

CASE 4029: Application of GENERAL
AMERICAN OIL COMPANY FOR A WATER-
FLOOD EXPANSION, EDDY COUNTY.

Case Number

4029

Application
Transcripts.

Small Exhibits

ETC.

dearnley-meier

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

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 22, 1969
EXAMINER HEARING

IN THE MATTER OF:

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

Case No. 4029

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 4029.

MR. HATCH: Case 4029, application of General American Oil Company for a waterflood expansion, Eddy County, New Mexico.

MR. RUSSELL: John F. Russell, Roswell, New Mexico, representing the applicant, and I have one witness, Mr. Crow.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1 through 6, inclusive, were marked for identification.)

ROY CROW

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

DIRECT EXAMINATION

BY MR. RUSSELL:

MR. UTZ: Any other appearances? You may proceed.

Q Please state your name, address, and the name of your employer, and the capacity in which you are employed.

A My name is Roy Crow. I am employed by General American Oil Company of Texas as Assistant Superintendent, and I reside in Artesia, New Mexico.

Q And you have previously qualified to give testimony before the Examiner and the Commission?

A I have.

Q Are you familiar with the application in Case No. 4029?

A I am.

Q What do you seek by that application?

A We seek to expand our present pilot flood in the Grayburg-Jackson and San Andres Flood in three stages. Do you want me to describe this now?

Q Is that an expansion of the flood authorized by Order No. 2324 of the Commission?

A That's correct.

Q Now, in connection with this application, have you prepared some exhibits?

A I have.

Q Referring you to what has been marked as Exhibit 1, will you explain what that represents?

A Exhibit 1 is a plat showing the proposed injection wells within a radius of two miles, showing the zones in which all wells are producing. As will be noted, there are four colored on the map. The three wells in blue indicate the current three approved pilot injection wells. The wells colored in yellow are our proposed first-stage expansion. The ones in brown are our second-stage expansion, and the ones colored in green are the third-stage expansion. The red outline indicates the outline of the project area.

Q Will you state the acreage that is to be included

within the three stages, and the pilot.

A Well, there are 1,480 acres, which would be an additional 200 acres to what was asked in the application, due to an oversight on my part.

Referring to the application, under Township 17 South, Range 30 East, we requested the southeast quarter of the southwest quarter; and to that in Section 19, we would add the southwest quarter of the southwest quarter, and the southwest quarter of the southeast quarter, an additional 80 acres. And then in Section 30 of the same Range, addition to the northwest quarter, we have the northwest quarter of the northeast quarter, Well No. 3.

O And that is the total of 1,480 acres?

A There are two others in Section -- Township 17 South, Range 29 East, in Section 24. In addition to the southeast quarter of the southeast quarter, we have the southwest quarter of the southeast quarter, and as --

MR. UTZ: Just a moment. Let me get this straight. Section 24, southeast southeast, and then what?

THE WITNESS: And you also have the southeast of the southwest already.

MR. UTZ: Yes.

THE WITNESS: And in addition to those two, we have

the southwest quarter of the southeast quarter, and the southwest quarter of the southwest quarter. These are all included within this red line, but on the map I first furnished Mr. Russell, these five 40's were omitted.

MR. HATCH: There are three wells on here that were not then in the original application?

MR. RUSSELL: No wells, just acreage.

MR. HATCH: It is advertised as 13 additional injection wells. Am I counting 16?

THE WITNESS: There are only 13 additional injection wells. These three in blue are already injection wells already approved.

MR. HATCH: I didn't count those.

THE WITNESS: The three circles that are not colored brown in stage two are Sinclair wells, which I have a letter to submit that these wells will be converted in their ultimate flood pattern to coop. As this progresses a little, you will see -- the reason this is in stages is due to the fact that Sinclair has not got an approval yet. And stage two will be put on at the time Sinclair gets their flood. And the three wells circled but not colored, those three are not General American wells.

MR. UTZ: Those are not in your application?

THE WITNESS: These are not in this order here.

They are just showing the coop along the line there with Sinclair, which I was going to bring out at the time I described the three stages.

Q (By Mr. Russell) Mr. Crow, in addition to the acreage which you have just described, the application on page two incorrectly lists the Keely C No. 8 Well as being Range 39 East. That should be 29 East, should it not?

A That's correct.

