

CASE 3955: Application of YATES  
Drilling Co. for salt water  
disposal, Roosevelt County, N.M.

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Case Number

3955

Application

Transcripts.

Small Exhibits

ETC.

MR. UTZ: Case 3955.

MR. HATCH: Application of Yates Drilling Company  
for salt water disposal, Roosevelt County, New Mexico.

MR. LOSEE: A. J. Losee, Artesia, New Mexico, Mr.  
Examiner, representing the applicant. I have one witness,  
Mr. White.

(Witness sworn)

(Applicant's Exhibits 1 through 5  
marked for identification.)

MR. UTZ: Are there other appearances? You may  
proceed.

\* \* \* \* \*

PAUL G. WHITE, called as a witness, having been first  
duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q Will you state your name, please?

A Paul G. White.

Q Where do you live, Mr. White?

A Artesia, New Mexico.

Q What is your occupation?

A Engineer for Yates Drilling Company, and Production  
Superintendent for Yates Petroleum Corporation.

Q Have you previously testified as an expert before

this Commission and had your qualifications accepted?

A Yes, sir, I have.

Q Would you please explain the nature of this application in Case No. 3955?

A We seek approval to inject produced water from the Bough C. Pennsylvanian into the Lillie M. Yates No. 4 well, as located on the plat.

Q You are referring to Exhibit 1, now, Mr. White, which is the plat showing the location of this well. What other information is shown on the plat?

A The other offset operators within a two-mile limit as required by Rule 701 B.

Q The location of the offset wells; Yates Drilling Company, as I understand it, operates the Lillie M. Yates Lease, comprising the west half of Section 31 in Township 8 South, Range 37, East?

A Yes, sir.

Q From what formations are the wells producing on your lease?

A From the Bough C.

Q What about the wells in the surrounding area, what formations?

A Most of the wells produce either from the Bough C

or the San Andres.

Q Please refer to what has been marked as Exhibit 2, being the diagrammatic sketch of the salt water disposal well, and explain that is shown on this sketch.

A We show the well mechanics, surface pipe, cement circulated on the surface pipe, intermediate pipe 8 and 5/8ths at 4146, cement circulated 1150 sacks, the production string, 4 and 1/2-inch casing at 9719, with a calculated cement top of 7700. We also show the well mechanics as set up for salt water disposal with the packer and 2 and 3/8ths tubing. The diagrammatic sketch also shows the Bough C perforations 9640 to 9660.

Q Please refer to what has been marked as Exhibit No. 3, being the log of the fresh water zone, or log of this well, can you point out to the Examiner whether there was any fresh water encountered in the drilling of the well?

A No, sir, I cannot. To my knowledge, there was no substantial amount of fresh water in the well.

Q Does your log, submitted as Exhibit 3, point out the zones into which you propose to inject?

A Yes, sir, the Bough C zone located 9640 to 9660.

Q Did this well produce any oil out of the Bough C zone?

A Yes, sir, it has. It has produced a cumulative production of 147,000 barrels of oil.

Q Is it presently on production?

A No, sir, it isn't.

Q The well has been temporarily abandoned?

A Yes, sir, for a period of at least two years.

Q Now, from what oil zones will you obtain this produced water to be injected into this well?

A From the same zone as the injection well, from the Bough C.

Q So that the produced water is compatible with the water in the injection zone?

A Yes, sir.

Q What volumes of water do you propose to inject into this well?

A At the present time 15 barrels of water per day.


Q Will the water gravity into the zone, or will you have to put it under pressure?

A The water will gravity into the zone.

Q Do you think that will be true for the life of the disposal well in your production in the area?

A Yes, sir.

Q Please refer to what has been marked as Exhibit 4



which is your data sheet on the well. Is that the information to which you just testified, reduced into writing?

A Yes, sir, that's correct.

Q Do you have an opinion as to whether the disposal of the produced water in the manner proposed in this application, creates any danger to oil, gas or fresh water reservoirs?

A No, sir.

Q It does not?

A No, sir, it does not.

Q Were Exhibits 1 through 4 prepared by you or under your direction?

A Yes.

MR. LOSEE: Mr. Examiner, we move to introduce Exhibits 1 through 4.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record of this case.

(Whereupon, Exhibits 1 through 4 offered and admitted in evidence.)

MR. LOSEE: I have no further questions.

CROSS EXAMINATION

BY MR. UTZ:

Q What zones will the produced water come from in this area?

