

CASE 3887: Application of KERSEY
& COMPANY FOR A WATERFLOOD
PROJECT, EDDY COUNTY, NEW MEXICO.

Cont to 23rd of Oct

Case Number

3887

Application
Transcripts.

Small Exhibits

ETC.

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

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

October 9, 1968

EXAMINER HEARING

IN THE MATTER OF:)

Application of Kersey and Company for) Case 3887
a waterflood project, Eddy County,)
New Mexico.)

BEFORE: Elvis Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3887.

MR. HATCH: Case 3887, application of Kersey and Company for a waterflood project, Eddy County, New Mexico, and the applicant in that Case has requested that it be set over for the next Examiner Hearing.

MR. UTZ: Case 3887 will be continued to the October 23d Examiner Hearing.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

Charlotte Macias
COURT REPORTER

I do hereby certify that the foregoing is a true and correct record of the proceedings in the Examiner hearing of Case No. 3887, heard by me on 10-2-68 1968.
Thomas A. W., Examiner
New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 23, 1968

EXAMINER HEARING

IN THE MATTER OF:)

Application of Kersey & Company)
for a waterflood project, Eddy County,)
New Mexico.)

) Case No. 3887
)
)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 3887.

MR. HATCH: Continued from the October 9, 1968,
Exahimer Hearing, Application of Kersey & Company for a
waterflood project, Eddy County, New Mexico.

MR. KERSEY: I'm Harold Kersey of Kersey & Company,
and I have appeared before the Commission in the past.

(Witness sworn.)

(Applicant's Exhibits A, B, C,
marked for identification.)

* * * * *

HAROLD KERSEY, the Applicant, having been first duly
sworn, testified as follows:

* * * * *

MR. KERSEY: I have the exhibits that have been
presented to the Commission. Here are some extra copies,
there are four exhibits.

MR. PORTER: Were those filed with the Application?

MR. KERSEY: Yes, they were filed with the
Application.

My first exhibit is Exhibit A and this shows a plat
of the area which is in the Loco Hills Field. The purpose of
this Application is to back up and complete the flood project
that Depco, Yates and Yates have instituted. We propose to
put on injection two new wells, our Dunn No. 3B and No. 4B.

Exhibit B shows the proposed completion procedure. In this particular area, the Premier Formations which is the base of the Grayburg, is being flooded and there are also other productive zones, Loco Hills and the Me-Tex above. If, we are presently drilling the No. 3B well and if it is productive in the Upper Zones, we propose to set casing through all the zones, perforating the Premier, injecting water into it under a packer with cement-lined tubing, and produce the Loco Hills and Me-Tex Zones through the same well. In doing this, if the packer should leak on the injection portion we will immediately determine it by the production of water.

This Exhibit B shows that we propose to run 7 inch casing to approximately 2500 feet, and that the bottom portion of the cased hole will be 4 and 1/2 inch casing. The reason for the 7 inch is so we can run two strings of 2 and 3/8ths tubing and have plenty of room. The reason for the 4 and 1/2 inch casing is we can get a better cement with around 4 and 1/2 inch casing, than if we extended the 7 inch to the bottom of the hole.

Exhibit C is the pertinent information sheet showing that the water is going to be injected into the Grayburg and the injection fluid will be purchased from Depco and the anticipated injection volume will be three to five hundred

4

barrels per well, and the pressures will range from 1200 to not to exceed 1800 pounds per square inch, and there will be, the injection will be through cement-lined tubing and if production is obtained in the Upper Grayburg, why, we propose with your permission, to complete it dually as a producer and as an injection well. This is a cooperative deal with Depco and Yates. We're injecting into our wells, and they, in turn, are injecting into their lease line wells, which will work out to mutual advantage of both of us, all of us.

EXAMINATION

BY MR. NUTTER:

Q These proposed injection wells of yours, the Dunn 3 and 4 are on the same pattern of injection wells that the other operators are using?

A That's right. You will notice on Exhibit A, that we're following the same pattern that they followed so that it will be a harmonious pattern as far as injection is concerned.

Q Are any of these other wells in this area producing from the zones in the Upper Grayburg?

A Our Dunn No. 1 is producing from the Upper Zones. I understand that Yates's No. 2 is producing also from the Upper Zones, and their engineer indicated that they would

possibly, they were considering producing and injecting at the same time. However, they haven't started anything yet.

Q Now, on your lease, are all four of the wells producing from the Lower Zone at the present time?

