BY MR. NUTTER:

Mr. Porter, is this the flood which was -- the flood to the north of your proposed flood here, the one which was authorized back in 1959 for Texas Consolidated Oils and then subsequently taken over by Newmont?

A Yes, sir, I believe that's correct. This flood was originally authorized by Texas Consolidated and then sold to J. Cleo Thompson and Newmont purchased this from these people.

Q What has been the measure of success that they have encountered up here in this four-section or four-well pilot?

A Well, sir, I do not have the exact figures; however, I did talk to Newmont's engineer just day before yesterday, and he told me that they had experienced a pretty good response. However, he said that their big trouble was the fact that they were limited in their water injection and he felt like as soon as they could increase injection and get these other wells on that they have



LBUQUEROUE, N.

permitted and which they are presently working on to convert them, that he felt like their response would be real good.

- What was the problem on water injection, was it insufficient water or tight formation or --
- Yes, sir, it was -- it was insufficient water and also very, very roor injection equipment. They are building a new plant and of course they are tying on to the Yucca water system. I believe that previously when Texas Consolidated was operating this pilot flood that they had shallow water well up to the north which would only make about 500 barrels a day, and of course they were not putting in nearly enough water to do very much good.
- Now, you say that the one well that has never been deepened will be deepened and that the one that was plugged and abandoned will be re-entered?
 - Either re-entered or else a replacement well drilled.
 - On the same 40?
 - Very close to it, yes, sir.
 - And injection would be down the casing in each instance? Q
- Yas, sir. These other wells to the north are being injected down the casing satisfactorily and we feel that ours will be doo.
 - This will be fresh water in a closed system?
- Yes, sir, we'll be using the Yucca which comes off the Α Caprock.
 - Any further questions of Mr. Porter?



You may be excused.

(Witness excused.)

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

MR. LOSEE: Nothing further.

MR. NUTTER: Did you have any questions?

MR. IRBY: No questions, a statement.

In view of the testimony and the Exhibit 5, the State Engineer offers no objection to the granting of this application.

MR. NUTTER: Anything further in this case? We'll take the case under advisement and call Case 2582.

DEARNLEY-MEIER REPORTING SERVICE, Inc. PHONI: 243-6691



STATE OF NEW MEXICO) COUNTY OF BERNALILLO

I, MARIANNA MEIER, NOTARY PUBLIC in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of proceedings 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.

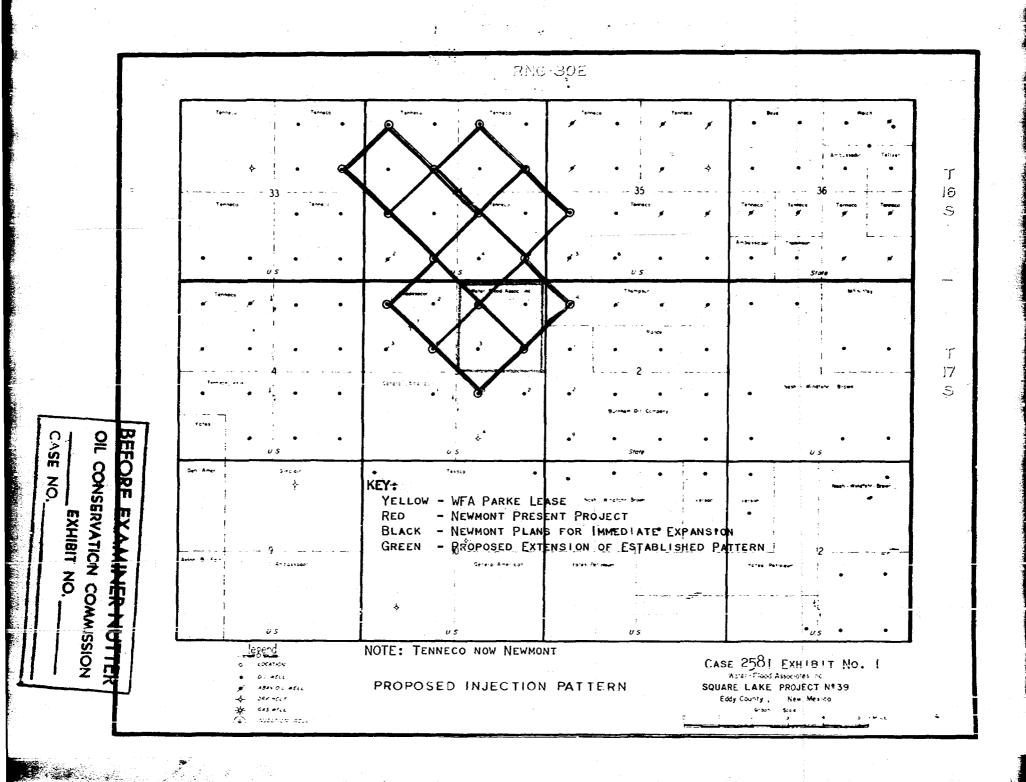
My Commission Expires:

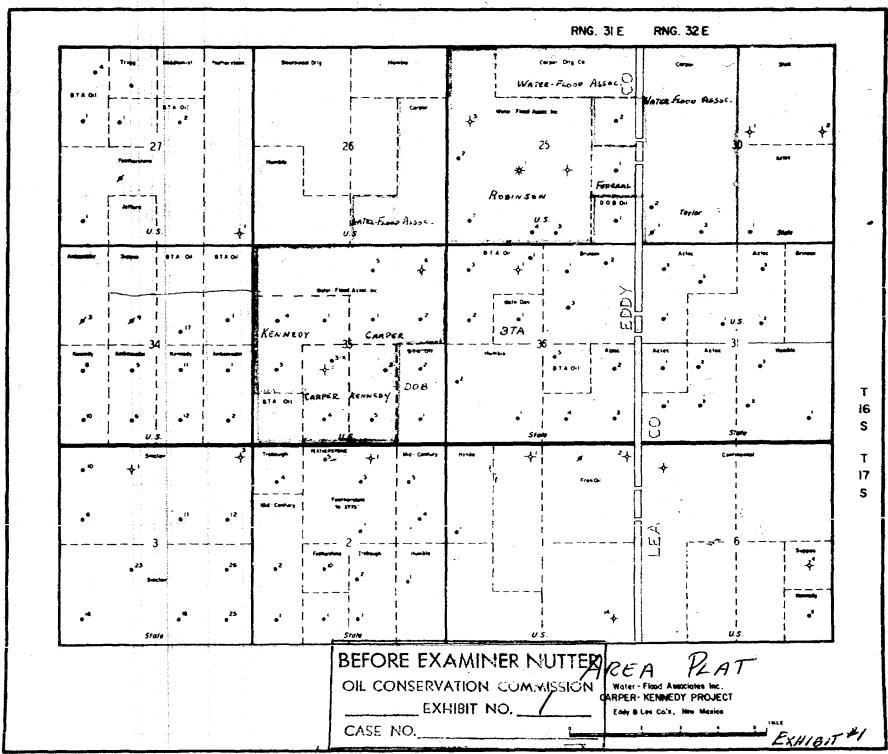
MARIANNA MEIER

I do hereby cartify that the foregoing is a coupling recorded of the proceedings in

Examiner New Mexico Oil Conservation Commission









WATER FLOOD ASSOCIATES, INC.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSIONSEC. 25, T-165, R-3IE - CARPER FEDERAL No. I

