

CASE 2892: Appli. of CONTINENTAL
for a waterflood project in the
BAISH POOL, LEA COUNTY, N. MEX.

10/1/54

1952/10.
2892

edition, Transcript,
all Exhibits, Etc.



CONTINENTAL OIL COMPANY

P. O. BOX 1377
ROSWELL, NEW MEXICO

PRODUCTION DEPARTMENT
NEW MEXICO DIVISION
A. B. SLAYBAUGH
DIVISION SUPERINTENDENT
V. C. EISSLER
ASSISTANT DIVISION SUPERINTENDENT

August 5, 1963

625 PETROLEUM BUILDING
TELEPHONE: MAIN 2-4202

New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

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

Gentlemen:

Re: APPLICATION FOR HEARING -
PROPOSED BAISH WATERFLOOD
PROJECT

We forward herewith application in triplicate for permission to install a waterflood project in the Baish (Yates) Pool located in Section 21, T17S, R32E, Lea County, New Mexico. As required by Rule 701, we are attaching a plat showing the proposed waterflood areas and schematic diagrams of the proposed water injection wells. There are no electric or radioactivity logs available on any of these wells.

We should appreciate your setting this matter for hearing at the earliest convenient date.

Yours very truly,

VTU:pr
Enc.

cc: State Engineer, Box 1079, Santa Fe, N. M.
RGP GW JWK VGM

DOCKET MAILED

Date 8-23-63

BEFORE THE OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CONTINENTAL
OIL COMPANY FOR APPROVAL OF A WATERFLOOD
PROJECT, UNDER THE PROVISIONS OF RULE 701E,
IN THE BAISH POOL AREA LOCATED IN TOWNSHIP
17 SOUTH, RANGE 32 EAST, NMPM, LEA COUNTY,
NEW MEXICO

Case 2892

Comes now Continental Oil Company and respectfully
requests permission to install and operate a waterflood project
under the provisions of Rule 701E, in the Baish Pool Area,
Section 21, Township 17 South, Range 32 East, NMPM, Lea County,
New Mexico, and in support thereof Applicant would show:

1. That Continental Oil Company is owner and operator
of the Baish "A" Lease which comprises the following
acreage:

Township 17 South, Range 32 East, NMPM

Section 21: N/2, SW/4, N/2 SE/4


Section 22: W/2 NW/4

2. That applicant proposes to inject water into
wells located in the NE/4 of Section 21 which
are shown on the attached plat marked Exhibit
No. 1.
3. That Applicant's Baish "A" Nos. 17 and 18 will
be converted to injection, and two new injection
wells will be drilled to form a 40 acre five-spot
pattern.
4. That production in the Baish Pool is at an
advanced stage of depletion and recovery by primary
methods is at or near the economic limit.
5. That Engineering investigations indicate that
waterflooding in the Baish Pool will be physically
and economically feasible.

6. That all injection wells are or will be completed in such a manner as to confine all injected water to the Baish (Yates sand) Pool horizon. The present and/or proposed status of all injection wells is shown on the schematic casing diagrams attached hereto and marked Exhibit II.
7. That Applicant proposes to inject approximately 450 barrels of water per day into the 4 proposed injection wells. Said water will be obtained from the Continental Oil Company Baish "B" No. 12 well located in Unit L of Section 22, Township 17 South, Range 32 East, which is a Devonian oil producer.
8. That the said flood will be installed and operated in conformance with Rule 701E.
9. That waterflooding the Baish Pool reservoir will result in the recovery of hydrocarbons which would not be recovered by primary methods and is therefore in the interest of conservation and prevention of waste.

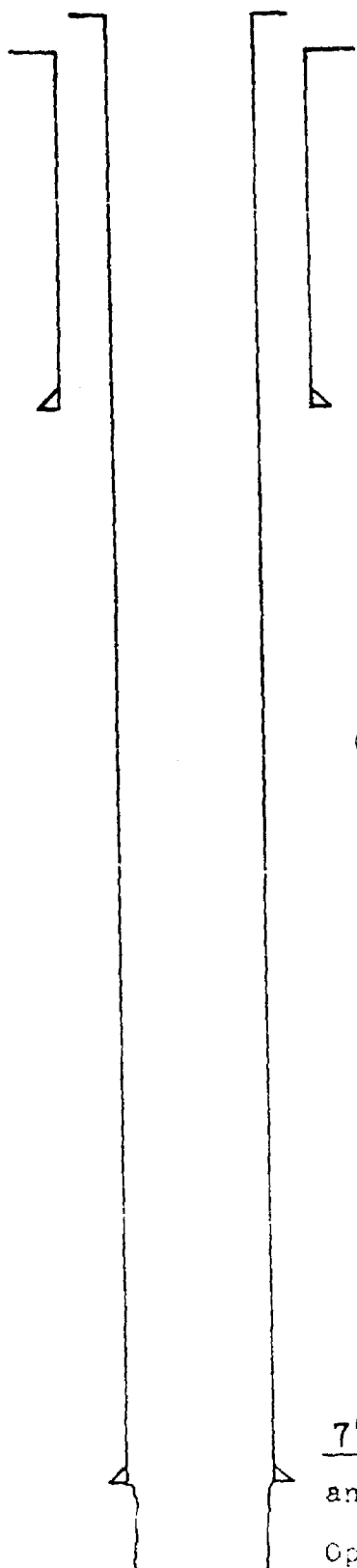
Wherefore, Applicant respectfully requests that this matter be set for hearing before the Commission's duly appointed examiner and that upon hearing an order be entered granting permission to install and operate a waterflood in the Baish Pool as described herein above.

