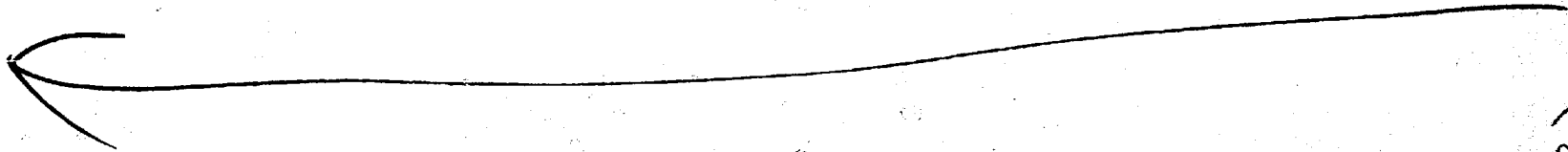



of the  
Roanoke. instead of the  
attorney. *[Signature]*



*note*

Send copies of all,  
Buff Order to. M.E. Taylor  
Rosenwell. instead of the  
attorney. 



Case No.

2169

Application, Transcript,  
Small Exhibits, Etc.

DRAFT

RSM/esr  
January 31

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. 2169

Order No. R-1864

APPLICATION OF GULF OIL CORPORATION  
FOR A SALT WATER DISPOSAL WELL IN  
THE GRAYBURG AND SAN ANDRES FORMATIONS,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 25, 1961, 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 February day of January, 1961, 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, Gulf Oil Corporation, is the owner and operator of the J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to dispose of produced salt water into the Grayburg and San Andres formations through said J. F. Janda "F" Well No. 17 with the injection interval from 3999 feet to 5650 feet.

(4) That inasmuch as the applicant <sup>does not</sup> proposes to install tubing in said well, it shov'd not be utilized for salt water disposal purposes after June 1, 1961.

(5) That if the applicant desires to utilize said well for salt water disposal purposes after June 1, 1961, a packer should be set at the top of the injection interval, tubing installed, and the annulus filled with sweet oil or its equivalent.

(6) That inasmuch as the applicant's proposed salt water disposal program will not, <sup>for the time being,</sup> jeopardize the production of oil, gas or fresh water in the area, approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to dispose of produced salt water into the Grayburg and San Andres formations through its J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico, with the injection interval from 3999 feet to 5650 feet.

PROVIDED HOWEVER, That the authorization granted by this order shall terminate on June 1, 1961, unless a packer is installed at the top of the injection interval, tubing installed, and the annulus filled with sweet oil or its equivalent, in which case the authorization granted by this order shall continue.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

Case 2169

# Gulf Oil Corporation

ROSWELL PRODUCTION DISTRICT

W. A. Shellishear  
DISTRICT MANAGER  
F. O. Mortlock  
DISTRICT EXPLORATION  
MANAGER  
M. I. Taylor  
DISTRICT PRODUCTION  
MANAGER  
H. C. Vivian  
DISTRICT SERVICES MANAGER

January 10, 1961

P. O. Drawer 669  
Roswell, New Mexico

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

Re: Application for Permission to Dispose  
of Salt Water Produced from Wells in  
the Eunice, Eumont, Arrowhead and  
South Eunice Pools into the Open Hole  
Interval 3,999 to 5,650 feet of Gulf's  
J. F. Janda "F" Well No. 17, Located  
in Section 4, Township 22 South, Range  
36 East, Lea County, New Mexico

Gentlemen:

In compliance with Oil Conservation Commission Rule 701, Gulf Oil Corporation herewith makes application for a hearing to obtain authority to inject salt water for disposal purposes into the open hole interval 3,999 to 5,650 feet of Gulf's J. F. Janda "F" Well No. 17.

In support of the application, Gulf Oil Corporation submits the following:

1. A plat is attached showing the location of the proposed salt water disposal well and all other wells and leases within a radius of two miles.
2. Gulf's J. F. Janda "F" Well No. 17, located 330 feet from north and east lines of Section 4-22S-36E, was drilled as a wildcat well to 11,730 feet and completed dry. It was subsequently plugged back to 5,650 feet.
3. Only one copy of the log for the well is available at this time and is attached showing the Grayburg top at 3,978 feet; San Andres top 4,440 feet.
4. The casing program in the subject disposal well is as follows:  
  
13-3/8-inch casing set at 441 feet, cement circulated  
9-5/8-inch casing set at 3,999 feet, cement circulated
5. Present depth of the above described well is 5,650 feet, plugged back from a total depth of 11,730 feet.
6. Applicant proposes to inject salt water in the open hole interval between 3,999 and 5,650 feet.
7. The water produced for disposal into this well is produced from surrounding wells in the Eunice, Eumont, Arrowhead and South Eunice Pools. The estimated water production is from 3,000 to 4,000 barrels per day.



*Handwritten:*  
1-12-61  
[Signature]

January 10, 1961

8. Applicant has recently been authorized to commingle production and consolidate tank batteries into a central battery located on our W. A. Ramsay Lease in Section 34-21S-36E to handle production from the W. A. Ramsay "A"; Arnott-Ramsay "C" and "D"; J. F. Janda "A", "B" and "F"; and Harry Leonard "A" and "D" Leases. The water previously was handled in pits at the individual batteries; however, since all the water is now gathered at the central battery, pit storage is not adequate.

