

CASE 3878: Application of GENERAL
AMERICAN OIL CO. OF TEXAS FOR A
WATERFLOOD PROJECT, EDDY COUNTY.

Case Number

3878

Application
Transcripts.

Small Exhibits

ETC.

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 4, 1968

Mr. John Russell
Attorney at Law
Post Office Drawer 640
Roswell, New Mexico 88201

Dear Sir:

Reference is made to Commission Order No. R-3524, recently entered in Case No. 3878, approving the General American Henshaw Sivley Waterflood Project.

Injection is to be through the two authorized water injection wells, each of which shall be equipped with tubing set in a packer immediately above the casing shoe. The casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing, or packer.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 168 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization,

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

Mr. John Russell
Attorney at Law
Roswell, New Mexico

C when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

P ALP/DSN/ir

cc: Oil Conservation Commission offices in Hobbs and Artesia, N.M.
U. S. Geological Survey, Artesia, New Mexico
Mr. D. E. Gray, State Engineer Office, Santa Fe, New Mexico

Y

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. John Russell
Attorney at Law
Post Office Drawer 640
Roswell, New Mexico 88201

Dear Sir:

Reference is made to Commission Order No. R-3524, ^{recently} entered in Case No. 3878, approving the General American American American Sibley Waterflood Project.

Injection is to be through the two authorized water injection wells, ^{each} which shall be equipped with tubing set in a packer immediately above the casing shoe. The casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing, or packer.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 168 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OCC: Hobbs x
Artesia x
Aztec x

USGS Artesia

~~Mr. Frank Irby~~, State Engineer Office, Santa Fe, New Mexico

Mr. D. ^F Gray

State of New Mexico
Oil Conservation Commission



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

October 22, 1968

Re: Case No. 3878
Order No. R-3524
Applicant:
General American Oil Co.

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

A. L. PORTER, Jr.
Secretary-Director

Carbon copy of order also sent to:

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. 3878
Order No. R-3524

APPLICATION OF GENERAL AMERICAN OIL
COMPANY OF TEXAS FOR A WATERFLOOD
PROJECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 9, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 22nd day of October, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, General American Oil Company of
Texas, seeks permission to institute a waterflood project in the
West Henshaw-Grayburg Pool by the injection of water into the
Premier Sand of the Grayburg formation through two injection
wells in Unit M of Section 8 and Unit G of Section 17, Township
16 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

-2-

CASE No. 3878
Order No. R-3524

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to institute a waterflood project in the West Henshaw-Grayburg Pool by the injection of water into the Premier Sand of the Grayburg formation through the following-described wells in Township 16 South, Range 30 East, NMPM, Eddy County, New Mexico:

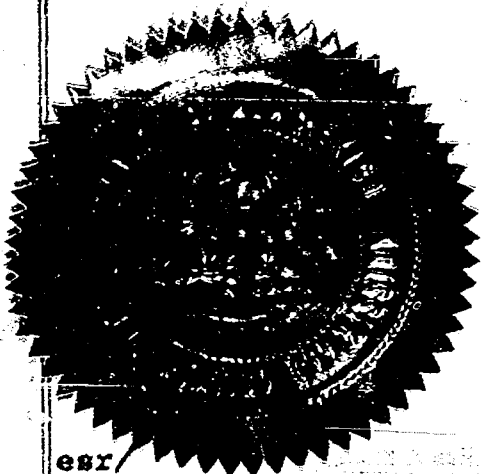
Federal-Sivley Well No. 2, Unit M, Section 8
Federal-Sivley Well No. 7, Unit G, Section 17

(2) That the subject waterflood project is hereby designated the General American Henshaw Sivley Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(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 3878

Heard 10-9-68

Rec. 10-11-68

Grant Gen. Am. of Ser. ~~and~~ waterflood projects in the S.W. Henshaw-Premier area. Since the 2-50's are diagonally offset I believe they can be considered one waterflood project.

The wells to be converted to waterflood are:

G.A. - lineally #2. 660/S+W 8-16S-30E.
- - - #7 1650/W, 2310/W 17-16S-30E

[Signature]

This is really a part of Tennessee's S.W. Henshaw-Premier Land Grant.

424 waterflood. *[Signature]*
168

121
12
520
600

Docket No. 29-68

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 9, 1968

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 3872: Application of Union Oil Company of California for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to fully complete its Federal "A" Well No. 1 located in Unit P of Section 12, Township 15 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Morton-Wolfcamp Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the San Andres and such other formations as may occur in the open-hole interval from approximately 4620 to 7350 feet.
- CASE 3873: Application of R. G. McPherson for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the open-hole interval from approximately 5250 feet to 5854 feet in his S. P. Johnson Well No. 1 located 990 feet from the West line and 1650 feet from the South line of Section 5, Township 18 South, Range 39 East, South Carter-San Andres Pool, Lea County, New Mexico.
- CASE 3874: Application of Gulf Oil Company - U. S. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Paddock and Blinbry Oil Pools in the well-bore of its C. L. Hardy Well No. 2 located in Unit N of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, with the provision that no more than one single allowable well be produced from said well.
- CASE 3875: Application of Pan American Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well in exception to the Fowler-Ellenburger Rules at an unorthodox location 910 feet from the North line and 1980 feet from the West line of Section 15, Township 24 South, Range 37 East, Lea County, New Mexico.

October 9, 1968, Examiner Hearing
-2-

Docket 29-58

CASE 3876: Application of Newmont Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Young (Queen) Unit Area comprising 1320 acres, more or less, of federal and state lands in Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.

CASE 3877: Application of Newmont Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Young (Queen) Unit Area by the injection of water into the Queen formation through 17 wells located in Sections 9, 16, 17, 19, 20, 21, and 29, Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.

CASE 3878: Application of General American Oil Company of Texas 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 Premier sand through two injection wells located in Unit M of Section 8, and Unit G of Section 17, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 3879: Application of Walter Duncan Oil Properties for an unorthodox oil well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox oil well location 1000 feet from the North line and 1242 feet from the East line of Section 36, Township 32 North, Range 18 West, San Juan County, New Mexico. Said well would be projected to the Dakota formation.

CASE 3880: Application of Anne Burnett Windfohr, dba Windfohr Oil Company, for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from approximately 6970 feet to 7028 feet in the Windfohr Oil Company Jackson "B" Well No. 23 located in Unit J of Section 24, Township 17 South, Range 30 East, Jackson-Abo Pool, Eddy County, New Mexico.