A Mr. Examiner, it will come from the Bough C formation in the other wells on the lease.

Q And that is the Lillie Yates Lease?

A Yes, sir, that is correct.

Q Are those three wells shown on your Exhibit No. 1 the wells that are completed in the Bough C?

A Yes, sir, and they are all producing except the No. 2 Well, which is temporarily abandoned, the 1 and 3 are producing.

Q Now, your Exhibit No. 2 doesn't show whether the tubing will be plastic-coated or not?

A No, sir, I do not show that for reasons of gravity flow into the zone; however, if the Commission requires this, we will be happy to comply with this.

Q Did you say whether you would load the annulus with inhibited fluid with a gauge at the surface?

A No, sir, I did not testify to that effect. We felt that we could leave the gauge open on the surface for inspection and be able to delete loading the annulus with inhibitor. There again, if the Commission requires this for our salt water disposal installation, we will comply.

Q Well, it really isn't very expensive to load the annulus, is it?



A No, sir.

Q Is there any production in the area between the 8 and 5/8ths casing shoe and the top of the cement on the 4 and 1/2-inch, that 3550 foot space that is open behind the 4 and 1/2?

A Not to my knowledge, Mr. Examiner, in the immediate area, no, sir.

MR. UTZ: Any other questions of the witness?

MR. LOSEE: I have one other question.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q Is the produced water from this Bough C of a particularly corrosive nature?

A No, sir, it is not.

Q Is that the reason that you actually set up your sketch to not plastic-coat your tubing?

A That's true. We have 9600 feet of tubing which would be quite expensive to plastic-coat and with the gravity flow and lack of corrosive nature of the Bough C water, we thought that we could install this with safety.

RECROSS EXAMINATION

BY MR. UTZ:

Q Do you have an analysis of the water?

A No, sir, not with me.

Q Do you know what the salinity is?

A No, sir, I do not, I can provide the Commission with an analysis of the water.

Q Well, if you do have it, I wish you would get that to us right away because time is of the essence.

A Yes, sir.

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

(Witness excused.)

MR. UTZ: The case will be taken under advisement.

I N D E X

WITNESS	PAGE
<u>PAUL G. WHITE</u>	
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EXHIBITS	MARKED
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	OFFERED AND ADMITTED
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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 2nd day of December, 1968.

I do hereby certify that the ADA DEARNLEY  
 a complete record of the proceedings in  
 the Examiner hearing of Case No. 3955  
 heard by me on 11-20-68 19  
Theresa J. [Signature] Examiner  
 New Mexico Oil Conservation Commission

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON S. HAYS  
MEMBER

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

P. O. BOX 2088  
SANTA FE

November 26, 1968

Mr. A. J. Losee  
Attorney at Law  
Post Office Box 239  
Artesia, New Mexico 88210

Re: Case No. 3955  
Order No. R-3598  
Applicant:  
Yates Drilling Co.

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC       

Aztec OCC       

Other State Engineer Office

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. 3955  
Order No. R-3598

APPLICATION OF YATES DRILLING COMPANY  
FOR SALT WATER DISPOSAL, ROOSEVELT  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8:30 a.m. on November 20, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 26th day of November, 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, Yates Drilling Company, is the owner and operator of the Lillie M. Yates Well No. 4, located in Unit D of Section 31, Township 8 South, Range 37 East, NMPM, Allison-Pennsylvanian Pool, Roosevelt County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Pennsylvanian formation, with injection into the perforated interval from approximately 9640 feet to 9660 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 9600 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

-2-  
CASE No. 3955  
Order No. R-3598

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Drilling Company, is hereby authorized to utilize its Lillie M. Yates Well No. 4, located in Unit D of Section 31, Township 8 South, Range 37 East, NMPM, Allison-Pennsylvanian Pool, Roosevelt County, New Mexico, to dispose of produced salt water into the Pennsylvanian formation; injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 9600 feet, with injection into the perforated interval from approximately 9640 feet to 9660 feet;

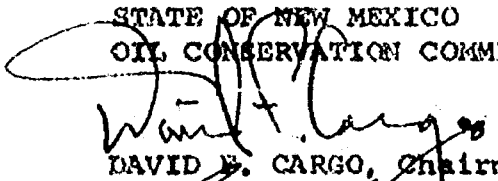
PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

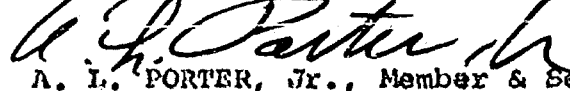
(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

