

CASE 3671: Application of AMERADA  
for salt water disposal, Lea  
County, New Mexicc.

CASE No.

3671

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

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

P. O. BOX 2088  
SANTA FE

November 13, 1967


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

Re: Case No. 3671  
Order No. R-3339  
Applicant:  
Amerada Petroleum Corp.

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 Mr. George E. Erickson

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. 3671  
Order No. R-3339

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 25, 1967, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 9th day of November, 1967, 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 Bagley SWD Well No. 1 (formerly called the State BT "D" Well No. 4) located in Unit N of Section 2, the Caudle Well No. 1 located in Unit H of Section 10, and the Bagley SWD Well No. 2 (formerly called the L. H. Chambers Well No. 2) located in Unit C of Section 11, all in Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico.

(3) That the applicant is presently authorized, by Order No. R-942, to utilize the aforesaid Bagley SWD Well No. 1 (formerly called the State BT "D" Well No. 4) to dispose of produced salt water into the Pennsylvanian formation, with injection into the interval from approximately 9045 feet to 9230 feet.

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CASE No. 3671

Order No. R-3339

(4) That the applicant is presently authorized, by Order No. R-2731, to utilize the aforesaid Bagley SWD Well No. 2 (formerly called the L. H. Chambers Well No. 2) to dispose of produced salt water into the Pennsylvanian formation, with injection into the interval from approximately 9005 feet to 9033 feet.

(5) That the applicant seeks authority to expand the disposal zones authorized for its Bagley SWD Wells Nos. 1 and 2 and authority to convert its Caudle Well No. 1 to salt water disposal.

(6) That the applicant proposes to inject produced salt water into the Pennsylvanian formation with injection into the intervals as follows:

The perforated and open-hole interval from approximately 8979 feet to 9291 feet in its Bagley SWD Well No. 1;

The perforated interval from approximately 9001 feet to 9326 feet in its Caudle Well No. 1; and

The perforated interval from approximately 9005 feet to 9303 feet in its Bagley SWD Well No. 2.

(7) That the injection should be accomplished through:

4-inch internally plastic-coated tubing installed in a packer set at approximately 8960 feet in the Bagley SWD Well No. 1;

3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8990 feet in the Caudle Well No. 1; and

3 1/2-inch internally plastic-coated tubing installed in a packer set at approximately 8903 feet in the Bagley SWD Well No. 2; and

that the casing-tubing annulus of each of the subject wells should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus of each of the subject wells or the annulus left open at the surface in order to determine leakage in the tubing or packer.

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CASE No. 3671  
Order No. R-3339

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

(9) That Order No. R-942 and Order No. R-2731 should be superseded.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amerada Petroleum Corporation, is hereby authorized to utilize its following-described wells in Township 12 South, Range 33 East, NMPM, Bagley Field, Lea County, New Mexico, to dispose of produced salt water into the Pennsylvanian formation:

Bagley SWD Well No. 1 (formerly called the State BT "D" Well No. 4) located in Unit N of Section 2 — injection to be accomplished through 4-inch tubing installed in a packer set at approximately 8960 feet, with injection into the perforated and open-hole interval from approximately 8979 feet to 9291 feet;

Caudle Well No. 1 located in Unit H of Section 10 — injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 8990 feet, with injection into the perforated interval from approximately 9001 feet to 9326 feet; and

Bagley SWD Well No. 2 (formerly called the L. H. Chambers Well No. 2) located in Unit C of Section 11 — injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 8903 feet, with injection into the perforated interval from approximately 9005 feet to 9303 feet;

PROVIDED HOWEVER, that the tubing of each of the subject wells shall be internally-plastic coated; that the casing-tubing annulus of each of the subject wells shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus of each of the subject wells or the annulus left open at the surface 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 1120 of the Commission Rules and Regulations.

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CASE No. 3671  
Order No. R-3339

(3) That Order No. R-942 and Order No. R-2731 are hereby superseded.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*David F. Cargo*  
DAVID F. CARGO, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

esr/

Case 3671  
Hend 10-35-67  
Rec. 10-31-67.

Grant Amradio permission to use  
Shin Candle #1, SENE-10-125-33E as  
a SWD well. Disposal will be thru  
3 1/2 tubing, under a packer set at approx  
8980. Disposal zone to be 9001-9326 into  
Perm formation.

Also Grant revision of orders  
as follows:

1. R. 242. St BT 'D' #4 - revise injection  
depth to 8979 to 9291.

Packer will be set at approx 8960.

2. R. 2731 - Chambers #2 - revise  
injection interval to 9005-9303.

Packer to be set approx. 8903.

Inert fluid to be used in the  
annulus in all wells.

Thos. A. W. F.



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 1183  
Order No. R-942

APPLICATION OF AMERADA PETROLEUM  
CORPORATION FOR AN ORDER GRANTING  
PERMISSION TO CONVERT ITS STATE  
BT "D" WELL NO. 4, LOCATED IN THE  
SE/4 SW/4 SECTION 2, TOWNSHIP 12  
SOUTH, RANGE 33 EAST, NMPM, INTO  
A SALT WATER DISPOSAL WELL IN ZONE  
2 OF THE BAGLEY-PENNSYLVANIAN POOL,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10 o'clock a.m. on November 28, 1956, at Hobbs, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 16th day of January, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Daniel S. Nutter, 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 case and the subject matter thereof.

(2) That the applicant is the owner of a depleted oil well in the Bagley-Pennsylvanian Pool known as the Amerada State BT "D" No. 4, located 560 feet from the South line and 1980 feet from the West line of Section 2, Township 12 South, Range 33 East, NMPM, Lea County, New Mexico.