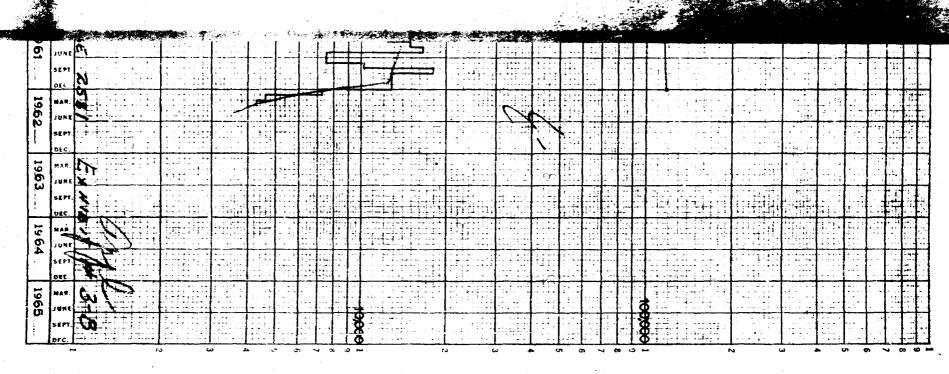
EXHIBIT NO. 3-A SECT 35, T-165, R-3IE - KENHEDY JOHNSON A NOS. 1-5

CASE NO. SEC. 35, T-165, R-3IE - CARPER TAYLOR NOS. 1-3

MONTH	1946	1947	1948	1949	1950	1951	1952	1953
JANUARY	1,945		2,501	1,939	1,656	1,626	1,518	1,525
FEBRUARY	1,579		2,449	1,991	1.720	1,606	: 1,691	1-021
MARCH	1,617	** :	2,391	1,948	1,948 1,639	1.111	1,732	1,383 1,442 1,446
APRIL	3,316		1.990	2.311	1,639	1,260 1,865	? (4 42)	1,442
MAY	2,226		3,192	995	1,633	1,865	1,690	1,446
JUNE -	3.017	*.	3,192 2,764 2,691	995 2,454	1,633 1,543 1,581	983	1,139 1,667 1,670 1,624	1,229 1,383
JULY	2.265		2,691	2,016	1,581	1,314	1,667	1,383
AUGUST	2,457		1,532	2,039	1,395 1,626	1.753	1,670	1,213
SEPTEMBER	2,099		2,320	2 ,2 23	1.626	1,753 766	1,624	1.112
OCTOBER	2,20 1	, S	1,697	1,632 1,826	2,091 1,460	1,936	1.470	1,355
HOYEMBER	1.600		2,921	1.826	1.460	1,313	1.521	1,508
DECEMBER	2,084		2,711	1,904	1,784	1,721	1,521 1,493	1,508 1,522
TOTAL	26,409	-	29,159	23.276	20,076	17,255	10.640	16,139
CUMULATIVE		440,181	469,340	492,618	512,694	529,947	548,587	564,726
	1954	1955	1956	1957	1958	1959	1960	1961
JANUARY	1,397	1,550	1,670	1,505	1,174	1,491	1,691	1,693 1,434 1,636 1,536 1,538 1,398
EBRUARY	1,313	1.329	1,914	1,308	1,152	1,219	1.227	1,434
LARCE	1,333	1,329 1,450	1,914 1,985 1,440	1,216	1,213	493 462	1,455	1.636
APRIL	972	1,192	1,440	1,211	1,131	1,462	1,200	1,536
YAY	1,322 1,208 1,662 1,142	1.119	1,647	1,147	1,272	1,568 1,262 1,546	1,532 1,326 1,222	1.538
MME	1,208	1,017 893	1,123	1.020	1,425	1,262	1,326	1,398
JULY .	1,662	893	1,316	1,283 1,088	1,133	1,546	1.222	1.457
August 1	1,142	1,357	1,514	1,085	1,701	1,510	1,300	1.478
SEPTENBER	1,394 1,512	1,307	1,521	1,093	1,376	1,250	1,300	1,139
CTGBER	1,512	1,573	1.314	1,093	1,701	1.356	1,417	1.474
OVENBER	1,267	1,352	1,314	1,195	1,520	1,356 1,484	1.488	1,272
ECEMBER	1,267 1,489	1,352	1,312	1,195	1,520	.53 3	1,678	1,272
TOTAL	16,011	15,242	18, 164	14,494	16,284	17,204	17,054	17,480
			614,143	628,637	644,921	662,125		696,659

EXHIBIT No. 3-A

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CUMULATIVE OIL PRODUCTION - BARRELS



WATER FLOOD ASSOCIATES, INC. SQUARE LAKE PROJECT

WELL DATA

Square Lake FIELD, EMDY COUNTY T-17S, R-30E

LEASE NAME & WELL NO.	UNIT/	ELEV.	DATE COMPLETED	SURFACE CABING	PRODUCTION CASING	T. D.	REMARKS
COLLIER-PARKE No. 1	A/3	375 3	6/5/43	8 1/4" @ 495 w/50 sx	5 1/2" 8 2840 w/100	3168	DEEPENED FROM 3035
COLLIER-PARKE No. 2	B/ 3	3742	6/15/43	8 1/4" @ 500 w/50 sx	5 1/2" @ 2823 w/100	3147	DEEPENED FROM 3015 IN 1951
COLLIER-PARKE No. 3	Q/ 3	3743	9/15/43	8 1/4" @ 504 w/50 ax	5 1/2" @ 2850 w/100	3185	DEEPENED FROM 3021 IN 1951 PEA 1/14/58
COLLIER-PARKE No. 4	H-3	3750	3/15/44	8 1/4" e 495 w/50 sx	5 1/2" 8 2885 w/100	3020	week to be proces