CONTINENTAL OIL COMPANY


Asst. Division Superintendent
Production Department

Case 2892

BAISH "A" NO. 17



10 3/4" O.D. surface casing set
at 69' and cemented to
surface with 50 sacks cement

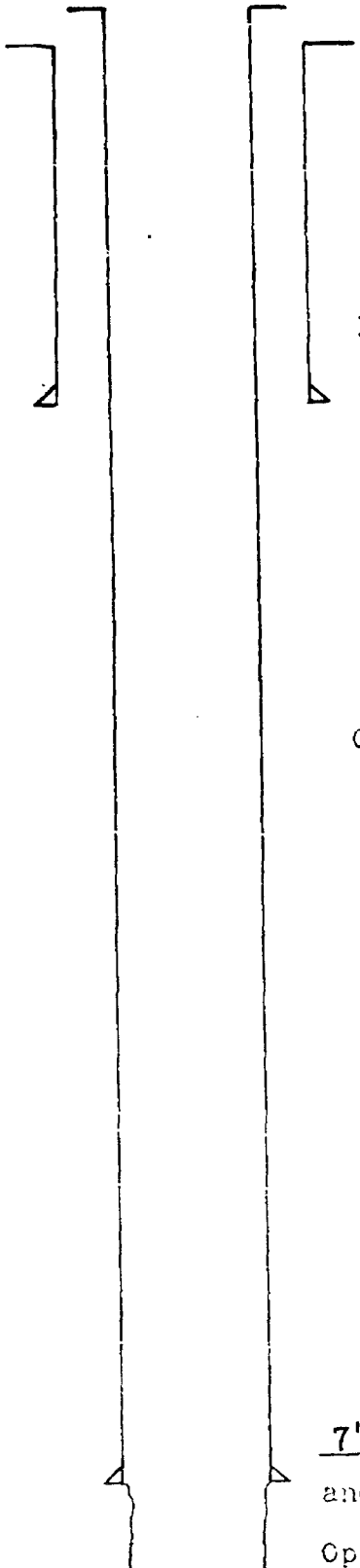
Cement Top - 970' (By Temperature Survey
or-Calculated)

7" O.D. production casing set @ 2302'
and cemented with 175 sacks cement
Open Hole 2302 ' to 2380 ' .

TD - 2510 ' .

Page 2892

BAISH "A" NO. 18



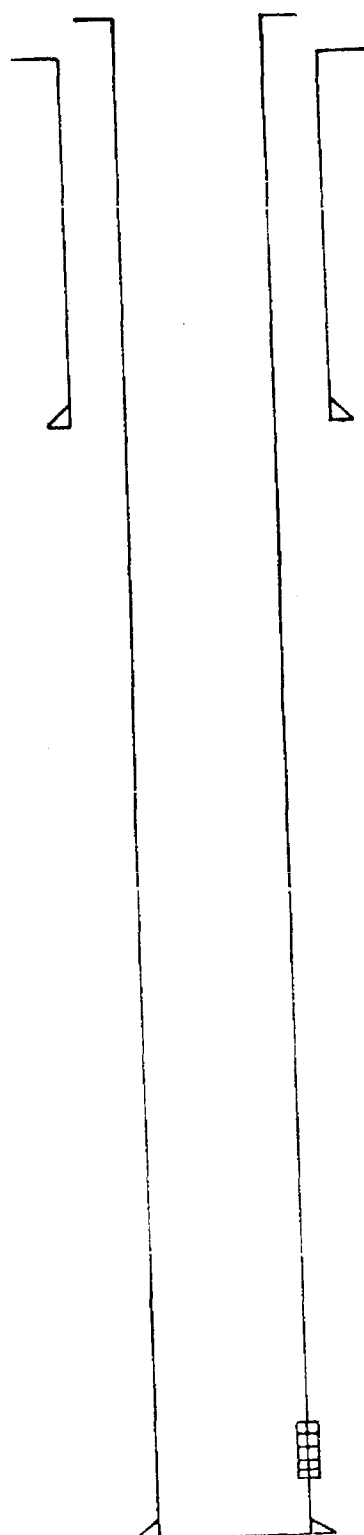
10 3/4" O.D. surface casing set
at 68' and cemented to
surface with 60 sacks cement

Cement Top - 320' (By Temperature Survey
~~or Calculated~~)

7" O.D. production casing set @ 2299'
and cemented with 250 sacks cement
Open Hole 2299 ' to 2387 '

TD - 2387 '