(3) That applicant's proposed zone of injection is from ~~9045~~<sup>8879</sup> feet to ~~9230~~ feet, and that said zone is not productive of oil or gas in commercial quantities.

✓ 9291  
(4) That the applicant's proposed salt water injection program will not jeopardize the production of oil, gas, or fresh water in the area.

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Case No. 1183  
Order No. R-942

(5) That no objection to the applicant's proposed salt water injection program was entered at the hearing.

(6) That the applicant's proposed salt water injection program is consonant with sound conservation practices.

IT IS THEREFORE ORDERED:

That the applicant, Amerada Petroleum Corporation, be and the same is hereby authorized to convert to a salt water disposal well its State BT "D" No. 4 Well, located 560 feet from the South line and 1980 feet from the West line of Section 2, Township 12 South, Range 33 East, NMPM, Bagley-Pennsylvanian Pool, Lea County, New Mexico, by making necessary perforations to enable disposal of salt water into ~~zone 2~~ of the Bagley-Pennsylvanian Pool, either through perforation or open hole from ~~9045~~ to ~~9230~~ feet. 8-279

9241

That applicant shall submit monthly reports of its disposal operation in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN, Member

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

S E A L

ir/

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.

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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.

9303  
(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, Chairman

E. S. WALKER, Member

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

S E A L

esr/

Docket No. 33-67

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 25, 1967

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

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

CASE 3668: Application of Mobil Oil Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the triple completion (conventional) of its Bridges State Well No. 121 located in Unit L of Section 13, Township 17 South, Range 34 East, Lea County, New Mexico, to produce oil from the North Vacuum-Abo, Vacuum-Upper Pennsylvanian, and Vacuum-Middle Pennsylvanian Pools, through parallel strings of tubing.

CASE 3669: Application of Amerada Petroleum Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its State "VA" Lease by the injection of water into the Grayburg-San Andres formation through two wells located in Units K and M of Section 23, Township 17 South, Range 34 East, Vacuum Pool, Lea County, New Mexico.

CASE 3670: Application of Amerada Petroleum Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (combination) of its State "MA" Well No. 3 located in Unit M of Section 24, Township 11 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Moore-Wolfcamp Gas Pool and oil from the Moore-Pennsylvanian Pool through tubing installed in parallel strings of 2 7/8 inch and 3 1/2 inch casing, respectively, cemented in a common well bore.

CASE 3671: Application of Amerada Petroleum Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation, Bagley Field, Lea County, New Mexico, through the following three wells, all located in Township 12 South, Range 33 East:

L. H. Chambers Well No. 2, Unit C of  
Section 11; Disposal Interval - 9005  
to 9393 feet;

State BT "D" Well No. 4, Unit N of  
Section 2; Disposal Interval - 8979  
to 9291 feet;

J. T. Caudle Well No. 1, Unit H of  
Section 10; Disposal Interval - 9001 to  
9326 feet;

CASE 3672: Application of Charles B. Read and Len Mayer for back allowable, Eddy County, New Mexico. Applicants, in the above-styled cause, see the assignment of back allowable for the period from

April 7, 1967, to August 3, 1967, to their Irene Brainard Well No. 1 located in Unit E of Section 20, Township 18 South, Range 26 East, Atoka-Pennsylvanian Pool, Eddy County, New Mexico, said period being from the date of completion of the well to the date of approval by the Federal Power Commission for the sale of gas from said well.

- CASE 3673: Application of Ralph Lowe for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates formation in the interval 2964 feet to 2982 feet in his Humble State Well No. 1 located in Unit G of Section 36, Township 25 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.
- CASE 3674: Application of Robert N. Enfield for the amendment of Order No. R-3189, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3189 which pooled all mineral interests in the Chaveroo-San Andres Pool underlying the NW/4 NW/4 of Section 11, Township 8 South, Range 33 East, Chaves County, New Mexico. Applicant specifically seeks the amendment of paragraph (9) of Order No. R-3189 to fix \$125.00 per month as a reasonable charge for supervision and operational overhead for the subject well and to authorize the applicant to withhold from production the proportionate share of said \$125.00 and the proportionate share of actual operating costs of said well attributable to each non-consenting working interest.
- CASE 3675: Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the North Hackberry Yates Unit Area comprising 720 acres, more or less, of Federal Lands in Sections 23 and 24, Township 19 South, Range 30 East, Eddy County, New Mexico.
- CASE 3676: Application of Gulf Oil Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Yates formation through eight wells in Sections 23 and 24, Township 19 South, Range 30 East, North Hackberry-Yates Pool, Eddy County, New Mexico.
- CASE 3677: Application of Dugan Production Corporation for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Salt Creek-Dakota Oil Pool, San Juan County, New Mexico, to permit the drilling of wells on 2 1/2 acre spacing provided that no well be located nearer than 165 feet to the outer boundary of the quarter-quarter section and no nearer than 200 feet to another well producing from the same pool, and provided further, that a 40-acre proration unit would be subject to a 40-acre allowable regardless of the number of wells on the unit.
- CASE 3678: Application of Ryder Scott Management Company for a waterflood expansion, waterflood buffer zone, and several unorthodox locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Artesia-Nichols Waterflood Project,

Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico, by the conversion of its Western-Yates Collier State Well No. 1 located in Unit F of Section 20 and its Mershon State Well No. 2 located in Unit D of Section 21. Applicant further proposes to drill three additional water injection wells at the following unorthodox locations in Section 20: 2650 feet from the North and West lines; 2650 feet from the North line and 1330 feet from the East line; and 1310 feet from the North line and 1330 feet from the East line. Applicant further seeks the designation of the W/2 NW/4 of Section 21 and the SW/4 NW/4, E/2 NW/4, NE/4, and W/2 SE/4 of Section 20 and the NW/4 NE/4 of Section 29 as a waterflood buffer zone with capacity allowables, or as an area wherein transfer of allowable between leases would be permitted.

