

CASE 1183: Application of Amerada
Petroleum Corp. for a salt water dis-
posal well in Bagley-Penn. Pool

Case No.

1183

Application, Transcript,
Small Exhibits, Etc.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 18, 1957

Mr. W. G. Abbott
Amerada Petroleum Corp.
Drawer D
Monument, New Mexico

Dear Sir:

We enclose a copy of Order R-942 issued January 16, 1957,
by the Oil Conservation Commission in Case 1183, which was heard
on November 28th at Hobbs.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encl.

C
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P
Y

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 Com-
mission, hereinafter referred to as the "Commission," in accord-
ance 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 feet to 9230 feet, and that said zone is not productive of oil
or gas in commercial quantities.
- (4) That the applicant's proposed salt water injection
program will not jeopardize the production of oil, gas, or fresh
water in the area.
- (5) That no objection to the applicant's proposed
salt water injection program was entered at the hearing.

-2-
Case No. 1183
Order No. R-942

(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 580 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.

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

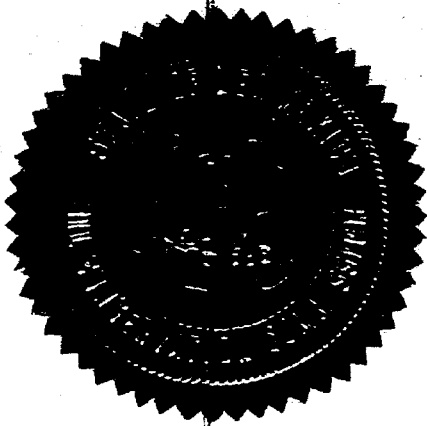
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EDWIN L. MECHEM, Chairman


MURRAY E. MORGAN, Member


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



1r/

OK
to
oppose & require
monthly injection
report.
@W
12/7/56

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date December 15, 1956

CASE 1183

Hearing Date November 28, 1956

My recommendations for an order in the above numbered cases are as follows:

I recommend that the Commission enter an order approving the application by Amerada for permission to ~~inject~~ dispose of salt water in its State BT "D" well no 4, located SE/4 SW/4 Sec 2 T 12S, R 33E, Bagley Pennsylvanian Pool.

Applicant proposes to inject the water in the so-called zone 2 of the Pennsylvanian Pool. This zone is being depleted to its economic limit in several wells and it is believed that no harm but possibly even some help may result from injecting into this zone. The subject well has Tallawaan assigned it of 3 BOPD per day but cannot make it. Last production reported ~~was~~ at the hearing ~~for~~ was for September, at which time it made 55 barrels during the month. No objections to the conversion of this well to a water well were received from any other operators in the Pool.

Staff Member
Xavier Butler

AMERADA PETROLEUM CORPORATION
P. O. BOX 2040
TULSA 2, OKLAHOMA

Case # 1183

Drawer D
Monument, New Mexico
November 3, 1956

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application to Recomplete
Amerada State BT"D" No. 4,
Bagley-Pennsylvanian Pool,
Lea County, New Mexico as
a salt water disposal well.

*Send copy of
Docket
to Bill
on
11/12/56*

Gentlemen:

By this letter of application Amerada Petroleum Corporation wishes to state the following:

- A. That Amerada Petroleum Corporation State BT"D" No. 4, located in the SE/4 of the SW/4 of Section 2, Township 12-S, Range 33-E, was completed as an oil well at a total depth of 9,500 feet in the Pennsylvanian Formation on August 14, 1951. The attached exhibit "A" shows the location of this well on the Amerada State BT"D" Lease together with the location of all offset wells.
- B. That oil production from the Amerada State BT"D" No. 4 has declined such that further operation has been considered economically infeasible.
- C. That water production in the Bagley area (i.e., the Bagley-Pennsylvanian and Devonian Pools), in which the subject well is located, is increasing and disposal is difficult. The current rate of water production is 7600 barrels per day.
- D. That Amerada Petroleum Corporation wishes to recomplete the Amerada State BT"D" No. 4, a depleted oil well, in the manner necessary to dispose of the current Bagley-area water production. The proposed recompletion will be done in the following manner:
 1. Drill out cement from 9085 to 9250 feet.
 2. Spot cement plug 9230-9250 feet.
 3. Acidize open hole 9100-9230.
 4. Perforate existing 5-1/2 inch casing 9055-9090 feet.
 5. Wash perforations with acid and complete well for injection.

*E to last
Smith
TDP
on 11/12/56*

November 3, 1956

- E. The proposed zone of injection, from 9045 to 9230, is in the Pennsylvanian formation and is not productive of oil or gas in commercial quantities. (Exhibit B)
- F. That the present method of disposal of salt water in open evaporation pits is inadequate.
- G. That the manner and method of the proposed injection is both mechanically feasible and practical.

Therefore, Amerada Petroleum Corporation requests that the Oil Conservation Commission set a certain day, on which this application may be heard and after said hearing grant permission to the applicant to recomplete the subject well as a salt water disposal well in the manner proposed in this application.

