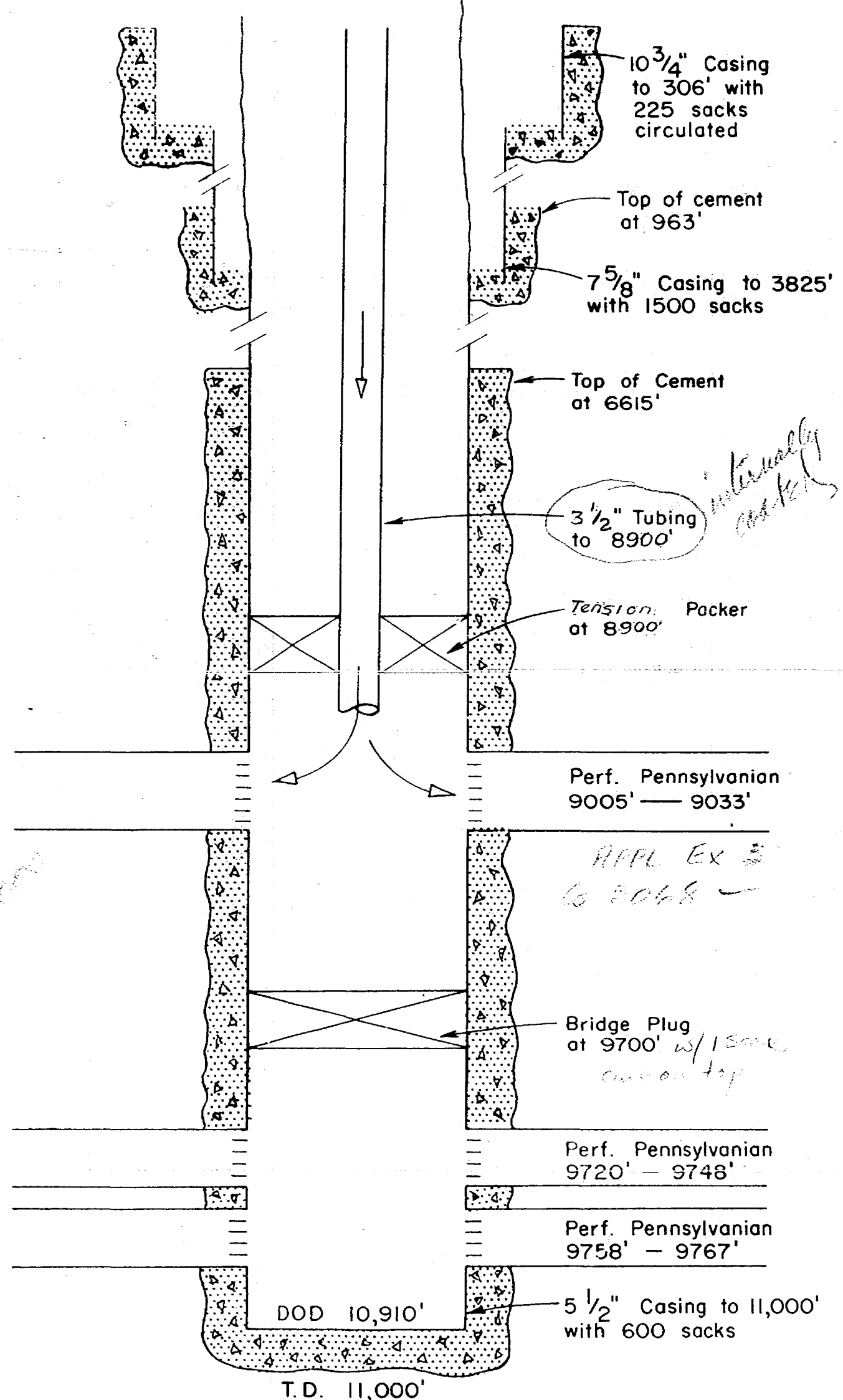


CASE 3068: Application of AMERADA  
for a salt water disposal, Lea  
County, New Mexico.

CASE NO.  
3068

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

PROPOSED SALT WATER DISPOSAL WELL  
AMERADA PETROLEUM CORPORATION  
L. H. CHAMBERS NO. 2  
NE NW SEC II T12S R33E  
BAGLEY PENNSYLVANIAN - LEA CO., NEW MEXICO



②  
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. 3068

Order No. R- 2731

APPLICATION OF AMERADA PETROLEUM  
CORPORATION FOR A SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
June 10, 1964, at Santa Fe, New Mexico, before Examiner  
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 June, 1964, the Commission,  
a quorum being present, having considered the ~~application~~ the testimony,  
the record, ~~evidence adduced~~ 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, Amerada Petroleum Corporation, is the owner and operator of the L. H. Chambers Well No. 2, located in Unit C of Section 11, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said L. H. Chambers Well No. 2 to dispose of produced salt water into the Pennsylvanian formation, with the injection interval from 9005 to 9033 feet.