Q You are asking that the application be amended to reflect that correct Range, and also the additional acreage which you have testified to?

A I do. Making a total of 1,480 acres instead of 1,280.

Q But there are no additional injection wells which are not included in the application?

A This is correct. This additional acreage was to correspond with the Commission's pattern of using all offsets and diagonal offsets, which I had not included these diagonal 40's to these injection wells on my first -- I had only used the direct offsets, and the five additional 40's were diagonal offsets to the injection well.

MR. RUSSELL: Do you concur in the amendment,

Mr. Examiner?

A I would like to discuss this plat just a little further to clarify the point that he brought out. The stage one colored in yellow, we would put this in immediately, with the exception, as you would note, of Well. No. 23 and State No. 2. These, we ask to be tentative at this time, since we have no affirmative agreement with Bassett on Well No. 8. We are working on this. And we would not convert these two wells in stage one, that is our Keeley C 23 and State No. 2, until we reached an agreement with Bassett, at which time we would furnish the Commission a copy of this agreement, or letter of this agreement before we converted these two wells.

We do want approval for them now, with the understanding that since we do not have an agreement with Bassett at this time, we would not convert these wells until we had submitted evidence that we have reached agreement with the Bassett property.

In the stage two, colored in dark brown, shows our Keely B 11, Keely C 16, and Keely C 21, and is colored solid on our maps. Those are the three General American wells; they would coop with the Sinclair Robinson No. 7, and Robinson No. 11, and No. 4, which are only circled on your map. And I will submit a letter from Sinclair showing that this will fit their ultimate

flood pattern, and that they do approve of our map and our plans here.

In stage three, colored in green, will be the conversion of three wells, Keely C 8, Burch B 10, and 11. This stage is merely to offset overriding royalties which General American has. We have overrides on our C leases, and none on the other leases. And by converting these additional wells as our third stage, we would balance our overriding royalty acreage, but we ask approval of all three stages at this time. We would put all three stages in now, if Sinclair was ready to go.

MR. UTZ: The corrections noted on your application will be approved.

O Now, I will refer you to what has been marked as Applicant's Exhibit Number 2, which consists of 13 parts, and is marked Number 2 and then through 2-L, and ask you what that exhibit reflects.

A The 13 parts of Exhibit 2 are the schematic diagrams of the proposed 13 injection wells. I will not discuss each one individually, unless you have questions. They are all the same general type. They show the surface casing, the cement, the depths set, the production casing, cement depths set, the amount of open hole, the approximate depth of tubing, and packer,

that will be placed in each well, and that injection will be down plastic-lined tubing below a packer, and inhibited water will be placed in the annulus.

The only thing that varies greatly from one of these to the other is that there are five wells to be deepened prior to injection, and these are marked at the bottom of each log as to the approximate amount of footage that they will be deepened.

MR. RUSSELL: Mr. Examiner, would you want him to go through each of those and give the footage location of the wells which is shown there?

MR. UTZ: No, I don't think so.

MR. RUSSELL: It is on each one of them.

MR. UTZ: As long as you state that these footages are all correct.

THE WITNESS: These are correct.

MR. UTZ: I don't think that will be necessary.

Q (By Mr. Russell) Now, I refer you to what has been marked as Applicant's Exhibit Number 3, and ask you what that reflects?

A Exhibit Number 3 is a recap on all wells to be converted in the three stages. I believe I failed to maybe designate that stage one, at least on my copy, anyway, stages

two and three, the last pages of the stage three, and all but the last three wells on the second page were stage two -- I am sorry this is not marked a little better -- and the first seven wells are stage one. It is a recap of pertinent data on the wells to be converted, showing total depth, and production casings, the surface casings, the producing intervals, and the type of treatment that the wells originally had, and again the proposed deepening.

Q That is primarily in tabular form, the information shown on the prior exhibit, on the schematics, the individual schematic drawings?

A This is true, only including the stimulation treatments of the wells.

Q Referring you to what has been marked as Applicant's Exhibit Number 5, will you identify that?

A Exhibit 4?

Q Exhibit Number 4, rather.

A Exhibit Number 4 is a copy of the summary of operations for the period of 1968 through December of 1969, which was submitted as our plan of operation to the U.S.G.S., and it is submitted as their approval to this particular expanded project.

Q I refer you now to what has been marked as Applicant's Exhibit Number 5, and ask you what that is?