Respectfully submitted,

AMERADA PETROLEUM CORPORATION

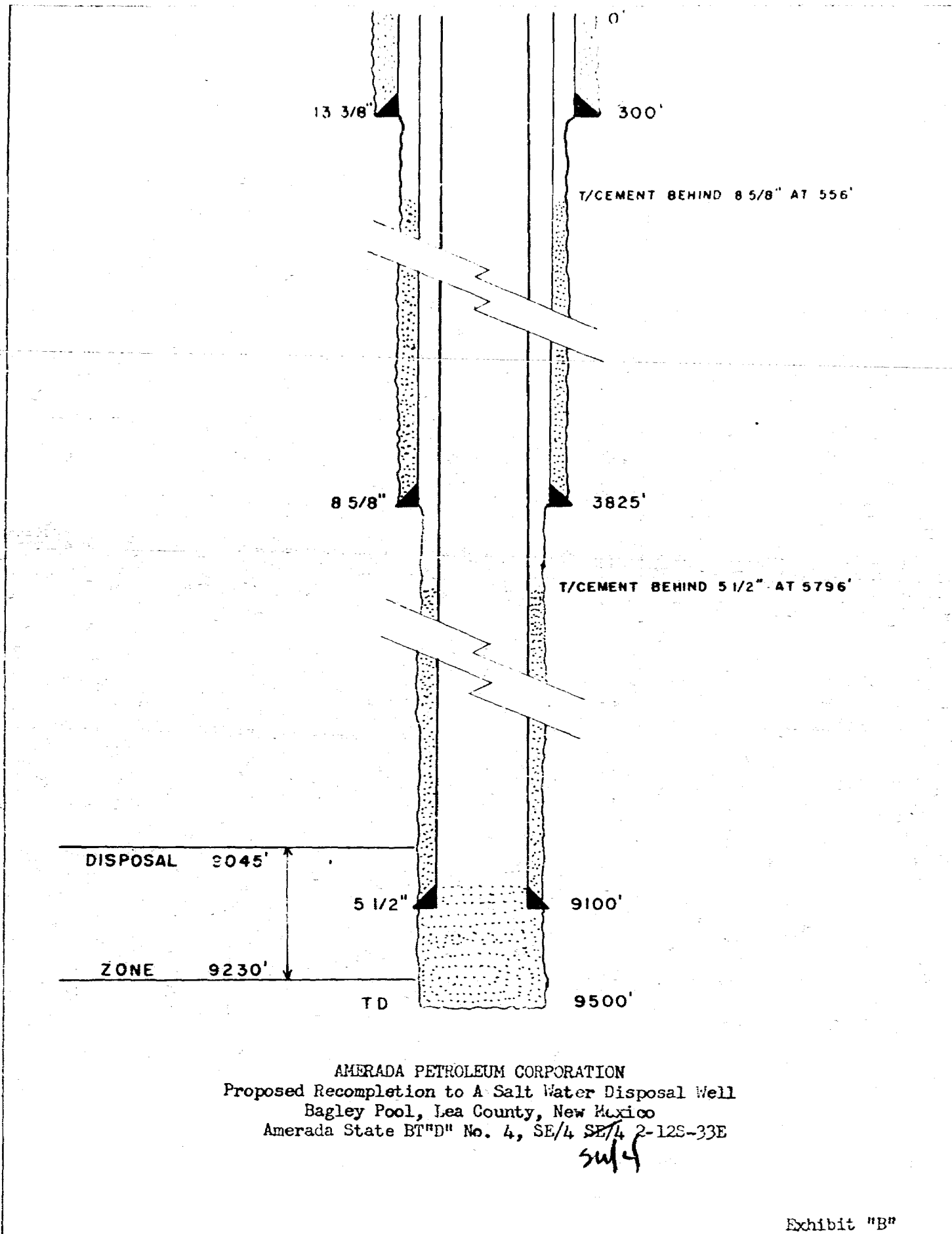


D. C. Capps
District Superintendent

DCC/WGA/vh

cc: Texas Pacific Coal & Oil Co.
Box 1688
Hobbs, New Mexico

Gulf Oil Corporation
Box 2167
Hobbs, New Mexico



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
NOVEMBER 28, 1956

TRANSCRIPT OF HEARING

Case No. 1183

DEARNLEY-MEIER AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
NOVEMBER 28, 1956

-----: :
 IN THE MATTER OF: :
 :
 :
 Application of Amerada Petroleum Corporation for an :
 order authorizing a salt water disposal well in the :
 Bagley-Pennsylvanian Pool, Lea County, New Mexico. :
 Applicant, in the above-styled cause, seeks an or- : Case No.
 der authorizing the conversion to a salt water dis- : 1183
 posal well of its Amerada State BT "D" Well No. 4, :
 located in the SE/4 SW/4 of Section 2, Township 12 :
 South, Range 33 East, Lea County, New Mexico; the :
 proposed zone of injection is from 9,045 to 9,230 :
 in the Bagley-Pennsylvanian Pool. :
 -----: :

BEFORE:

Mr. Daniel S. Nutter

TRANSCRIPT OF HEARING

W. G. ABBOTT

a witness, of lawful age, having been first duly sworn on oath,
testified as follows:

DIRECT EXAMINATION

By MR. NUTTER:

Q State your name, please.

A W. G. Abbott, Amerada Petroleum Corporation.

MR. NUTTER: Case No. 1183 is the application of Amerada
Petroleum Corporation for an order authorizing a salt water dis-
posal well in the Bagley-Pennsylvanian Pool, Lea County, New Mexico,

said disposal well to be Amerada State BT "D" Well No. 4, located in the Southeast quarter, Southwest quarter, Section 2, Township 12 South, Range 33 East, Lea County, New Mexico.

MR. ABBOTT: We propose to recomplate our State BT "D" 4 which is presently producing in the Bagley-Pennsylvanian Pool, and by opening up additional perforations, use this well as a salt water disposal well.

Here is two copies of the plat showing the well. This well is located in the Southeast quarter of the Southwest quarter of Section 2, Township 12 South, Range 33 East. This well was completed as an oil well at a total depth of 9500 feet in the Pennsylvanian formation, August 14, 1951. The original perforation, we originally perforated ten feet in the upper part of the Pennsylvanian. Original perforations were from 9,045 to 9,055, and we propose to open up additional perforations to cover that whole zone in the Pennsylvanian to dispose of water between the intervals of 9,045 to 9,230 feet.

Here are two copies of the diagram of this proposed dual completion; I mean proposed disposal well. I would also like to submit two copies showing the oil production, the daily, average daily oil production versus time, drawn on a semi-log scale for this Amerada State BT "D", the State No. 4, and I would like to submit the electrical log of this well. I just have one copy.