BAISH "A" NO. 10 (PROPOSED WELL)



7" O.D. surface casing set
at 250' and cemented to
surface with 100 sacks cement

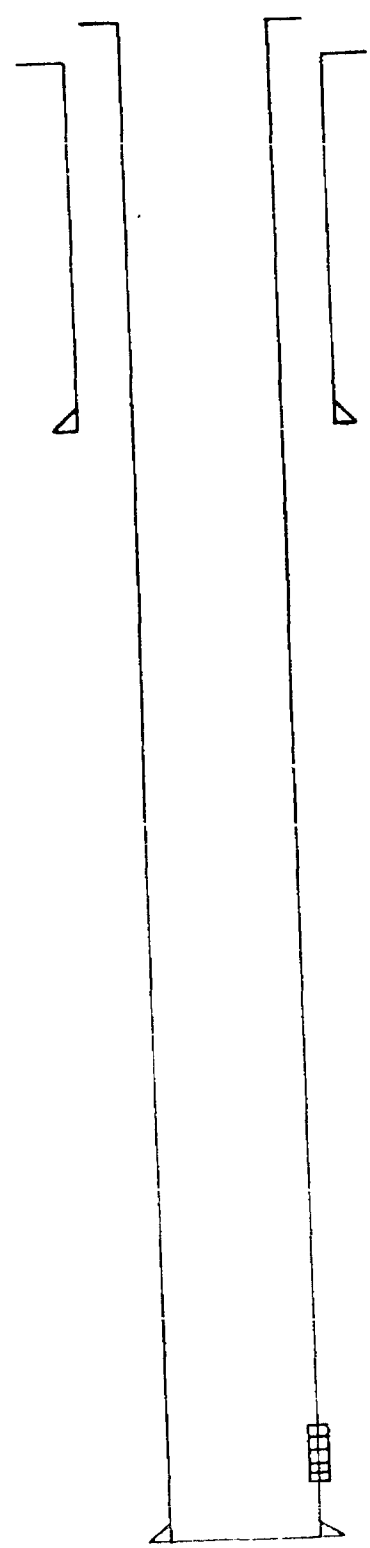
Cement Top - 300' (~~By Temperature Survey~~
or Calculated)

Perforations _____' to _____'
2 7/8" O.D. production casing set @ 2400'
and cemented with 360 sacks cement

TD and/or PBD 2400'

2892

BAISH "A" NO. 11 (PROPOSED WELL)



7" O.D. surface casing set
at 250' and cemented to
surface with 100 sacks cement

Cement Top - 300' (By Temperature Survey -
or Calculated)

Perforations _____ ' to _____ '
2 7/8" O.D. production casing set @ 2400'
and cemented with 360 sacks cement

TD and/or PBD 2400'

~~BAISON "A" NO. 10~~ (PROPOSED WELL)

Located Unit A Sec 21-17-32

110 N + E.

7" O.D. surface casing set
at 250' and cemented to
surface with 100 sacks cement

Cement Top - ²300' (By Temperature Survey
or Calculated)

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

April EXHIBIT NO. 2-a

CASE NO. 2892

Perforations _____ to _____

2 7/8" O.D. production casing set @ 2400'

and cemented with 360 sacks cement

TD and/or PBD 2400'

LX Wa

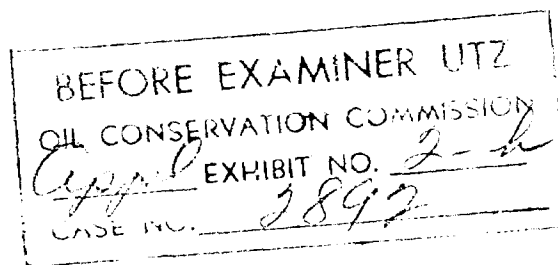
~~BAISH "A" NO. 11~~ (PROPOSED WELL)

Located Unit B Sec. 21-17-32

177

7" O.D. surface casing set
at 250' and cemented to
surface with 100 sacks cement

Cement Top - 200' (By Temperature Survey
or Calculated)



Perforations _____ to _____

2 7/8" O.D. production casing set @ 2400'

and cemented with 360 sacks cement

TD and/or PBD 2400'

LX 11-1

BAISH "A" NO. 17

2310 M
1310 E

21-17 3L

10 3/4" O.D. surface casing set
at 69' and cemented to
surface with 50 sacks cement

Cement Top - 970' (By Temperature Survey
or-Galvanized)

| | |
|-----------------------------|------|
| BEFORE EXAMINER UTZ | |
| OIL CONSERVATION COMMISSION | |
| EXHIBIT NO. | 2-C |
| CASE NO. | 2892 |

7" O.D. production casing set @ 2302'
and cemented with 175 sacks cement
Open Hole 2302' to 2380'

BAISH "A" NO. 18

231 N
100

2115 12

10 3/4" O.D. surface casing set
at 68' and cemented to
surface with 60 sacks cement

Cement Top - 320' (By Temperature Survey
~~on Calculated~~)