A Exhibit Number 5 is a portion of the only available log of the 13 wells to be converted to injection, and it shows the production casing, and the open-hole interval beneath. The small wiggly lines in the three places there are actually where supposedly three different pay zones are, as would indicate the log does not show up very much different in those places than it does anywhere else, so actually these logs are not really very informative, really, as to actually whether you are correlating in the same pay or not.

Q Now, Mr. Crow, what will be the source of water for this proposed flood?

A I would like to back up, we have one more exhibit.

Q All right. Referring to Exhibit Number 6, and tell us what that is.

A Exhibit Number 6 is a letter from Sinclair which states that they have no objections to our expanded flood, and that the three wells that I have shown on their Robinson Lease to be proposed injection wells will fit their ultimate flood pattern, in that our cooperation along with them will be as shown on our plat.

Q What is the source of water which you will use for this flood?

A We will recycle all produced water from the releases

involved in this flood, which will amount to about 80 barrels, plus approximately 700 barrels of produced water from the Loco Hills Flood. This will be supplemented by fresh water from Double Eagle Water Corporation, which is Caprock water.

Q Are you presently recycling the water produced from this stage, or your pilot flood?

A We are.

Q What is the approximate amount of water per well per day that you expect to inject?

A Well, we plan to inject as close to 500 barrels a day as we can. The range will probably be from 200 to 500. Some of the wells are much tighter than others.

Q The water will be furnished by Double Eagle Corporation is Ogalalla water from the Lea County Basin, is it not?

A This is correct.

Q How many wells are in the proposed flood area?

A There will be 62 wells within the 1,480-acre area.

Q Do you know what the cumulative primary was for this acreage?

A These wells made 5,212,693 to the first of the year.

Q What do you estimate that your secondary reserves are that you may recover?

A At this time, we are calculating that we will recover

50 per cent of primary, which would equal 2,606,347 secondary reserves.

Q What is the current average production per well today, at this time?

A For all leases involved, approximately one and a half barrels per day is the current production, per well.

Q Do you have anything further that you want to offer or discuss at this time in connection with this proposed application?

A I don't think so.

MR. RUSSELL: Mr. Examiner, at this time I move the introduction of Exhibits 1 through 6.

MR. UTZ: Without objection, Exhibits 1 through 6 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Numbers 1 through 6, inclusive, were admitted in evidence.)

MR. RUSSELL: I have no further direct examination of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Crow, I note you don't have any cement tops on these. These were not available?

A No, sir, these were not available. I looked, and if

I would have had any at all, I would have calculated the others, based on the one, but I could not find any cement logs available.

Q Do you intend to test casing on these wells before you inject?

A Well, we usually will install a pressure gauge on the annular side, too, where we could note at any time we did have a casing failure, if this would be sufficient. We usually do not actually test the casings. Injection, as I noted before, would be below a packer set approximately 50 feet from the bottom of the casing, with inhibited fluid in the annular space.

Q That will be plain tubing?

A It will be plastic-lined tubing.

Q I believe you stated that you would recycle your produced water?

A Yes, sir.

Q Now, you said 62 wells in the unit. Does that include injection wells, or just producing wells?

A That is the entire number of wells between this 1,480 acres, which would include the total of 16 injection wells, the three pilot and the 13 --

Q Excluding Sinclair's? There are three now, and you have 13?

A Yes, sir.

Q How many leases are actually in this unit that you have outlined here in red?

A Well, there is the Burch C, the Burch B, the Keely C, the Keely B, and that is all. And the State 1, just an injection well on the State Lease.

Q So there are five separate leases.

MR. UTZ: Any other questions of the witness?

MR. RUSSELL: No further questions.

MR. UTZ: You may be excused. Are there any statements in this case? The case will be taken under advisement.

Have you specifically checked the location of the wells on your application, and are you sure those locations are correct?

THE WITNESS: I have checked them once, but I will be glad to check them again.

MR. RUSSELL: See that they correspond with Exhibit Number 2.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
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<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1 through 6	2	13

STATE OF NEW MEXICO)
) ss.
 COUNTY OF BERNALILLO)

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Samuel Mortelette
 COURT REPORTER

I do hereby certify that the foregoing is
 a true and correct copy of the transcript
 of the hearing of Case No. 4029
 held at the court house on Jan 27, 1969.
Thos. C. Ortiz, Secretary
 New Mexico Oil Conservation Commission

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. 4029
Order No. R-3664

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 22, 1969,
at Santa Fe, New Mexico, before Examiner Elvin A. Utz.