A Well, now, at the present time, we only have two wells drilled. Our No. 1 and 2, both of those wells are producing from the Premier.

Q And the No. 1 is also producing from the Upper Zone?

A The Upper and the No. 2 is producing from the Upper Zone. So it's very probable that the No. 3 well could very well be productive in the Upper Zones.

Q Is the Upper Zone being flooded in the area?

A No, they are not. They will be, at some later time, personally, as far as I was concerned, I would have preferred that we flood all zones at this time, rather than wait until a later date, but Depco chose to flood the Premier Zone so we're going along with their proposal and flood the Premier only at this time.

Q But there is a possibility that these upper--

A Yes, all the zones can be flooded, I feel, at some later time.

Q This schematic diagram that you show on your Exhibit

B is for the well, in the event that you would have obtained production in the Upper Zone?

A That is right, and if we don't obtain production in the Upper Zone, the well will be completed with 4 and 1/2 inch casing and packer set above the Premier Zone with a cement-lined tubing.

Q The only difference from this diagram, would be that you would have 4 and 1/2 inch and single string of tubing but you would have the packer?

A That's right. The only difference will be if production is obtained, we will have to run 7 inch casing. If it's not, we will run 4 and 1/2. We are drilling on the well, presently we are at about 2000 feet.

Q The name of the two Upper Zones is the Me-Tex --

A And Loco Hills.

Q -- and Loco Hills Sands. And the zone that is to be flooded is the Premier and the Grayburg?

A Premier and Basal Grayburg.

Q Will the produced water in this area be reinjected?

A Yes, it will, we will run the produced water from our wells back to the injection plant of Dapco and they will put it back in the ground.

Q Now, your injection water is Double Eagle water

from Depco?

A From Depco, right.

Q And your produced water will be returned to Depco and returned with the Double Eagle water?

A Will be reinjected.

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

EXAMINATION

BY MR. PORTER:

Q About when was this area developed?

A We drilled the discovery well in this area in 1949.

Q And at that time, it was an extension of the --

A Of the Artesia Field.

Q -- right, and now, you say that Yates and Depco are not injecting yet?

A Depco has started injecting into their No. 1 Dunn A which is in the southeast of the northeast of 12, and so far as I know, that is the only well that is on injection. Perhaps their No. 6 is, but I'm not, No. 6B, but I am not sure about it, but I do know the No. 1 is.

Q Have there been other injection projects into this same sand, the Premier Sand?

A Yes, I have a project on this same plat.

Q What has been your response?

A The Premier is a very good zone to inject into, in my opinion, because we have been successful in other areas, and I feel it will be successful in this area.

Q The Me-Tex and the other zone you referred to, are they in the Grayburg?

A They are in the Grayburg, above.

Q As I understand it, the Grayburg in this area, has a number of zones that are separate producing zones.

A That is right.

MR. PORTER: That's all I have, Mr. Nutter.

MR. NUTTER: Any other questions of the witness?
He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further?

MR. KERSEY: I believe that's all on this particular case.

MR. NUTTER: Applicant's Exhibits A, B, and C are admitted in evidence.

(Whereupon, Applicant's Exhibits A, B, and C admitted in evidence.)

MR. NUTTER: Does anyone have anything to offer in Case 3887? We will take the case under advisement.

I N D E X

<u>WITNESS</u>		<u>PAGE</u>
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<u>EXHIBITS</u>	<u>MARKED</u>	<u>ADMITTED</u>
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STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

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

WITNESS my hand this 1st day of November, 1968.

I hereby certify that the foregoing is
 a true and correct record of the proceedings
 before the New Mexico Oil Conservation Commission
 reported by me, and that the same is a true and correct
 record to the best of my knowledge, skill and ability.
 10/23 1968
Ada Dearnley
 Court Reporter
 New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

November 4, 1963

C
Mr. Harold Kersey
Kersey & Company
Post Office Box 316
Artesia, New Mexico

O
Dear Sir:

Reference is made to Commission Order No. R-3546, recently entered in Case No. 3887, approving the Kersey Artesia Dunn Waterflood Project.

P
Y
Injection is to be through the two authorized water injection wells, each of which shall be equipped with tubing set in a packer within 100 feet of the uppermost injection perforations. If completed as single completion injection wells, the casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing, or packer. In the event production is encountered in the Upper Grayburg formation, this section may be produced through a second string of tubing and the inhibited fluid and pressure gauge eliminated.