BEFORE EXAMINER USE

THE CORPORATION COMMISSION

April 1919 No. 2 A

USE NO. 2892

7" O.D. production casing set @ 2299'
and cemented with 250 sacks cement
Open Hole 2299 ' to 2387 '

TD 2387 '

EX-114

DRAFT

JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 2892

Order No. R- 2566

APPLICATION OF CONTINENTAL OIL
COMPANY FOR A WATERFLOOD PROJ-
ECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 4, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

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

FINDS:

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

(2) That the applicant, Continental Oil Company, seeks authority to institute a waterflood project in the Baish Pool ~~Lea County, New Mexico~~, by the injection of water into the Yates formation through four wells ~~located~~ in the NE/4 of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

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

(4) That the proposed waterflood project is in the interest of conservation and should result in recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rule 701 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to institute a waterflood project in the Baish Pool, ~~Lea County, New Mexico~~, by the injection of water into the Yates formation through the following-described four wells ~~located~~ in the NE/4 of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico:

- 1) Baish "A" well no 10 to be located 990 feet from the North line and 990 feet from the East line.
- 2) Baish "A" well no 11 to be located 990 feet from the North line and 2310 feet from the East line.
- 3) Baish "A" well no 4 located 2310 feet from the North line and 2310 feet from the East line.
- 4) Baish "A" well no 3 located 2310 feet from the North line and 990 feet from the East line.

(2) That the subject waterflood project shall be governed by the provisions of Rule 701 of the Commission Rules and Regulations, including the allowable provisions thereof, and including the provisions with respect to expansion of the waterflood project.

(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.

Case 2192

Baish Pond Waterflood

Proposed Producing Well

Baish "A" Well No. 9 (to be drilled)
Located 1650' FN&EL Sec. 21-17S-32E

Proposed Injection Wells

- 1 Baish "A" Well No. 10 (to be drilled)
Located 990' FN&EL Sec. 21-17S-32E
- 2 Baish "A" Well No. 11 (to be drilled)
Located 990' FN&EL 2310' FEL Sec. 21-17S-32E
- 3 Baish "A" Well No. 4 (formerly no 17)
Located 2310' FN&EL Sec. 21-17S-32E
(Authority for water injection granted
in Order R-363 of Sept. 17, 1953)
- 4 Baish "A" Well No. 3 (formerly no 18)
Located 2310' FN&EL and 990' FEL Sec 21-17S-32E

Water Source Well

Baish "B" Well No. 5 (formerly no 12)
Located 1980' FSL and 990' FWL Sec. 22-17S-32E

Case. 2892

Heard 9-4-63

Rec. 9-9-63

1. Grant Continental a waterflood project to be known as the Baish waterflood in the Baish Oil Pool
2. Grant authority to inject water into the Yates formation thru the four wells listed on the attached sheet.
2. The producing well is a std. 330 location so no approval is necessary.
3. Flood shall be operated in accordance with Rule 701

Thos A. Pitt

No. 25-63

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 4, 1963

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

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

- CASE 2890:** Application of S. P. Yates for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill and complete an oil well in the Seven Rivers formation at an unorthodox location 1435 feet from the North line and 1155 feet from the East line of Section 12, Township 20 South, Range 26 East, Eddy County, New Mexico.
- CASE 2891:** Application of Continental Oil Company for the creation of a new oil pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool comprising portions of Sections 30 and 31, Township 26 South, Range 32 East, Lea County, New Mexico, said pool to be designated the Battleaxe Delaware Pool.
- CASE 2892:** 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 in the Baish Pool, Lea County, New Mexico, by the injection of water into the Yates formation through four wells located in the NE/4 of Section 21, Township 17 South, Range 32 East.
- CASE 2893:** Application of Murphy H. Baxter for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Indian Hills Upper Pennsylvanian Gas Pool underlying all of Section 32, Township 21 South, Range 24 East, Eddy County, New Mexico.
- CASE 2894:** Application of Murphy H. Baxter for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill his Marathon State Well No. 1 at an unorthodox Indian Hills Upper Pennsylvanian location 864 feet from the North line and 473 feet from the West line of Section 32, Township 21 South, Range 24 East, Eddy County, New Mexico.
- CASE 2895:** Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its J. B. McGhee Well No. 1, located in Unit 1 of Section 31, Township 24 South, Range 38 East, Lea County, New Mexico, to produce oil from the Dollarhide-Drinkard and Dollarhide-Devonian Pools through parallel strings of tubing.
- CASE 2896:** Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple com-

-2-
No. 25-63

pletion (tubingless) of its L. R. Kershaw Well No. 8, located in Unit D of Section 13, Township 20 South, Range 37 East, Lea County, New Mexico, to produce gas from the Eumont Gas Pool and oil from the Skaggs-Glorieta and East Weir-Blinbry Pools through parallel strings of tubing cemented in a common well bore.

CASE 2884: (Continued from August 21, 1963 examiner hearing)
Application of Continental Oil Company for a pressure maintenance project, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project by the injection of water into the Dakota formation through its Table Mesa Well No. 25, located in Unit K, Section 34, Township 28 North, Range 17 West, Table Mesa Pool, San Juan County, New Mexico.