At the present time there are six wells completed in this zone, two as we call it of the Bagley-Pennsylvanian zone. Those wells are State BT "D" No. 4, the proposed salt water disposal well, State BT "I" No. 2, State BT "A" No. 2, State BT "D" No. 5, State BT "C" No. 5, and the Texas Pacific Coal and Oil State C No. 5. It is questionable whether the Texas Pacific Coal and Oil State No. 6, C 6 is completed in this zone. Actually by correlation on the electrical logs, it could be in this zone, but the performance of the well and the production history have seemed to indicate that it might be a, just a localized condition around their C 6 well, and it might not have good connection with the rest of the Zone 2 reservoir.

I would like to also submit the production data for the Zone 2 of the Bagley-Pennsylvanian Pool showing the total production for the reservoir, and also the individual production for the individual well. There is two copies of that. Also we would like to submit production data curve for the Zone 2 of the Bagley-Pennsylvanian zone showing the bottomhole pressure, monthly oil and water production in accumulative oil production versus time. We want to use this well for disposal as we consider the well, the oil production in the well depleted. We feel that this would be our best and most economical means of disposing of the water produced in the Bagley Pool.

At the present time this water production amounts to approximately 7600 barrels a day. Of this 7600, about 71 percent is produced from the Siluro - Devonian Pool and about 29 percent from the Pennsylvanian. Of this total water produced, approximately 89 percent of it is produced by Amerada, and the remaining percentage is produced by Texas Pacific Coal and Oil.

By MR. NUTTER: Are you speaking of the water in the whole pool or just in Zone 2?

A No, the whole pool.

Q I see.

A We do not think that water injection in this zone will be detrimental to the remaining wells in the zone. Actually, we think that it will help recovery. We feel that all through there is sufficient water drive in this particular reservoir to recover the oil that by injecting water, the reservoir pressure may be maintained. This should result in preventing further shrinkage of the oil in the reservoir, and the wells can be produced to a lower chemical limit.

Also, this would increase the ultimate recovery slightly, and we feel that this water injection in this section can be done by gravity disposal of the salt water, where for approximately one and a half years, and probably additional disposal by pump for another three years, before the pressures become excessive in the reservoir.

I believe that's all.

MR. NUTTER: Does anyone have a question of the witness?

By MR. NUTTER:

Q Mr. Abbott, this zone No. 2, what in particular in your Well No. 4, what is the top of that zone and the bottom on it?

A Let's see, I have to look at that electric log. Actually the zoning in that Pennsylvanian is more or less a porosity development, we consider the top of our perforations fairly close to the top of that zone. Actually, if you are reading it off the electric log the top of that zone could be considered about 9,040 feet.

Q And how far down does that zone go?

A To the base of our post perforations down to 9230.

Q Now, how far, what is the interval in Zone No. 1?

A I don't have that.

Q What is the approximate bottom of Zone No. 1?

A Well, I don't believe I have that information.

Q Is it well above the Zone No. 2, however?

A Yes, sir.

Q Is there any evidence, in your opinion, between any vertical communication between Zone No. 1 and No. 2?

A We don't believe there is by the pressure information, but as this Zone 1 is a solution gas drive, even if there was a communication in the reservoir, it may actually help the zone 1 rather than hurt it.

Q I see. Is your BT "D" Well No. 4 presently producing?

A Yes, sir, in September it produced 55 barrels of oil.

Q Did it make water?

A Yes, sir, it made 450 barrels of water.

Q And you feel that it has reached its economic limit?

A Yes, sir. This production data for this entire Zone 2 seeks, if you look at the cumulative oil figure or curve, you can see that the slope of that curve is approaching zero, and we feel that that whole zone is just about depleted.

Q Is there any established water-oil contact in Zone No. 2 at the present time?

A No, sir, there isn't.

Q Don't you know whether your injection, your water injection program then is going to be throughout the entire zone, isn't it?

A Yes, sir.

Q From top to bottom?

A Yes, sir.

Q Do you think that there is any possibility in injecting water in this well, might contribute to watering out some of these wells surrounding?

A No, I think this is a fairly low well and I think that the higher wells on the structure will probably help, and the higher wells on the structure are Texas Pacific Coal Wells, and they may be helped by this water injection.

MR. NUTTER: Does anyone have any questions of the witness?

If not he may be excused.

(Witness excused.)

MR. NUTTER: Did you want to offer these as Exhibits 1 through 6, Mr. Abbott?

MR. ABBOTT: Yes, sir.

MR. NUTTER: Without objection, Exhibits No. 1 through 6 will be received in evidence.

Does anyone have a statement they wish to make in this case?

If there are no statements, we will take the case under advisement.

MR. ABBOTT: I may add on this case that that well is temporarily abandoned now.

DOCKET: EXAMINER HEARING NOVEMBER 28, 1956

New Mexico Oil Conservation Commission 10:00 a.m. Hobbs, New Mexico.

Oil Conservation Commission Office, 1000 W. Broadway, Hobbs, New Mexico.

The following cases will be heard before Daniel S. Nutter, Examiner:

- CASE 1177: Application of Stanolind Oil and Gas Company for approval of a non-standard gas proration unit in the Jalmat Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for the Jalmat Gas Pool as set forth in Order R-520. Applicant, in the above-styled cause, seeks an order authorizing a 481-acre non-standard gas proration unit in the Jalmat Gas Pool comprising the E/2 E/2 of Section 13, Township 26 South, Range 36 East, and Lots 1, 2, 3, and 4, and the E/2 W/2 of Section 18, Township 26 South, Range 37 East, Lea County, New Mexico; said unit to be dedicated to applicant's Farnsworth "A" Well No. 4, located 1980 feet from the North line and 660 feet from the West line of said Section 18.
- CASE 1178: Application of Gulf Oil Corporation for approval of a non-standard gas proration unit in the Eumont Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for the Eumont Gas Pool as set forth in Order R-520. Applicant, in the above-styled cause, seeks an order authorizing a 320-acre non-standard gas proration unit in the Eumont Gas Pool comprising the E/2 of Section 22, Township 21 South, Range 36 East, Lea County, New Mexico; said unit to be dedicated to applicant's Leonard "A" Well No. 3, located 660 feet from the North line and 1980 feet from the East line of said Section 22.
- CASE 1179: Application of Gulf Oil Corporation for approval of a non-standard gas proration unit in the Jalmat Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for the Jalmat Gas Pool as set forth in Order R-520. Applicant, in the above-styled cause, seeks an order authorizing a 227-acre non-standard gas proration unit in the Jalmat Gas Pool comprising Lots 5, 6, and 7, and the SE/4 NW/4, and the E/2 SW/4 of Section 6, Township 22 South, Range 36 East, Lea County, New Mexico; said unit to be dedicated to applicant's J. H. Day Well No. 3, located 330 feet from the South line and 2310 feet from the West line of said Section 6.
- CASE 1180: Application of John M. Kelly for approval of a non-standard gas proration unit in the Eumont Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for the Eumont Gas Pool as set forth in Order R-520. Applicant, in the above-styled cause, seeks an order authorizing a 200-acre non-standard gas proration unit in the Eumont Gas Pool comprising the E/2 SW/4, NW/4 SE/4, and W/2 NE/4 of Section 16, Township 19 South, Range 37 East, Lea County, New Mexico; said unit to be dedicated to applicant's Humble State Well No. 1, located 1980 feet from the South and West lines of said Section 16.

CASE 1181: Application of Continental Oil Company for a non-standard gas proration unit in the Eumont Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for said pool. Applicant, in the above-styled cause, seeks an order establishing a 360-acre non-standard gas proration unit in the Eumont Gas Pool consisting of Lots 2, 7, 10, 11, 12, 13, 14, 15, and 16 of Section 1, Township 21 South, Range 36 East, Lea County, New Mexico; said unit to be dedicated to applicant's State F-1 Well No. 5, located 3300 feet from the North line and 1980 feet from the West line of said Section 1.

CASE 1182: Application of Continental Oil Company for a non-standard gas proration unit in the Eumont Gas Pool in exception to Rule 5 (a) of the Special Rules and Regulations for said pool. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the S/2 of Section 1, Township 21 South, Range 36 East, Lea County, New Mexico; said unit to be dedicated to applicant's State F-1 Well No. 1, located 660 feet from the South and West lines of said Section 1.

CASE 1183: Application of Amerada Petroleum Corporation for an order authorizing a salt water disposal well in the Bagley-Pennsylvanian Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the conversion to a salt water disposal well of its Amerada State BT "D" Well No. 4, located in the SE/4 SW/4 of Section 2, Township 12 South, Range 33 East, Lea County, New Mexico; the proposed zone of injection is from 9,045 to 9,230 in the Bagley-Pennsylvanian Pool.

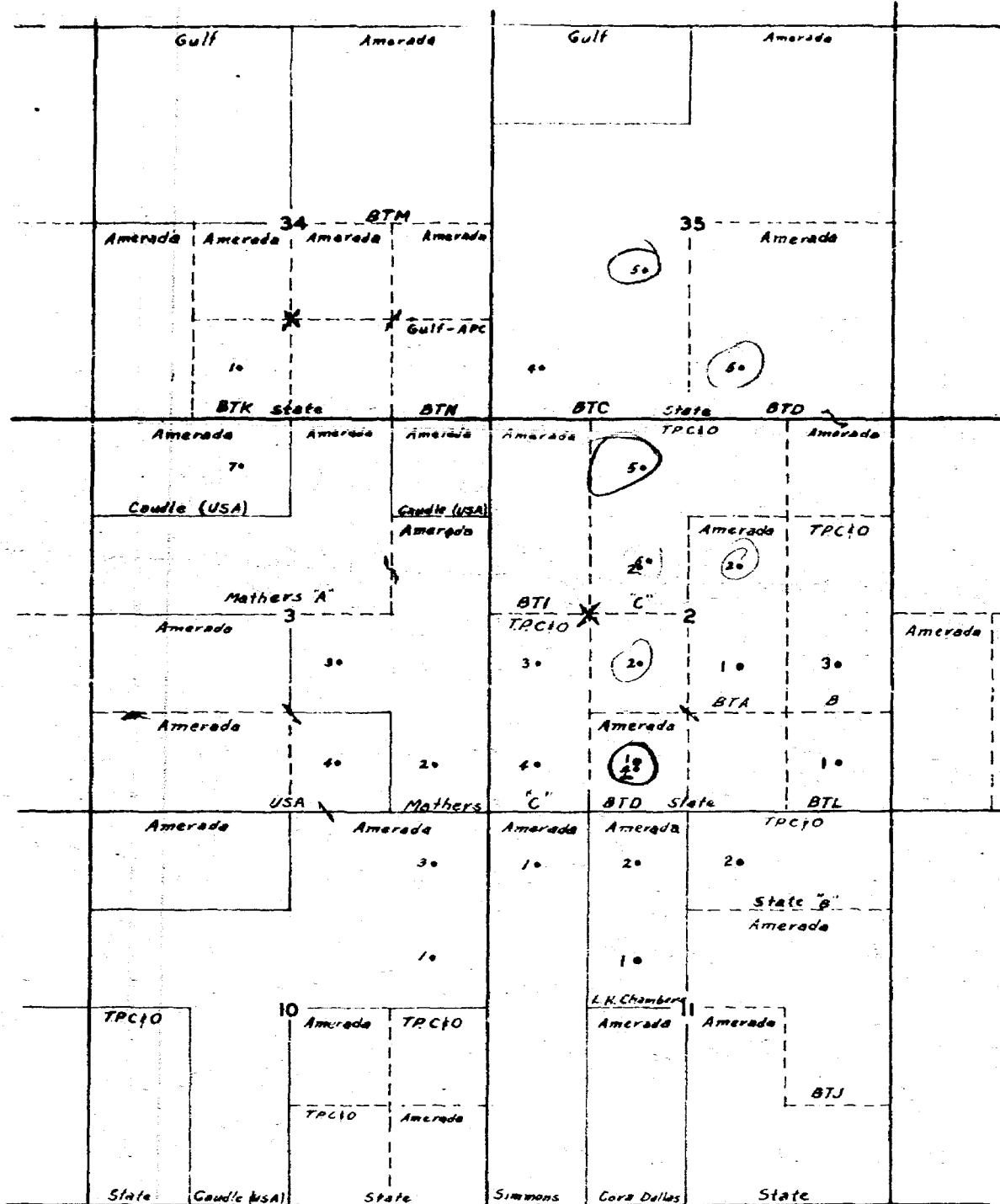
CASE 1184: Application of Harold Kersey, dba Kersey and Company, for approval of the proposed Red Lake Premier Sand Unit in Eddy County, New Mexico, in accordance with Rule 507 of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order approving the proposed Red Lake Premier Sand Unit comprising the following acreage in Eddy County, New Mexico:

Township 17 South, Range 28 East
Section 19: SE/4
Section 20: NE/4 NW/4, S/2 NW/4,
NE/4, S/2
Section 21: SW/4 NW/4, SW/4, W/2 SE/4
Section 28: NW/4, NW/4 NE/4, NW/4 SW/4
Section 29: N/2
Section 30: NE/4

said unit consists of State and Federal Acreage.

ir/

R 33 E



T 11 S

T 12 S

BAGLEY PENNSYLVANIAN POOL

LEA COUNTY, NEW MEXICO

SCALE 1 INCH = 2000 FEET

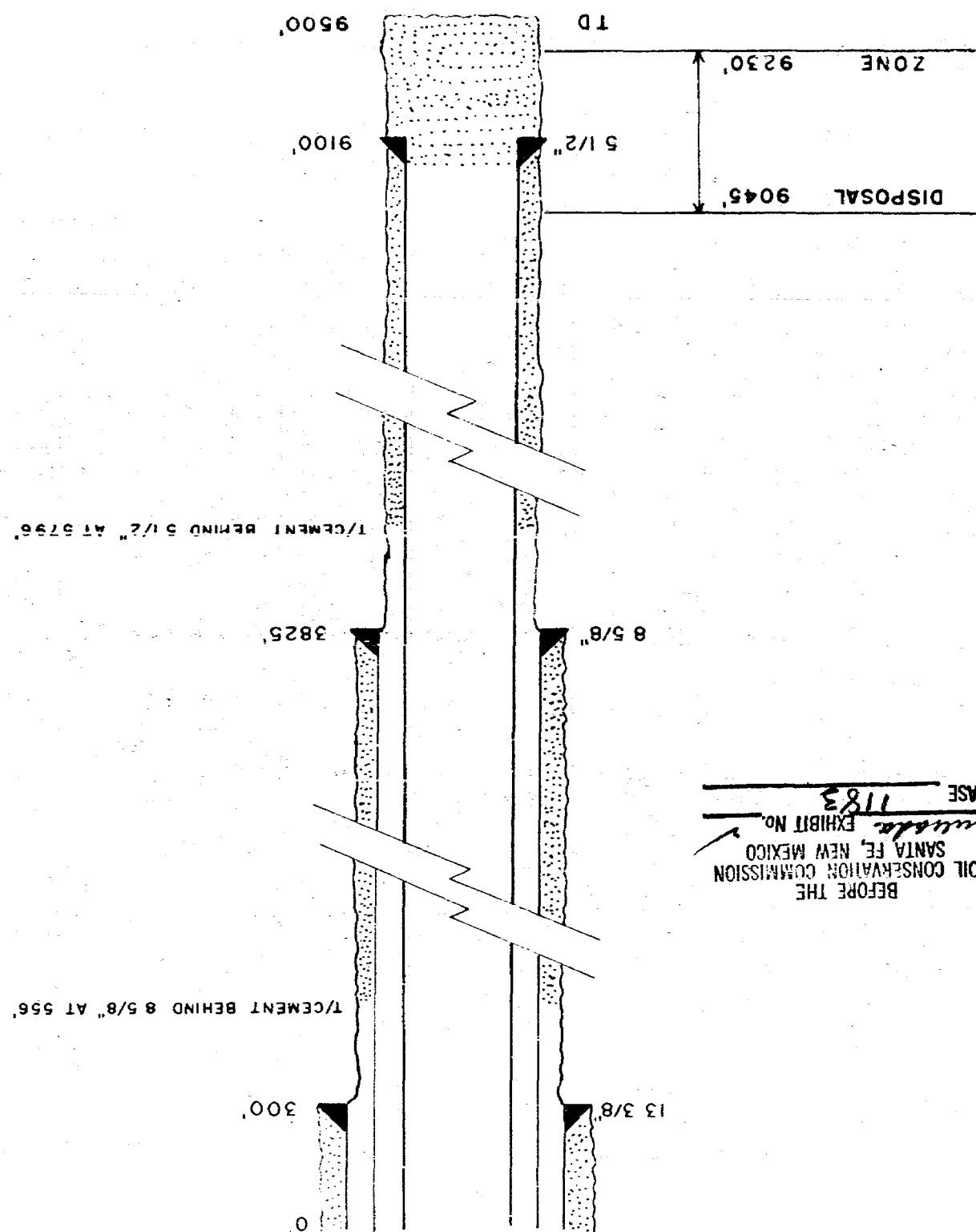
Exhibit "A"

PROPOSED SALT WATER DISPOSAL WELL

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Amerada EXHIBIT No. 1
CASE 1183

AMERADA PETROLEUM CORPORATION
Proposed Recompaction to A Salt Water Disposal Well
Bagley Pool, Lea County, New Mexico
Amerada State BLM No. 4, SE/4 SE/4 2-12S-33E



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Amerada
EXHIBIT NO. 1183
CASE

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1183 EXHIBIT No. 5

PRODUCTION DATA

ZONE 2

BAGLEY-PENNSYLVANIAN POOL.