As to allowable, our calculations indicate that when all of the authorized 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-E-3 is 169 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

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

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

Mr. Harold Kersey
Kersey & Company
Post Office Box 316
Artesia, New Mexico

C
O
P
Y
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 are acquired through purchase or unitization, 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.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSN/ir

cc: Oil Conservation Commission Offices in Hobbs and Artesia, N.M.

U. S. Geological Survey, Artesia, New Mexico

Mr. D. E. Gray, State Engineer Office, Santa Fe, New Mexico

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. Harold Kersey
Kersey & Company
Post Office Box 316
Artesia, New Mexico 88210

Dear Sir:

Reference is made to Commission Order No. R-3546, ^{recently} entered in Case No. 3887, approving the Kersey Artesia ^{Dunn} Waterflood Project.

Injection is to be through the two authorized water injection wells, ^{each} which shall be equipped with tubing set in a packer within 100 feet of the uppermost injection perforations. If completed as simple completion injection wells, the casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing, or packer. In the event production is encountered in the Upper Grayburg formation, this section may be produced through a second string of tubing. As to allowable, our calculations indicate that when all of the authorized 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-E-3 is 168 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration 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 are acquired through purchase or unitization, 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.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OOC: Hobbs x
Artesia x
Aztec

USGS Artesia

Mr. Frank Irby, State Engineer Office, Santa Fe, New Mexico

Mr. D. E. Gray

and the inhibited fluid and pressure gauge eliminated.

State of New Mexico
Oil Conservation Commission



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

Re: Case No. 3887
Order No. R-3546
Applicant:
Kersey & Company

A. L. PORTER, Jr.
Secretary-Director

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. 3887
Order No. R-3546

APPLICATION OF KERSEY & COMPANY
FOR A WATERFLOOD PROJECT, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 23, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 31st day of October, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Kersey & Company, seeks authority to institute a waterflood project in the Artesia Pool by the injection of water into the Premier Sand of the Grayburg formation through two injection wells to be drilled in the centers of Units E and K of Section 12, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

(3) That the applicant proposes to dually complete said wells in such a manner as to permit the production of oil from the Metex and Loco Hills zones of the Grayburg formation, if said zones prove productive, from perforations above a packer separating said zones from the Premier zone, through 2 3/8-inch tubing, and to permit the injection of water for secondary

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CASE No. 3887

Order No. R-3546

recovery purposes into the Premier zone in the perforated interval below said packer through a parallel string of 2 3/8-inch tubing.

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(7) That approval of the proposed dual completion will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

(8) That the subject application should be approved and the waterflood project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kersey & Company, is hereby authorized to institute a waterflood project in the Artesia Pool by the injection of water into the Premier Sand of the Grayburg formation in its Dunn "B" Well No. 3 to be drilled in the center of Unit K and its Dunn "B" Well No. 4 to be drilled in the center of Unit E, both in Section 12, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

(2) That the applicant is further authorized to dually complete said wells in such a manner as to permit the production of oil from the Mstex and Loco Hills zones of the Grayburg formation from perforations above a packer separating said zones from the Premier zone through 2 3/8-inch tubing, and to permit the injection of water for secondary recovery purposes into the Premier zone in the perforated interval below said packer through a parallel string of 2 3/8-inch tubing.

(3) That the subject waterflood project is hereby designated the Kersey Artesia Dunn Waterflood Project and shall be governed

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CASE No. 3887
Order No. R-3546

by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.


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

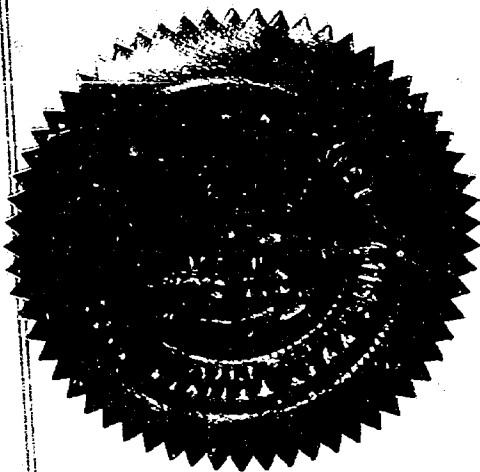
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman

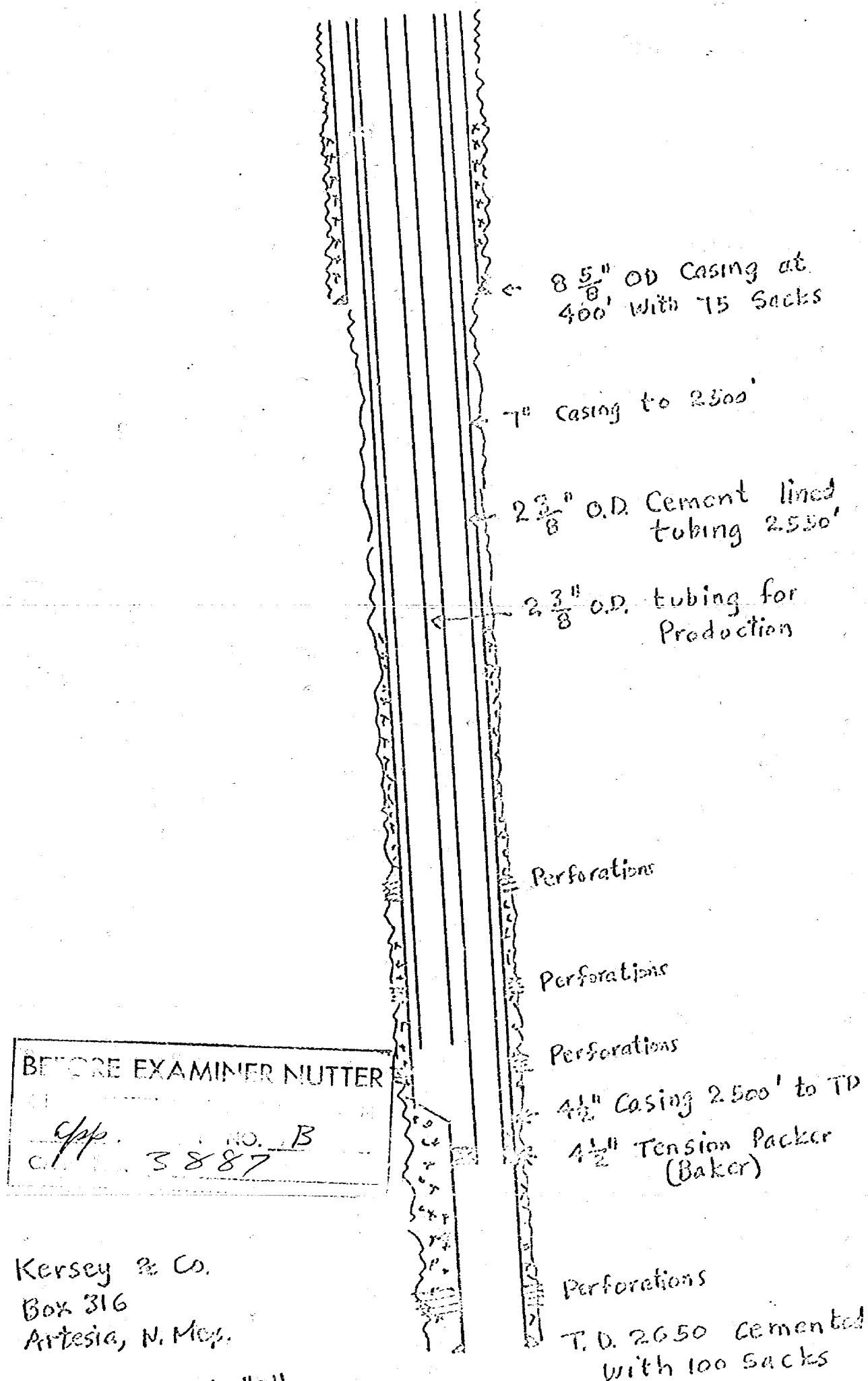

GUYTON B. HAYS, Member


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



esr/

Sketch Showing Proposed Water Injection
and Producing Wells Dunn 3-B & 4-B.



Kersey & Co.
Box 316
Artesia, N. Mex.

Exhibit "B"

PERTINENT INFORMATION SHEET

Dunn 8 Lease, Well Numbers 3 & 4

As per Rule 701B-4

1. Water injection into the Grayburg at approximately 2600-2630'
2. Injection fluid will be fresh and produced saline water.
3. Anticipated Injection Volumes will be 300 to 500 BOPD per well.
4. Anticipated injection pressures will be 1200 PSI not to exceed 1800 PSI.
5. Source of injection water will be from Double Eagle Corporation after pressurization by Depco, Inc.
6. Water will be injected down internally coated tubing under a tension packer.
7. If production is obtained in the upper Grayburg sections, the wells will be completed dually as producer and injection wells.