CASE 2888: (Continued from the August 21, 1963 examiner hearing)
Application of the British American Oil Producing Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Jalmat Deep Unit Area comprising 10,568.81 acres of State land in Townships 21 and 22 South, Range 35 East, Lea County, New Mexico.

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. 2892
Order No. R-2566

APPLICATION OF CONTINENTAL OIL
COMPANY FOR A WATERFLOOD PROJ-
ECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 4, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 11th day of September, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Continental Oil Company, seeks authority to institute a waterflood project in the Baish Pool by the injection of water into the Yates formation through four wells in the NE/4 of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

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

(4) That the proposed waterflood project is in the interest of conservation and should result in recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rule 701 of the Commission Rules and Regulations.

-2-

CASE No. 2892
Order No. R-2566

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to institute a waterflood project in the Baish Pool by the injection of water into the Yates formation through the following-described four wells in the NE/4 of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico:

Baish "A" Well No. 10 to be located 990 feet from the North line and 990 feet from the East line

Baish "A" Well No. 11 to be located 990 feet from the North line and 2310 feet from the East line

Baish "A" Well No. 4 located 2310 feet from the North line and 2310 feet from the East line

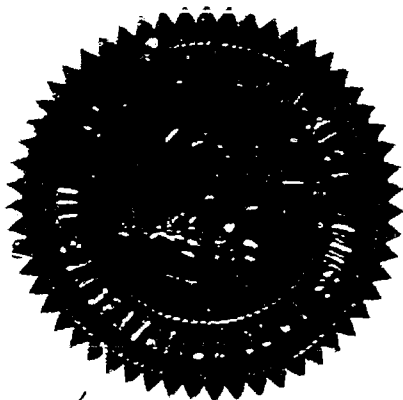
Baish "A" Well No. 3 located 2310 feet from the North line and 990 feet from the East line

(2) That the subject waterflood project shall be governed by the provisions of Rule 701 of the Commission Rules and Regulations, including the allowable provisions thereof, and including the provisions with respect to expansion of the waterflood project.

(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

Jack M. Campbell
JACK M. CAMPBELL, Chairman

E. S. Walker
E. S. WALKER, Member

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

esr/

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

September 12, 1963

**Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1713
Santa Fe, New Mexico**

Dear Sir:

Enclosed herewith is Commission Order No. R-2566, entered in Case No. 2892, approving the Continental Baish Waterflood Project.

According to our calculations, 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 307 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 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

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

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/ir

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

Oil Conservation Commission
Post Office Box 1930
Hobbs, New Mexico

Case File No. 2892

C
O
P
Y

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

Mr. Jason Kellahin - etc

_____, 19____

~~Gentlemen:~~

Enclosed herewith is Commission Order No. R- 2566, entered in Case No. 2892, approving the Water Flood Project.

According to our calculations, 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 300 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 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



CONTINENTAL OIL COMPANY

P. O. BOX 460
HOBBS, NEW MEXICO 88240

1001 NORTH TURNER
TELEPHONE: 393-4141

PRODUCTION DEPARTMENT
HOBBS DISTRICT
L. P. THOMPSON
District Manager
G. C. JAMIESON
Assistant District Manager

August 1, 1967

New Mexico Oil Conservation Commission
Box 2077
Santa Fe, New Mexico

Attention of Mr. A. L. Porter, Jr.,
Secretary-Director

Gentlemen:

Re: Baish Yates Waterflood
Project

Order No. R-2566, arising out of Case No. 2892,
authorized a waterflood project in the Yates formation in
the Baish Pool, Lea County, New Mexico. You are hereby
notified that Continental Oil Company has abandoned the
waterflood project and has ceased injection of water, as
of this date.

Appropriate forms will be furnished, showing
change of status of the wells involved.

Yours very truly,

LPT-MEH
CC: New Mexico Oil Conservation Commission
Hobbs, New Mexico

67 AUG 3 PM 2 3

PIONEERING IN PETROLEUM PROGRESS SINCE 1875

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

EXAMINER HEARING

IN THE MATTER OF:

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 in the Baish Pool, Lea
County, New Mexico, by the injection of
water into the Yates formation through
four wells located in the NE/4 of
Section 21, Township 17 South, Range
32 East.

Case No. 2892

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

September 4, 1963.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

SANTA FE, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

MR. UTZ: We will take up next Case 2892.

MR. DURRETT: Application of Continental Oil Company
for a waterflood project, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa
Fe, New Mexico, representing the Applicant. We have one witness.
May the record show that he has been sworn?

MR. UTZ: Yes, sir, the record will so show.

(Whereupon, Applicant's Exhibits
1, 2a, b, c, & d & 3 were
marked for identification.)

JAMES P. BOYLAN

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A James P. Boylan.

Q Are you the same Mr. Boylan who testified and qualified
as an expert in Case 2891?

A Yes, sir, I am.

Q Are you familiar with the application of Continental
Oil Company in Case No. 2892?