LEASK NAME & WELL NO.	SEC.	STIMULATIONS	(a/D)	PRESENT RATE-8/D	Cum. PRI. RECBBLS.	PRODUCING INTERVAL
COLLIER-PARKE No. 1	A/3	SHOT: 130 QTS. 2970-3005 140 QTS. 3130-3168	100	1	2 7,00 0	Zones 5, 6, & 8
COLLIER-PARKE No. 2	B/ 3	SHOT: 130 QTS. 2950-3015 115 QTS. 3118-3148	123		42,000	Zones 5, 6, & 8
COLLIER-PARKE No. 3	G/ 3	SHOT: 130 ers. 2945-3005	106	-0-	24,500	Zones 5, 6, 4 8
COLLIER-PARKE No. 4	H - 3	SHOT: 120 ets. 2960-3020	146	t	23,000	ZONES 5 & 6

Propose to inj down pag blooch page will start of 500 BPD D 1500 BH press

EXMINIT No. 4

WATER FLOOD ASSOCIATES, INC.

301 BOOKER BLDG.

ARTESIA. NEW MEXICO

P. O. BOX 376

MAY 31, 1962

PHONE SH 6-6032

STATE SHOUMER SANTA FE, NEW MEXICO

ATTENTIONS HE. FRAME INDY, GHIEF WATER RIGHTS DIVISION

DEAR MR. IMEY!

RE! OIL COMMERVATION COMMISSION CARE 2501

CASE 2581 WILL BE HEARD ON JAME 7, WHEREIN WATER-FLOOD ASSOCIATES, INC. SEEKS APPROVAL OF A WATER FLOOD PROJECT IN NE/4, SECTION 3, T-175, R-30E, EDBY COUNTY. APPLICATION IS MADE TO INJECT WATER INTO WELLS NO. 8 AND 4 AS SHOWN OF THE ATTACHED PLAT. THIS AREA IS NOT WITHIN A DECLARED WATER DASIN.

The wells are emissed with $85/8^{\circ}$ apprace casing bet at 500° and 495° respectively and cemented with 50 sacks. The top of the cement is estimated to se at 880° . The production casing is $51/2^{\circ}$ set at 2823° (No. 2) and 2835° (No. 4) and cemented with 100 sacks. The top of the cement behind the production string is estimated to be at 1450° . Both wells are completed in open hole below the casing. There are no perforations in the casing.

WE ARE PROPOSED TO INJECT WATER THIS BOTH OF THESE WELLS BOWN THE CASING.

ANY SMALLOW MATER WHICH HIGHT BE PRESENT IS PROTECTED BY TWO CASING STRINGS, BOTH STRINGS BEING COMENTED. THE SURFACE CASING IS SET THROUGH THE OCHOA SERIES AND INTO THE SALT (SALADO).

WE ARE PLANTING TO PURCHABE WATER FOR INJECTION FROM THE NEWMONT OIL COMPANY PLANT LOCATED 1/2 HILE NORTH OF OUR LEASE.

PLEASE CALL NO IF THERE IS ANY FURTHER INFORMATION WHICH YOU MAY REQUIRE.

VERY TRULY YOURS,

WATER FLOOD ASSOCIATES, INC.