(4) That the injection should be accomplished through 3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8900 feet, that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus in order to determine leakage in the 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, Amerada Petroleum Corporation, is hereby authorized to dispose of produced salt water into the Pennsylvanian formation through its L. H. Chambers Well No. 2, located in Unit C of Section 11, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico, injection to be accomplished through 3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8900 feet, with injection interval from 9005 to 9033 feet;

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

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 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.

Docket No. 16-64

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 10, 1964

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 3063: Application of R. C. Davoust Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Turkey Track Section 3 Unit Area comprising 480 acres of State land in Section 3, Township 19 South, Range 29 East, Eddy County, New Mexico.

CASE 3064: Application of R. C. Davoust Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of the Turkey Track Queen Waterflood Project in Section 34, Township 18 South, Range 29 East and Section 3, Township 19 South, Range 29 East, Turkey Track Field, Eddy County, New Mexico, to include the Grayburg formation.

CASE 3065: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the West Pearl Queen Unit Area comprising 2520 acres, more or less, of State, Fee and Federal lands in Township 19 South, Range 35 East, Lea County, New Mexico.

CASE 3066: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Pearl Queen Pool by the injection of water into the Queen formation through 30 wells in Sections 28, 29, 30, 31, 32, and 33, Township 19 South, Range 35 East, Lea County, New Mexico.

CASE 3067: Application of Texaco Inc., for the creation of a new oil pool and for special temporary pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Pennsylvanian production for its Navajo Tribal AL Well No. 1 located in Unit H of Section 28, Township 26 North, Range 18 West, San Juan County, New Mexico, and for the establishment of temporary pool rules including a provision for 80-acre spacing and a GOR limitation of 4000 to 1.

CASE 3068: Application of Amerada Petroleum Corporation for a salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the interval from 9005 to 9033 feet, Pennsylvanian formation, through its L. H. Chambers Well No. 2 located in Unit C of Section 11, Township 12 South, Range 33 East, Bagley Field, Lea County, New Mexico.

CASE 3069: Application of Continental Oil Company for a pressure maintenance project and a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in the Pennsylvanian "CD" formation underlying its Rattlesnake lease in Sections 1, 2, 11, and 12, Township 29 North, Range 19 West, Rattlesnake Pennsylvanian "CD" Pool, San Juan County, New Mexico.

- 2 -

June 10 Examiner Hearing - Docket No. 16-64

Initial injection to be through two wells located in Units B and H of Section 11, one of which, No. 146 in Unit B, would be dually completed for water injection through tubing and Pennsylvanian "B" Gas Pool production through the casing-tubing annulus. Applicant further seeks the promulgation of special rules for the operation of said project.

CASE 3038: Application of Kennedy Oil Company for a waterflood buffer zone and capacity allowables, Eddy County, New Mexico, or a determination that an offset well is producing primary oil. Applicant, in the above-styled cause, seeks the designation of the N/2 SW/4 of Section 20, Township 16 South, Range 31 East, Square Lake Pool, Eddy County, New Mexico, as a buffer zone adjacent to a waterflood project operated in the S/2 SW/4 of said Section 20 by Newmont Oil Company and the assignment of capacity allowables to applicant's Rowley Federal Wells Nos. 1 and 2 located in Units K and L, respectively, of said Section 20. In the alternative, applicant seeks a determination that the Newmont well located in Unit N and applicant's wells in Units K and L of Section 20 are producing primary oil and are not affected by the Newmont waterflood. Upon such determination, applicant seeks the assignment of normal primary allowables to the wells located in Units K, L and N of Section 20.