KERSEY & COMPANY
September 10, 1968

EXHIBIT "C"

BEFORE EXAMINER NUTTER	
CIL	INTERVIEWER C. NUTTER
<i>App.</i>	EXHIBIT NO. <i>C</i>
CASE NO.	<i>3882</i>

Docket No. 29-68
DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 9, 1968

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

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

CASE 3872: Application of Union Oil Company of California for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to equally complete its Federal "A" Well No. 1 located in Unit P of Section 12, Township 15 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Morton-Wolfcamp Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the San Andres and such other formations as may occur in the open-hole interval from approximately 4620 to 7350 feet.

CASE 3873: Application of R. G. McPherson for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the open-hole interval from approximately 5250 feet to 5854 feet in his S. P. Johnson Well No. 1 located 990 feet from the West line and 1650 feet from the South line of Section 5, Township 18 South, Range 39 East, South Carter-San Andres Pool, Lea County, New Mexico.

CASE 3874: Application of Gulf Oil Company - U. S. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Paddock and Blinbry Oil Pools in the well-bore of its C. L. Hardy Well No. 2 located in Unit N of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, with the provision that no more than one single allowable will be produced from said well.

CASE 3875: Application of Pan American Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well in exception to the Fowler-Ellenburger Rules at an unorthodox location 910 feet from the North line and 1980 feet from the West line of Section 15, Township 24 South, Range 37 East, Lea County, New Mexico.

- CASE 3876: Application of Newmont Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Young (Queen) Unit Area comprising 1320 acres, more or less, of federal and state lands in Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.
- CASE 3877: Application of Newmont Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Young (Queen) Unit Area by the injection of water into the Queen formation through 17 wells located in Sections 9, 16, 17, 19, 20, 21, and 29, Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.
- CASE 3878: Application of General American Oil Company of Texas for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier sand through two injection wells located in Unit M of Section 8, and Unit G of Section 17, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.
- CASE 3879: Application of Walter Duncan Oil Properties for an unorthodox oil well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox oil well location 1000 feet from the North line and 1242 feet from the East line of Section 36, Township 32 North, Range 18 West, San Juan County, New Mexico. Said well would be projected to the Dakota formation.
- CASE 3880: Application of Anne Burnett Windfohr, Windfohr Oil Company, for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from approximately 6970 feet to 7028 feet in the Windfohr Oil Company Jackson "B" Well No. 23 located in Unit J of Section 24, Township 17 South, Range 30 East, Jackson-Abo Pool, Eddy County, New Mexico.
- CASE 3881: Application of J. M. Huber Corporation for the creation of a new oil pool and for special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Devonian oil pool for its Lone Star Federal Well No. 1 located in the NE/4 NE/4 of Section 20, Township 8 South, Range 36 East, Roosevelt County, New Mexico, and for the promulgation of special rules therefor including a provision for 80-acre proration units.

- CASE 3882: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Teague Blinebry Pool, Lea County, New Mexico.
- CASE 3883: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Imperial Tubb-Drinkard Pool, Lea County, New Mexico.
- CASE 3884: Application of Marathon Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Miller Ranch Unit Area comprising 5,276 acres, more or less, of State, Federal and Fee lands in Townships 21 and 22 South, Range 25 East, Eddy County, New Mexico.
- CASE 3885: Application of Sinclair Oil & Gas Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Turner "B" Grayburg-Jackson Waterflood Project, Grayburg-Jackson Pool, by the conversion to water injection of 12 additional injection wells located in Sections 20, 29, and 30, Township 17 South, Range 31 East, Eddy County, New Mexico.
- CASE 3886: Application of Sinclair Oil & Gas Company for the amendment of a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks amendment of its Guadalupe Ridge Unit Agreement, unitizing certain lands in Eddy County, New Mexico, and approved by Order No. R-3471, to conform to certain requirements of the Director of the United States Geological Survey. In the absence of objection, the case will be submitted and an order issued upon the basis of the application and exhibits attached thereto.
- CASE 3887: Application of Kersey & Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier sand of the Grayburg formation through two wells to be located in Units E and K of Section 12, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Applicant further proposes to produce oil from the Upper Grayburg through parallel strings of tubing, if said zones are productive in the subject wells.