9. A critical condition exists due to the volume of water being handled in one pit. We anticipate that the pit will be full before this matter can be set for hearing. It is requested that an emergency order be issued to temporarily dispose of this produced water in the subject disposal well for a few days if the pit becomes full until this matter is set for hearing.

10. By copy of this letter, all offset operators to our J. F. Janda "F" Lease are notified of this application.

Gulf Oil Corporation respectfully requests that this matter be set for Examiner Hearing at an early date.

Respectfully Submitted,

GULF OIL CORPORATION

By *W. A. Shellshear*  
District Manager

Attachments

JHH:bc

cc: The Oil Conservation Commission  
Post Office Box 2045  
Hobbs, New Mexico

Sinclair Oil & Gas Company  
Post Office Box 1470  
Hobbs, New Mexico

Texas Pacific Coal & Oil Company  
Post Office Box 2110  
Fort Worth 1, Texas

Western Natural Gas Company  
823 Midland Tower Building  
Midland, Texas





13-3/8" OD Csg Set at 441'

Cmtd w/450 sax  
cmt circ.

*Requests.  
for  
6 injections  
wells in R-1820  
2111  
2 to 3 m. to inject.*

*9 7/8" Cr.  
Blw. 5 m. o.  
4000' alt.  
Little Com. Co.  
Com. house.*

9-5/8" OD Csg Set at 3999'

Cmtd w/2000 sax  
cmt circ.

Proposed Injection in Open  
Hole Interval 3999' to 5650'

PBTD 5650'

TD 11,730'

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 4  
CASE NO. 2169

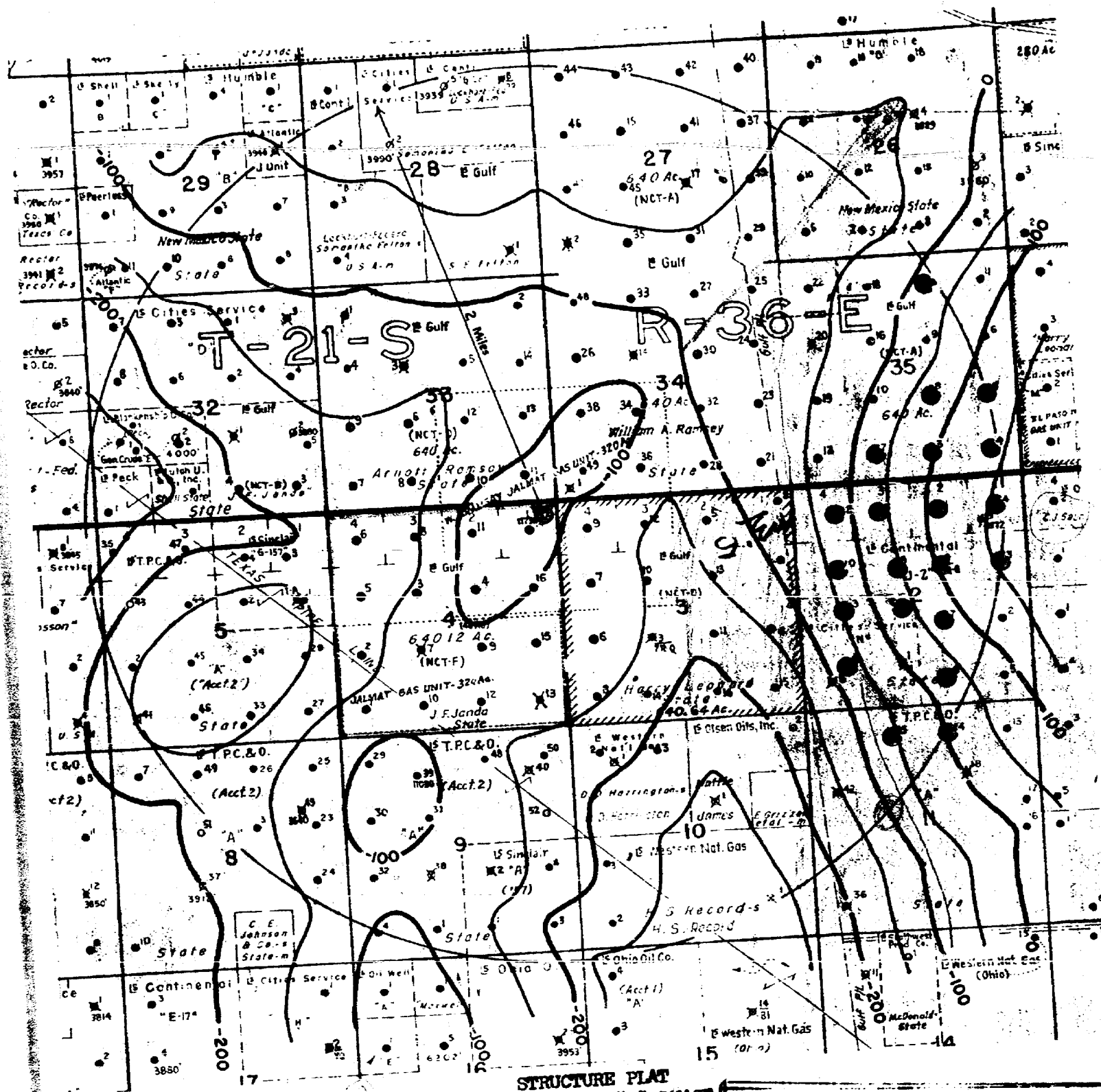
Case No. 2169  
Exhibit No. 4

PROPOSED SALT WATER DISPOSAL WELL

J. F. JANDA "F" NO. 17  
LEA COUNTY, NEW MEXICO

Gulf Oil Corp. Jan. 25, 1961

NOTE  
Drawing not to scale



STRUCTURE PLAT  
J. F. JANDA "F" LEASE  
Contoured on Top of Queen Formation  
Contour Interval 50'