CASE 3679: Application of Sinclair Oil & Gas Company for the amendment of Order No. R-2854, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2854, which order established a 160-acre non-standard gas proration unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 of Section 26, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to applicant's J. R. Cone "A" Well No. 2 located in Unit L of said Section 26. Applicant now seeks the dedication of said unit to its J. R. Cone "B" Well No. 1 located in Unit N of said Section 26.

CASE 3680: Application of Texaco Inc. for an unorthodox location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to recomplete its State "CT" Well No. 4 at an unorthodox location 660 feet from the North line and 1980 feet from the West line of Section 35, Township 7 South, Range 35 East, in the Todd-Upper San Andres Pool, Roosevelt County, New Mexico, in exception to the pool rules which require wells to be located in the NE/4 or the SW/4 of the Section.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF AMERADA PETROLEUM CORPORATION )  
FOR AUTHORITY TO DISPOSE OF SALT WATER INTO )  
THE PENNSYLVANIAN FORMATION THROUGH ITS J. T.)  
CAUDLE WELL NO. 1, IN THE BAGLEY FIELD, LEA )  
COUNTY, NEW MEXICO. )

CASE NO. 3671

APPLICATION

Applicant Amerada Petroleum Corporation states that:

1. Applicant hereby requests authority to dispose of salt water into the Pennsylvanian Formation through its J. T. Caudle Well No. 1, located in the SE/4 NE/4 Section 10-12S-33E, Bagley Field, Lea County, New Mexico.
2. Attached hereto as Exhibit A is a plat showing the location of the subject disposal well, the location of all other wells within a radius of two miles from the subject well, and the names of all known lessees within that radius.
3. Attached hereto as Exhibits B and C, respectively, are a log of the subject well and a diagrammatic sketch of the proposed completion.
4. Applicant proposes to use the subject well for disposal of approximately 6,500 barrels of salt water per day produced by nearby wells from the Bagley-Devonian and Bagley-Pennsylvanian Pools.
5. A copy of this application, complete with all attachments, has been mailed to the State Engineer's Office, Capitol Building, Santa Fe, New Mexico.

AMERADA PETROLEUM CORPORATION

By

Thomas W. Lynch  
Thomas W. Lynch  
P. O. Box 2040  
Tulsa, Oklahoma 74102

Resident Counsel:

Jason W. Kellahin  
Kellahin and Fox  
P. O. Box 1769  
Santa Fe, New Mexico 87501

DOCKET MAILED

Date 10-11-67



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF AMERADA PETROLEUM CORPORATION )  
FOR AUTHORITY TO DISPOSE OF SALT WATER INTO )  
THE PENNSYLVANIAN FORMATION THROUGH ITS )  
BAGLEY SWD WELL NO. 2, FORMERLY CALLED THE )  
L. H. CHAMBERS WELL NO. 2, IN THE BAGLEY )  
FIELD, LEA COUNTY, NEW MEXICO. )

CASE NO. 3671

APPLICATION

Applicant Amerada Petroleum Corporation states that:

1. Applicant hereby requests authority to dispose of salt water into the Pennsylvanian Formation through its Bagley SWD Well No. 2, formerly called the L. H. Chambers Well No. 2, located in the NE/4 NW/4 Section 11-12S-33E, Bagley Field, Lea County, New Mexico.

2. Attached hereto as Exhibit A is a plat showing the location of the subject disposal well, the location of all other wells within a radius of two miles from the subject well, and the names of all known lessees within that radius.

3. Attached hereto as Exhibits B and C, respectively, are a log of the subject well and a diagrammatic sketch of the proposed completion.

4. Applicant proposes to use the subject well for disposal of approximately 6,500 barrels of salt water per day produced by nearby wells from the Bagley-Devonian and Bagley-Pennsylvanian Pools.

5. A copy of this application, complete with all attachments, has been mailed to the State Engineer's Office, Capitol Building, Santa Fe, New Mexico.

AMERADA PETROLEUM CORPORATION

By

Thomas W. Lynch  
Thomas W. Lynch  
P. O. Box 2040  
Tulsa, Oklahoma 74102

Resident Counsel:

Jason W. Kellahin  
Kellahin and Fox  
P. O. Box 1769  
Santa Fe, New Mexico 87501

DOCKET MAILED

Date 10-11-77

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF AMERADA PETROLEUM CORPORATION )  
FOR AUTHORITY TO DISPOSE OF SALT WATER INTO )  
THE PENNSYLVANIAN FORMATION THROUGH ITS )  
BAGLEY SWD WELL NO. 1, FORMERLY CALLED THE )  
STATE BT "D" WELL NO. 4, IN THE BAGLEY FIELD, )  
LEA COUNTY, NEW MEXICO. )

CASE NO. 3671

APPLICATION

Applicant Amerada Petroleum Corporation states that:

1. Applicant hereby requests authority to dispose of salt water into the Pennsylvanian Formation through its Bagley SWD Well No. 1, formerly called the State BT "D" Well No. 4, located in the SE/4 SW/4 Section 2-12S-33E, Bagley Field, Lea County, New Mexico.

2. Attached hereto as Exhibit A is a plat showing the location of the subject disposal well, the location of all other wells within a radius of two miles from the subject well, and the names of all known lessees within that radius.

3. Attached hereto as Exhibits B and C, respectively, are a log of the subject well and a diagrammatic sketch of the proposed completion.

4. Applicant proposes to use the subject well for disposal of approximately 6,500 barrels of salt water per day produced by nearby wells from the Bagley-Devonian and Bagley-Pennsylvanian Pools.