## NEW MEXICO OIL CONSERVATION COMMISSION

OPERATOR <b>Amerada Petroleum Corporation</b>		ADDRESS <b>Tulsa, Oklahoma</b>	
LEASE NAME <b>L. H. Chambers</b>	WELL NO. <b>2</b>	FIELD <b>Bagley-Pennsylvanian</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>C</b> I WELL IS LOCATED <b>660</b> FEET FROM THE <b>North</b> LINE AND <b>1980</b> FEET FROM THE <b>West</b> LINE, SECTION <b>11</b> TOWNSHIP <b>12S</b> RANGE <b>33E</b> NMPM.			
<b>CASING AND TUBING DATA</b>			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>10 3/4</b>	<b>306'</b>	<b>225</b>
INTERMEDIATE	<b>7 5/8</b>	<b>3825'</b>	<b>1500</b>
LONG STRING	<b>5 1/2</b>	<b>11000'</b>	<b>600</b>
TUBING	<b>2 3/8</b>	<b>8556'</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>Guiberson KV-30 Set @ 8432</b>
NAME OF PROPOSED INJECTION FORMATION <b>Pennsylvanian</b>		TOP OF FORMATION <b>8667'</b>	BOTTOM OF FORMATION <b>10364'</b>
IS INJECTION THROUGH TUBING, CASING OR ANNULUS? <b>Tubing</b>		PERFORATIONS OR OPEN HOLE <b>Perforations</b>	PROPOSED INTERVAL(S) OF INJECTION <b>9005-9033 Squeezed w/100 Sacks</b>
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Production</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Yes</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>9720-9748'; 9758-9767'</b>			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>350'</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>8700' Upper Penn. Gas</b>	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>10890</b>
ANTICIPATED DAILY INJECTION VOLUME (BBL/D) <b>2500</b>	MINIMUM <b>6000</b>	MAXIMUM <b>Closed</b>	OPEN OR CLOSED TYPE SYSTEM <b>Pressure</b>
IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Pressure</b>		APPROX. PRESSURE (PSI) <b>500</b>	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>		WATER TO BE DISPOSED OF <b>Yes</b>	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Addielene Chambers</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Texas Pacific Oil Company</b>		ARE WATER ANALYSES ATTACHED? <b>No</b>	
Fort Worth National Bank Building, Fort Worth, Texas			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?			
SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	
THE NEW MEXICO STATE ENGINEER <b>Yes</b>			
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?			
PLAN OF AREA <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>	
		DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>	

R. S. Chandra

Proration Engineer

May 4, 1964

(Signature) R. S. Christie

(Title)

(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

May 22, 1964

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

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

Dear Mr. Porter:

Reference is made to the application of Amerada Petroleum Corporation submitted by Jason W. Kellahin on May 19, 1964 which seeks authority to dispose of salt water into the Pennsylvanian formation through the L. H. Chambers well No. 2 located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 11, T. 12 S., R. 33 E., Bagley Field, Lea County.

In view of the fact that injection is to be down 2 3/8 inch tubing under a Guiberson packer set at 8432 feet and the system is to be a closed system, it appears that no threat of contamination to the fresh waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of this application.

Very truly yours,

S. E. Reynolds  
State Engineer

FEI/ma

cc-J. W. Kellahin  
F. H. Hennighausen

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

RECEIVED MAY 18 1964

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF AMERADA PETROLEUM CORPORATION )  
FOR AUTHORITY UNDER STATEWIDE RULE 701 TO )  
DISPOSE OF SALT WATER INTO THE PENNSYLVANIAN )  
FORMATION THROUGH ITS L. H. CHAMBERS WELL )  
NO. 2, LOCATED IN THE NE/4 NW/4 SECTION 11, )  
TOWNSHIP 12 SOUTH, RANGE 33 EAST, BAGLEY )  
FIELD, LEA COUNTY, NEW MEXICO. )

CASE NO. 3062

APPLICATION

Applicant Amerada Petroleum Corporation states that:

1. Applicant owns the L. H. Chambers Well No. 2, located in the NE/4 NW/4 Section 11, Township 12 South, Range 33 East, Bagley Field, Lea County, New Mexico, as shown on the attached plat.

2. As shown on the attached Form C-120-A, applicant proposes to convert the subject well to a salt water disposal well, and inject 2500-6000 barrels of salt water per day under 500 psi pressure into the Pennsylvanian Formation which is productive of oil and is found at a depth interval of 8667-10364 feet. The source of the water is primarily the Bagley-Devonian Pool, produced by various wells on the lease and in the immediate vicinity of the subject well.

3. The proposed method of completing the subject well as a disposal well is shown on the attached diagrammatic sketch, and an electric log of the well is attached.

Applicant therefore requests that this matter be set for hearing before an Examiner, that notice thereof be given as required by law, and that upon conclusion of such hearing an order be entered granting this application.