BEFORE EXAMINER UTZ  
OIL CONSERVATION DIVISION

- LEGEND -

□ Pertinent Gulf Lease

⊙ Proposed Water Injection Well

● Wells Producing in Arrowhead Pool

Case No. 2169  
Exhibit No. 3

Gulf Oil Corporation

January 25, 1961

Case No. 2169  
Exhibit No. 7

No. 3-61

DOCKET: EXAMINER HEARING - WEDNESDAY, JANUARY 25, 1961  
OIL CONSERVATION COMMISSION - 9 a.m., CONFERENCE ROOM - STATE LAND OFFICE  
BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz Examiner, or Oliver E. Payne, attorney, as alternate examiner:

CASE 2159: Application of Continental Oil Company for three non-standard gas proration units. Applicant, in the above-styled cause, seeks the establishment of the following-described non-standard gas proration units in the Jalmat Gas Pool, Lea County, New Mexico:

A 320-acre non-standard gas proration unit consisting of the W/2 E/2 and E/2 W/2 of Section 19, Township 25 South, Range 37 East, to be dedicated to the Sholes B-19 Well No. 1, located in the center of the SE/4 SW/4 of said Section 19.

A 320-acre non-standard gas proration unit consisting of the E/2 and NE/4 NW/4 of Section 1, Township 25 South, Range 36 East, to be dedicated to the Wells B-1 Well No. 1, located in the center of the NE/4 NE/4 of said Section 1.

A 360-acre non-standard gas proration unit consisting of the SE/4, E/2 W/2 and SW/4 SW/4 of Section 29, Township 22 South, Range 36 East, to be dedicated to the Meyer A-29 Well No. 3, located in the center of the SE/4 SW/4 of said Section 29.

CASE 2160: Application of Continental Oil Company for a quadruple completion. Applicant, in the above-styled cause, seeks an order authorizing the quadruple completion of its North-east Haynes-Apache 9 No. 1 Well, located in the NW/4 SW/4 of Section 9, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of hydrocarbons from the Greenhorn formation through a string of 2 7/8-inch casing, the production of hydrocarbons from the Dakota formation through 2 3/8-inch tubing installed within a string of 4 1/2-inch casing, the production of hydrocarbons from the Mesaverde formation through the 2 3/6 x 4 1/2-inch annulus of the latter casing string, and the production of hydrocarbons from the Gallup formation through 2 3/8-inch tubing installed within a second string of 4 1/2-inch casing, the three strings of casing being cemented in a common well bore.

CASE 2161: Application of Texaco, Inc. for a triple completion. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of the C. H. Weir "B" Well No. 4, located in Unit I, Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Eumont Gas Pool, the production of oil from the Skaggs-Glorieta Pool and the production of oil from the Skaggs-Drinkard Pool through the casing-tubing annulus, through 2 3/8-inch tubing, and through 2 3/8-inch tubing respectively.

CASE 2162: Application of The Atlantic Refining Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the commingled Justis Tubb-Drinkard and Justis-Blinobry production from the following-described leases:

Langlie Federal Lease, N/2 SE/4 of Section 14

Langlie Federal "A" Lease, S/2 NE/4 of Section 14

Langlie Federal "B" Lease, N/2 NE/4 of Section 14

all in Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 2163: Application of Yates Drilling Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the Pennsylvanian formation production from all wells presently completed or hereafter drilled on Federal Lease NM 03283, comprising the W/2 of Section 31, Township 8 South, Range 37 East, Roosevelt County, New Mexico.

CASE 2164: Application of Hudson and Hudson for an exception to Rule 506 (A) of the Commission Rules and Regulations and for permission to transfer allowables. Applicant, in the above-styled cause, seeks an exception to Rule 506 (A) by increasing the limiting gas-oil ratio for the West Tonto Yates Seven Rivers Pool, Lea County, New Mexico, from 2,000 to 6,000 cubic feet of gas per barrel of oil. Applicant further seeks permission to shut-in one well in said pool and transfer its allowable to another well.

CASE 2165: Application of Pan American Petroleum Corporation for two unorthodox oil well locations and a non-standard oil proration unit. Applicant, in the above-styled cause, seeks approval of two unorthodox oil well locations in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, said locations to be as follows:

Navajo Tribal "E" Well No. 7, to be located 250 feet from the South line and 800 feet from the West line of Section 16.

Navajo Tribal "G" Well No. 5, to be located 1830 feet from the South line and 885 feet from the East line of Section 18, both in Township 29 North, Range 14 West.