5. A copy of this application, complete with all attachments, has been mailed to the State Engineer's Office, Capitol Building, Santa Fe, New Mexico.

AMERADA PETROLEUM CORPORATION

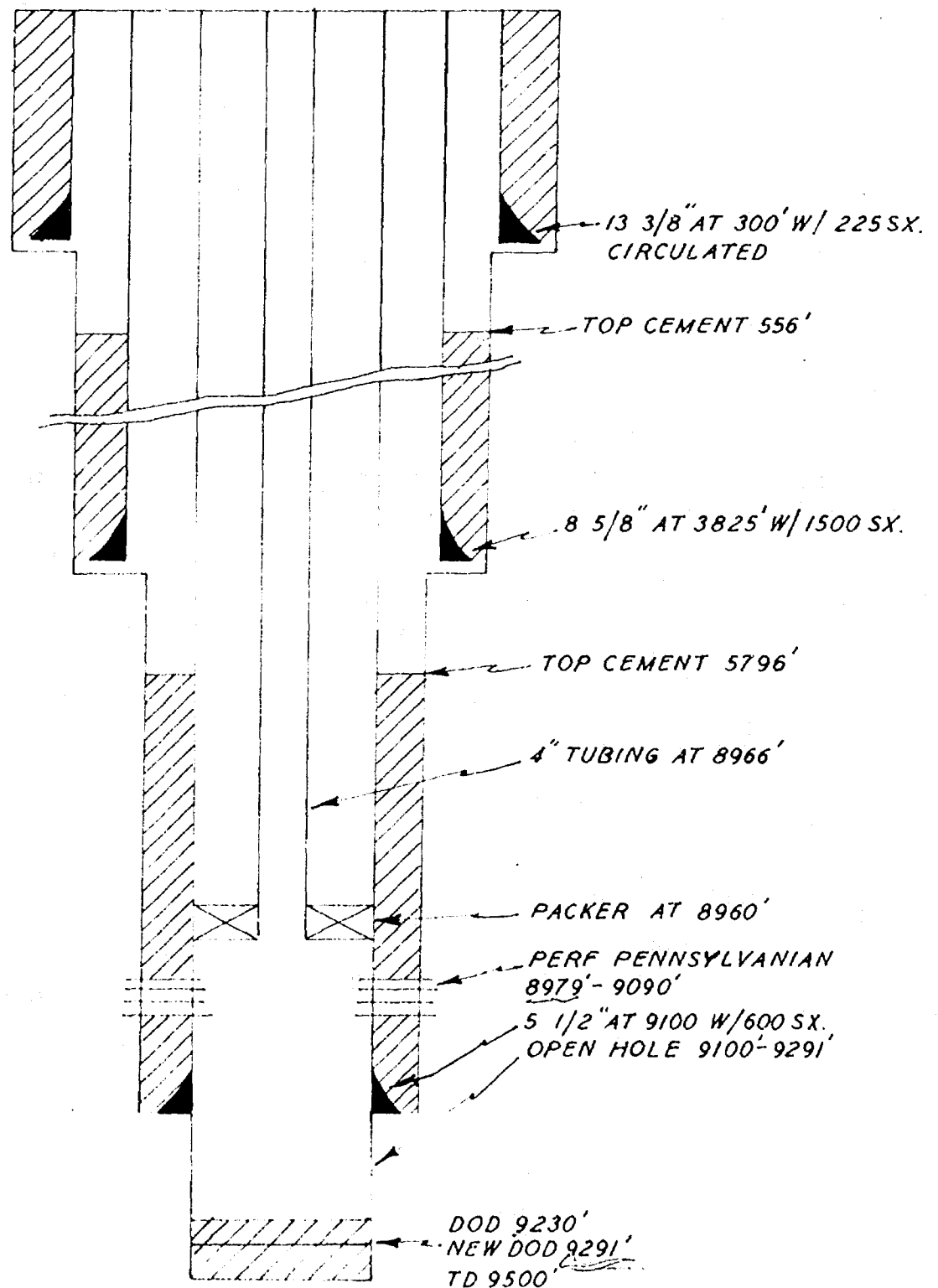
By Thomas W. Lynch  
Thomas W. Lynch  
P. O. Box 2049  
Tulsa, Oklahoma 74102

Resident Counsel:

Jason W. Kellahin  
Kellahin and Fox  
P. O. Box 1769  
Santa Fe, New Mexico 87501

PROPOSED SALTWATER DISPOSAL WELL  
AMERADA STATE BTD NO. 4

SE. SW. 2-12S-33E  
BAGLEY PENNSYLVANIAN OIL POOL  
LEA COUNTY, NEW MEXICO

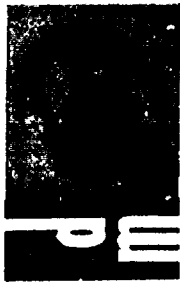


Case 3671

dearnley-meier reporting service, inc.

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

1120 SIAMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 25, 1967

IN THE MATTER OF:

Application of Amerada  
Petroleum Corporation  
for salt water disposal,  
Lea County, New Mexico

Case No. 3671

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 3671.

MR. HATCH: Case 3671, application of Amerada Petroleum Corporation for salt water disposal, Lea County, New Mexico.

MR. ERICKSON: George E. Erickson, Jr., for Applicant Amerada Petroleum, address, P.O.Box 2040, Tulsa, Oklahoma, and in association with Mr. Jason Kellahin. This case consolidates for hearing Applications to inject salt water into three wells shown on the Commission docket, 33-67, and I would like to point out for the benefit of the Examiner that the L.H. Chambers No. 2 shown on the docket sheet has a disposal interval shown of 9005 to 9033. That should be 9303. It's correct on the application, but an error on the docket only.