A Yes, sir, based on two years of experience working with
this area.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

Q That is the Baish Pool area?

A That is correct.

Q Now, referring to what has been marked as Exhibit No. 1, Mr. Boylan, would you identify that exhibit and discuss the information shown on it?

A Exhibit 1 is a lease plat of the Baish Pool and surrounding area. The boundaries of the Baish Pool as defined by Orders B-50 and R-842 are outlined in red. Further, the producing formation is indicated for all wells producing within a two-mile radius of the four proposed Baish Pool water injection wells.

The Continental Oil Company Baish A No. 5 well located 1980 feet from the north and west lines of Section 21, Township 17 South, Range 32 East was drilled and completed December 8, 1935 as the discovery well in the Baish Yates Pool. This well was drilled to a total depth of 2370 feet and completed for an initial potential of 100 barrels of oil per day. Since this time nine additional wells have been completed in the Baish Yates Pool. However, four of these wells have subsequently been deepened to the Maljamar, Grayburg, San Andres pay and one has been shut-in, leaving five producing wells.

The only well producing from the Baish Pool that is not on Continental Baish A lease in Section 21 is the E. C. Donahoe



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

New Mexico State No. 1, formerly Roy H. Smith Gulf State No. 1, located in Unit L of Section 16, Township 17 South, Range 32 East. On Exhibit 1 this well is shown by the former ownership.

Q Which is Roy H. Smith, is that correct?

A That is correct.

Q What is the current daily average production for Continental wells in the Baish Yates Pool?

A During the month of July these four wells averaged 15.5 barrels of oil per day and 28.6 million cubic feet of gas per day for an average gas-oil ratio of 2120 cubic feet per barrel. The maximum daily average production from any one well during July, 1963 was five barrels of oil per day.

Q In your opinion is this reservoir in the advanced stage of depletion?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 3, will you identify that exhibit and discuss the information shown on it?

A Exhibit No. 3 represents the performance of the Baish Yates Pool underlying Continental acreage. In addition to the monthly oil and water production, the periods of gas and water injection are shown. As is shown on the oil production curve, the monthly oil production has declined to 452 barrels of oil per



month in June of 1963.

MR. PORTER: It looks like it might have been in a state of depletion when it was discovered.

MR. KELLAHIN: It could have been.

Q Would you explain what is represented by the intervals indicated as gas injection period and water injection period?

A From January, 1951 to April, 1952, 16,792 MCF of gas was injected into the Baish Yates Pool through the Baish A No. 7. From October, 1953 to October, 1954, 18,332 barrels of water were injected into the Baish Yates Pool through the Baish A No. 17. The Buffalo Oil Company owned and operated this property during these periods.

Q In your opinion did the reservoir respond to either gas or water injection at that time?

A In my opinion, no. In both instances the injected volumes were insufficient to effect any pressure increase or show any response to injection.

Q What is the cumulative production from the wells that are located in Section 21?

A The cumulative production from the Baish Yates Pool wells located in Section 21 as of July 1, 1963 was 483,574 barrels of oil, negligible water, and an estimated 900 million cubic feet of gas.



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Q What is the API gravity of the oil produced from the Baish Yates Pool?

A The gravity reported to the New Mexico Oil Conservation Commission ranges from 37 to 39 degrees API.

Q In your opinion is waterflooding of the Yates sand in this area feasible?

A Yes, sir. While reservoir data is limited, the rule of thumb of a barrel of secondary oil for every barrel of primary oil recovered appears to have merit in this instance. Data to be obtained while drilling the development wells will be used to make a more thorough evaluation of this project. At the present only the central portion of the pool containing approximately 910 acre feet is under consideration.

Q Will waterflooding tend to prevent waste and conserve the natural resources?

A Yes, sir. Significant quantities of oil will be recovered that could not otherwise be produced.

Q What is the predicted life of this waterflood project?

Approximately nine and one-half years.

Q What type of injection pattern do you propose to use?

A A central 40-acre five spot will be used as indicated on Exhibit No. 1. This will involve drilling two injection wells located in Units A and B, one producing well located in Unit G,



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and converting one producing well located in Unit H to an injection well.

Well No. 17, located in Unit G, was used as an injection well in 1954 and will be so used in this project. Authority for water injection into Well No. 17 was granted by Order R-363 of September 17, 1953.

Q Water injection has been discontinued in that well at the present though, is that correct?

A That is correct.

Q Is this considered a pilot flood?

A The geometric pattern conforms to a five spot pilot. However, we do not consider this a pilot operation. This pattern is expected to first flood out the center five spot producing well and then flood the outlying wells to the south. However, additional five spots may be desirable if performance data should justify them.

Q Will all the ground water sources be protected from contamination by this program?

A Yes, sir. Schematics of the present and proposed casing programs were submitted by the Applicant as Exhibit No. 2. It should be pointed out that in this area there are no fresh water zones present. The Oglala is absent and the Santa Rosa produces brackish water.