Applicant also seeks an 88.7-acre non-standard oil proration unit in said pool comprising that portion of the SW/4 of Section 16, within the Navajo Reservation lying South of the mid-channel of the San Juan River, Township 29 North, Range 14 West, to be dedicated to said Navajo Tribal "E" Well No. 7.

CASE 2166: Application of Pan American Petroleum Corporation for permission to take interference tests and transfer allowables. Applicant, in the above-styled cause, seeks permission to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21, Township 29 North, Range 14 West and transferring the allowable of said well in equal parts to the other five wells on the said Navajo "E" Lease.

CASE 2167: Application of Chambers & Kennedy for a 200-acre non-standard gas proration unit and for an unorthodox gas well location. Applicant, in the above-styled cause, seeks the establishment of a 200-acre non-standard gas proration unit in the Eumont Gas Pool, Lea County, New Mexico, comprising the NE/4 NE/4, S/2 NE/4, and the N/2 SE/4 of Section 34, Township 19 South, Range 37 East. Said unit is to be dedicated to the Monument State Well No. 1, located on an unorthodox location at a point 1649 feet from the South line and 2197 feet from the East line of said Section 34.

CASE 2168:

Application of Continental Oil Company for permission to shut-in one well and transfer its allowable to other wells. Applicant, in the above-styled cause, seeks permission to shut-in its Wilder Well No. 20, located 1980 feet from the South and East lines of Section 26, Township 26 South, Range 32 East, El Mar-Delaware Pool, Lea County, New Mexico, and transfer its allowable to the following offset wells in said Section 26: Wilder Lease Well Nos. 17, 18, 22 and 25.

CASE 2169:

Application of Gulf Oil Corporation for a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Grayburg and San Andres formations through its J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, with the proposed injection interval from 3999 feet to 5650 feet.

CASE 2170:

Application of Amerada Petroleum Corporation for an amendment of Order R-1750. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1750, which authorized the triple completion of its Wimberly Well No. 13, located in Unit M, Section 24, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, to substitute an undesignated oil pool, probably Paddock, for the Langlie-Mattix which was previously authorized. Applicant also proposes to use three parallel strings of tubing rather than two as provided in Order R-1750.

Case 2169

Heard 1-25-60

1-30-60

1. Grant Gulf authority to use their J. F. Janda "F" #17, 330/N1E line sec. 4-22S-36E. as a SWD well for a period of 120 days beginning Feb. 1, 1961.
2. If the well is to be used as a SWD well longer than 120 days. it must have a packer set in the bottom of the  $9\frac{5}{8}$  casing and tubing run to the surface. The annulus shall be filled with sweet oil or equivalent.
3. If this is done then this order should be made permanent.

Thos. H. M.



GOVERNOR  
JOHN BURROUGHS  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission

LAND COMMISSIONER  
MURRAY E. MORGAN  
MEMBER



P. O. BOX 871  
SANTA FE

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

February 3, 1961

Mr. Bill Eastler &  
Mr. H. I. Talyer  
Gulf Oil Corporation  
Box 669  
Roswell, New Mexico

Re: Case No. 2169  
Order No. B-1864  
Applicant:  
Gulf Oil 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.,  
Secretary-Director

lr/

Carbon copy of order also sent to:

Hobbs OCC X  
Artesia OCC         
Aztec 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. 2169  
Order No. R-1864**

**APPLICATION OF GULF OIL CORPORATION  
FOR A SALT WATER DISPOSAL WELL IN  
THE GRAYBURG AND SAN ANDRES FORMATIONS,  
LEA COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on January 25, 1961, 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 3rd day of February, 1961, 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, Gulf Oil Corporation, is the owner and operator of the J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, NEPM, Lea County, New Mexico.
- (3) That the applicant proposes to dispose of produced salt water into the Grayburg and San Andres formations through said J. F. Janda "F" Well No. 17 with the injection interval from 3999 feet to 5650 feet.
- (4) That inasmuch as the applicant does not propose to install tubing in said well, it should not be utilized for salt water disposal purposes after June 1, 1961.
- (5) That if the applicant desires to utilize said well for salt water disposal purposes after June 1, 1961, a packer should be set at the top of the injection interval, tubing installed, and the annulus filled with sweet oil or its equivalent.

-2-

CASE No. 2169  
Order No. R-1864

(6) That inasmuch as the applicant's proposed salt water disposal program will not, for the time being, 'compromise the production of oil, gas or fresh water in the area, approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to dispose of produced salt water into the Grayburg and San Andres formations through its J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, NE1/4, Lea County, New Mexico, with the injection interval from 3999 feet to 5650 feet.

PROVIDED HOWEVER, That the authorization granted by this order shall terminate on June 1, 1961, unless a packer is installed at the top of the injection interval, tubing installed, and the annulus filled with sweet oil or its equivalent, in which case the authorization granted by this order shall continue.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*E. L. McQueen*

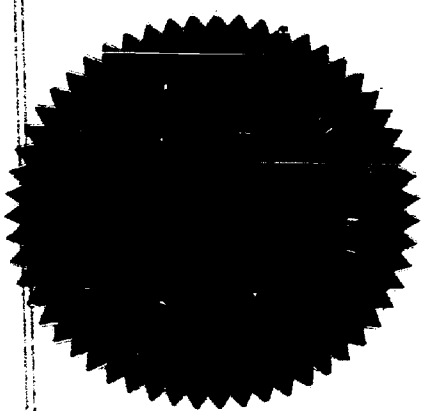
EDWIN L. MCQUEEN, Chairman

*E. S. Walker*

E. S. WALKER, Member

*A. L. Porter, Jr.*

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



cc:/

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 26, 1961

C  
O  
P  
Y

Gulf Oil Corporation  
P. O. Box 2167  
Hobbs, New Mexico

Attention: Mr. J. M. Russell

Gentlemen:

Reference is made to your letter of May 23, 1961 to Mr. Joe P. Ramsey of the Oil Conservation Commission's Hobbs Office, requesting a 30-day extension to the provisions of Order No. R-1864 which permit Gulf to dispose of salt water down the casing of its J. F. Janda "Y" Well No. 17.