NOW, on this 24th day of January, 1969, 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 authority to expand its pilot waterflood project in
the Grayburg zone of the San Andres formation in the Grayburg-
Jackson Pool, Eddy County, New Mexico, authorized by Order No.
R-2324, by the conversion to water injection of 13 additional
injection wells located in Township 17 South, Ranges 29 and 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 expanded pilot waterflood project
should result in the recovery of otherwise unrecoverable oil,

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CASE No. 4029

Order No. R-3664

thereby preventing waste; provided, however that unless agreed to by all parties, the transfer of allowables across lease lines where royalty ownership is diverse should not be authorized.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to expand its pilot waterflood project in the Grayburg zone of the San Andres formation in the Grayburg-Jackson Pool, Eddy County, New Mexico, authorized by Order No. R-2324, by converting to water injection the following-described 13 additional injection wells in Eddy County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

<u>LEASE</u>	<u>WELL NO.</u>	<u>UNIT</u>	<u>SECTION</u>
Keely "C"	8	A	25
Keely "B"	6	C	25
Keely "C"	10	E	25
Keely "C"	12	G	25
Keely "C"	20	I	25
Keely "C"	23	M	25
Keely "B"	10	I	26
Keely "B"	11	O	26
Keely "C"	16	K	26
Keely "C"	21	M	26
State	2	C	36

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

<u>LEASE</u>	<u>WELL NO.</u>	<u>UNIT</u>	<u>SECTION</u>
Burch "B"	10	C	30
Burch "B"	11	E	30

(2) That the expanded pilot waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations, including the allowable provisions thereof;

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CASE No. 4029

Order No. R-3664

PROVIDED HOWEVER, that unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this expanded waterflood project shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(3) That monthly progress reports of the expanded 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.

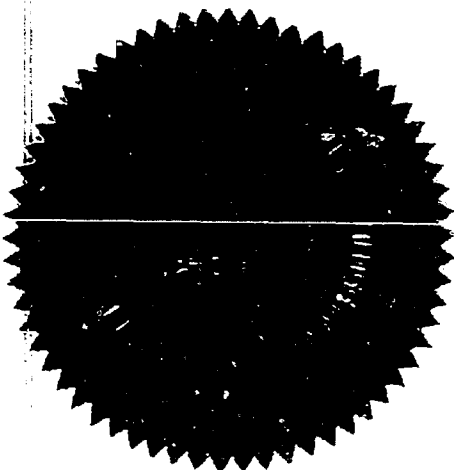
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMIJO, Member


A. L. PORTER, Jr. Member & Secretary



esr/

OIL CONSERVATION COMMISSION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

January 24, 1969

Mr. Jack Russell
Attorney at Law
Post Office Drawer 640
Roswell, New Mexico 83201

Dear Sir:

Enclosed herewith is Commission Order No. R-3664, entered in Case No. 4029, approving the expansion of the General American Keely "C" Waterflood Project.

Additional injection is to be through the 13 newly authorized water injection wells, each of which shall be equipped with a string of tubing set in a packer located not more than 50 feet above the casing shoe. It is our understanding that all of the injection wells are open-hole completions.

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 1960 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less if all of the leases were unitized or otherwise consolidated into a single project area.

As you know, however, Commission Order No. 802 dated November 19, 1948, established certain unitized tracts for proration purposes in this project area which followed the lease lines for the Keely B, Keely C, Burch B, and Burch C leases. The waterflood project allowables for each of the unitized tracts are as follows:

Unit W-3 project area SW/4 of Section 26: 210 barrels

Unit G-5 project area S/2 NE/4 and SE/4 of Section 26, N/2 NW/4 of Section 25, and S/2 SW/4 of Section 24: 532 barrels

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

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Mr. Jack Russell
Attorney at Law
Roswell, New Mexico

January 24, 1969

Unit W-4 project area S/2 SE/4 of Section 24,
NE/4, N/2 SE/4, SW/4 SE/4, S/2 NW/4, and SW/4
of Section 25: 784 barrels

Unit G-2 project area S/2 SW/4 of Section 19
and NW/4 of Section 30: 303 barrels

C
O
P
Y
The difference in the sum of the allowables for the four projects and the total allowable which would be assigned if the entire project area were unitized (1334 barrels vs. 1960 barrels) results from loss of allowable by the injection well in the NE/4 NW/4 of Section 36 (there is no producing well on this lease to assign the allowable to) and no waterflood allowable being assigned to the two wells in the SW/4 SE/4 of Section 19 and the NW/4 NE/4 of Section 30 (there is no injection well on this lease, the Burch C (unitized area W-1).