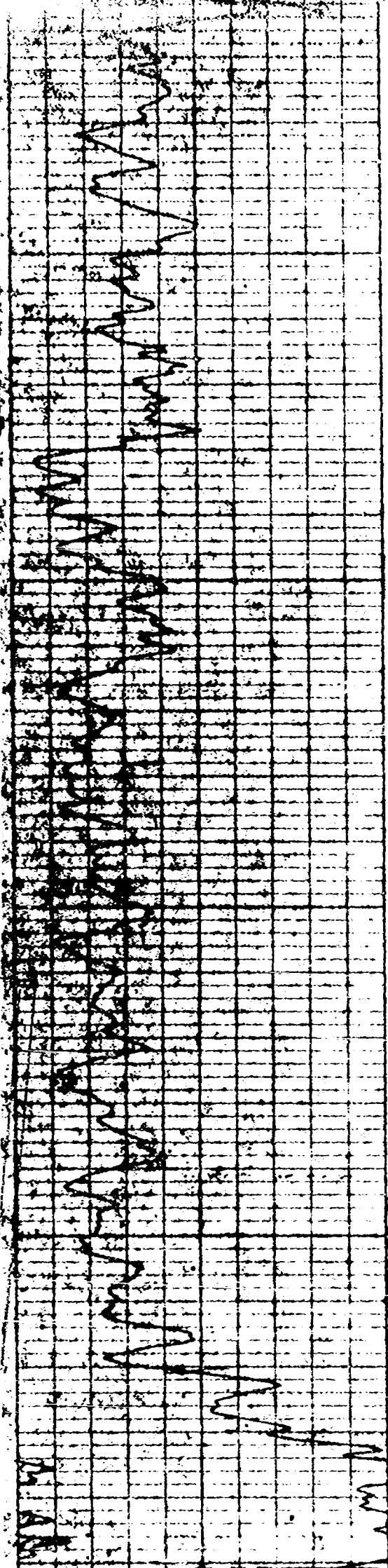
CASE 3881: Application of J. M. Huber Corporation for the creation of a new oil pool and for special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Devonian oil pool for its Lone Star Federal Well No. 1 located in the NE/4 NE/4 of Section 20, Township 8 South, Range 36 East, Roosevelt County, New Mexico, and for the promulgation of special rules therefor including a provision for 80-acre proration units.

- CASE 3882: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Teague Blinebry Pool, Lea County, New Mexico.
- CASE 3883: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Imperial Tubb-Drinkard Pool, Lea County, New Mexico.
- CASE 3884: Application of Marathon Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Miller Ranch Unit Area comprising 5,276 acres, more or less, of State, Federal and Fee lands in Townships 21 and 22 South, Range 25 East, Eddy County, New Mexico.
- CASE 3885: Application of Sinclair Oil & Gas Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Turner "B" Grayburg-Jackson Waterflood Project, Grayburg-Jackson Pool, by the conversion to water injection of 12 additional injection wells located in Sections 20, 29, and 30, Township 17 South, Range 31 East, Eddy County, New Mexico.
- CASE 3886: Application of Sinclair Oil & Gas Company for the amendment of a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks amendment of its Guadalupe Ridge Unit Agreement, unitizing certain lands in Eddy County, New Mexico, and approved by Order No. R-3471, to conform to certain requirements of the Director of the United States Geological Survey. In the absence of objection, the case will be submitted and an order issued upon the basis of the application and exhibits attached thereto.
- CASE 3887: Application of Kersey & Company 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 Premier sand of the Grayburg formation through two wells to be located in Units E and K of Section 12, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Applicant further proposes to produce oil from the Upper Grayburg through parallel strings of tubing, if said zones are productive in the subject wells.

- CASE 3888: Application of Amerada Petroleum Corporation for a dual completion, salt water disposal and tubing exception, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State E "B" Well No. 1 located in Unit E of Section 27, Township 10 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the North Echols-Devonian Pool and the disposal of produced salt water through the tubing-casing annulus into the San Andres formation through perforations in said casing from approximately 5220 feet to 5250 feet. Applicant also seeks an exception to the tubing requirements of Commission Rule 107 in that said tubing would be set more than 250 feet above the upper most Devonian perforation.
- CASE 3889: Application of BTA Oil Producers for the creation of a new pool and special pool rules, Lea and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Bough C zone of the Pennsylvanian formation for its well located in Section 5, Township 9 South, Range 36 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 160-acre proration units and for the assignment of an 80-acre allowable factor of 4.77.
- CASE 3890: Application of Pan American Petroleum Corporation for special pool rules and a non-standard gas proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Empire-Pennsylvanian Gas Pool, Eddy County, New Mexico, including a provision for 320-acre spacing units with wells to be located in either the northwest quarter or the southeast quarter of the section. Applicant further seeks approval of a 280-acre non-standard gas proration unit comprising the SE/4, S/2 SW/4, and the NW/4 SW/4 of Section 30, Township 17 South, Range 28 East, Empire-Pennsylvanian Gas Pool, to be dedicated to its State V Com Well No. 1 located 990 feet from the South and East lines of said Section 30.

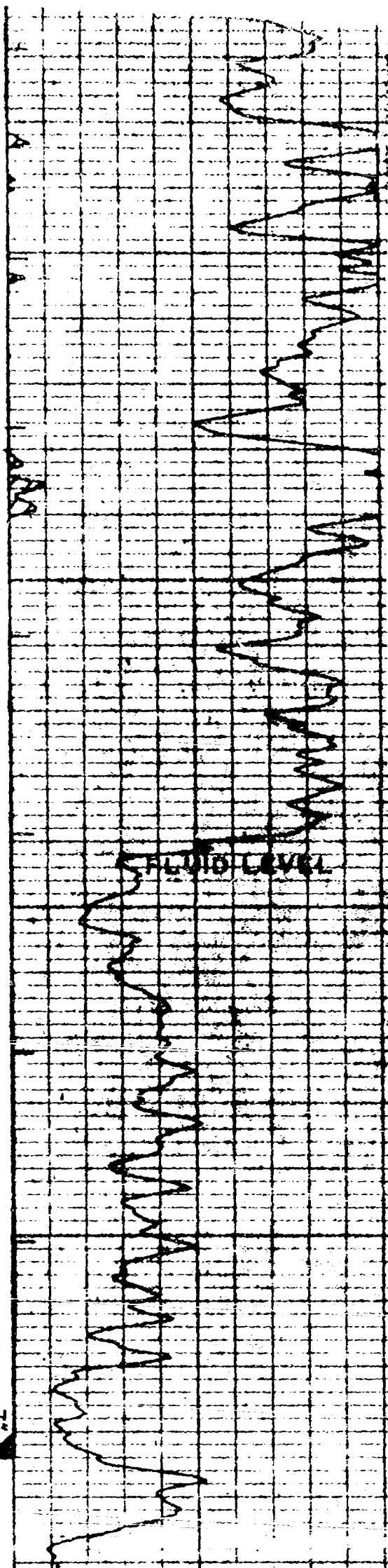
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. B
CASE NO. 3878

Exhibit
"B"