Inasmuch as the Commission originally contemplated a four-month disposal period for the subject well in this manner, and injection did not commence until April 12, 1961, the Commission has no objection to your continuing to use the well in the present manner until July 1, 1961.

Very truly yours,

A. L. POSTER, Jr.  
Secretary-Director

ALP/DSM/lr

cc: Mr. Joe D. Ramsey  
Oil Conservation Commission - Hobbs

Case File 2169



PETROLEUM AND ITS PRODUCTS

## GULF OIL CORPORATION

P. O. Box 2167  
Hobbs, New Mexico

HOBBS OFFICE OCC

1961 MAY 23 PM 3:47

FORT WORTH  
PRODUCTION DIVISION

May 23, 1961

*File Case # 2169*

Mr. Joe D. Ramey  
P. O. Box 2045  
Hobbs, New Mexico

Dear Sir:

By OCC Order No. R-1864 approval was obtained to dispose of produced water into the Grayburg and San Andres formations in J. F. Janda "F" No. 17 in the injection interval from 3999' to 5650'. This well is located in Unit "A", Section 4-22S-36E, Lea County, New Mexico.

This order permitted injection of water down the 9-5/8" casing stating that the order shall terminate on June 1, 1961 unless a packer and tubing are installed and the tubing-casing annulus filled with oil.

The purpose of this letter is to request a one month extension, thus permitting injection of water, as is now being done, until July 1, 1961. This request is made since the water treatment has not responded as anticipated and additional time is required to obtain the desired quality of the injection water. As a matter of information, several approaches to obtain quality water are being pursued in effort to insure suitable water. Also, five of the six pilot injection wells are completed and equipped for injection and work is nearing completion on the sixth injection well.

Since these waters are not corrosive and as the 9-5/8" casing was cemented to the surface, it is our firm belief that continued injection will not jeopardize the production of oil, gas or fresh water in the area and will not cause waste nor impair correlative rights. Injection has been in process only since April 12, 1961.

This request is made at this time to avoid last minute rushes and for the convenience of all. It is hoped that the water will be suitable and injection can be commenced prior to June 1, 1961.

Yours very truly,

J. M. RUSSELL  
Area Production Manager

CMB:ptg

HOBBS OFFICE OCC

P. O. Box 2167  
Hobbs, New Mexico

MAY 23 PM 3:47

May 23, 1961

Mr. Joe D. Ramsey  
P. O. Box 2045  
Hobbs, New Mexico

Dear Sir:

By OCC Order No. R-1864 approval was obtained to dispose of produced water into the Grayburg and San Andres formations in J. F. Janda "F" No. 17 in the injection interval from 3999' to 5650'. This well is located in Unit "A", Section 4-223-36E, Lea County, New Mexico.

This order permitted injection of water down the 9-5/8" casing stating that the order shall terminate on June 1, 1961 unless a packer and tubing are installed and the tubing-casing annulus filled with oil.

The purpose of this letter is to request a one month extension, thus permitting injection of water, as is now being done, until July 1, 1961. This request is made since the water treatment has not responded as anticipated and additional time is required to obtain the desired quality of the injection water. As a matter of information, several approaches to obtain quality water are being pursued in effort to insure suitable water. Also, five of the six pilot injection wells are completed and equipped for injection and work is nearing completion on the sixth injection well.

Since these waters are not corrosive and as the 9-5/8" casing was cemented to the surface, it is our firm belief that continued injection will not jeopardize the production of oil, gas or fresh water in the area and will not cause waste nor impair correlative rights. Injection has been in process only since April 12, 1961.

This request is made at this time to avoid last minute rushes and for the convenience of all. It is hoped that the water will be suitable and injection can be commenced prior to June 1, 1961.

Yours very truly,  
"Original Signed By  
J. M. Russell"

J. M. RUSSELL  
Area Production Manager

CMB:ptg

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
January 25, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil Corporation for a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Grayburg and San Andres formations through its J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, with the proposed injection interval from 3999 feet to 5650 feet. ) Case 2169

BEFORE:

Elvin A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2169.

MR. PAYNE: Application of Gulf Oil Corporation for a salt water disposal well.

MR. KASTLER: Bill Kastler, Roswell, New Mexico, appearing on behalf of Gulf Oil Corporation. Our two witnesses in this case are Gerald J. Savage and Don Bilbrey.

(Witnesses sworn.)

GERALD J. SAVAGE,

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

DIRECT EXAMINATION

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

BY MR. KASTLER:

Q Would you state your name, your position, and so forth?