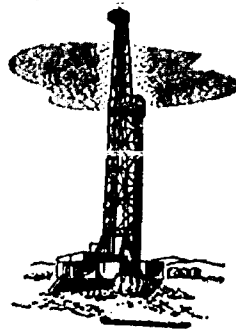
  
DAVID E. CARGO, Chairman

  
GUYTON B. HAYS, Member

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

S E A L

qsr/



YATES DRILLING COMPANY

YATES BUILDING - 207 SOUTH 4TH ST. - DIAL 746-3558

ARTESIA, NEW MEXICO - 88210

November 21, 1968

NOV 22 AM 8 24

S. P. YATES,  
PRESIDENT

HUGH W. PARRY,  
SEC. TREAS.

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

Attn: Mr. Elvis Utz

Re: Case No. 3955

Dear Mr. Utz:

Under Case Number 3955 whereby Yates Drilling Co. applied for approval to dispose of produced waters in the Lillie M. Yates No. 4 Well, you requested that I send a copy of the Bough C water analysis to complete your file.

Attached please find this data.

Sincerely yours,

*Paul G. White*

Paul G. White  
Engineer

PGW/gs

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
MIDLAND DIVISION

LABORATORY WATER ANALYSIS

No. W1-201-68

To Yates Drilling Company

Date 5-7-68

Carper Building

Artesia, New Mexico 88210

Attn: Cliff Lloyd

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by

Date Rec. 4-30-68

Well No.

Depth

Formation

County

Field

Source

	L. M. Yates #1	Nearburg Ingram #5	Nearburg Ingram #7
Resistivity	.142 @ 75 F	.081 @ 75 F,	.054 @ 75 F
Specific Gravity	1.041	1.082	1.180
pH	6.2	6.3	6.3
Calcium (Ca)	3,350	6,850	22,000 *MPL
Magnesium (Mg)	480	1,050	8,820
Chlorides (Cl)	34,500	72,000	163,500
Sulfates (SO <sub>4</sub> )	420	190	110
Bicarbonates (HCO <sub>3</sub> )	170	205	310
Soluble Iron (Fe)	40	35	Nil
Formation	Bough "C"	Bough "C"	San Andres

Remarks: The scale sample from L. M. Yates #4 was identified as being primarily Iron Sulfide.

Remarks:

\*Milligrams per liter

Respectfully submitted,

Analyst: Frank Whitfield

cc:

HALLIBURTON COMPANY

By

Frank Whitfield

DIVISION CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.



3955  
Heard 11-20-68  
Rec. 11-21-68

Grant Yates Dr. Co. permission  
to connect their Lillie M. Yates  
# 4-D-31-85-37 E, Allison, Penn.,  
area to SW D well. Injection  
shall be thru 2 $\frac{3}{8}$ " internally  
plastic coated tubing, under  
a packer set at approx 8600'  
+ into Bougli (C) perfor 8640-  
8660. Annulus to be filled with  
Inert fluid.

Thos C. Yates

CASE 3953 3418 feet to 3429 feet in the Bernice Dinnin A Well No. 2 located in Unit J of Section 23, Township 20 South, Range 33 East, Teas Yates-Seven Rivers Pool, Lea County, New Mexico.

continued:

CASE 3954: Application of C. E. Long, Jr., for a non-standard gas proration unit and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre non-standard gas proration unit comprising the S/2 SW/4 of Section 32, Township 21 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to his Shell-State Well No. 1 at an unorthodox location for said pool 660 feet from the South line and 2310 feet from the West line of said Section 32.