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I should also like to point out that the schematic diagrams have been corrected as follows: Exhibit No. 2-a, the cement top behind the production string will be 200 feet rather than 300 feet. This will put cement behind the pipe from the surface to total depth. The same change was made on Exhibit 2-b; on Exhibit 2-c and 2-d, which are schematic diagrams for Baish A-17 and 18 respectively, we propose to equip these wells with tubing and packers as shown.

MR. IRBY: May I interrupt here?

MR. UTZ: If you care to.

MR. IRBY: Would you please identify the exhibits with the wells? Mine don't conform to your statements.

MR. UTZ: I was having a little trouble on that line too.

A Exhibit 2-a will be an injection well located in Unit A, Section 21, 17, 32.

MR. IRBY: My exhibit doesn't have any description on it. Would you give me the well designation on Exhibit 2-a, then each successive exhibit?

MR. KELLAHIN: May I interrupt here a moment? Mr. Irby, the well designations are being changed and that is one reason we used this system of identifying the wells by location rather than by well number. To avoid confusion in the future,



those designations have not been filed with the Commission and they will be very shortly. If we use one designation here today it will be a different designation next week. That was the reason for it giving it by location rather than by number.

MR. PORTER: Excuse me, if I may interrupt for the moment. You are giving the location as Unit A?

MR. KELLAHIN: That's right.

MR. PORTER: And you are not tying it down to any particular footage location?

MR. KELLAHIN: I suppose we could.

A It will be in the center of the Southwest Quarter of Unit A.

MR. PORTER: It will be the center?

MR. UTZ: Center of Unit A then?

MR. PORTER: No.

A No.

MR. PORTER: If you could give us the location by the footage measurement from the section line.

A The location of the injection well in Unit A will be approximately 990 from the north and east lines of Section 21, Township 17 South, Range 32 East.

MR. PORTER: Will you do that for the other exhibits?

MR. IRBY: That is Exhibit 2?



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A Yes, sir.

MR. PORTER: Now Unit B.

A The injection well to be located in Unit B will be located approximately 990 from the north line and 2310 from the east line of Section 21, Township 17 South, Range 32 East.

MR. PORTER: Yes, sir. Now, on your Baish A No. 17?

A The location of Baish A No. 17 is as shown on Exhibit No. 1.

MR. PORTER: And the same thing for No. 18?

A Yes, sir.

MR. UTZ: Wait a minute. As shown on Exhibit No. 1. What is that location, do you have it?

A The location of Baish A No. 17 is approximately 2310 from the north line and east line of Section 21, Township 17 South, Range 32 East.

MR. UTZ: 2310 from the north and east?

A Yes, sir.

MR. UTZ: Is that what is shown on Exhibit No. 1 as Well No. 18?

A No, sir.

MR. PORTER: 17.

A No, sir, I'm locating No. 17.

MR. UTZ: All right. That's the one that has been an



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injection well all along and you intend to use it in the same manner now?

A Yes, sir. The location of Baish A No. 8 is approximately 2310 from the north line and 990 from the east line of Section 21, Township 17 South, Range 32 East.

MR. IRBY: That was No. 8?

MR. PORTER: 18. I believe you did say 8.

MR. UTZ: Does that get your locations straightened out?

MR. IRBY: Yes, it gets the location straightened out, but it doesn't straighten out the exhibits that I have.

MR. UTZ: You mean as to the well name?

MR. IRBY: Yes, sir. That's the only designation by which I can identify these on the exhibit.

MR. UTZ: Exhibit No. 2-a, just scratch out the well name and use the location. The well is not yet named. Exhibit 2-b, the same. Exhibit No. 2-c, use the location that he gave you with the well number, the Baish A No. 17 --

MR. IRBY: The one which is marked 10 is now 17, is that right?

MR. UTZ: No. The one which was marked 10 is the one that is 990 from the northeast in Unit A. That Exhibit 2-a.

MR. IRBY: Wait a minute, according to mine it's 2-c.



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MR. PORTER: You must have a different set of exhibits.
Off the record.

(Whereupon, a discussion was held off the record.)

MR. PORTER: Back on the record.

Q (By Mr. Kellahin) Mr. Boylan, having consulted with the State Engineer, have you consulted with him in regard to this casing program?

A Yes, sir. The casing programs as shown on Exhibits 2-a, b, c and d, as corrected, were satisfactory to the State Engineer's representative. It is suggested we also proposed to load the annular space above the packer with non-corrosive fluid.

MR. UTZ: You don't intend to use a packer in the first two wells?

A The first two wells will be slim hole wells with 2-7/8" O.D. injection casing.

MR. UTZ: The cement coming back up inside the surface casing?

A That is correct.

Q (By Mr. Kellahin) What facilities will be provided for quantity and pressure measurements of injected water?

A Flow meters and pressure gauges will be installed in order to measure the quantities for each well.



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Q What injection rate do you anticipate?

A A maximum water injection rate of 13,500 barrels per month, or 450 barrels of water per day into the four injection wells is anticipated.

Q What is the source of injection water?