AMERADA PETROLEUM CORPORATION

By

James W. Kellahin  
Kellahin & Fox  
P. O. Box ~~1713~~ 1769  
Santa Fe, New Mexico

By

Thomas W. Lynch  
Thomas W. Lynch  
P. O. Box 2040  
Tulsa 2, Oklahoma  
May 18, 1964

DOCKET MAILED

Date 6-1-64

NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Amerada Petroleum Corporation</b>		ADDRESS <b>Tulsa, Oklahoma</b>	
LEASE NAME <b>L. H. Chambers</b>	WELL NO. <b>2</b>	FIELD <b>Bagley-Pennsylvanian</b>	COUNTY <b>McCurtain</b>
LOCATION UNIT LETTER <b>C</b> WELL IS LOCATED <b>660</b> FEET FROM THE <b>North</b> LINE AND <b>1980</b> FEET FROM THE <b>West</b> LINE, SECTION <b>11</b> TOWNSHIP <b>12S</b> RANGE <b>33E</b> NMPM.			
<b>CASING AND TUBING DATA</b>			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>10 3/4</b>	<b>306'</b>	<b>225</b>
INTERMEDIATE	<b>7 5/8</b>	<b>3825'</b>	<b>1500</b>
LONG STRING	<b>5 1/2</b>	<b>11000'</b>	<b>600</b>
TUBING	<b>2 3/8</b>	<b>8556'</b>	<b>Guiberson KV-30 Set @ 8432</b>
NAME OF PROPOSED INJECTION FORMATION <b>Pennsylvanian</b>		TOP OF FORMATION <b>8667'</b>	BOTTOM OF FORMATION <b>10364'</b>
IS INJECTION THROUGH TUBING, CASING OR ANNULUS? <b>Tubing</b>		PERFORATIONS OR OPEN HOLE <b>Perforations</b>	PROPOSED INTERVAL(S) OF INJECTION <b>9005-9033 Squeezed w/100 Sacks</b>
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Production</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>Yes</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>9720-9748'; 9758-9767'</b>			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>350'</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>8700' Upper Penn. Gas</b>	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>10890</b>
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) <b>2500</b>	MINIMUM <b>2500</b>	MAXIMUM <b>6000</b>	OPEN OR CLOSED TYPE SYSTEM <b>Closed</b>
IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Pressure</b>		APPROX. PRESSURE (PSI) <b>500</b>	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE. <b>Yes</b>		WATER TO BE DISPOSED OF <b>Yes</b>	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Addielene Chambers Box 65, Lovington, New Mexico</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	
ARE WATER ANALYSES ATTACHED? <b>No</b>			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL			
<b>Texas Pacific Oil Company Fort Worth National Bank Building, Fort Worth, Texas</b>			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
<b>Yes</b>		<b>Yes</b>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?		ELECTRICAL LOG	
<b>Yes</b>		<b>Yes</b>	
PLAT OF AREA		DIAGRAMMATIC SKETCH OF WELL	
<b>Yes</b>		<b>Yes</b>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

*R. S. Christie*  
(Signature) **R. S. Christie**

**Proration Engineer**  
(Title)

**May 4, 1964**  
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.

JASON W. KELLAHIN  
ROBERT E. FOX

KELLAHIN AND FOX

ATTORNEYS AT LAW

54 1/2 EAST SAN FRANCISCO STREET

POST OFFICE BOX 1769

SANTA FE, NEW MEXICO

TELEPHONES

983-9396

982-2991

May 19, 1964

100 3068

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

Gentlemen:

Enclosed find original and two copies of application of Amerada Petroleum Corporation for approval of a salt water disposal well in the Bagley Field, Lea County, New Mexico, which application is to be set for hearing before a Commission Examiner on June 10.

A copy of this application and exhibits excepting log is being forwarded to the Office of the State Engineer today.

Very truly yours,

*Jason W. Kellahin*  
JASON W. KELLAHIN

jwk:mas  
enclosures

DOCKET MAILED

Date 6-1-64

GENERAL OFFICE  
Box 2040  
TULSA 2, OKLA.

AMERADA PETROLEUM CORPORATION

Box 668  
HOBBS, NEW MEXICO

MAIN OFFICE OCC

1964 JUN 17 AM 7:48

June 15, 1964

Mr. Dan Nutter  
New Mexico Oil  
Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Re: Hearing on Saltwater Disposal-  
Bagley Field, Lea County, New  
Mexico.

Dear Sir:

Attached is the cross-section which you requested on the Bagley Pennsylvanian pool that pertains to Case No. 3068. I have shown the past and present completions and other information that I think might be helpful.