ZONE 2 - BAGLEY-PENNSYLVANIAN FOOL

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1951</u> | Aug. | 2402 | |
| | Sept. | 5688 | |
| | Oct. | 6488 | |
| | Nov. | 8595 | |
| | Dec. | 13482 | |
| <u>1952</u> | Jan. | 20220 | 1319 |
| | Feb. | 16944 | 1336 |
| | Mar. | 19752 | 4358 |
| | Apr. | 18163 | 8342 |
| | May | 7316 | 1642 |
| | June | 2151.6 | 5988 |
| | July | 22954 | 8421 |
| | Aug. | 25600 | 8983 |
| | Sept. | 25701 | 9285 |
| | Oct. | 26393 | 12322 |
| | Nov. | 30131 | 11982 |
| | Dec. | 31628 | 1023 |
| <u>1953</u> | Jan. | 31677 | 9822 |
| | Feb. | 28561 | 8840 |
| | Mar. | 31620 | 9768 |
| | Apr. | 30542 | 11082 |
| | May | 29748 | 8467 |
| | June | 26370 | 5768 |
| | July | 30240 | 41212 |
| | Aug. | 31308 | 44512 |
| | Sept. | 30593 | 36624 |
| | Oct. | 29515 | 37520 |
| | Nov. | 26306 | 37727 |
| | Dec. | 25513 | 38818 |
| <u>1954</u> | Jan. | 25940 | 38995 |
| | Feb. | 23153 | 42985 |
| | Mar. | 24020 | 49912 |
| | Apr. | 23366 | 64657 |
| | May | 22654 | 49132 |
| | June | 19939 | 39876 |
| | July | 20339 | 55598 |
| | Aug. | 18428 | 48944 |
| | Sept. | 16751 | 40745 |
| | Oct. | 16139 | 34083 |
| | Nov. | 15879 | 43973 |
| | Dec. | 14924 | 34264 |

ZONE 2 - BAGLEY-PENNSYLVANIAN POOL - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1955</u> | Jan. | 16773 | 28333 |
| | Feb. | 14151 | 24820 |
| | Mar. | 15720 | 25352 |
| | Apr. | 14497 | 28779 |
| | May | 14999 | 30572 |
| | June | 14171 | 27236 |
| | July | 14128 | 29778 |
| | Aug. | 13987 | 35615 |
| | Sept. | 8478 | 26488 |
| | Oct. | 13265 | 32937 |
| | Nov. | 11318 | 25797 |
| | Dec. | 14072 | 38146 |
| <u>1956</u> | Jan. | 13308 | 47212 |
| | Feb. | 9414 | 32048 |
| | Mar. | 9501 | 43668 |
| | Apr. | 7337 | 47547 |
| | May | 7391 | 47547 |
| | June | 5053 | 37727 |
| | July | 7320 | 38270 |
| | Aug. | 5253 | 33223 |
| | Sept. | 6289 | 33665 |
| | TOTAL | 1132953 | 1621952 |

STATE PT"D" #4 - (Completed 8-14-51)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER BBL.</u> |
|-------------|--------------|------------------|-------------------|
| <u>1951</u> | Aug. | 2402 | |
| | Sept. | 5688 | |
| | Oct. | 4150 | |
| | Nov. | 2398 | |
| | Dec. | 7163 | |
| <u>1952</u> | Jan. | 6596 | 1319 |
| | Feb. | 5344 | 1336 |
| | Mar. | 6538 | 4358 |
| | Apr. | 6825 | 8312 |
| | May | 1343 | 1642 |
| | June | 4899 | 5988 |
| | July | 4737 | 8421 |
| | Aug. | 5053 | 8983 |
| | Sept. | 5223 | 9285 |
| | Oct. | 5281 | 12322 |
| | Nov. | 5135 | 11482 |
| | Dec. | 5270 | 1023 |
| <u>1953</u> | Jan. | 5289 | 9822 |
| | Feb. | 4760 | 8840 |
| | Mar. | 5270 | 9788 |
| | Apr. | 5100 | 9471 |
| | May | 3668 | 6710 |
| | June | 893 | 4068 |
| | July | 4205 | 37845 |
| | Aug. | 5270 | 35268 |
| | Sept. | 5100 | 24900 |
| | Oct. | 5086 | 19133 |
| | Nov. | 4530 | 18120 |
| | Dec. | 4681 | 19956 |
| <u>1954</u> | Jan. | 4718 | 20114 |
| | Feb. | 4192 | 23755 |
| | Mar. | 4654 | 28587 |
| | Apr. | 4530 | 40770 |
| | May | 3865 | 21902 |
| | June | 2807 | 15906 |
| | July | 2540 | 15603 |
| | Aug. | 2390 | 14681 |
| | Sept. | 2342 | 14387 |
| | Oct. | 1490 | 13410 |
| | Nov. | 1095 | 17155 |
| | Dec. | 767 | 12016 |

STATE BT"D" #4 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1955</u> | Jan. | 337 | 5280 |
| | Feb. | 310 | 5890 |
| | Mar. | 252 | 4788 |
| | Apr. | 304 | 7296 |
| | May | 270 | 8730 |
| | June | 235 | 7598 |
| | July | 266 | 8601 |
| | Aug. | 275 | 8892 |
| | Sept. | 228 | 5472 |
| | Oct. | 265 | 6360 |
| | Nov. | 98 | 2352 |
| | Dec. | 85 | 2040 |
| <u>1956</u> | Jan. | 94 | 250 |
| | Feb. | 53 | 225 |
| | Mar. | | |
| | Apr. | 58 | 400 |
| | May | 44 | 350 |
| | June | 43 | 300 |
| | July | 75 | 400 |
| | Aug. | 47 | 450 |
| | Sept. | 55 | 450 |
| | TOTAL | 176681 | 593334 |