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

ALP/ir
Enclosure

cc: Oil Conservation Commission
Hobbs and Artesia, New Mexico
State Engineer Office, Santa Fe, New Mexico

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. 164
ORDER NO. 802

THE APPLICATION OF GRAYBURG OIL COMPANY
OF NEW MEXICO, AND WESTERN PRODUCTION
COMPANY, INC., FOR AN ORDER GRANTING
PERMISSION TO UNITIZE CERTAIN TRACTS
WITHIN THE BOUNDARIES OF THE GRAYBURG
COOPERATIVE AND UNIT AREA, IN TOWNSHIP
17 SOUTH, RANGES 29 AND 30 EAST, N.M.P.M.
IN THE GRAYBURG-JACKSON POOL OF EDDY
COUNTY, NEW MEXICO, FOR PRORATION AND
ALLOWABLE PURPOSES.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This matter came on for hearing at 10:00 o'clock A. M. on the 28th day of October, 1948, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 19th day of November, 1948, the Commission, having before it for consideration the testimony adduced at said hearing and being fully advised in the premises,

FINDS:

1. That due public notice having been given, as provided by law, the Commission has jurisdiction of this cause.
2. That the acreage involved in the application is federally owned and the Supervisor of the United States Geological Survey interposes no objections to the application.
3. That heretofore, in Case No. 152, upon which hearing was held before the Commission on July 29, 1948, the Commission granted to Applicants herein, permits to drill twenty-eight unorthodox "five spot" locations, upon the leases described in this application.
4. That the creation and establishment of the tracts of land described in the application, into unitized tracts for proration and allowable purposes only, will enable Grayburg Oil Company of New Mexico and Western Production Company, Inc. to produce the wells upon the respective proposed unitized tracts at a more efficient rate of withdrawal; that a greater ultimate recovery of oil will be obtained from each of said unitized tracts, and that such method of operation will be in the interest of conservation, prevent waste and enable applicants to produce substantial quantities of oil that would not otherwise be recovered.

IT IS THEREFORE ORDERED, that the Application of Grayburg Oil Company of New Mexico and Western Production Company, Inc., for an order authorizing the unitization

CASE NO. 164
ORDER NO. 802

for proration and allowable purposes of the tracts therein described, be and the same is hereby granted and approved, and it is further ordered that the following tracts of land located in the Grayburg-Jackson Pool of Eddy County, New Mexico are hereby established as unitized tracts for proration and allowable purposes:

GRAYBURG OIL COMPANY OF NEW MEXICO UNITS:

UNIT G-1, described as S/2 S/2 Section 18,
N/2 and N/2 S/2 Section 19, Township 17
South, Range 30 East, N.M.P.M.

Now
UNIT G-2, described as S/2 SW/4 Section
19, ~~SW/4~~ Section 30, Township 17 South,
Range 30 East, N.M.P.M.

UNIT G-3, described as SW/4 Section 23,
Township 17 South, Range 29 East, N.M.P.M.

UNIT G-4, described as N/2 NW/4, SW/4 NW/4,
N/2 SW/4, N/2 SE/4 and NE/4 Section 24,
Township 17 South, Range 29 East, N.M.P.M.

UNIT G-5, described as S/2 SW/4 Section 24,
N/2 NW/4 Section 25, E/2 Section 26, Township
17 South, Range 29 East, N.M.P.M.

WESTERN PRODUCTION COMPANY, INC. UNITS:

UNIT W-1, described as S/2 SE/4 Section 19,
N/2 NE/4 Section 30, Township 17 South,
Range 30 East, N.M.P.M.

UNIT W-2, described as SE/4 Section 23,
Township 17 South, Range 29 East, N.M.P.M.

UNIT W-3, described as W/2 Section 26,
Township 17 South, Range 29 East, N.M.P.M.