MR. UTZ: The other figures are correct?

MR. ERICKSON: Yes, sir, they are. I have one witness, Mr. Jack Evans.

MR. UTZ: Let the record show that Mr. Evans has been sworn in the previous case.

MR. ERICKSON: Also request the record to show that Mr. Evans has previously been accepted for his qualifications.

MR. UTZ: The record will so show.

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification.)

J A C K    E V A N S, called as a witness,  
having been previously duly sworn, was examined and testified  
as follows:

DIRECT EXAMINATION

BY MR. ERICKSON:

Q    Are you familiar with the salt water injection  
program for the three wells which are the subject matter of  
the consolidated application at this hearing?

A    Yes.

Q    I would like to invite your attention to what has  
been marked as Exhibit 1 for identification and ask you to  
describe that exhibit.

A    Exhibit 1 is a map of the Bagley Field, Lea County,  
New Mexico, in Townships 11 and 12 South, Range 33 East.

Q    Now, does this map, or plat, show the location of  
the three wells which are the subject matter of this application?

A    Yes, sir.

Q    Would you note the location of those three wells  
just to assist the Examiner?

A    The three wells are indicated with colored  
triangles, State B T "D" No. 4 is in Unit N, of Section 2  
the Chambers No. 2 is in Unit C of Section 11, the Caudle  
No. 1 is in Unit H of Section 10. The reason for the two

color differences there are that the orange triangles indicate wells that are currently being used for salt water disposal and the green Caudle No. 1 is a new well that we propose to use for salt water disposal.

Q Does this plat also show the location of neighboring wells in the Lessee's adjacent leases?

A Yes, sir.

Q I would like to invite your attention now to what has been marked as Exhibit 2 for identification, and I'll ask you to describe Exhibit 2.

A Exhibit 2 is a log, electric log on the Amerada State BT "D" No. 4, which is currently being used as a salt water disposal well. At the bottom of the log, I have indicated the existing perforations that are being used for disposal and the existing open hole interval that is being used for disposal, and also the proposed perforations and open hole that we would like to use for disposal. This is merely an expansion within the Bagley-Penn of the existing disposal interval.

Q Mr. Evans, you stated that this well is currently being used for injection of water, what authority exists for that use?

A In 1957, Amerada received approval and permission

by way of Order No. R-942, --

Q That's dated January 16th, 1957?

A That is correct.

Q What injection intervals were authorized by that Order?

A The interval authorized was from 9045 to 9230, which is the red interval indicated on the log.

Q Now, what interval do you propose for approval with this application?

A We propose to expand that interval to the green, as shown, and that's from 8979 to 9291.

Q So this expands the interval already authorized for injection?

A That is correct.

Q Now, I would like to call your attention to what has been marked as Exhibit 3 for identification.

MR. UTZ: You do propose to have some open hole?

THE WITNESS: That will be drilled out. Right now, plugback depth is at 9230, and we will drill out to 9291.

MR. UTZ: The open hole shown in red was approved in the previous order?

THE WITNESS: Yes, sir.

Q (By Mr. Erickson) Directing your attention to



Exhibit No. 3, for identification, what does that exhibit show?

A Exhibit 3 is an electric log of the Amerada Chambers No. 2 which also is being used now as a salt water disposal well.

Q Under what authority is that currently being used as a disposal well?

A Under Order R-2731, dated June 19th, 1964.

Q And what intervals were authorized by that order?

A From 9005 feet to 9033 feet. That corresponds to the red perforations or the red zone indicated on the log.

Q And what is the proposed interval which you are seeking with this application?

A We propose to expand the interval from 9005 to 9303 feet. These proposed perforations are shown in green on the log.

MR. ERICKSON: Any questions about this exhibit?

MR. UTZ: Yes, what was the Order, again?

MR. ERICKSON: Order No. R-2731 of June 19th, 1964.

MR. UTZ: What was the previous order?

MR. ERICKSON: The previous Order for Exhibit 2 was R-942 of January 16th, 1957.

MR. UTZ: That's the State BT "D"?

MR. ERICKSON: Yes, sir.

MR. UTZ: All right; proceed.

Q (By Mr. Erickson) Now, directing your attention to Exhibit No. 4 for identification, would you describe for the Examiner what that exhibit shows?

A Exhibit 4 is an electric log on the Amerada Caudle No. 1 and on this exhibit we show the existing perforations in red, that are producing right now. The perforations in red are producing. Above the red perforations, you'll notice a rectangular area from 8920 to 8980, that is a set of perforations that was tested and had a small gas show and are packed off. They're behind a packer. We do not intend to use these in any way as far as disposal is concerned. Now, the proposed perforations in this well are shown in green over the gross interval, this includes the existing perforations, the gross interval we propose for disposal is from 9001 to 9326 feet.

Q Has there been any Order issued approving use of this well as a disposal well?

A No, sir, it has not.

Q So this is the one where there is no Order and the other wells have both been approved for disposal, but you

are seeking to expand the interval in each of the other two?

A Yes, sir, and in this one we're seeking permission to use it as disposal. No permission has been established yet.

Q Mr. Evans, is the Caudle No. 1 currently producing oil?

A Yes, sir, it is.

Q Do you have current production data for that well?

A It produces six barrels of oil per day and 27 barrels of water per day.

Q At approximately what depth?

A At approximately 9000 feet.

Q In your opinion, is this Caudle No. 1 an economical well?

A It is at it's uneconomical limit or approaching it.

Q Will the proposed injection through the Caudle No. 1 have any harmful effect on the Caudle No. 3 which is shown on Exhibit No. 1?