This well, if approved for injection, will be used to supplement the present disposal system. The present system, which is operating at capacity, handles approximately 5,000 barrels water per day at about 700 psi. To increase pump sizes would be extremely costly.

Since the subject well is a direct offset to the present system and since the zone is virtually depleted in this portion of the field, we feel that this is the most logical and economical interval for disposal.

If there are any other questions please call me.

Yours very truly,

*L. E. Thomas*  
L. E. Thomas  
District Engineer  
Amerada Petroleum Corporation

LET/jh

cc: Messrs. R. S. Christie  
A. E. Snyder  
O. L. Schmidt  
File

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
E. B. JOHNNY WALKER  
MEMBER

P. O. BOX 871  
SANTA FE

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

June 19, 1964

Mr. Jason Kallahin  
Kallahin & Fox  
Attorneys at Law  
Post Office Box 1769  
Santa Fe, New Mexico

Re: Case No. 3068  
Order No. P-2731  
Applicant:

Amerada Petroleum Corporation

Dear Sir:

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC   x  

Artesia OCC           

Astec OCC           

OTHER

**BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO**

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

CASE No. 3068  
Order No. R-2731

**APPLICATION OF AMERADA PETROLEUM  
CORPORATION FOR A SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on June 10, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 19th day of June, 1964, 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, Amerada Petroleum Corporation, is the owner and operator of the L. H. Chambers Well No. 2, located in Unit C of Section 11, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said L. H. Chambers Well No. 2 to dispose of produced salt water into the Pennsylvanian formation, with the injection interval from 9005 to 9033 feet.

(4) That the injection should be accomplished through 3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8900 feet.

-2-

CASE No. 3068  
Order No. R-2731

(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, Amerada Petroleum Corporation, is hereby authorized to dispose of produced salt water into the Pennsylvanian formation through its L. H. Chambers Well No. 2, located in Unit C of Section 11, Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico, injection to be accomplished through 3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8900 feet, with injection interval from 9005 to 9033 feet.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 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.

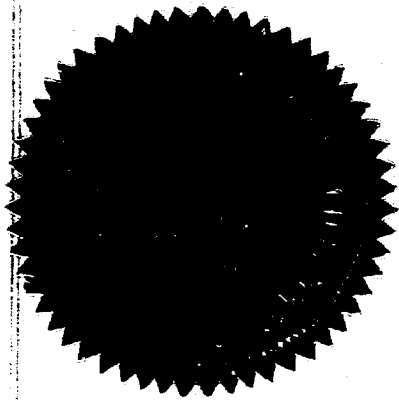
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

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

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



gsr/



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
June 10, 1964

EXAMINER HEARING

IN THE MATTER OF: Application of Amerada  
Petroleum Corporation for a salt water  
disposal, Lea County, New Mexico

Case No. 3068

BEFORE: NEW MEXICO OIL CONSERVATION COMMISSION  
DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case No. 3068.

MR. DURRETT: Application of Amerada Petroleum Cor-  
poration for a salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: I am Jason Kellahin of Kellahin and  
Fox, Santa Fe, New Mexico, and I represent the applicant. We  
have one witness I would like to have sworn, please.

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. DURRETT: Would you stand and be sworn, please.

(Witness sworn.)

ORVALL SCHMIDT, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q You are Orvall Schmidt; is that correct?

A Yes.

Q By whom are you employed and what position, Mr. Schmidt?

A I am employed by Amerada Petroleum as a Petroleum Engineer.

Q Have you ever testified before the Oil Conservation Commission?

A No, sir.

Q For the benefit of the Examiner, would you state briefly your education and experience as a Petroleum Engineer.

A I have a B.S. Degree in Mining Engineering with a petroleum option from the University of North Dakota. I have been employed by Amerada for the past seven years, two years in Seminole, Texas and approximately two years in Tatum, New Mexico.

Q And in connection with the work in Tatum, New Mexico, does that come under your jurisdiction as an engineer?



A Yes, sir.

Q Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir.

Q (By Mr. Kellahin) Mr. Schmidt, are you familiar with the application of Amerada Petroleum Corporation in Case No. 3068?

A Yes, sir.

Q Would you define briefly what is proposed in this case?

A Amerada has asked permission to use the L. H. Chambers Well Number 2 as a salt water disposal well.

MR. KELLAHIN: I would like to have these marked for identification as Applicant's Exhibits Numbers One through Three.

(Whereupon, Applicant's Exhibits Numbers One through Three marked for identification.)