- CASE 3888: Application of Amerada Petroleum Corporation for a dual completion, salt water disposal and tubing exception, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State E "B" Well No. 1 located in Unit E of Section 27, Township 10 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the North Echols-Devonian Pool and the disposal of produced salt water through the tubing-casing annulus into the San Andres formation through perforations in said casing from approximately 5220 feet to 5250 feet. Applicant also seeks an exception to the tubing requirements of Commission Rule 107 in that said tubing would be set more than 250 feet above the upper most Devonian perforation.
- CASE 3889: Application of BTA Oil Producers for the creation of a new pool and special pool rules, Lea and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Bough C zone of the Pennsylvanian formation for its well located in Section 5, Township 9 South, Range 36 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 160-acre proration units and for the assignment of an 80-acre allowable factor of 4.77.
- CASE 3890: Application of Pan American Petroleum Corporation for special pool rules and a non-standard gas proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Empire-Pennsylvanian Gas Pool, Eddy County, New Mexico, including a provision for 320-acre spacing units with wells to be located in either the northwest quarter or the southeast quarter of the section. Applicant further seeks approval of a 280-acre non-standard gas proration unit comprising the SE/4, S/2 SW/4, and the NW/4 SW/4 of Section 30, Township 17 South, Range 28 East, Empire-Pennsylvanian Gas Pool, to be dedicated to its State V Com Well No. 1 located 990 feet from the South and East lines of said Section 30.



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Drawer U
Artesia, New Mexico 88210

September 19, 1968

Kersey and Company
Post Office Box 316
Artesia, New Mexico 88210

Carl P. S.

Gentlemen:

Your letter of September 10, 1968 requests approval to operate a waterflood of the Grayburg formation on that portion of oil and gas lease Las Cruces 028772(b) described as follows:

T. 18 S., R. 23 E., N.M.P.M., Eddy County, New Mexico
sec. 12: S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$

You propose to drill and complete as water injection wells No. 3 Dunn, located 1980/S&W; and No. 4 Dunn, located 1980/N and 660/W of section 12, extending the 80-acre five-spot flood pattern of the projects to the east, south, and west, and operating in conjunction with them.

The plan for operating the above described waterflood project as proposed in the application is satisfactory to this office, and hereby approved subject to like approval by the New Mexico Oil Conservation Commission and the following:

1. This project will be operated in compliance with the New Mexico Oil Conservation Commission regulations governing waterflood operations.
2. Duplicate copies of a monthly progress report (N.M.O.C.C. form C-120 are acceptable) are to be submitted to this office showing the volume of water injected and average pressures for the injection wells, and production for the producing wells in the project area.
3. This approval does not preclude the necessity for further approval if the project is expanded to include other wells and leases or the necessity to submit the usual notices and reports on wells involved.

Sincerely yours,

James A. Knauf
District Engineer

cc: N.M.O.C.C., Santa Fe

Docket No. 31-68

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 23, 1968

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

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

CASE 3894: Application of Signal Oil and Gas Company for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard oil proration unit comprising the W/2 NE/4 and the N/2 SE/4 of Section 17, Township 10 South, Range 24 East, Vada-Pennsylvanian Pool, Lea County, New Mexico, said unit to be dedicated to its State AP Well No. 1 located 1980 feet from the South line and 660 feet from the East line of said Section 17.

CASE 3895: Application of Sun Oil Company for a pressure maintenance project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its New Mexico State "H" Lease by the injection of water into the San Andres formation through its New Mexico State "H" Well No. 13 located in the SE/4 of Section 16, Township 8 South, Range 30 East, Cato-San Andres Pool, Chaves County, New Mexico. Applicant further seeks the promulgation of special rules to govern operation of said pressure maintenance project.

CASE 3887: (Continued from the October 9, 1968, Examiner Hearing)

Application of Kersey & Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier sand of Grayburg formation through two wells to be located in Units E and K of Section 12, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Applicant further proposes to produce oil from the Upper Grayburg through parallel strings of tubing, if said zones are productive in the subject wells.

CASE 3896: Application of Kersey & Hanson, Yates Drilling Company, and John H. Trigg for several waterflood projects, Eddy County, New Mexico. Applicants, in the above-styled cause, seek authority to institute several cooperative waterflood projects by the injection of water into the Queen and Grayburg formations through four injection wells located in Sections 21

CASE 3896 continued

and 28, Township 18 South, Range 29 East, Turkey
Track Queen-Grayburg Pool, Eddy County, New Mexico.