UNIT W-4, described as S/2 SE/4 Section 24,
S/2 NW/4, SW/4 and E/2 Section 25, Township
17 South, Range 29 East, N.M.P.M.

IT IS FURTHER ORDERED, and Applicants are hereby authorized to produce from each unitized tract, hereinabove described, the total allowable production, as fixed by the Commission for the total number of developed forth acre proration units comprising such unitized tract, and the Applicants are hereby authorized to produce the total allowable, so fixed by the Commission for each unitized tract, from all of the wells located upon or that may be hereafter drilled upon such unitized tract, producing from the Grayburg-Jackson Pay.

IT IS FURTHER ORDERED, that no well located upon any unitized tract shall be permitted to produce at a rate in excess of the top allowable as fixed by the Commission.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Coe  29
Hend 1-22-69
Res 4-22-69

Grant General American permission
to connect 13 wells to Waterflood
Injection wells. for their Grayburg-
Jackson waterflood.

The list of these wells on the
application is correct.

Injection shall be thru Int.
plastic lined tubing and under
a packer. Annulus to be filled
with Inert fluid w/ pressure
gauge at Surface.

Produced water will be injected.

Thos. G. Mc

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. 2640
Order No. R-2324

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 11, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 3rd day of October, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, General American Oil Company of Texas, is the operator of Section 25, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico.

(3) That the applicant requests approval of a pilot water-flood project in the Grayburg zone of the San Andres formation, Grayburg-Jackson Pool, Eddy County, New Mexico, by the injection of water into its Keely "C" Well No. 25, located in Unit O, Section 25, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico.

(4) That the wells in the proposed project area are in an advanced stage of depletion and should be classified as "stripper" wells.

(5) That approval of the subject application should increase ultimate recovery of oil which otherwise might not be recovered, and will neither cause waste nor impair correlative rights; provided, however, that unless agreed to by all parties, the transfer

-2-

CASE No. 2640
Order No. R-2324

of allowables across lease lines where royalty ownership is diverse should not be authorized.

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to institute a pilot waterflood project in the Grayburg-Jackson Pool by the injection of water into the Grayburg zone of the San Andres formation through its Keely "C" Well No. 25, located in Unit O, Section 25, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico.

(2) That the waterflood project shall be governed by Rule 701 including the allowable provisions thereof.

PROVIDED HOWEVER, That unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this waterflood shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(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



EDWIN L. MECHEM, Chairman



E. S. WALKER, Member



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

S E A L

esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 22, 1969

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 4013: (Continued and Readvertised.)

Application of Redfern Development Corporation and Wil-Mc Oil Corporation for salt water disposal, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the San Andres formation in the interval from approximately 4042 feet to 4179 feet in the Wil-Mc State K Well No. 1 located in Unit O of Section 11, Township 10 South, Range 32 East, Mescalero-San Andres Pool, Lea County, New Mexico.

CASE 4029: Application of General American Oil Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its pilot waterflood project in the Grayburg zone of the San Andres formation in the Grayburg-Jackson Pool, Eddy County, New Mexico, authorized by Order No. R-2324, by the conversion to water injection of 13 additional injection wells located in Township 17 South, Ranges 29 and 30 East, Eddy County, New Mexico.