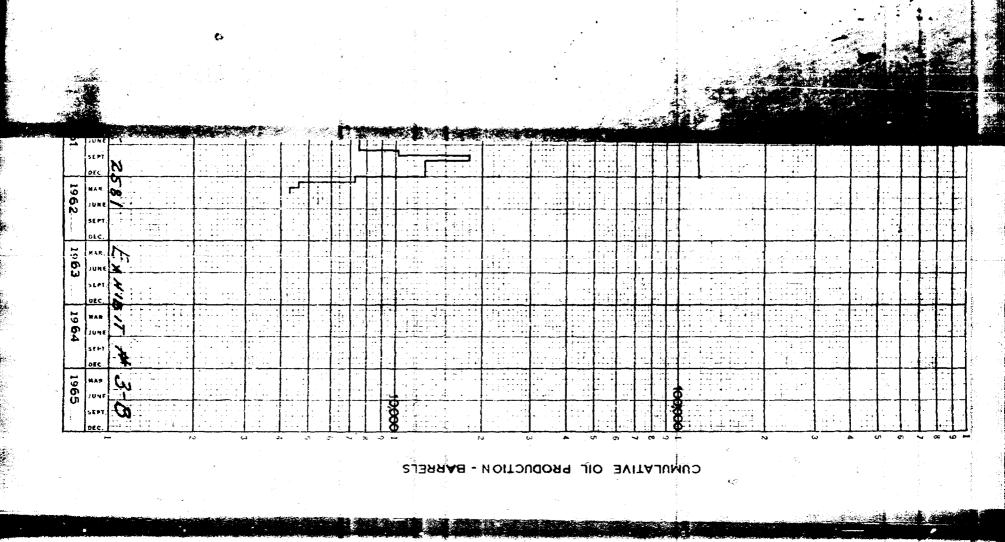
H. C. Pobyer Engineer

CASE 2581

EXHIBIT #5

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WATER FLOOD ASSOCIATES, INC. 301 BOOKER BLDG. ARTESIA, NEW MEXICO

P. O. BOX 376

Ame 4, 1962

PHONE \$H 6-6032

United States Geological Survey Camper Building Agresia, New Mexico

ATTENTIONS MR. JIN KNAW?

BENT LENCH :

RE: NEW MERICO DIS CONSERVATION CONSTIGNICASE 2581

CASE 2581 WILL BE HEARD BEFORE THE NEW MEXICO OIL CONSERVATION CONTISSION ON JUNE 7, 1962. WATER FLOOD ARBICIATES, INC. SEEKS APPROVAL FOR TWO WATER INJECTION WELLS ON THE PARKE PEDERAL LEASE, NE/4 SECTION 3, T-175, R-30E, EDDY COUNTY (LEASE LC 029080-J), AS SHOWN ON THE ATTACHED PLAT. THE PATTERN IS A MATURAL EXPENSION OF THE WATER INJECTION PATTERN ESTABLISHED BY MEMORY OIL COMPANY IN SECTION 34 TO THE MORTH.

WATER INJECTION WILL BE INTO THE GRAYBURG-SAN AMORES FORMATION, THE PRODUCTIVE INTERVAL IMPOUGNOUT THE AREA.

THIS AREA WILL NOT BE UNITEIRS. THE TLOOG PROGRAM WILL BE ON A COOPERATIVE BASIS WITH SALANCED INJECTION ACROSS LEASE LINES.

THE PRIMARY PRODUCTION IN THE AREA IS IN AN ADVANCED STAGE OF DEPLETION; NUMBER CONSIDERABLE SECONDARY RESERVES BEHALK WHICH MAY BE RECOVERED BY WATER FLOOD METHORS. THE PROGRAM PROPUSED WILL BE IN THE INTEREST OF CONSERVATION OF NATURAL RESOURCES AND WILL ECONOMICALLY RECOVER SIL WHICH WOULD BE UNRECOVERABLE BY NATURAL PRODUCING MECHANISMS.

WE EARNESTLY SEEK YOUR APPROVAL OF THE CONVERSION OF OUR PARK WELLS & AND 4 TO WATER INJECTION. IS THERE IS ANY PURTHER INFORMATION WHICH YOU REQUIRE, PLEASE CALL HE.

Veny toury yours,

WATER FLOOD ASSOCIATES, INC.

H. C. Porter Superintendent

HCPLCL ATTACHMENT

> CASE 2581 EXHIBIT #6

NEWMONT OIL COMPANY

300 BOOKER BUILDING ARTESIA, NEW MEXICO

May 17, 1962

NEW MEXICO

Waterflood Associates, Inc. 301 Booker Bldg. Artesia, New Mexico

Attention: Mr. Hall Porter

Dear Mr. Porter:

This will inform you that Newmont Oil Company supports your application to convert the following wells for injection in the Square Lake Pool:

Parke No. 2 - NW/4 NE/4 Sec. 3-17-30 Parke No. 4 - SE/4 NE/4 Sec. 3-17-30

These wells conform to the waterflood development pattern already established in this area.

Our support is given with the understanding that prompt action will be taken in developing this property for waterflood, including arrangements for leaseline cooperation with Newmont.

Yours very truly,

NEWHONT OIL COMPANY

Herman J. Ledbetter Superintendent

z f

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO
CASE NO.

EXNIBIT #7

WATER FLOOD ASSOCIATES, INC. 201 SOURS BLOG ARTESIA NEW MEXICO

P. O. BOX 376

June 4, 1962

PHONE 8H 4-603

MILTED STATES GEOLOGICAL SHEVEY
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ANTONIA, THE STREET

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VERY TIME! YOURS,

N. C. Pertun

ATT ASSESSED

REPORT EXAMINATION DOMESTION TO SELECT THE SECOND SERVICE OF SECOND SECO

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