CASE 3897: Application of Kersey-Wittkopp and E. A. Hanson for two
waterflood projects, Eddy County, New Mexico. Applicants,
in the above-styled cause, seek authority to institute two
cooperative waterflood projects by the injection of water
into the Queen formation through two injection wells loca-
ted in the NW/4 SE/4 and the SW/4 SE/4 of Section 6. Town-
ship 19 South, Range 31 East, Shugart Pool, Eddy County,
New Mexico.

CASE 3898: Application of Tenneco Oil Company for salt water disposal,
Lea County, New Mexico. Applicant, in the above-styled
cause, seeks authority to dispose of produced salt water
into the Queen formation in the open-hole interval from
approximately 3258 feet to 3341 feet in its Ginsberg-Federal
Well No. 6 located in Unit E of Section 31, Township 25
South, Range 38 East, Langlie-Mattix Field, Lea County, New
Mexico.

CASE 3899: Application of Cities Service Oil Company for salt water
disposal, Lea County, New Mexico. Applicant, in the above-
styled cause, seeks authority to dispose of produced salt
water into the San Andres formation in the interval from
approximately 4087 feet to 4176 feet in its State AD Well
No. 8 located in Unit J of Section 22, Township 10 South,
Range 22 East, Mescalero-San Andres Pool, Lea County, New
Mexico.

CASE 3900: Application of Continental Oil Company for downhole commin-
gling, Lea County, New Mexico. Applicant, in the above-
styled cause, seeks authority to commingle production from
the Vacuum Wolfcamp Pool and the North Vacuum Abo Pool in
the well-bore of its State H-35 Well No. 7 located 660 feet
from the North line and 1780 feet from the East line of
Section 35, Township 17 South, Range 34 East, Lea County,
New Mexico.

CASE 3901: Application of Continental Oil Company for salt water dis-
posal, Lea County, New Mexico. Applicant, in the above-
styled cause, seeks authority to dispose of produced salt
water into the Yates-Seven Rivers formations in the perforated
interval from approximately 3330 feet to 3552 feet in its
Lynn A-28 Well No. 6 located in Unit H of Section 28, Township

(CASE 3901 continued)

23 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

CASE 3902: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the Queen formation through its Stevens "B" Well No. 8 located in Unit A of Section 12, Township 23 South, Range 36 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 3903: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Delaware formation in the perforated intervals from approximately 4675 feet to 4765 feet in its Payne Well No. 11 and from 4666 feet to 4740 feet in its Payne Well No. 12 located 660 feet from the South line and 1650 feet from the West line of Section 30, 1935 feet from the North line and 2090 feet from the West line of Section 31, respectively, Township 26 South, Range 33 East, El Mar-Delaware Pool, Lea County, New Mexico.

CASE 3904: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the Delaware formation through its Thompson Federal 19 Well No. 2 located in Unit F of Section 19, Township 26 South, Range 32 East, North Mason-Delaware Pool, Lea County, New Mexico.

CASE 3905: Application of Texas Pacific Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximately 12,269 feet to 12,541 feet in its State "O" Well No. 1 located in Unit J of Section 15, Township 10 South, Range 36 East, South Crossroads-Devonian Pool, Lea County, New Mexico.

- CASE 3906:** Application of Skelly Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation through its Mattix "A" Well No. 4 located in Unit K of Section 2, Township 24 South, Range 37 East, Langlie-Mattix Oil Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 3907:** Application of Skelly Oil Company for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the San Andres formation through its Hobbs "W" Well No. 9 located in Unit F of Section 29, Township 7 South, Range 34 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 3908:** Application of Pan American Petroleum Corporation for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 3932 feet to 4027 feet in its Miller Federal Well No. 4 located in Unit L of Section 35, Township 7 South, Range 31 East, Tom-Tom San Andres Pool, Chaves County, New Mexico.
- CASE 3909:** Application of Champlin Petroleum Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into San Andres formation, Chaveroo-San Andres Pool, Roosevelt County, New Mexico, through the following two wells located in Township 7 South, Range 33 East:

Champlin Lauck-Federal Well No. 12,
Unit J of Section 29; Disposal Interval -
4202 feet to 4404 feet;

Champlin State 32-7-33 Well No. 5, Unit J
of Section 32; Disposal Interval - 4303
feet to 4425 feet.