A Produced water from the Baish B No. 12 "A" Devonian oil well will be used. Laboratory tests have indicated fresh water to be detrimental to the permeability of the Yates formation. It is for this reason and for convenience that salt water is preferred.

Q Is there a sufficient amount of salt water available for the injection program?

A The Baish A-12 currently produces approximately 1500 barrels of water per day, which will be sufficient for the water injection requirements.

Q What will be done with the produced water from the project?

A It will be reinjected into the Yates formation.

Q What do you anticipate will be the total water requirement?

A Approximately 1,250,000 barrels of water will be injected for this flood.

Q You propose to operate this flood under the provision



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of Rule 701, do you not?

A Yes, that is correct.

Q Under Rule 701-E, what would be the maximum daily allowable for the project?

A The maximum daily allowable for the project area is anticipated to be 42 barrels of oil per day for each 40-acre proration unit with a Yates well thereon, plus one-third of 42 barrels of oil per day for each additional Yates well on a 40-acre proration unit.

The initial project area will include seven 40-acre proration units containing eight total Yates sand wells, for an estimated maximum allowable of 308 barrels of oil per day.

Q Were Exhibits 1 through 3 inclusive prepared by you or under your supervision?

A Yes, sir, they were.

MR. KELLAHIN: At this time I would like to offer the exhibits in evidence.

MR. UTZ: That was Exhibit 1 and 3 and four parts of Exhibit 2?

MR. KELLAHIN: That's right.

MR. UTZ: They will be entered into the record without objection.



(Whereupon, Applicant's Exhibits
1, 2-a, b, c & d and 3 were
offered and admitted in evidence.)

MR. KELLAHIN: That completes the direct examination of
the witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Now, your source well was your Devonian. Did you call
it the A or B-12?

A The water supply well will be the Baish B-12. I may
have called it the Baish A-12, but it is Baish B-12.

Q I think you did at one point. That water will be
from which formation again?

A The Devonian.

Q It is salt water?

A Yes, sir, that is correct.

Q Have you run any recent tests on the casing on the
No. 17 injection well?

A No, sir, we haven't.

Q Do you have any idea what condition that casing is in?

A I can't say for a fact, but it possibly could need
repair.

Q Do you intend to test the casing and repair it, squeeze
it or anything?

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A If that would be necessary to contain the non-corrosive fluid in the annular space we would, yes, sir.

Q Is this tubing that you are going to install in these two old wells internally plastic coated?

A No, sir.

Q Or protected in any way?

A No, we anticipate a corrosion inhibition program for the injection water.

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

MR. DURRETT: Yes, sir, I have a question or two.

BY MR. DURRETT:

Q I believe you testified that the average production from these wells was somewhere in the vicinity of five barrels of oil per day?

A Yes, sir, that is correct.

Q You would consider them to be stripper wells?

A Yes, sir.

Q Would you describe to me possibly by unit the two wells that are going to have the annular space above the packer filled with the non-corrosive fluid, I missed that?

A The two water injection wells located in Units G and H of Section 21, Township 17 South, Range 32 East, will be equipped with tubing and packers and will have the annular space filled



with non-corrosive fluid.

Q One other question. I didn't get the location of the producer here. Could you give me a footage location on that?

A The location of the proposed central producing well will be approximately 1650 from the north and east lines of Section 21, Township 17 South, Range 32 East.

Q 1650 from the north and 1650 from the east?

A Yes, sir.

Q Which of these wells are presently drilled? Is the well in Unit A drilled now?

A No, sir.

Q How about the well in Unit B?

A No, sir.

Q The well in Unit G is drilled, is that correct.

A The proposed injection well is drilled. The proposed producing well is not drilled.

Q The producer is not drilled?

A That is correct.

Q The injection well on Unit H, is it drilled to date?

A It is drilled and is currently on production.

MR. DURRETT: Thank you. I think that's all.

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

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(Witness excused.)

MR. UTZ: Are there any other statements to be made in this case? The case will be taken under advisement.

MR. IRBY: The State Engineer offers no objection to the use of salt water in this case.

MR. DURRETT: Mr. Kellahin, before we go off the record, would you furnish the Commission with the descriptive names of the wells as soon as they have been determined so we can enter them in the order?

MR. KELLAHIN: They will be furnished, yes, sir.

MR. UTZ: How soon do you think you can determine that?

MR. BOYLAN: I believe that we could probably give it to them now.

MR. KELLAHIN: We can give them to you now, the reason we didn't feel like using them at the present time, if he used the present designation it would conflict with the wells in the Maljamar that are now being changed, which cause no end of confusion. We can give them to you at this time.

MR. UTZ: Why don't you give us a list of those designations at your convenience sometime today or mail them in, either way.

MR. KELLAHIN: Mail them in.

MR. UTZ: We will take the case under advisement.



STATE OF NEW MEXICO)
) SS
 COUNTY OF BERNALILLO)

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 9th day of September, 1963.

Ada Dearnley
 Notary Public-Court Reporter

My commission expires:
 June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2882, heard by me on Sept 4, 1963.
[Signature]
 New Mexico Oil Conservation Commission

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