A Gerald Savage; I am a production geologist, Gulf Oil Corporation, Roswell, New Mexico.

Q Are you familiar with Gulf's application in Case No. 2169?

A Yes, sir, I am.

Q Would you state briefly what is involved in this application?

A Gulf wishes to obtain permission to dispose of produced water underground in J. F. Janda "F" 17. This need is brought about by the consolidation of our surface collecting system, which has overtaxed the surface facilities.

Q Where is this water coming from?

A Water will come from our consolidated automatic battery located in Section 34 of 21 South, 36 East, which collects water from several Gulf leases in the area which produce from the Eunice, Eumont, Arrowhead, South Eunice and Jalmat pools.

Q Mr. Savage, have your qualifications as a petroleum geologist been previously accepted by this Commission?

A Yes, sir, they have.

MR. KASTLER: Is the witness qualified?

MR. UTZ: Yes, he is.

Q (By Mr. Kastler) Do you have a lease plat which shows the geographic location of the proposed injection well and all wells within a two-mile radius producing from the proposed injection zone?





A Yes, sir, I have. These plats I have caused to be labelled Exhibit No. 1 in this case.

Q Referring to Exhibit 1, would you please state what is shown there, give the description of the well location, et cetera?

A This plat is a lease and ownership plat of the area. It shows, outlined in red, Gulf's J. F. Janda "F" lease, and Gulf's J. F. Janda "F" Well No. 17, located 330 feet from the north and east lines of Section 4 of 22 South, Range 36 East. Also, this well is marked with a red circle. Also, marked with a green circle, are all wells producing from the Grayburg formation, or in the Arrowhead Pool, according to the January, 1961 proration schedule.

Q All wells within a two-mile radius?

A All wells within a two-mile radius, and I have included three wells which lie outside that two-mile radius, but which have about half their proration unit within the two-mile radius.

Q Does Gulf own the oil and gas lease covering all of Section 4, 22 South, 36 East?

A Yes, they do.

Q Would you state whether this is a State lease or a fee lease?

A This is a State lease.

Q It is Gulf's J. F. Janda State lease?

A That's right.

Q Is Gulf the owner of the Grayburg wells in Section 35, 21, 36?

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A Yes, sir, they are.

Q Who are the owners of the Grayburg wells in Section 2, 22 South, 36 East?

A Continental Oil Company and the Cities Service Oil Company are the operators of the Grayburg producers in that section.

Q Is the Cities Service ownership confined to the SE/4 of Section 2?

A Their ownership is confined to the SW/4 of Section 2.

Q And the remainder is owned by Continental?

A That's right.

Q Who are the owners of the Grayburg producing wells in 11, 22 South, 36 East, within a two-mile radius?

A Texas-Pacific Company, Penn Oil, are the owners of these wells.

Q Have all those parties been notified of Gulf's application?

A Yes, sir, they have.

Q Do you have a log of the proposed injection well for introduction into this case as Exhibit 2?

A Yes, sir.

Q What is shown on this log?

A Specifically, shown on this log at a depth of 3,680 feet is the top of the Queen formation; the top of the Grayburg formation at a depth of 3,978 feet; the base of the 9 5/8-inch casing at a depth of 3,999 feet; top of the San Andres formation, 4,440 feet; the plugged-back depth, 5,650 feet, and the top of the Glorieta



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formation at 5,774 feet.

Q Do you have a structure plat covering the area within a two-mile radius of Gulf's Janda "F" 17?

A Yes, sir, I have.

Q Has this been labelled Exhibit No. 3?

A Yes, sir.

Q What does this plat show?

A This is a structure plat contoured on top of the Queen formation with a contour interval of 50 feet. Shown outlined in red is Gulf's J. F. Janda "F" Lease and Gulf's J. F. Janda "F" Well No. 17, marked with a red circle. Also marked, with a green circle, are all wells within a two-mile radius of the subject well, which are completed in the Arrowhead Pool, and those additional three wells which I mentioned before, totalling 21.

Q Why is this structure plat contoured on the Queen structure when it is the Grayburg and San Andres formations that will receive the injected water?

A The majority of the wells in this area are Queen producers and do not penetrate to the Grayburg formation, so to provide sufficient control the Queen was mapped, which, it is felt, adequately reflects the Grayburg structure.

Q Is there an established oil-water contact for the Grayburg formation in this area?

A No, sir. A sharp oil-water contact has not been established for the Grayburg, but in tabulating the well data, Grayburg wells



in the area, significant amounts of water has been found to be produced at a depth of minus 300 feet with the deepest Grayburg producing from minus 328 feet. In no event could the oil-water contact be construed to be below a depth of minus 340 feet.

Q What is the situation in regard to water production from those wells marked green on your structure plat?

A According to the October, 1960, Oil and Gas Engineer Committee Report, which was the most recent I had available, 20 out of the 21 wells referred to produced water. Twelve of those 20 produced more water than oil. Of those 12 that produced more water than oil ten wells produced from two to four times as much water as they did oil. This substantiates my opinion that the oil-water contact must be near a depth of minus 300 feet, because those wells produced from a depth of approximately minus 300 feet, with only one well going to a depth of minus 328 feet.

Q The wells marked with green on your map, what is the lowest producing depth?