Q (By Mr. Kellahin) Now, referring to what has been marked as Applicant's Exhibit Number One, would you identify that exhibit and discuss the information shown on it?

A It is a map showing the Bagley-Pennsylvanian Field. The arrow points to the L. H. Chambers No. 2 which Amerada wishes to use as a salt water disposal well to supplement the one that they already have, which is at one location to the north. The exact location of that well is in the Bagley-Pennsylvanian Pool, Lea County, New Mexico. The well is



located 660 feet from the north line and 1,980 feet from the west line of Section 11, Township 12 South, Range 33 East.

It also shows Upper Pennsylvanian Gas Wells designated by the "blue"; the Lower Pennsylvanian Gas Wells as the "gray"; the Devonian Wells; and the other Pennsylvanian wells in the field.

Q Do the exhibits show all of the producing Pennsylvanian Wells within the area?

A Yes, sir.

Q And it shows the offset ownership; does it not?

A Yes, sir.

Q Referring to what has been marked as Exhibit Number Two, will you identify that exhibit, please?

A Exhibit Number Two gives the name of the proposed disposal well and the location which I have already given.

It gives the casing and the cement program which I will elaborate more fully on in Exhibit Number Three. The proposed injection formation which is the Pennsylvanian; the top of the formation at 8,667 feet, the bottom of the formation at 10,364 feet.

Injection will take place through tubing into five and a half inch casing, perforations from 9,005 to 9,033 feet, which is presently squeezed off. The depth of the bottom of the deepest fresh water zone in this area is 350 feet; the depth of



the next higher oil or gas zone is 8,700 feet which is in the Upper Pennsylvanian Gas Pool, and the depth of the next lower pay is 10,890 feet, which is the Devonian.

The anticipated daily injection will be, or is expected to be, a minimum of 2,500 barrels and a maximum of 6,000 barrels. It will be a closed system and we hope to dispose of the water on that volume to start with and to anticipate a maximum pressure of perhaps 500 P.S.I.

Q What is the closest Pennsylvanian production to the proposed injection well?

A It is an Amerada W.E. Mathers Number 2 to the northwest.

Q Utilizing the well as proposed for salt water disposal, does it have any adverse effects on it?

A No, sir.

Q Referring to what has been marked as Exhibit Number Three, would you identify that exhibit and discuss the information shown on it, please?

A Exhibit Number Three is the Schematic of the casing and tubing program. It shows 10 and 3/4 inch casing set at 306 feet with the cement being circulated. 7 and 5/8 inch casing set at 3,825 feet and with the top of the cement at 963 feet. Shows 5 and 1/2 inch casing set at 11,000 feet. The top of cement is at 6,615 feet. Shows perforations in the Pennsylvanian,



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which are now squeezed off from 9,005 feet to 9,033 feet which was the initial producing zone of this well. They were squeezed off and the well was re-perforated from 9,720 feet to 9,748 feet and 9,758 feet to 9,767 feet which are now opened, and a Bridge Plug set at 9,700 feet. We will dump one sack of cement on top to protect our Devonian zone, perforate from 9,005 to 9,033 feet, run 8,900 feet of internally plastic coated tubing with a packer on the bottom and set it at 8,900 feet. Now, you will note on top there that there is a void in the cement. It is at 306 feet to 963 feet.

Now, this fresh water zone will be protected by the 7 and 5/8 inch casing; 5 and 1/2 inch casing, which is the tubing we propose to run.

Q In your opinion, the fresh water zone will be fully protected from any contamination?

A Yes, sir.

Q Then, will all producing zones in the area be fully protected from any contamination by salt water?

A Yes, sir.

Q Just to review this now: The injection will be through plastic tubing?

A That's correct.

Q And it will be a completely closed system?

A Completely closed.



Q What is the source of the water that will be disposed of in this well?

A From the Pennsylvanian and from the Devonian formations, mainly the Devonian.

Q Is that determined from production, producing wells?

A Yes.

Q What are you doing with this water at the present time?

A It is being injected at the present into one location north of the well that we wish to inject into.

Q Well, this now will then supplement the other well; is that correct?

A That's correct.

Q And will it be injected into the same formation?

A In the same formation.

Q Will it be in the same zone formation or a different zone?

A It will be in a different zone, just slightly lower.

Q Do you anticipate the well will take the volume of the water you propose to inject?

A Yes, sir.

MR. KELLAHIN: If the Examiner please, I believe the file will reflect that a letter was written by Mr. Frank Irby of the State Engineer's Office stating that they offered no objection to the proposed soft water disposal well.