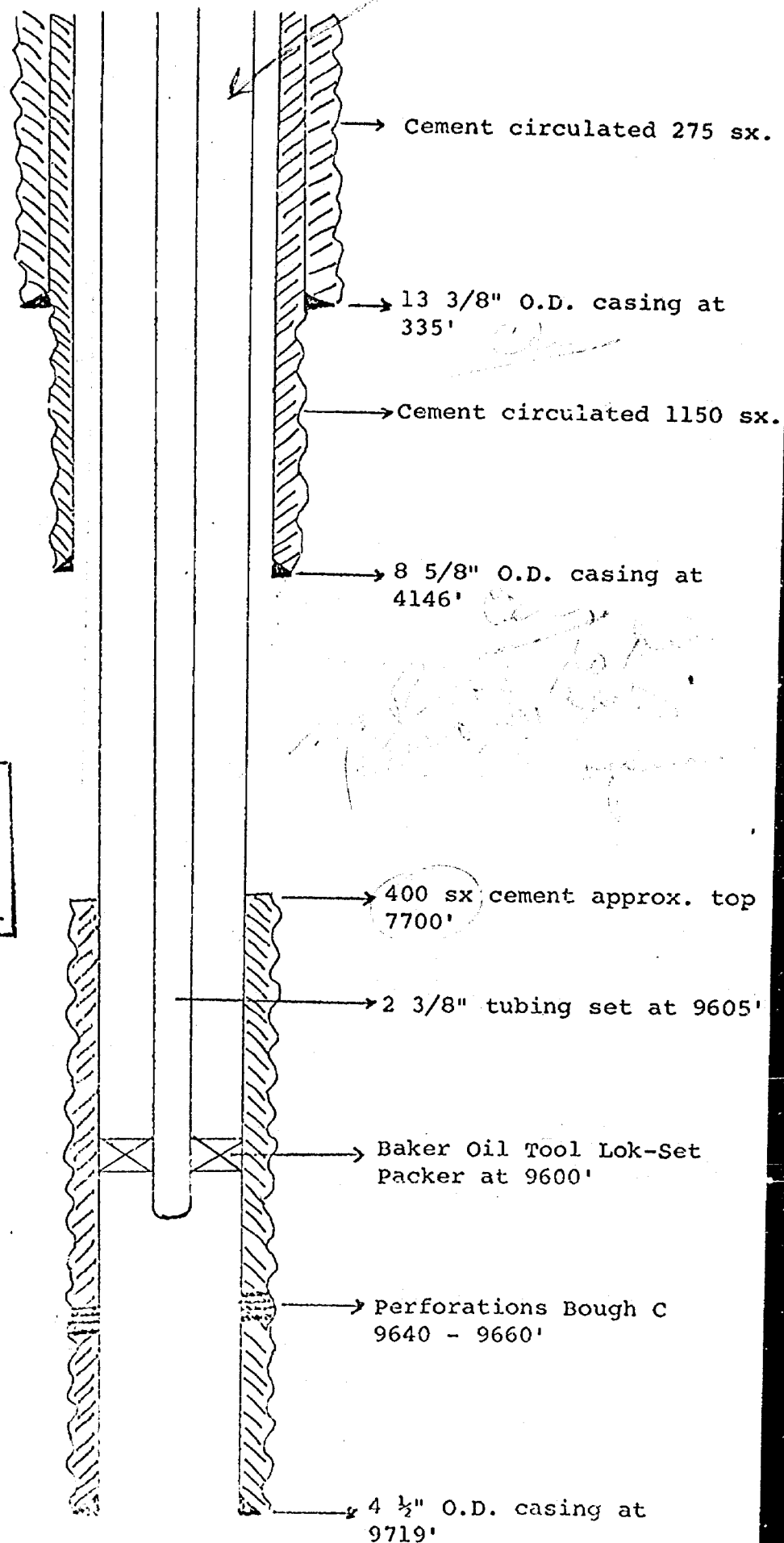
CASE 3955: Application of Yates Drilling Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation in the perforated interval from approximately 9640 feet to 9660 feet in its Lillie M. Yates Well No. 4 located in Unit D of Section 31, Township 8 South, Range 37 East, Allison Pennsylvanian Pool, Roosevelt County, New Mexico.

CASE 3956: Application of Yates Petroleum Corporation 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 4411 feet to 4464 feet in its Federal AK Well No. 1 located in Unit I of Section 3, Township 19 South, Range 25 East, Penasco-Wolfcamp Pool, Eddy County, New Mexico.

CASE 3957: Application of Yates Petroleum Corporation for salt water disposal, Eddy 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 1260 feet to 1410 feet in its A. V. Gissler Well No. 2 located in Unit B of Section 23, Township 17 South, Range 25 East, Eagle Creek-San Andres Pool, Eddy County, New Mexico.