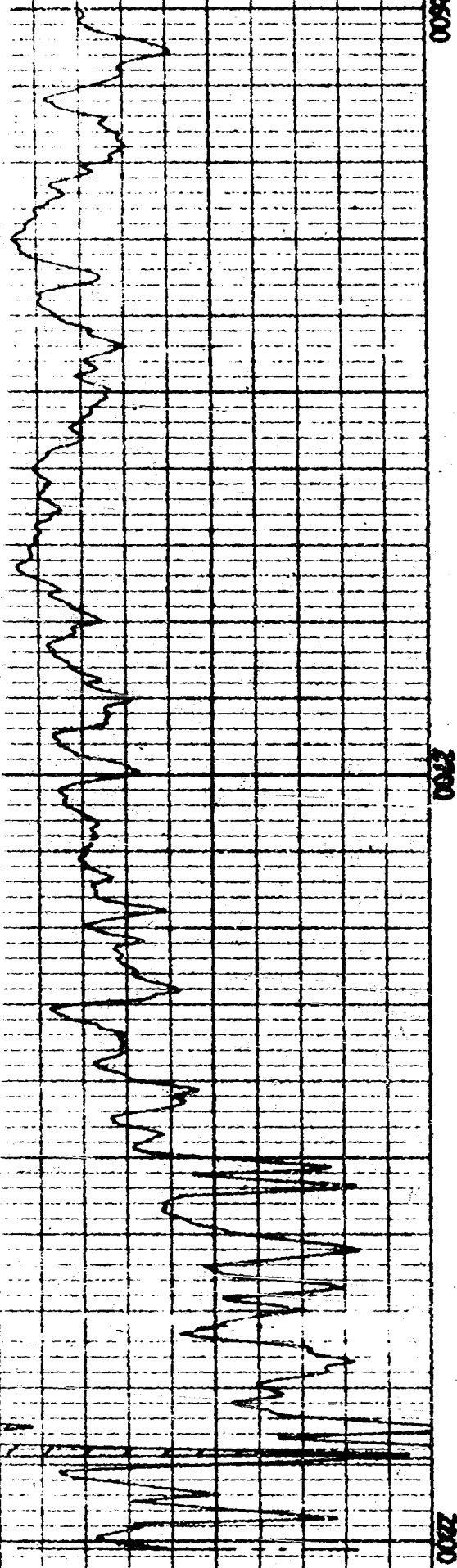
R. D. 2751
T. D. 2754

GENERAL AMERICAN OIL CO. OF TEXAS
FEDERAL RIVLEY N° 2
UNDESIGNATED



R. D. 2752
T. D. 2754

REPEAT SECTION



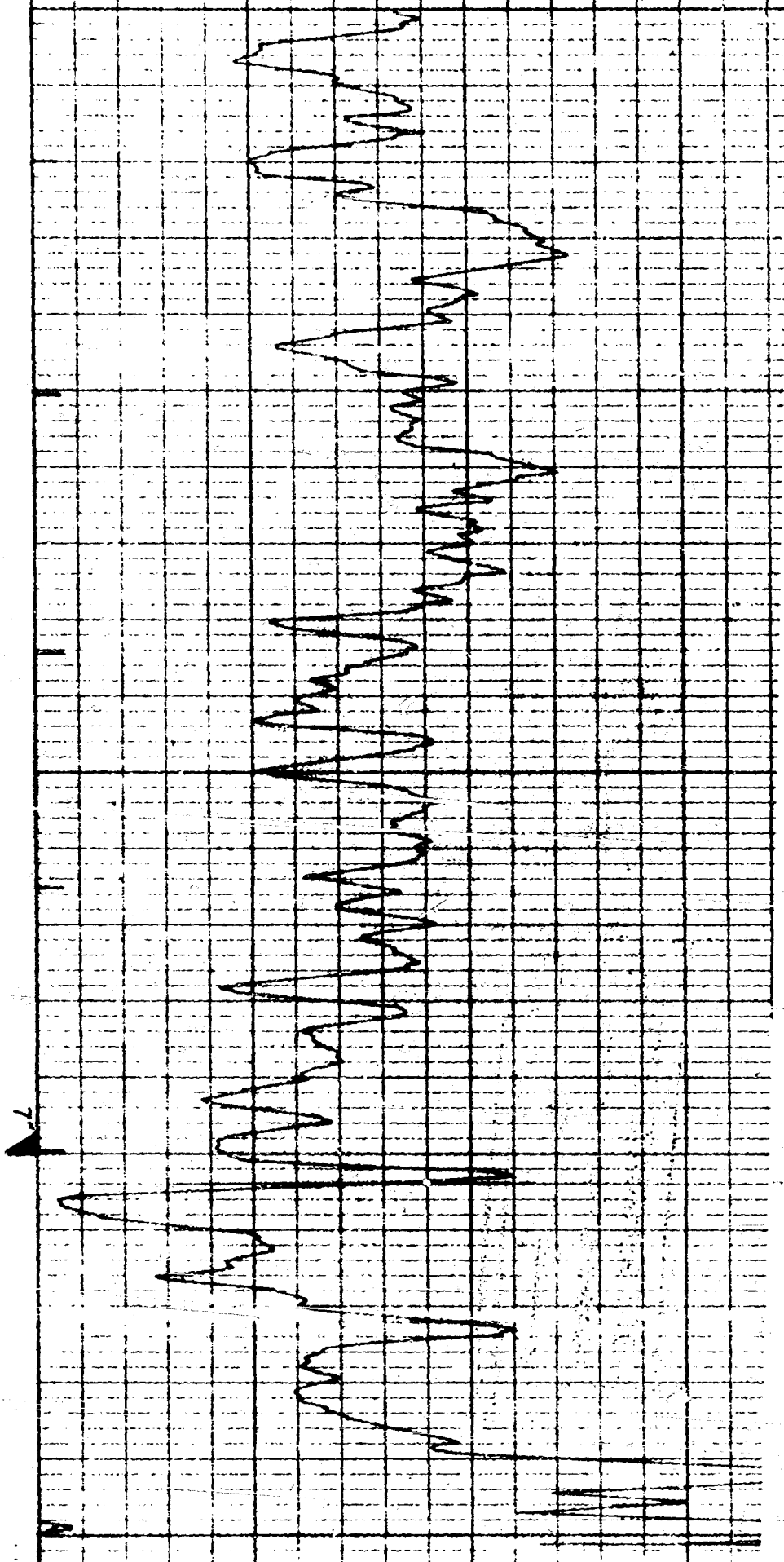
R. D. 2801

T. D. 2802

GENERAL AMERICAN OIL CO. OF TEXAS

SIVLEY N° 7

WEST HENSHAW GRAYBURG



R. D. 2801

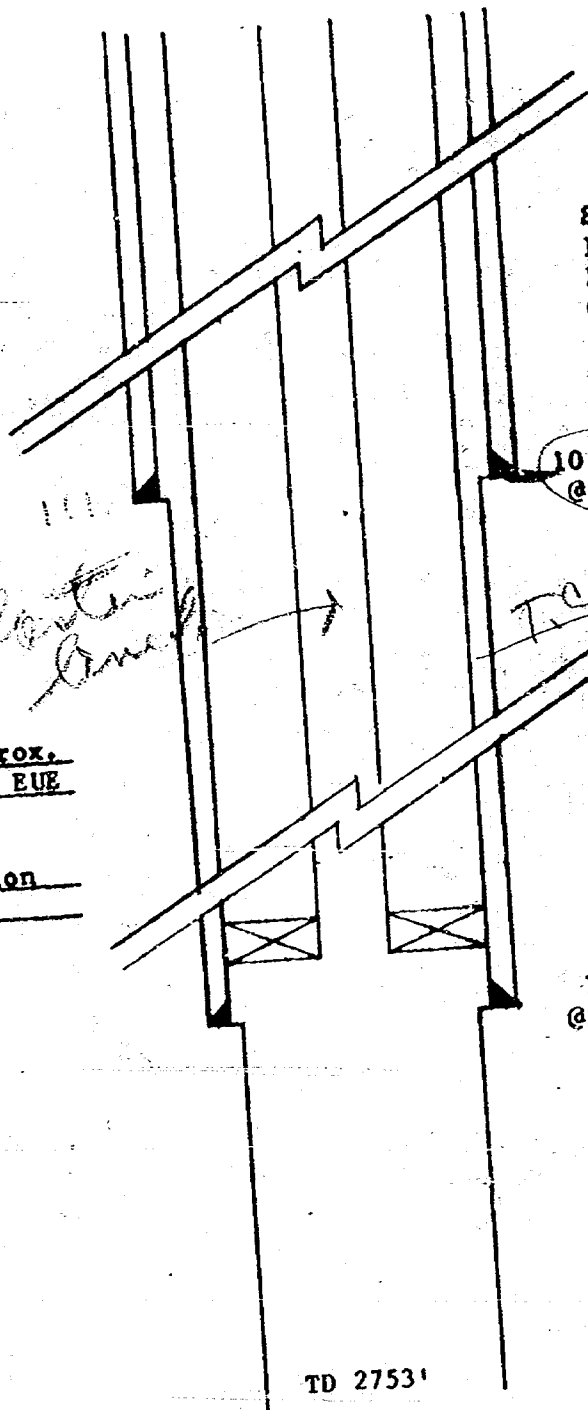
T. D. 2802

Exhibit "C"
GENERAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

12-2-56 *Compd.*

Lease and Well No.: Sivley #2
Location: 660' feet from South line and
660' feet from West line of
Section 8 TWP 16-S ROE 30-E
N.M.P.M. Eddy County, New Mexico