- CASE 3910: Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SW/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NE/4 SW/4 of said Section 17.
- CASE 3911: Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SE/4 of Section 8, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NW/4 SE/4 of said Section 8. In the alternative applicant seeks approval of a non-standard oil proration unit comprising the E/2 SE/4 of said Section 8 and the W/2 SW/4 of Section 9, said Township and Range, said unit to be dedicated to a well to be drilled in the NE/4 SE/4 of said Section 8.
- CASE 3882: (Continued from the October 9, 1968, Examiner Hearing)
Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Teague Blinbry Pool, Lea County, New Mexico.
- CASE 3883: (Continued from the October 9, 1968, Examiner Hearing)
Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Imperial Tubb-Drinkard Pool, Lea County, New Mexico.

KERSEY & COMPANY

DRILLING AND OIL PRODUCTION
Phone SH 6-3671 • P. O. Box 316 • 808 W. Grand
ARTESIA, NEW MEXICO 88210

September 10, 1968

See for history

Case 3887

Re: Dunn Lease - Request for approval to
flood and complete dually two new wells
if production is obtained in Sec. 12-18-28
Eddy County, New Mexico.

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Secretary Director, Mr. A. L. Porter, Jr.

SEP 16 AM 8 10

Dear Sir:

It is respectfully requested that Kersey & Company be given
administrative approval to use for water injection and oil production
Dunn No. 3-B and Dunn No. 4-B wells which are to be drilled as located
on the attached base map.

In order to more effectively sweep the oil from the formation
(Premier) and protect correlative rights, Kersey & Company has agreed
with Depco, Inc. to perform the work for lease line cooperation.

Attachments to this application include a base map (Exhibit A),
diagramatic sketch of the two wells (Exhibit B), and pertinent data
sheet (Exhibit C).

Recently, order No. R2869 and No. R2869A granted water-flooding
operation to Depco, Inc. in Sections 10-11-12, T18S, R28E, in this same
area. Also Orders No. WFX223 and WFX294 were granted Yates Petroleum
Corporation for water flooding in this same area.

If the upper Grayburg zones should prove productive these will
be treated and each well completed dually with injection into the
Premier under the packer, and producing above the packer as per the
attached sketches of completion proposed.

Copies of this application and attachments will be sent to
all offset operators as listed below and also to the U.S.G.S. office.

Kersey & Company upon approval of the application will proceed
with the drilling and completing of the wells for water injection and will
also immediately notify the Commission of injection operations and abide
by the rules and regulations as set out in the Order, and will also file
and maintain accurate records as required by New Mexico Oil Commission.

Yours very truly,

DOCKET MAILED

KERSEY & COMPANY

Harold Kersey

Harold Kersey

DOCKET MAILED

9-26-68
Date

CC: Depco, Inc.
Yates Petroleum Corp.

DRAFT

GMH/esr

Spec Sta

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. 3887

Order No. R-2546

APPLICATION OF KERSEY & COMPANY
FOR A WATERFLOOD PROJECT, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 23, 1968,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 10th day of October, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Kersey & Company, seeks authority
to institute a waterflood project in the Artesia Pool by the
injection of water into the Premier Sand of the Grayburg formation
through two injection wells to be drilled in the centers of Units
E and K of Section 12, Township 18 South, Range 28 East, NMPM,
Eddy County, New Mexico.

(3) That the applicant proposes to dually complete said
wells in such a manner as to permit the production of oil from
the Metex and Loco Hills zones of the Grayburg formation, if
said zones prove productive, from perforations above a packer

separating said zones from the Premier zone, through 2 3/8-inch tubing, ^{to permit} and the injection of water for secondary recovery purposes into the Premier zone in the perforated interval below said packer through a parallel string of 2 3/8-inch tubing.

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(7) That approval of the proposed dual completion will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

(8) That the subject application should be approved and the waterflood project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kersey & Company, is hereby authorized to institute a waterflood project in the Artesia Pool by the injection of water into the Premier Sand of the Grayburg formation in its Dunn "B" Well No. 3 to be drilled in the center of Unit K and its Dunn "B" Well No. 4 to be drilled in the center of Unit E, both in Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

(2) That the applicant is further authorized to dually complete said wells in such a manner as to permit the production of oil from the Metex and Loco Hills zones of the Grayburg formation from perforations above a packer separating said zones from

the Premier zone through 2 3/8-inch tubing, and the injection of water for secondary recovery purposes into the Premier zone in the perforated interval below said packer through a parallel string of 2 3/8-inch tubing.

(3) That the subject waterflood project is hereby designated the Kerry Arteria Dunn Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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