A That one well I mentioned is producing from a set of perforations from 3885 to 3900 feet, and the base of those perforations is at minus 328 feet. This is a vertical distance of 94 feet above the base of the 9 and 5/8-inch casing in J. F. Janda "F" No. 17. There are other wells located within the two-mile radius of the subject well which produce from as low as minus 350 feet, but this production is from the Queen formation, and the Grayburg was not reached.



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Q Therefore, you don't expect them to be affected in any way by this injection of waste water?

A Not in the least.

Q Do you have any other statement you wish to make?

A I would like to say that if Gulf is granted their request in this case we will be injecting water into a 1651 foot interval and it is more than likely that, with general equal porosities and permeabilities the greater hydrostatic head near the bottom of the hole will cause a greater volume of water to be injected into the lower part of that interval. In addition, I would like to point out that we have experienced loss circulation difficulties in drilling the San Andres. All this is evidence that the majority of the injection water would probably enter the San Andres rather than the Grayburg.

Q Are there any wells within a two-mile radius producing from the San Andres to your knowledge?

A No, sir, there are none.

Q Will this application, if granted, impare any correlative rights, in your opinion?

A No, sir, it will not.

Q Were Exhibits 1, 2 and 3 prepared by you or at your direction and under your supervision?

A Yes, sir, they were.

MR. KASTLER: This concludes the questions I have of this

~~witness on direct examination, and I would like at this time to~~



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move that Exhibits 1, 2 and 3 be admitted.

MR. UTZ: Exhibits 1, 2 and 3 will be admitted into evidence.

BY MR. UTZ:

Q Mr. Savage, my records show that the Arrowhead, Queen, Grayburg Pool consists of the E/2 of Section 3; have you checked that?

A Yes, sir. I had checked that just last week, and unless our records of that pool are not up to date, I have Section 2 as being in the Arrowhead Pool; also Section 35 to the North, and the E/2 of Section 34. In any event, none of these wells, no additional wells within a two-mile radius are completed in the Arrowhead pool.

MR. KASTLER: You mean, none in addition to those circled in the green area here.

Q (By Mr. Utz) Where are the wells producing from in that section?

A They are producing from the Queen-Grayburg, which is the interval in the Arrowhead Pool.

Q If they are producing from the pool they should be in the pool, shouldn't they?

A I beg your pardon. I misunderstood you. I believe you are referring to the wells in the E/2 of Section 3?

Q That's right.

A No, sir. Those are completed in the South Eunice Pool.

~~MR. KELLAHIN: From the Queen formation?~~



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A From the Queen formation.

Q (By Mr. Utz) At any rate, our proration schedule didn't show any wells on which we issued allowables in the E/2 of Section 3?

A No, sir. I tabulated all wells within this two-mile radius and I found none of the wells in Section 3 to be carried in the Arrowhead Pool according to January, 1961 proration schedule.

Q Well, it is possible they extended the pool too far, because it is in the pool. Will your other witness give testimony in regard to mechanical completion of this well?

A Yes, sir, he will.

Q It is your belief that the injection of water will be mainly in the San Andres?

A Yes, sir, that's correct.

Q Where is the San Andres in relation to the Queen-Grayburg?

A The San Andres is about 450 feet below the top of the Grayburg. That is, the top of the San Andres is 450 feet below the top of the Grayburg, and that lies about 300 or 280 feet below the top of the Queen.

Q So the injection zone will be well below the producing area of the Arrowhead Pool?

A Well, not exactly, inasmuch as the Arrowhead Pool includes the Grayburg formation. However, in view of this vertical distance of 94 feet, which is the distance from the base of the casing in our well to the base of the lowest producing well, we would be injecting our water at the highest interval, well below the producing



interval of those wells that are completed in the Arrowhead Pool.

MR. UTZ: Any other questions of this witness? Witness may be excused.

MR. KASTLER: Our next witness is Mr. Don Bilbrey.

DON BILBREY

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

DIRECT EXAMINATION

BY MR. KASTLER:

Q Would you please state your name, your position with Gulf Oil Company, and where you are employed?

A Don Bilbrey, employed by Gulf Oil Corporation as a petroleum engineer, Hobbs, New Mexico.

Q As a petroleum engineer for Gulf Oil, are you familiar with its application in Case 2169 and with the well history and completion data on the well Janda "F" No. 17?

A Yes, I am.

Q Have you previously qualified as an expert petroleum engineer before the New Mexico Oil Conservation Commission?

A No, sir, I haven't.

Q Would you please outline your educational background and what degrees you have received?

A I was graduated from the University of Texas in June, 1953, Bachelor of Science in Petroleum Engineering. In August, 1953, I received a Bachelor of Science from the same institution in Geology.

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After a two-year stint in service I came back to the University of Texas and received a Master's in Geology, June, 1957.

Q Would you please now review your professional experience?

A I went to work for Gulf in May of 1957, and was assigned to the Roswell District Office as a production geologist. In January, 1958, I was transferred to Hobbs, where I worked as a geologist, mainly siting wells. In July of 1958 I was transferred back to Roswell as petroleum engineer, and I worked in the reservoir engineering section as a reserves engineer. In January of 1961 I was transferred back to Hobbs as a petroleum engineer. That is where I am now.

Q You are, therefore, qualified and have had experience both as a petroleum geologist and a petroleum engineer; is that correct?