MR. NUTTER: Yes, sir, we have that letter.

Q (By Mr. Kellahin) Were Exhibits One, Two, and Three -- have you examined them personally, and do they correctly reflect the proposals made by Amerada in this case?

A Yes, sir, they do.

Q They were not prepared by you; is that correct?

A No, sir.

MR. KELLAHIN: At this time we would like to offer Applicant's Exhibits One, Two and Three into evidence.

MR. NUTTER: Applicant's Exhibits Number One, Two and Three will be admitted into evidence.

(Whereupon, Applicant's Exhibits One, Two and Three were admitted into evidence.)

MR. KELLAHIN: That's all the questions I have on Direct Examination.

MR. NUTTER: Are there any questions of Mr. Schmidt?

CROSS EXAMINATION

BY MR. NUTTER:

Q Now, this well was previously perforated from 9,005 to 9,033 feet?

A Yes, sir, that was the initial producing zone.

Q And that was producing from the Bagley, that was producing at the time from the Bagley-Upper Pennsylvanian Gas Pool; is that correct?





A That's right.

Q Now, is the current disposal well; it is the Number Four, isn't it?

A "D"

Q Is the current well injecting into the same productive interval?

A It is going into the Pennsylvanian formation, the Pennsylvanian formation is divided into three various zones, in this pool, it is going into the Number One Zone, I believe, and this L. H. Chambers will be going to the Number Two.

Q Now, you are talking about three zones in the Upper-Pennsylvanian pool; is that correct?

A That's right, and the oil zone.

Q In what zone does the Mathers's No. 2 well produce?

A I don't know, I believe it's open and probably in both zones. There are several wells.

Q You said there were three zones?

A Yes, it is probably open in three zones. All these disposal wells are open in --

Q Well, now, why do you feel that no damage will occur or result to the Mathers' No. 2 by the injection of the water here?

A Well, this is primarily to be used as a salt water disposal well. If we do feel any effects that a waterflood



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would give us, they are probably more beneficial than harmful.

Q That would depend on the structural position of these various wells?

A Yes, sir.

Q You haven't offered any structural map of the area however to show structurally the position of the injection well or the producing wells nor a cross section of the structure; what is their relative position?

A The L. H. Chambers No. 2 is a well to the south as is the W. E. Mathers No. 2. They are probably structurally the same.

Q Why was this well squeezed in the proposed perforated interval and then recompleted in the Lower Pennsylvanian; did it quit producing in the Upper Pennsylvanian, or did it go to water, or just what happened?

A It quit producing. These zones have a tendency to produce a water in the oil together and they will deplete together in various of these zones.

Q This was a gas well, wasn't it?

A No, it was an oil well.

Q It was a Bagley-Upper Pennsylvanian oil well?

A No, just a Bagley-Pennsylvanian oil well, we have an Upper Pennsylvanian gas, a Lower Pennsylvanian gas.

Q I thought you said this interval, 9005 to 9,033 was



the Bagley-Upper Pennsylvanian Gas?

A No, if I did I would like to correct that.

Q It is the equivilent zone that the Mathers' No. 2 was producing from, which is the Bagley-Upper Pennsylvanian Gas well?

A I was in error. If the Mathers' No. 2 is approximately 1,000 feet higher producing a 1,000 feet lower than this oil well has --

Q Then it's a 1,000 feet higher than what?

A Than the L. H. Chambers' No. 2 is producing from; the gas zone is approximately 1,000 feet higher --

Q Than the --

A -- oil zone.

Q Than the Chambers' No. 2 is producing from now?

A Yes, sir, it is abandoned now, but what it was producing from.

Q You mean the 9,005 feet interval or the 9,700 feet interval?

A The L. H. Chambers' No. 2 was initially completed from 9,005 to 9,033. It was abandoned in that zone. It was depleted. Then it was tested at 9,720 to 9,748 and these perforations are now open. The W. E. Mathers' No. 2 is an open Pennsylvanian gas well which is approximately 1,000 feet higher than the initial perforations in the L. H. Chambers' No. 2.



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Q In other words, the Mathers' No. 2 is a 1,000 feet higher than these, the production zone in the Mathers' No. 2 is 1,000 feet higher in the Pennsylvanian formation than the perforated interval 9,005 and 9,033 feet. Is that due to a different zone in the Pennsylvanian or is it due to the same zone being structurally higher in the Mathers' well?

A It is a different zone.

Q It is a different zone. Now, is the zone from 9,005 to 9,033 in this Chambers' No. 2 well productive from any well in this area?