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
APPN EXHIBIT NO. C
CASE NO. 3828



SURFACE CASING
Depth Set: 522'
Hole Size: 12"
Casing Size & Wt.: 10 3/4" 32.75#
Sacks Cement: 30
Top of Cement: _____

10 3/4"
@ 522'

TUBING
Depth Set: 2684' Approx.
Size, Wt. & Type: 2" 4.7# EUE

PACKER
Make & Type: Toten Tension
Depth Set: 2684'

PRODUCTION CASING
Depth Set: 2734'
Hole Size: 8"
Casing Size & Wt.: 7" 24# & 28#
Sacks Cement: 100
Top of Cement: 1879' *

7"
@ 2734' - 2757'

OPEN HOLE
Size: 6 1/4"
Total Depth: 2753'
Pay Zone: 2738-50'

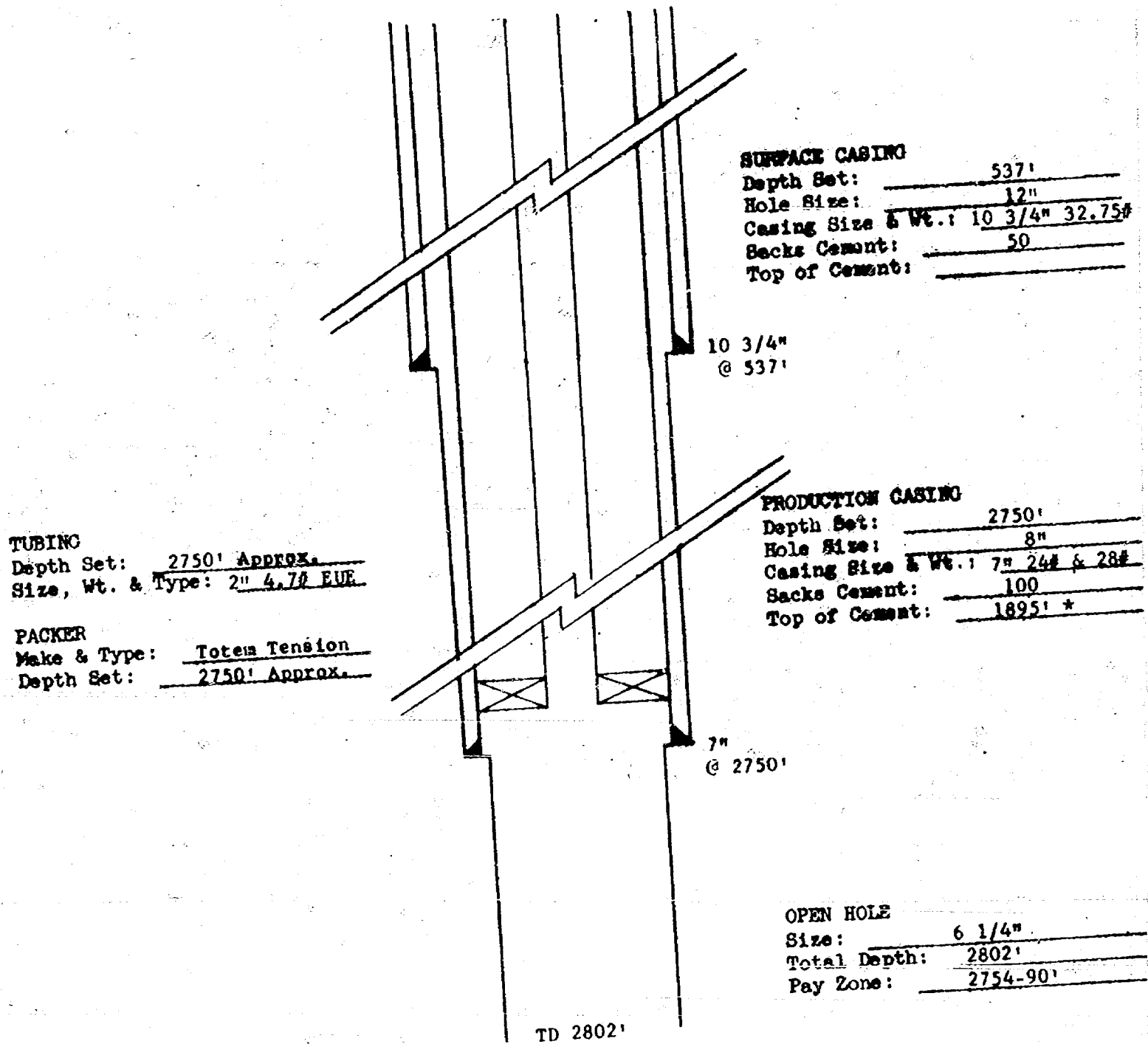
TD 2753'

*Cement Top Calculated @ 70% Fillup.

CENTRAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

2-20-58
Completed

Lease and Well No.: Sivley #7
Location: 1650 feet from North line and
2310 feet from East line of
Section 17 TWP 16-S R0E 30-E
N.M.P.M. Eddy County, New Mexico



*Cement Top Calculated @ 70% Fillup.

NOTE: OIL WEALS TO BE CONVERTED TO INJECTION.

Exhibit "D"

General American Oil Company of Texas
Southwest Henshaw Waterflood Project
Eddy County, New Mexico

General American Oil Company of Texas

General American Oil Company of Texas

Operator:

Staley #2

Staley #7

Well No.:

660' FSL & FWL Sec. 8-16S-30E

1650' FWL & 2310' FWL Sec. 17-16S-30E

Location:

3774' GL

3770' GL

Elevation:

Completion Data:

2753'

2802'

Total Depth:

PB Total Depth:

Surface Casing:

522'

537'

Depth Set:

10 3/4" 32.75#

10 3/4" 32.75#

Size & Wt.:

50

50

No. Sacks:

Production Casing:

2734'

2750'

Depth Set:

7" 24# & 28#

7" 24# & 28#

Size & Wt.:

100

100

No. Sacks:

Producing Zone:

Premier Sand

Premier Sand

Formation:

2738-50'

2754-90'

Interval:

Treatment Record:

Sand Frac

Sand Frac

Type:

2734-53'

2750-2802'

Interval:

60,000# 20/40 sand, 4,000# 40/60 sand

30,000# 40/60 sand, 25,000# 20/40 sand

Volume:

carried in 35,500 gals of oil. Max.

carried in 33,054 gals of oil. Max.

press. 2600#. Min. press. 2300#.

press. 2700#. Min. press. 2200#.

BEFORE EXAMINER USE
OIL CONSERVATION COMMISSION
EXHIBIT NO. D
CASE NO. 3878

dearnley-meier reporting service, inc.