A That's right.

MR. KASTLER: Mr. Utz, are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Kastler) Mr. Bilbrey, do you have a drawing of Gulf's J. F. Janda "F" Well No. 17, the completion data, for introduction here as Exhibit No. 4?

A Yes, I do.

Q Will you give the well's history, please?

A Gulf J. F. Janda "F" 17 was drilled in 1960 as a wildcat Devonian test. It reached a total depth of 11,730 feet, and was dry

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in the Devonian. The well was then temporarily abandoned. When we ran into water problems and had to dispose of our surplus water we thought of using this well as a disposal well. In the latter part of 1960 we plugged back the Janda 17 to the depth of 5650. In the drilling of the well initially we set surface casing, 13 3/8, to 431 feet.

Q How was that cemented?

A It was circulated cement., and the 9 5/8 intermediate, 3999 feet, again the cement circulated. That leaves us with an open hole interval from 3999 feet to the plugged back depth of 5650 feet. We have, since that plug-back time, tested the well. We have treated it with acid and tested it for injection, and found that it will take water under a pressure of about 200 pounds, takes sufficient water for us to dispose of all that excess water we have now.

Q What is the quantity of water that you intend to inject into this well, if this application is granted?

A When all leases are finally connected to the central battery we will probably have from 3 to 4,000 barrels a day available. Right now we are producing about 2,000, 2500 barrels into the central battery.

Q In your opinion is this well capable of handling all salt water necessary to inject that might be produced from these wells?

A Yes, it will handle all the water at probably no more than 200 pounds surface pressure.



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Q Do you propose to dispose of any more water on the surface, or in the surface pit, if this application should be granted?

A No. We prefer to dispose of all water in this well.

Q However, you intend to keep the pit available for any unforeseen happenings?

A In case of emergency the pit will still be available.

Q This application, if granted, in your opinion, will it result in any waste of oil or gas?

A No.

Q Will it compare any correlative rights, in your opinion?

A I think not.

Q Was Exhibit No. 4 prepared by you or at your direction or under your supervision?

A It was.

MR. KASTLER: These are the only questions I have for this witness on direct, and I would like to recommend and request that Exhibit No. 4 be admitted into evidence.

MR. UTZ: Without objection Exhibit No. 4 will be entered into the record.

BY MR. UTZ:

Q Mr. Bilbrey, what is the size of your production string, or your lower string, 9 5/8?

A Yes.

Q Where is the top of the cement on that?

A Circulated to the surface.



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Q Do you intend to put tubing in this well?

A No, sir.

Q How old is this casing?

A This casing is new casing which was installed when the well was drilled, and it is probably not over five months old.

Q What volumes of water are you going to dispose of?

A Probably three to four thousand barrels a day, ultimately.

Q How corrosive is this water?

A In our producing wells in this area from which this water is coming we have experienced little or no corrosion. We feel it will not be a problem here.

Q Do you intend to treat it?

A No, sir.

Q Do you intend to use any coupons to check the corrosion?

A Yes, sir. This will be part of the larger system. We will keep an eye on it by means of coupons, and possibly caliber surveys if we feel it is necessary.

Q This is set at what formation, 39, just above the Grayburg, isn't it?

A No, sir. It is set just a few feet below the top of the Grayburg as we have it marked.

Q Can you explain why Gulf did not propose to set tubing in this well, put sweet oil in the annulus as additional protection against corrosion?

A As you might know, we have received permission from the



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Commission to initiate, to pilot flood on our W. A. Ramsey lease, six injection wells. As soon as those injection wells are ready and that, we think, will be within a period of two or three months at most, that water will be injected in those wells, and this well will not be used, for the time being, as a disposal well. If, in the future, we need to dispose of more water we will have to go back to disposing in this well.

Q Actually, you are requesting this for a limited time?

A We would prefer that it not be limited simply for the reason we don't know how the six injection wells and the pilot flood will take the water. It might not take all the water. If so we will have to continue to dispose of some of the water in the disposal well.

Q What was the name of this flood?

A I don't know the technical name right off.

Q Do you have the order number?

A It was Case No. 2111, Order No. R-1820. It was approved by the O.C.C. November 16th, 1960.

Q And you think that you will be injecting water in six injection wells in four months?

A We hope to in three months. We had hoped that we would be able to inject by the time we got the automatic battery going so we could dispose of the water that way, but we have been running a little behind on our pilot flood compared to the automatic battery.

MR. UTZ: Any other questions?



MR. PAYNE: No questions.

MR. UTZ: Witness may be excused. Other statements in this case? Case will be taken under advisement. Hearing is adjourned.

(Whereupon, the hearing was adjourned at 5:10 P.M.)

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, JUNE PAIGE, 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 6th day of February, 1961.

*June Paige*  
Notary Public - Court Reporter

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E X H I B I T S

<u>NUMBER</u>	<u>EXHIBIT</u>	<u>IDENTIFIED</u>	<u>OFFERED</u>	<u>ADMITTED</u>
Ex.#1	Lease Plat	3	8	8
Ex.#2	Log	4	8	8
Ex.#3	Structure Plat	5	8	8
Ex.#4	Completion Data	11	13	13

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 2169.  
heard by me on Jan. 25, 1961.

*[Signature]*  
New Mexico Oil Conservation Commission Examiner

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