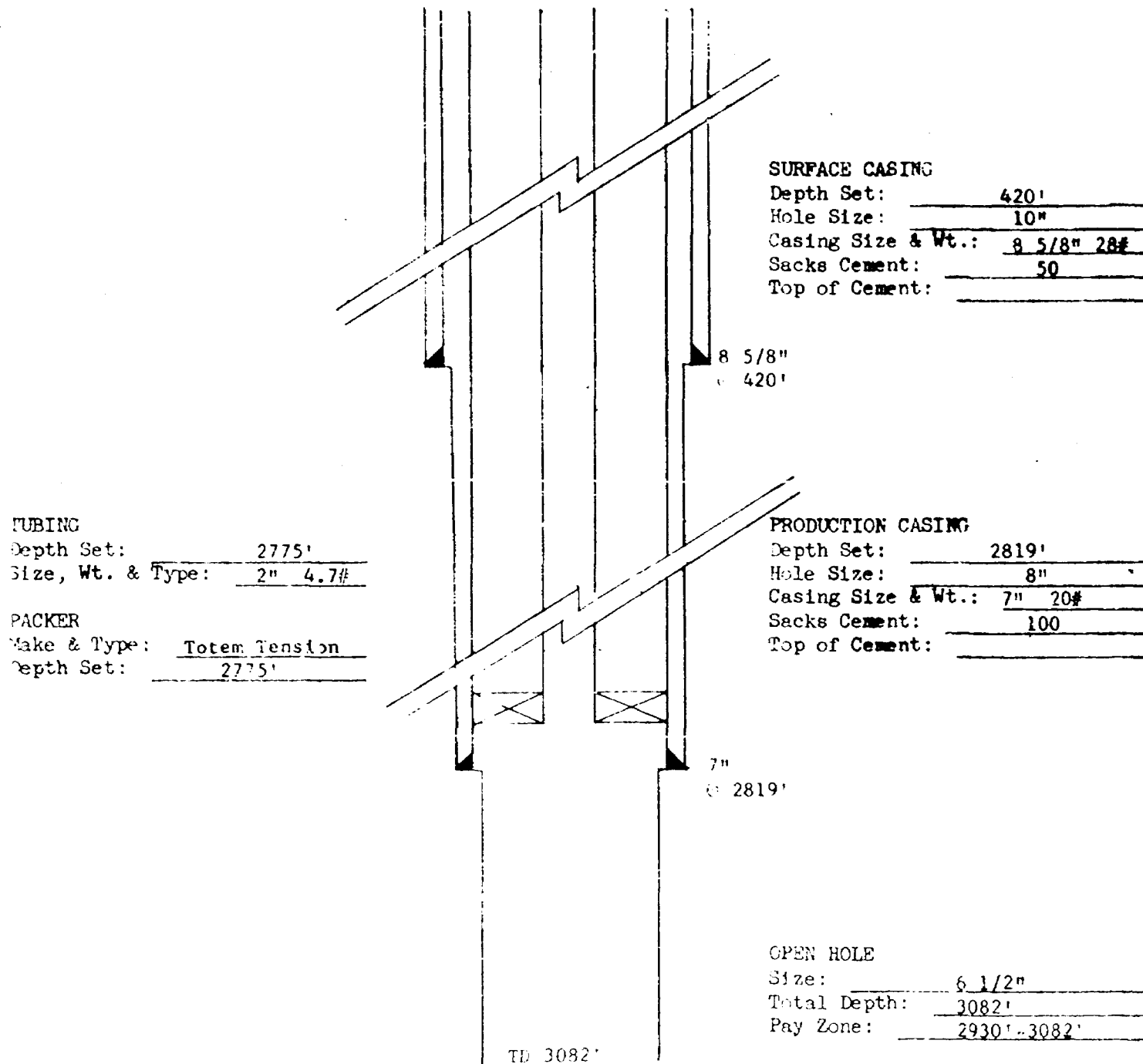
CASE 4030: Application of Argus Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the perforated and open-hole interval from approximately 3554 feet to 3775 feet in its J. T. Lynn A-28 Well No. 3, located 2310 feet from the South line and 1650 feet from the East line of Section 28, Township 23 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

CASE 4031: Application of Texaco Inc. 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-Seven Rivers formations in the open-hole interval from approximately 2964 feet to 3119 feet in its C. W. Shepherd Federal "B" Well No. 5 located in Unit I of Section 1, Township 26 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

- CASE 4032: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the establishment of non-standard gas proration units and unorthodox gas well locations, where necessary, in the Aztec and Blanco-Pictured Cliffs Gas Pools in Sections 6, 7, 18, 19, 30, and 31, Townships 29 and 30 North, Ranges 8 and 9 West, San Juan County, New Mexico. Said non-standard units and locations being necessitated by variations in said legal subdivisions of the U. S. Public Land Surveys.
- CASE 4033: Application of Phillips Petroleum Company 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-Seven Rivers formations in the perforated interval from 3606 feet to 3740 feet in its Cruces Federal Well No. 5 located in Unit P of Section 26, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4034: Application of Phillips Petroleum Company 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-Seven Rivers formations in the open-hole interval from 3360 feet to 3520 feet in its C. D. Woolworth Well No. 9 located in Unit B of Section 27, Township 24 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4035: Application of Phillips Petroleum Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg-San Andres formations through its Philcox Well No. 5 located in Unit N of Section 27, Township 17 South, Range 33 East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