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

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



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

October 9, 1968

EXAMINER HEARING

IN THE MATTER OF:)

Application of General American Oil)
Company of Texas for a waterflood)
project, Eddy County, New Mexico.)

Case 3878

BEFORE: Elvis Utz, Examiner

TRANSCRIPT OF HEARING

(Whereupon, Applicant's Exhibits A through D were marked for identification.)

MR. UTZ: Case 3878.

MR. HATCH: Case 3878, application of General American Oil Company of Texas for a waterflood project, Eddy County, New Mexico.

MR. RUSSELL: I'm John F. Russell appearing on behalf of the applicant. I have one witness, Mr. Crow.

(Witness sworn)

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

ROY CROW,

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

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Will you please state your name, address, name of your employer and the capacity in which you are employed?

A My name is Roy Crow from Artesia, New Mexico. I'm employed by General American Oil Company of Texas in the capacity of a District Engineer.

Q And are you familiar with the application of General American Oil Company in this case presently being heard?

A I am.

Q What do you seek by this application?

A Well, we seek approval for a waterflood project in Eddy County to recover additional reserves which would otherwise be lost.

Q From what formation?

A From the Premier Sand.

Q Now, I'll refer you to what has been marked as Applicant's Exhibit A and ask you to explain what that reflects.

A Exhibit A is a plat which indicates previously approved Premier Sand waterfloods outlined in red and a previously approved Penrose Sand flood which is outlined in blue and also shows all other producing wells and their formation within a radius of two miles of this proposed project.

Q Now, your proposed area is outlined in yellow, is it not?

A This is correct.

Q And the one, say, surrounding it, outlined in red, which is Tenneco, now, that was approved in Case Number 3813 before the Commission, was it not?

A This is correct.

Q And at that time, it was mentioned that they were working with lease-line agreement with General American, is that correct?

A That is correct.

Q But your injection wells were not approved, proposed injection wells were not approved in the order?

A They were not.

Q Will you show the location of your injection wells and do you have the footage locations on there?

A The two proposed injection wells, or one is located in the southwest quarter of Section 8, 16, 30; the other being located in the southwest quarter of the northeast quarter of Section 17, and I can give these footages.

The one in Section 8 is designated Sivley #2, 660 from the south line and 660 from the west line, Section 8, 16 South, 30 East.

The other in Section 17 is designated Sivley #7 and is located 1650 from the north line and 2310 from the east line of Section 17, 16 South, 30 East.

Q Now, referring you to what has been marked as Exhibit B which consists of two parts, will you explain what that exhibit is.

A Exhibit B is just a portion of the gamma ray neutrons on the two proposed injection wells which shows the base of the

seven-inch casing and the seven-inch casing collars and the amount of open-hole exposed below the casing into which the injection will be placed.

Q That first part of your Exhibit B is your Federal Sivley #2, and the second part if your Sivley #7, is that correct?

A This is correct.

MR. UTZ: What, now?

MR. RUSSELL: The first part of Exhibit B.

MR. UTZ: All right. That's the log?

MR. RUSSELL: Right.

A That's the log.

Q (By Mr. Russell) Now, I refer you to what has been marked as Applicant's Exhibit C which also consists of two parts and ask you to explain that exhibit.

A Exhibit C is a two-part, each, a diagrammatic sketch of the two proposed injection wells showing that surface casing in Sivley #2 was set ten and three-quarter inches, thirty-two-pound casing at a depth of 522 feet and cemented with fifty sacks of cement. Production string of seven inches, twenty-four and twenty-eight-pound casing, was set at 2734, cemented with 100 sacks and calculated cement top of 1879 feet based on a temperature survey fill-up calculation on the offsetting producing well; also indicates that an open-hole

from 2734 to 2753, the identified pay zone, Premier Sand, from 2738 to 2750, showing also that injection will be down plastic-lined tubing set with a packer at approximately 2684 with injection below a packer into the open hole.

Q Now, the second portion of Exhibit C reflects the same information as the first portion, only it pertains to your Sivley #7 well, is that correct?

A That is correct. One thing I might add is that both strings of casing were new at the time these wells were completed, number 2 being completed on December the 2nd, 1956, number 7 being completed on February the 20th, 1958.

Q Now, I'll refer you to what has been marked as Applicant's Exhibit D and ask you to explain that.

A Exhibit D is just a summation of the pertinent well data on the two injection wells showing the completion data, total depth, the surface casing as indicated on the schematic diagram, the production casing, the producing zone and also a record of the initial sand fracked treatment on each of the two wells.

Q Now, what is the fluid to be injected here?

A The fluid to be injected, at the outset of the flood, would be fresh water obtained from Double Eagle Corporation. At which time the producing wells begin to make water, it will be a mixture of produced Premier Sand water

and fresh water which we are commingling in other Premier floods in the area without particular problem.

Q And what quantities and pressure do you anticipate this injection program to be?

A Proposed to inject at the rate of 300 barrels per day per well with a maximum pressure of approximately 1800 pounds.

Q Now, what was your primary recovery in this water-flood area?

A To July the 1st of '68, we had recovered 184,824 barrels from the four producing wells.

Q And what do you anticipate you will be able to recover under your secondary program?

A Secondary recovery reserves are set at 135,613 barrels.

Q Now, in your opinion, will the granting of this application protect correlative rights and prevent waste by premature abandonment of wells?

A Yes.

Q What is the average production of the well per day in the area?

A The current production is approximately one barrel of oil per day and one well makes a slight trace of water.

Q Were Exhibits A, B, C and D prepared by you or under

your direction or supervision?

A They were.

MR. RUSSELL: I move the introduction of Exhibits A, B, C and D. Exhibit B and C each being in two parts.

MR. UTZ: Without objection, Exhibits A, B, C and D will be entered into the record of this case.

(Whereupon, Applicant's Exhibits A through D were entered into the record)

MR. RUSSELL: Do you have anything further you want to add, Mr. Crow, that we haven't brought out?

THE WITNESS: The only thing that I would add is Tenneco's unit was approved and it was mentioned in their testimony that a cooperative line agreement was in the process of being ratified, and I have a copy which has been sent to Tenneco which actually they have not approved yet, but I have no reason to doubt it will not be approved in the near future for the cooperation along the line of these two floods.

MR. RUSSELL: Which is along the lines mentioned in their case?

THE WITNESS: Which would be the same as mentioned in their case.

MR. RUSSELL: I have no further questions of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Would you state how you intend to handle the annulus below the packer?

A Well, it's been our procedure in the past where injecting below a packer tube, to fill the annulus with inhibited fluid.

Q You will leave them open or use a pressure gauge?

A We usually leave them open.

Q Have you ever detected any packer leakage or tubing perforations using this method?

A Yes, we've had two that I know of, of the several floods that we had where we've actually had to -- in one place, the packer just came unseated in the immediate surface to the -- well, it came to the surface and was remedied; and another place where the packer actually failed and was replaced.

Q So this is a pretty accurate method?

A It seems to be more accurate than with a gauge. The pumpers sometimes fail to read the gauges.

Q Sometimes they even fail to see the gauges. This Premier zone is in the Grayburg, is it not?

A Yes, sir, it's a lower Grayburg, Mesa-Grayburg.

MR. UTZ: Are there any questions of the witness?

He may be excused. Any statements in this case? The case

will be taken under advisement. We'll adjourn the hearing
until 1:30.