A No, sir. It will not have any harmful effect on the Caudle 3. The Caudle No. 3 is the north offset to the Caudle 1. The Caudle 3 now produces one barrel a day. It is past its economic limit.

Q If it does have any effect, what would you expect

that effect to be, in general terms?

A We would expect rather than harmful that this would be a beneficial effect to the No. 3.

Q Mr. Evans, I would like for you to turn to what has been marked as Exhibit No. 5 for identification and describe that exhibit.

A Exhibit No. 5 is a downhole schematic of the Amerada State BT "D" No. 4 showing the casing and tubing configuration and showing the proposed injection or disposal interval.

Q Turning to Exhibits No. 6 and 7 for identification; describe those exhibits.

A Exhibit 6 is the downhole schematic of the Amerada Chambers No. 2 showing the casing configuration and tubing and the proposed interval for disposal.

Q So then Exhibit 5 shows the State BT "D"; 6, the Chambers; and, 7, the Caudle?

A Yes, sir. The Caudle No. 1 schematic is Exhibit 7 depicting these aspects, the casing and tubing relationship and the perforations that we propose for disposal.

Q Mr. Evans, if this application is approved, how many barrels of water would you propose to inject in each well per day?

A We would expect a maximum of 6500 barrels per day

per well at a maximum surface pressure of 1000 pounds.

Q And what would be the source of the injected water?

A The injected or disposed water would come from the, primarily from the Bagley-Devonian formation and some from the Bagley-Pennsylvanian formation. This is water that needs to be disposed of.

Q Would that water be saline?

A Yes, sir, it's brackish water.

Q Where is the fresh water strata located for each of these three wells?

A Well, in all cases, the fresh water strata will be up behind the surface casing.

Q At about what rough separation, vertical separation?

A Oh, there will be 8500 feet actually between the disposed interval and the location of the fresh water.

Q Well, now, what separation will exist between the disposal intervals for the three wells and this fresh water strata, that is physical separation I am speaking of now?

A There is casing, complete sheathing of casing and tubing behind, or with use of a packer that will keep the disposed water within the Pennsylvanian formation and prevent any contamination up that high.

Q This is true in the case of each of the three wells?

A Yes, sir, it is.

Q In your opinion, then, will this separation in this three-well project protect the fresh water strata?

A Yes, sir, it will.

Q Mr. Evans, were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes, sir.

MR. ERICKSON: I move the acceptance into evidence of Exhibits 1 through 7.

MR. UTZ: Without objection, Exhibits 1 through 7 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 7 were admitted in evidence.)

MR. ERICKSON: Does the Examiner have any questions?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Evans, in regard to your openhole behind the casing on the Caudle No. 1, I think you, either you or other witnesses have been properly questioned regarding the other two wells at the previous hearing, what formations lie behind those intervals, that is from 309 to 672 and from 3925 to 6805.

A Well again, with the incompetent impermeable rock,

or formation that would not give up nor take fluids.

Q In other words, there is nothing there to be harmed even if you should have a leak?

A That's correct.

Q I don't recall what you stated as to what the equipment is in the annulus in this well.

A We will use kontrol treated salt water, it's treated for corrosion, for protection.

Q What is your experience in the other two wells, are you having trouble getting the Pennsylvanian to accept the water?

A We have pressured up essentially; we are pressuring up this interval and plus the fact that our Devonian water production is increasing. The Devonian is an active water driven formation, water volumes are increasing and undercurrent allowable situations with the allowable high, the water problem is aggravated, so with the existing disposal wells we have, we are near capacity, both through injection facilities and well capabilities.

Q But by expanding the injection zone, you hope to put a little more water down?

A Yes, sir.

Q And this thousand pounds was the surface pressure

that you are using at the surface plus your hydrostatic head?

A Yes, sir, that is correct.

Q I would say it was a little tight.

A Well, we have put 16 million barrels of water in that particular formation and I think it's primarily a question of the formations are getting filled up, getting pressured up.

Q You haven't noticed any increase in production from your Pennsylvanian oil wells, have you?

A No, sir, no noticeable.

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

(Witness excused.)

MR. UTZ: Any statements? The case will be taken under advisement.



I N D E X

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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 29th day of November, 1967.

Ada Dearnley  
 Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Bernalillo hearing of Case No. 3621, heard by an oil conservation hearing, 19.....  
Michael J. Dearnley, Examiner  
 New Mexico Oil Conservation Commission