A Well, yes, it is.

Q Which well?

A In the Caudle No. 1 and 3 I believe, to the west.

MR. PORTER: Caudle 1 and 3 are oil wells?

Q (By Mr. Nutter) So, in other words, what you say here is this is in the middle Pennsylvanian?

A Yes, sir, in the Pennsylvanian oil zone.

Q So, the 9,005 to the 9,033 interval in the Chambers well is the middle Pennsylvanian rather than the Upper or Lower?

A Yes, sir.

Q Now, what affect will the injection of water into this proposed interval have on the nearest wells producing from that interval, being the Caudle 1 and 3?

A Probably none.



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Q And upon what do you base that statement?

A The Caudle 1 and 3 are very tight wells. If there is any effect, it will probably be to our benefit, if any.

Q Again, this would be subject to the structural position of the two intervals, or the interval in the two areas?

A Yes, sir.

Q What about this well directly west of your proposed well; Simmons No. 1, is it?

A Yes, sir, it's been abandoned for several years.

Q Could you furnish this office with a cross section of the structural running from the Amerada-Caudle No. 3 through this abandoned Simmons No. 1 over to your Chambers No. 2?

A Yes, sir, we will do that.

MR. NUTTER: Showing the correlation of the zones through those three wells and the structural portion of each.

Are there any other questions of Mr. Schmidt?

MR. DURRETT: I have one question.

# CROSS EXAMINATION

BY MR. DURRETT:

Q Where is the produced salt water coming from you are putting in your No. -- what is it, Four -- your pre-disposal well, and that you propose to put in this well?

A It is coming from the Devonian, Bagley Lower Pennsylvanian and Bagley-Upper Pennsylvanian gas and the Bagley oil



wells mostly; ninety per cent from the Devonian wells, which we believe will increase, and that is why we need another disposal well.

Q You may have covered this; just what volumes are you using right now as far as disposal?

A We are injecting approximately 5,000 barrels a day.

Q What do you anticipate after, assuming you had approval of this well?

A Well, it would increase gradually. We have workovers. We are waiting to perform until we get another disposal well so we can increase our water production from these various wells, larger pumping equipment and so forth.

Q Do you have an anticipated volume that you --

A No, sir, I don't.

Q How many wells are involved?

A I don't remember offhand.

Q Just approximately?

A In the neighborhood of twenty, twenty-five wells.

MR. DURRETT: Thank you.

Q (By Mr. Porter) You may have indicated this, but what zone are you injecting into?

A The Pennsylvanian.

Q Just the Pennsylvanian, no particular --

A The Pennsylvanian oil zone.



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Q I see, which encompasses all of the Pennsylvanian formations?

A No, I believe there are limits in the pool of the -- In the lower Pennsylvanian gas.

MR. NUTTER: I believe the limits in these three pools are defined.

A That is correct; and this is the Middle Pennsylvanian as defined by those pool rules as the Pennsylvanian.

MR. NUTTER: Mr. Schmidt, the thought entered my mind that somewhere along the line, Amerada got permission for a salt water disposal well or a pressure maintenance well on a small lease in the south end of a field; is this the one or was that --

A I believe that would be the Saunders pool.

Q That was in the Saunders pool. Are there any further questions of Mr. Schmidt?

MR. KELLAHIN: I have a couple.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Schmidt, what is the status of that well No. 4; that has been abandoned?

A Yes, sir.

Q Now, to clarify another matter, the Exhibit "C" that was filed with the Application with the Commission, shows that



you will use 2 and 3/8 inch tubing; is that correct?

A No, sir, that was in error and I have changed it on the exhibits. We will use 3 and 1/2 inch O. D. internally coated tubing.

Q But the exhibit which is offered at the Hearing today correctly shows the size of tubing; does it not?

A Yes, sir.

MR. KELLAHIN: That's all.

MR. NUTTER: Are there any other questions of Mr. Schmidt? He may be excused.

MR. KELLAHIN: That's all I have.

MR. NUTTER: Does anyone have anything they wish to offer in this case 3068?

The case will be taken under advisement and we will call Case 3069.

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STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

I, CHARLES WALKER, Notary Public 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.

Witness my Hand and Seal this                      day of                      , 1964.

*Charles Walker*  
NOTARY PUBLIC

My Commission Expires:  
March 25, 1968.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3068, heard by me on June 10, 1964.  
*[Signature]*, Examiner.  
New Mexico Oil Conservation Commission



I N D E X

WITNESS:

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