I N D E X

WITNESS	PAGE
ROY CROW	
Direct Examination by Mr. Russell	2
Cross Examination by Mr. Utz	9

<u>EXHIBIT</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's A through D	2	8

Charlotta Macias
Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the public hearing on Case No. 3825, heard by me on 10-9-68.

Ernest W. [Signature] Chairman
New Mexico Oil Conservation Commission

LAW OFFICES OF
JOHN F. RUSSELL
412 HINKLE BUILDING
P. O. DRAWER 640
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641
AREA CODE 505

September 17, 1968

Case 3878

Mr. A. L. Porter, Secretary
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Re: General American Oil Company of Texas

Dear Mr. Porter:

I transmit herewith an Application of General American Oil Company of Texas, in triplicate, covering a water-flood project.

It will be appreciated if this case could be placed on the docket for your regular examiner's hearing on October 9th.

Very truly yours,

John F. Russell
John F. Russell

JFR:d
Enclosures

DOCKET MAILED

Date 9-26-68

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)
GENERAL AMERICAN OIL COMPANY OF TEXAS)
FOR AN ORDER AUTHORIZING IT TO COM-)
MENCE A WATERFLOOD PROJECT CONSISTING)
OF THE W $\frac{1}{2}$ of SECTION 8, and the E $\frac{1}{2}$ of)
SECTION 17, TOWNSHIP 16 SOUTH, RANGE)
30 EAST, N.M.P.M., EDDY COUNTY, NEW)
MEXICO BY THE INJECTION OF WATER INTO)
THE PREMIER SAND THROUGH TWO WELLS)
LOCATED IN UNIT M OF SECTION 8 AND)
UNIT G OF SECTION 17, TOWNSHIP 16)
SOUTH, RANGE 30 EAST, N.M.P.M., EDDY)
COUNTY, NEW MEXICO.)

No. 3878

APPLICATION

COMES NOW General American Oil Company of Texas by its
attorney, John F. Russell, and states:

1. It is the operator of leases embracing the following
described lands:

Township 16 South, Range 30 East, N.M.P.M.

Section 8: W $\frac{1}{2}$

Section 17: E $\frac{1}{2}$

2. Applicant proposes to institute a waterflood project for
the secondary recovery of oil and gas on said lease, and attached
hereto is a plat marked "Exhibit A" showing the location of the
two proposed injection wells.

3. Attached hereto, and marked "Exhibit B", is a copy of a
portion of the well logs of the two injection wells.

4. Attached hereto as Exhibit "C" are diagramatic sketches
showing the proposed completion of the injection wells.

5. Attached hereto as Exhibit "D" is a tabulation showing pertinent information on each of the proposed injection wells.

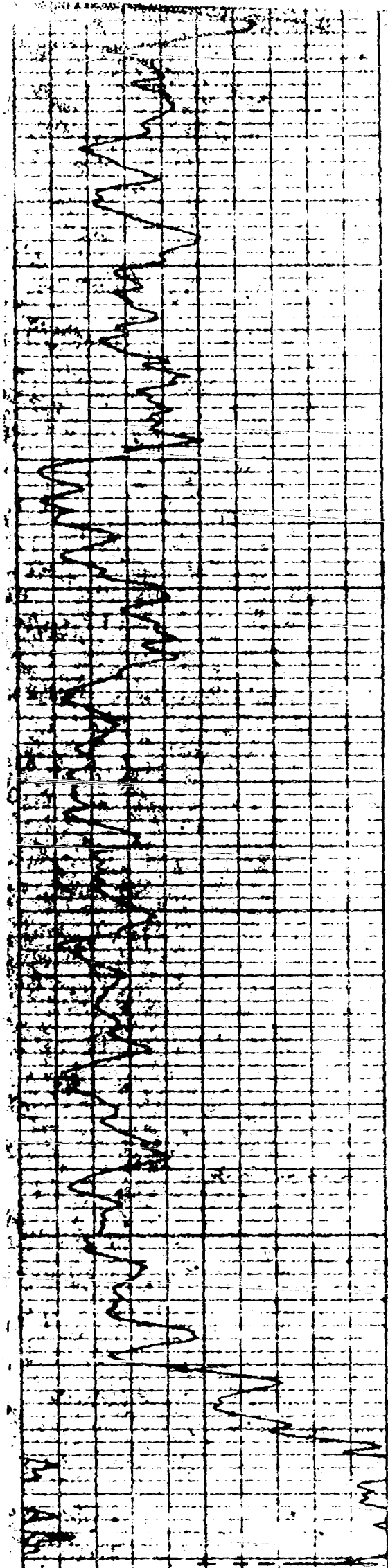
6. Applicant proposes to inject produced water from its High Lonesome Waterflood Project and fresh water acquired from the Double Eagle Corporation. It is anticipated that approximately 300 barrels per well, per day, will be injected at a maximum pressure of approximately 1750 pounds.

WHEREFORE, Applicant requests the Commission to set this matter down for hearing before an examiner, to publish its notice as provided by law, and, after hearing, to issue its order authorizing the waterflood project as requested in the application.