STATE BT"1" #2 - (Completed 10-18-51)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1951</u> | Oct. | 2338 | |
| | Nov. | 6197 | |
| | Dec. | 6319 | |
| <u>1952</u> | Jan. | 5983 | |
| | Feb. | 5800 | |
| | Mar. | 6684 | |
| | Apr. | 5474 | |
| | May | 2174 | |
| | June | 5454 | |
| | July | 4793 | |
| | Aug. | 5062 | |
| | Sept. | 5152 | |
| | Oct. | 5275 | |
| | Nov. | 5103 | |
| | Dec. | 5270 | |
| <u>1953</u> | Jan. | 5277 | |
| | Feb. | 4760 | |
| | Mar. | 5270 | |
| | Apr. | 5100 | |
| | May | 5270 | |
| | June | 5100 | |
| | July | 5270 | |
| | Aug. | 5270 | |
| | Sept. | 5100 | |
| | Oct. | 5146 | |
| | Nov. | 4530 | |
| | Dec. | 4705 | |
| <u>1954</u> | Jan. | 4681 | |
| | Feb. | 4228 | |
| | Mar. | 4581 | |
| | Apr. | 4530 | |
| | May | 4695 | |
| | June | 4516 | |
| | July | 4681 | |
| | Aug. | 4588 | 293 |
| | Sept. | 4320 | 276 |
| | Oct. | 4588 | 293 |
| | Nov. | 4534 | 864 |
| | Dec. | 4279 | 755 |

STATE BT"1" #2 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1955</u> | Jan. | 5066 | 825 |
| | Feb. | 4379 | 773 |
| | Mar. | 5046 | 890 |
| | Apr. | 4657 | 1092 |
| | May | 4593 | 1148 |
| | June | 4380 | 1095 |
| | July | 4324 | 1081 |
| | Aug. | 4695 | 2207 |
| | Sept. | 2458 | 1157 |
| | Oct. | 4590 | 2160 |
| | Nov. | 4468 | 2103 |
| | Dec. | 5256 | 6967 |
| <u>1956</u> | Jan. | 5484 | 17366 |
| | Feb. | 3215 | 8692 |
| | Mar. | 2661 | 7195 |
| | Apr. | 1521 | 13689 |
| | May | 1281 | 11529 |
| | June | 769 | 8843 |
| | July | 529 | 6084 |
| | Aug. | 402 | 5484 |
| | Sept. | 380 | 5049 |
| | Total | 262251 | 107912 |

STATE BT"A" #2 - (Completed 12-22-51)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1952</u> | Jan. | 7641 | |
| | Feb. | 5800 | |
| | Mar. | 6530 | |
| | Apr. | 5864 | |
| | May | 1792 | |
| | June | 5410 | |
| | July | 4966 | |
| | Aug. | 5101 | |
| | Sept. | 5117 | |
| | Oct. | 5277 | |
| | Nov. | 5100 | |
| | Dec. | 5270 | |
| <u>1953</u> | Jan. | 5274 | |
| | Feb. | 4761 | |
| | Mar. | 5270 | |
| | Apr. | 5100 | |
| | May | 5270 | |
| | June | 5100 | |
| | July | 5270 | 397 |
| | Aug. | 5270 | 458 |
| | Sept. | 5100 | 443 |
| | Oct. | 5146 | 447 |
| | Nov. | 4530 | 394 |
| | Dec. | 4716 | 705 |
| <u>1954</u> | Jan. | 4681 | 699 |
| | Feb. | 4228 | 270 |
| | Mar. | 4564 | 682 |
| | Apr. | 4530 | 340 |
| | May | 4681 | 826 |
| | June | 4530 | 800 |
| | July | 5131 | 1803 |
| | Aug. | 4159 | 1386 |
| | Sept. | 4299 | 1433 |
| | Oct. | 4588 | 1529 |
| | Nov. | 4537 | 1512 |
| | Dec. | 4178 | 1791 |

STATE BT"A" #2 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1955</u> | Jan. | 5127 | 3713 |
| | Feb. | 4357 | 2905 |
| | Mar. | 4904 | 4904 |
| | Apr. | 4429 | 4429 |
| | May | 4827 | 4827 |
| | June | 4459 | 4459 |
| | July | 4606 | 4616 |
| | Aug. | 4301 | 6452 |
| | Sept. | 2353 | 3386 |
| | Oct. | 4557 | 6605 |
| | Nov. | 3974 | 5719 |
| | Dec. | 5924 | 8525 |
| <u>1956</u> | Jan. | 5530 | 7958 |
| | Feb. | 4680 | 13320 |
| | Mar. | 5061 | 13683 |
| | Apr. | 4214 | 11993 |
| | May | 4591 | 13066 |
| | June | 3727 | 6625 |
| | July | 5052 | 8981 |
| | Aug. | 4398 | 6597 |
| | Sept. | 4334 | 6501 |
| | TOTAL | 274191 | 165179 |

STATE BT"D" #5 - (Completed 4-30-52)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1952</u> | May | 2007 | |
| | June | 5783 | |
| | July | 5109 | |
| | Aug. | 5053 | |
| | Sept. | 5109 | |
| | Oct. | 5280 | |
| | Nov. | 5103 | |
| | Dec. | 5277 | |
| <u>1953</u> | Jan. | 5289 | |
| | Feb. | 4760 | |
| | Mar. | 5270 | |
| | Apr. | 5100 | 1611 |
| | May | 5270 | 1757 |
| | June | 5100 | 1700 |
| | July | 5270 | 2838 |
| | Aug. | 5270 | 2964 |
| | Sept. | 5100 | 2869 |
| | Oct. | 5146 | 6968 |
| | Nov. | 4584 | 2810 |
| | Dec. | 4681 | 3253 |
| <u>1954</u> | Jan. | 4717 | 3278 |
| | Feb. | 4191 | 4362 |
| | Mar. | 4654 | 4844 |
| | Apr. | 4530 | 8794 |
| | May | 3866 | 11003 |
| | June | 2806 | 8418 |
| | July | 2540 | 22860 |
| | Aug. | 1953 | 17577 |
| | Sept. | 750 | 9964 |
| | Oct. | 225 | 4275 |
| | Nov. | 518 | 9842 |
| | Dec. | 216 | 4104 |
| <u>1955</u> | Jan. | 141 | 2679 |
| | Feb. | 102 | 1938 |
| | Mar. | 64 | 1216 |
| | Apr. | 66 | 1254 |
| | May | 14 | 686 |
| | June | N.R. | N.R. |
| | July | N.R. | N.R. |
| | Aug. | N.R. | N.R. |
| | Sept. | N.R. | N.R. |
| | Oct. | N.R. | N.R. |
| | Nov. | N.R. | N.R. |
| | Dec. | N.R. | N.R. |