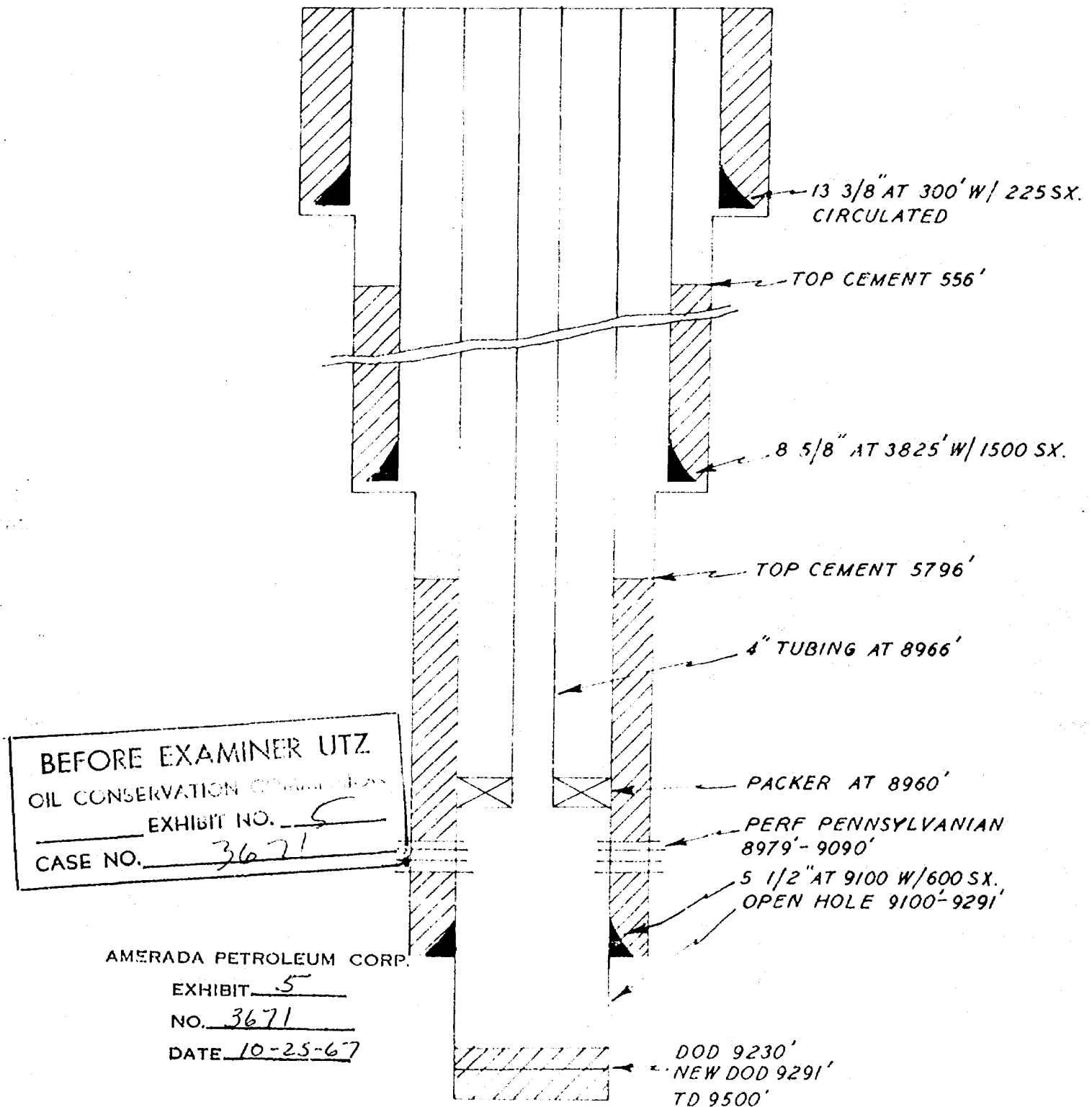
PROPOSED SALTWATER DISPOSAL WELL

AMERADA STATE LTD NO. 4

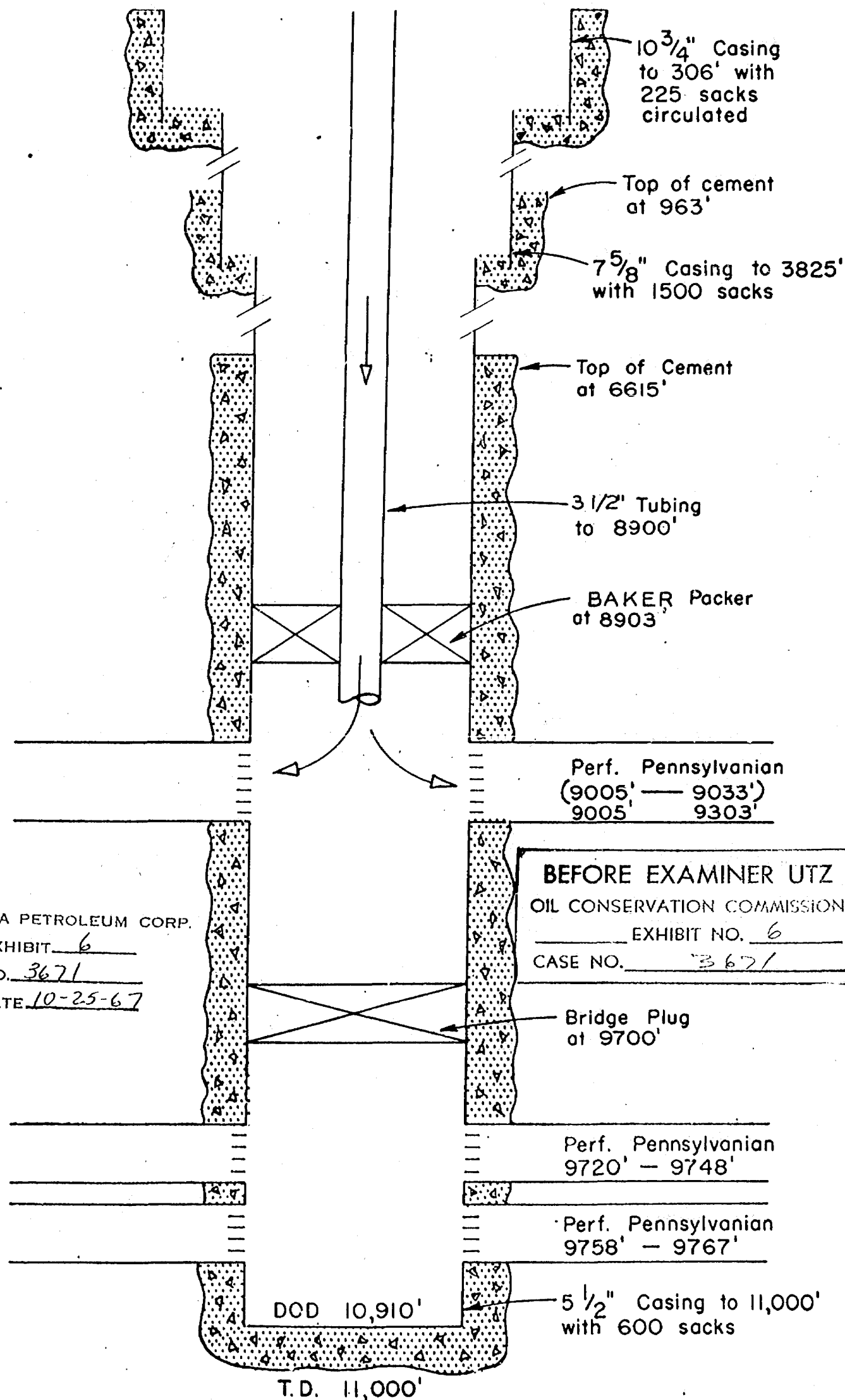
SE. SW. 2-12S-33E

BAGLEY PENNSYLVANIAN OIL POOL

LEA COUNTY, NEW MEXICO



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



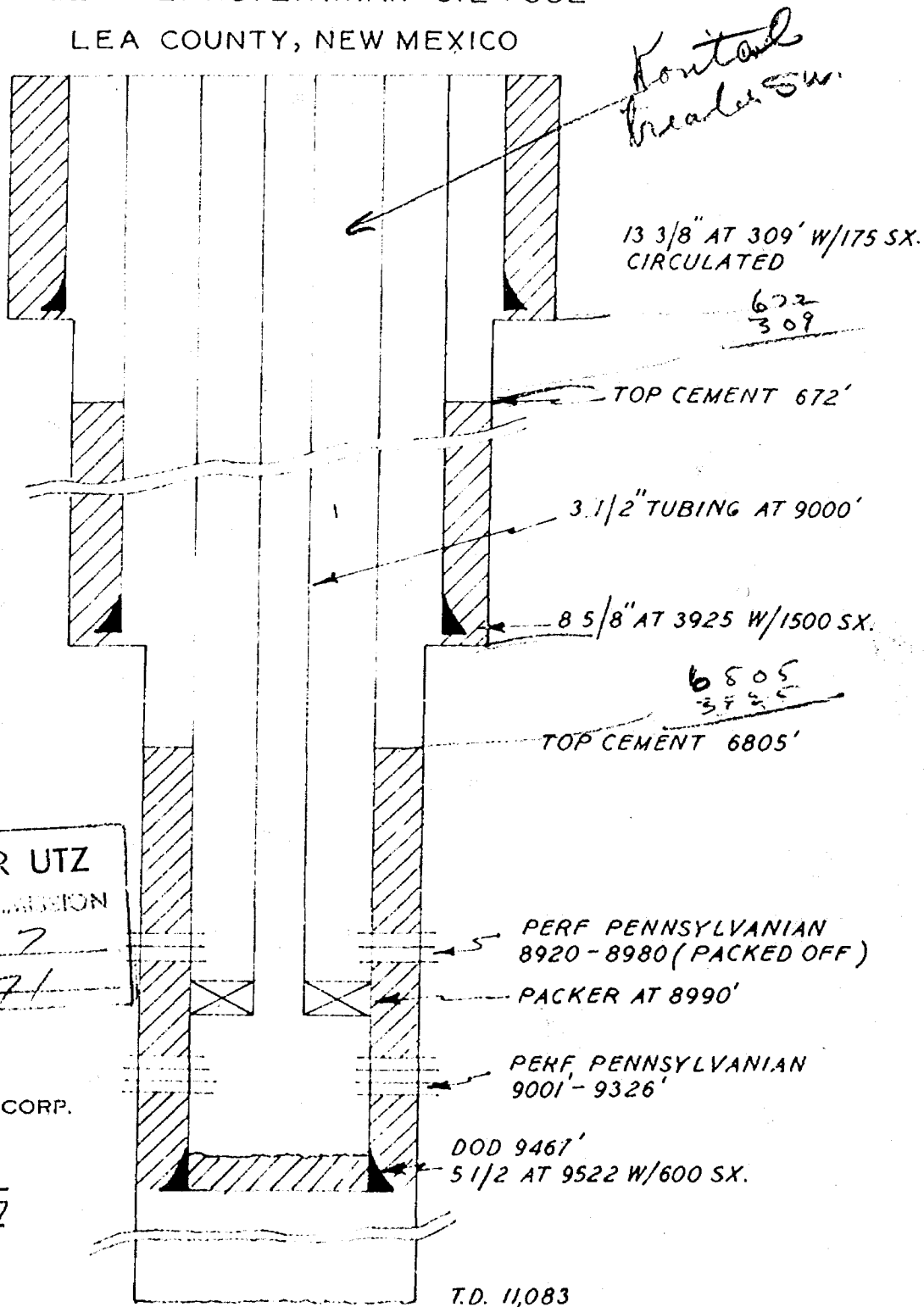
AMERADA PETROLEUM CORP.  
 EXHIBIT 6  
 NO. 3671  
 DATE 10-25-67

BEFORE EXAMINER UTZ  
 OIL CONSERVATION COMMISSION  
 EXHIBIT NO. 6  
 CASE NO. 3671

PROPOSED SALTWATER DISPOSAL WELL

AMERADA CAUDLE NO.1

C. SE NE. 10-12S-33E  
BAGLEY PENNSYLVANIAN OIL POOL  
LEA COUNTY, NEW MEXICO



BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 7  
CASE NO. 3671

AMERADA PETROLEUM CORP.  
EXHIBIT 7  
NO. 3671  
DATE 10-25-67