Respectfully submitted,

John F. Russell
John F. Russell
Attorney for Applicant

P. O. Drawer 640
Roswell, New Mexico 88201



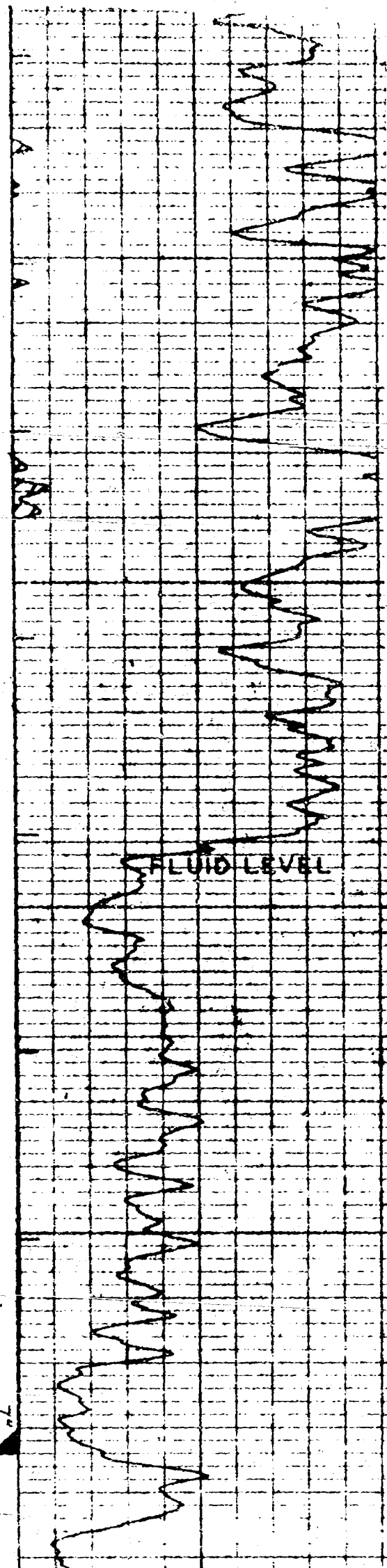
R. D. 2751

T. O. 2754

GENERAL AMERICAN OIL CO. OF TEXAS

FEDERAL BIVLEY, N° 2

UNDESIGNATED



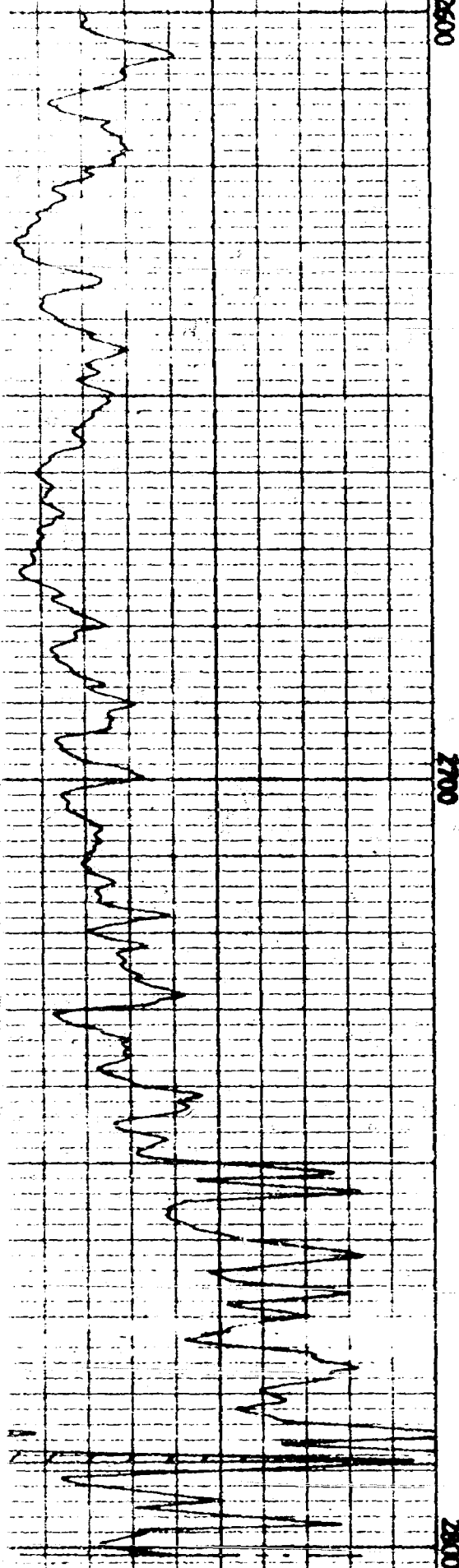
FLUID LEVEL

R. D. 2752

T. D. 2754

Chae
3878

REPEAT SECTION



R. D. 2801

T. D. 2802

GENERAL AMERICAN OIL CO. OF TEXAS

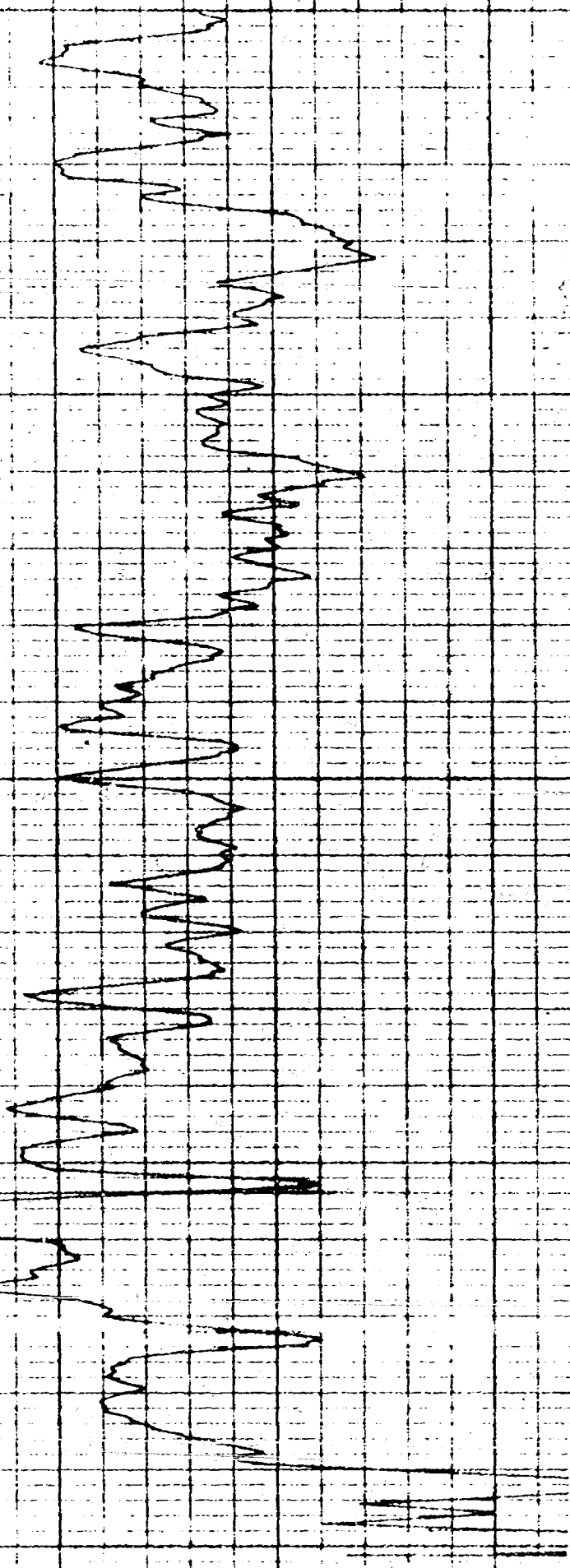
SIVLEY N° 7

WEST HENSHAW GRAYBURG

2600

2700

2800



R. D. 2801

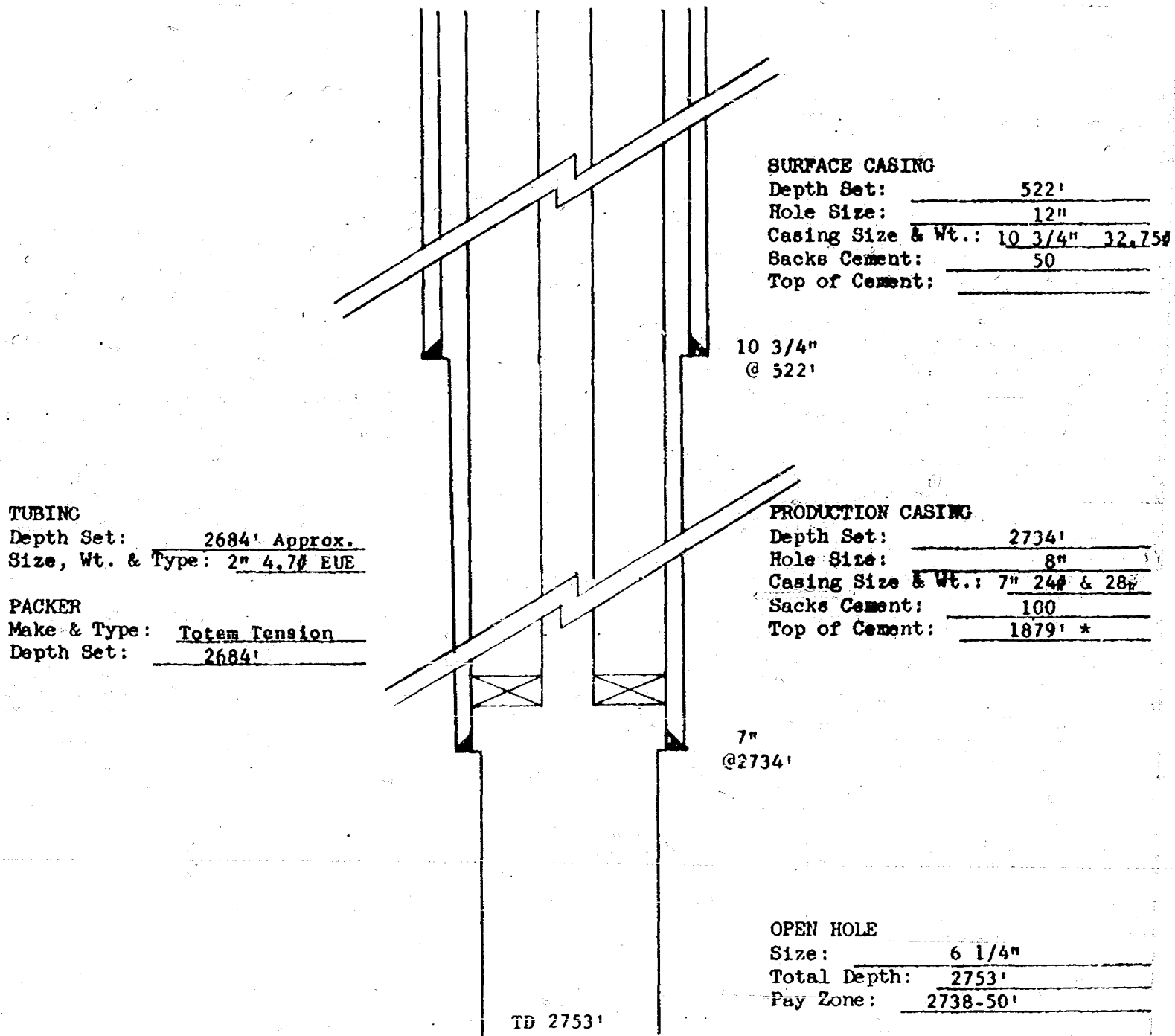
T. D. 2802

44-3874

Exhibit "C"

GENERAL AMERICAN OIL COMPANY OF TEXAS SCHEMATIC DIAGRAM OF PROPOSED DRILLING WELL

Lense and Well No.: Sivley #2
 Location: 660' feet from South line and
660' feet from West line of
 Section 8 TWP 16-S RGE 30-E
 N.M.P.M.: Eddy County, New Mexico



*Cement Top Calculated @ 70% Fillup.

Case 3878

AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED PRODUCTION WELL

Lease and Well No.: Stivley #7
Location: 1650 feet from North line and
2310 feet from East line of
Section 17 TWP 16-S RGE 30-E
N.M.P.M. Eddy County, New Mexico

TUBING
Depth Set: 2750' Approx.
Size, Wt. & Type: 2" 4.7# EUE

PACKER
Make & Type: Totem Tension
Depth Set: 2750' Approx.

SURFACE CASING
Depth Set: 537'
Hole Size: 12"
Casing Size & Wt.: 10 3/4" 32.75#
Sacks Cement: 50
Top of Cement: _____

10 3/4"
@ 537'

PRODUCTION CASING
Depth Set: 2750'
Hole Size: 8"
Casing Size & Wt.: 7" 26# & 28#
Sacks Cement: 100
Top of Cement: 1895' *

7"
@ 2750'

OPEN HOLE
Size: 6 1/4"
Total Depth: 2802'
Pay Zone: 2754-90'

TD 2802'

*Cement Top Calculated @ 70% Fillup.

Well data on wells to be converted to injection.

Exhibit D

General American Oil Company of Texas
Southwest Henshaw Waterflood Project
Eddy County, New Mexico

Operator:

General American Oil Company of Texas

Well No.:

Stivley #2

General American Oil Company of Texas

Location:

660' PSL & FWL Sec. 8-16S-30E

Stivley #7

Elevation:

3774' GL

1650' FNL & 2310' FEL Sec. 17-16S-30E

Completion Data:

3770' GL

Total Depth:

2753'

PB Total Depth:

Surface Casing:

2802'

Depth Set:

Size & Wt.:

522'

No. Sacks:

10 3/4" 32.75#

537'

50

10 3/4" 32.75#

Production Casing:

50

Depth Set:

Size & Wt.:

2734'

No. Sacks:

7" 24# & 28#

2750'

100

7" 24# & 28#

100

Producing Zone:

Formation:

Interval:

Premier Sand

2738-50'

Premier Sand

Treatment Record:

2754-90'

Type:

Interval:

Sand Frac

Volume:

2734-53'

60,000# 20/40 sand, 4,000# 40/60 sand

Sand Frac

2750-2802'

carried in 35,500 gals of oil. Max.
press. 2600#. Min. press. 2300#.

30,000# 40/60 sand, 25,000# 20/40 sand
carried in 33,054 gals of oil. Max.
press. 2700#. Min. press. 2200#.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Drawer U
Artesia, New Mexico 88210

MAIN OFFICE

69 JUN 12 AM 8 17

IN REPLY REFER TO:

June 10, 1969

General American Oil Company of Texas
Post Office Box 416