STATE BT"D" #5 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1956</u> | Jan. | N.R. | N.R. |
| | Feb. | N.R. | N.R. |
| | Mar. | N.R. | N.R. |
| | Apr. | N.R. | N.R. |
| | May | N.R. | N.R. |
| | June | 26 | N.R. |
| | July | 11 | N.R. |
| | Aug. | N.R. | N.R. |
| | Sept. | N.R. | N.R. |
| | TOTAL | 130951 | 143864 |

*N.R. - No Report

TEXAS PACIFIC COAL & OIL STATE "C" #5

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1952</u> | July | 3349 | |
| | Aug. | 5331 | |
| | Sept. | 5100 | |
| | Oct. | 5280 | |
| | Nov. | 5100 | |
| | Dec. | 5270 | |
| | <u>1953</u> | Jan. | 5270 |
| Feb. | | 4760 | |
| Mar. | | 5270 | |
| Apr. | | 5042 | |
| May | | 5000 | |
| June | | 5077 | |
| July | | 4955 | 132 |
| Aug. | | 4958 | 5425 |
| Sept. | | 5093 | 8028 |
| Oct. | | 3845 | 10400 |
| Nov. | | 3602 | 15900 |
| Dec. | | 2049 | 14384 |
| <u>1954</u> | Jan. | 2462 | 14384 |
| | Feb. | 2086 | 14280 |
| | Mar. | 886 | 15035 |
| | Apr. | 716 | 14250 |
| | May | 853 | 14880 |
| | June | 763 | 14250 |
| | July | 766 | 14570 |
| | Aug. | 750 | 14260 |
| | Sept. | 720 | 13800 |
| | Oct. | 660 | 13950 |
| | Nov. | 660 | 13800 |
| | Dec. | 682 | 14880 |
| <u>1955</u> | Jan. | 682 | 14880 |
| | Feb. | 616 | 12880 |
| | Mar. | 670 | 12710 |
| | Apr. | 497 | 13500 |
| | May | 664 | 13950 |
| | June | 644 | 12900 |
| | July | 342 | 14260 |
| | Aug. | 348 | 13330 |
| | Sept. | 410 | 13200 |
| | Oct. | 316 | 13980 |
| | Nov. | 541 | 13200 |
| | Dec. | 374 | 13315 |

STATE "C" #5 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| 1956 | Jan. | 374 | 13320 |
| | Feb. | N.R. | N.R.* |
| | Mar. | 343 | 13180 |
| | Apr. | 309 | 13200 |
| | May | 308 | 13640 |
| | June | 365 | 12000 |
| | July | 367 | 12400 |
| | Aug. | 341 | 12400 |
| | Sept. | 300 | 13500 |
| | TOTAL | 105166 | 492353 |

* N.R. - No Report

STATE BT" C" #5

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BEL.</u> | <u>WATER, BEL.</u> |
|-------------|--------------|------------------|--------------------|
| <u>1952</u> | Nov. | 4590 | |
| | Dec. | 5271 | |
| <u>1953</u> | Jan. | 5273 | |
| | Feb. | 4760 | |
| | Mar. | 5270 | |
| | Apr. | 5100 | |
| | May | 5270 | |
| | June | 5100 | |
| | July | 5270 | |
| | Aug. | 5270 | 397 |
| | Sept. | 5100 | 384 |
| | Oct. | 5146 | 572 |
| | Nov. | 4530 | 503 |
| | Dec. | 4681 | 520 |
| <u>1954</u> | Jan. | 4681 | 520 |
| | Feb. | 4228 | 318 |
| | Mar. | 4681 | 762 |
| | Apr. | 4530 | 503 |
| | May | 4694 | 521 |
| | June | 4517 | 502 |
| | July | 4681 | 762 |
| | Aug. | 4588 | 747 |
| | Sept. | 4320 | 885 |
| | Oct. | 4588 | 626 |
| | Nov. | 4535 | 800 |
| | Dec. | 4802 | 718 |
| <u>1955</u> | Jan. | 5420 | 956 |
| | Feb. | 4387 | 434 |
| | Mar. | 4784 | 814 |
| | Apr. | 4544 | 1208 |
| | May | 4631 | 1231 |
| | June | 4453 | 1184 |
| | July | 4590 | 1220 |
| | Aug. | 4368 | 4732 |
| | Sept. | 3029 | 3273 |
| | Oct. | 3537 | 3832 |
| | Nov. | 2237 | 2423 |
| | Dec. | 2433 | 7299 |

STATE BT"C" #5 - (Continued)

| <u>YEAR</u> | <u>MONTH</u> | <u>OIL, BBL.</u> | <u>WATER, BBL.</u> |
|-------------|--------------|------------------|--------------------|
| 1956 | Jan. | 1826 | 8318 |
| | Feb. | 1466 | 9811 |
| | Mar. | 1436 | 9610 |
| | Apr. | 1235 | 8265 |
| | May | 1167 | 7809 |
| | June | 123 | 9959 |
| | July | 1286 | 10405 |
| | Aug. | 65 | 8292 |
| | Sept. | 1220 | 8165 |
| | TOTAL | 183713 | 119310 |