CASE 3958: Application of Yates Petroleum Corporation for a dual completion and salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete three wells in Section 8, Township 19 South, Range 25 East, and Section 25, Township 18 South, Range 25 East, Penasco Draw-San Andres Yaso Pool, Eddy County, New Mexico, in such a manner as to permit the production of oil from the San Andres formation and the disposal of produced salt water

DIAGRAMMATIC SKETCH  
 PROPOSED SWD WELL,  
 YATES DRILLING CO.  
 LILLIE M. YATES NO. 4



BEFORE EXAMINER UTZ  
 OIL CONSERVATION COMMISSION  
 EXHIBIT NO. 2  
 CASE NO. 3955

EXHIBIT 2  
 DATE 10-28-68

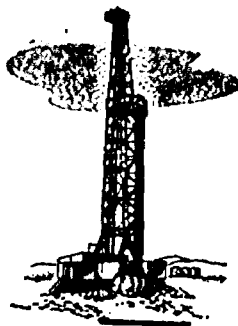
YATES DRILLING CO.  
LILLIE M. YATES NO. 4  
PERTINENT DATA SHEET

1. Produced water from wells No. 1 and No. 3 will be injected into the Pennsylvanian Formation in Well No. 4 at 9640-9660.
2. The produced water to be injected is from the Penn Formation produced by (2) oil wells in the area.
3. The produced water is all Penn Formation water.
4. The volume of produced water is approximately 15 BWPD.
5. The proposed injection well has been tested and does not make Penn oil in commercial quantities.

EXHIBIT 4

DATE 10-28-68

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	<u>4</u>
CASE NO.	<u>3955</u>



YATES DRILLING COMPANY

YATES BUILDING - 207 SOUTH 4TH ST. - DIAL 746-3558

S. P. YATES,  
PRESIDENT

HUGH W. PARRY,  
SEC. TREAS.

ARTESIA, NEW MEXICO - 88210

October 15, 1968

*Case*  
*3955*

State of New Mexico  
Oil Conservation Commission  
P. O. Box 2080  
Santa Fe, New Mexico 87501

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

Re: Conversion of (1) Pennsylvanian T.A.  
Well to Salt Water Disposal Well

Dear Sir:

The Yates Drilling Co. respectfully requests that the New Mexico Oil Conservation Commission set for hearing as soon as possible a case for the conversion of the following well:

Lillie M. Yates No.4 Unit D Sec. 31-T8S-R37E Roosevelt Co.

The Yates Drilling Co. seeks authority to equip the subject well in order to dispose of produced water into the Pennsylvanian Formation.

This application is accompanied by (1) plat of area (2) diagrammatic sketch of well (3) log on well (4) pertinent data sheet.

Copies of this application and all exhibits pertaining thereto have been sent to all offset operators.

DOCKET MAILED

Sincerely,

Date

*11-7-68*

*Paul G. White*

Paul G. White

PGW/gs

Certified Copy - NMOCC District

Atlantic Richfield, Roswell

Mobil Oil Co., Midland, Texas

Marathon Oil Co., Hobbs, New Mex.

Coastal States, Midland, Tex.

Shell Oil Co., Midland, Tex.

Nearburg & Ingram, Dallas, Tex.

YATES DRILLING CO.  
LILLIE M. YATES NO. 4  
PERTINENT DATA SHEET

1. Produced water from wells No. 1 and No. 3 will be injected into the Pennsylvanian Formation in Well No. 4 at 9640-9660.
2. The produced water to be injected is from the Penn Formation produced by (2) oil wells in the area.
3. The produced water is all Penn Formation water.
4. The volume of produced water is approximately 15 BWPD.
5. The proposed injection well has been tested and does not make Penn oil in commercial quantities.

EXHIBIT 4

DATE 10-28-68

*Cave*  
*3955*

DRAFT

GMH/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. 3955

Order No. R- 3598

APPLICATION OF YATES DRILLING COMPANY  
FOR SALT WATER DISPOSAL, ROOSEVELT  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

8:30  
This cause came on for hearing at 8 a.m. on November 20, 1968,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this \_\_\_\_\_ day of November, 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, Yates Drilling Company,  
is the owner and operator of the Lillie M. Yates Well No. 4,  
located in Unit D of Section 31, Township 8 South, Range  
37 East, NMPM, Allison-Pennsylvanian Pool, Roosevelt  
County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Pennsylvanian  
formation, with injection into the perforated interval  
from approximately 9640 feet to 9660 feet.

(4) That the injection should be accomplished through  
2 3/8-inch plastic-lined tubing installed in a packer set at

approximately 9600 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Drilling Company, is hereby authorized to utilize its Lillie M. Yates Well No. 4, located in Unit D of Section 31, Township 8 South, Range 37 East, NMPM, Allison-Pennsylvanian Pool, Roosevelt County, New Mexico, to dispose of produced salt water into the Pennsylvanian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 9600 feet, with injection into the perforated interval from approximately 9640 feet to 9660 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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