Lobo Hills, New Mexico 88255

Gentlemen:

Your letter of June 6, 1969 requests approval to operate a waterflood of the Premier zone of the Grayburg formation on oil and gas lease New Mexico 04068 described as follows:

T. 16 S., R. 30 E., N.M.P.M., Eddy County, New Mexico

Section 3: S $\frac{1}{2}$ SW $\frac{1}{4}$

Section 17: W $\frac{1}{2}$ NE $\frac{1}{4}$

You propose to convert to water injection wells No. 2 Sivley located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, and No. 7 Sivley located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, which would be in cooperative agreement with the Southwest Henshaw Premier Sand Unit to the east and west.

The plan for operating the above described waterflood project as proposed in the application is satisfactory to this office, and hereby approved subject to the following:

1. This project will be operated in compliance with the New Mexico Oil Conservation Commission regulations governing waterflood operations.
2. Duplicate copies of a monthly progress report (N.M.O.C.C. form C-120 acceptable) are to be submitted to this office showing the volume of water injected, and average pressures for the injection wells, and production for the producing wells in the project area.
3. This approval does not preclude the necessity for further approval when the project is expanded to include other wells and leases or the necessity to submit the usual notices and reports on wells involved.

Sincerely yours,

(Orig. Sgd.) JAMES A. KNAUF

James A. Knauf
District Engineer

cc: N.M.O.C.C., Santa Fe
Roswell - File Accounts

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3878

Order No. R- 3524

APPLICATION OF GENERAL AMERICAN OIL COMPANY OF TEXAS
FOR A WATERFLOOD PROJECT, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 9, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this day of October, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, General American Oil Company of Texas,
seeks permission to institute a waterflood project in the
West Henshaw-
Unit Area, Grayburg Pool by
Premier Sand of
the injection of water into the the Grayburg formation
Unit M of
through two injection wells in Section 8 and Unit G of Sec-
-tion 17, Township 16 North South, Range 30 West East, NMPM,
Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to institute a waterflood project in the West Henshaw-Grayburg Pool by the injection of water into the Premeir Sand of the Grayburg formation through the following-described wells in Township 16 ~~North~~ South, Range 30 ~~West~~ East, NMPM, Eddy County, New Mexico:

~~Federal~~
~~General American Oil Company of Texas~~

Federal - Sivley Well No. 2 ;
Federal - Sivley Well No. 7 ;

Unit M, Section 8
Unit G, Section 17

(2) That the subject waterflood project is hereby designated the General American Henshaw Sivley Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(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.