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

Lease and Well No.: Keely B #6
Location: 660 feet from North line and
1980 feet from West line of
Section 25 TWP 17S RGE 29E
M.P.M. Eddy County, New Mexico



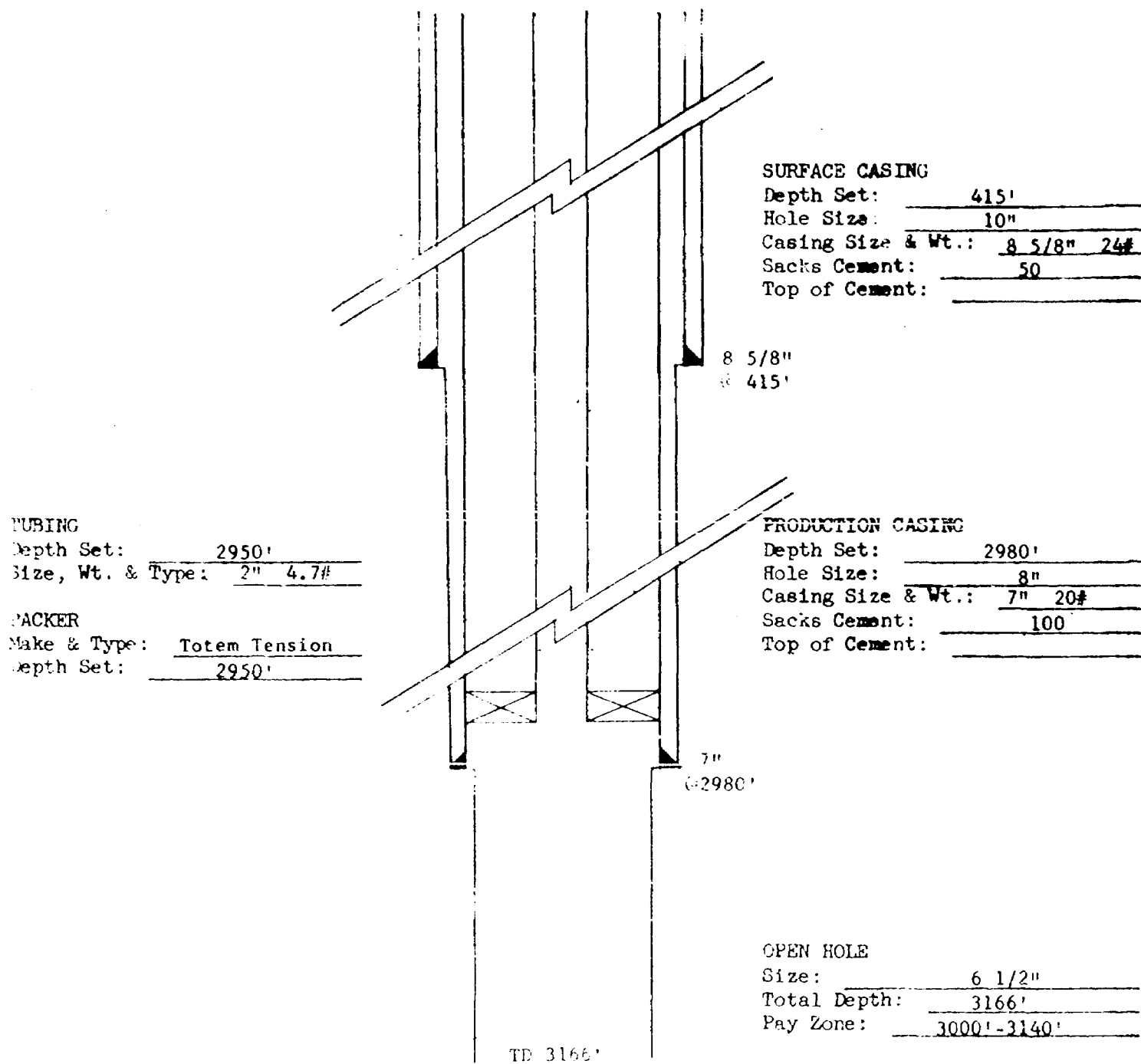
This well will probably be deepened to 315' prior to injection.

Copied
4029

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

20

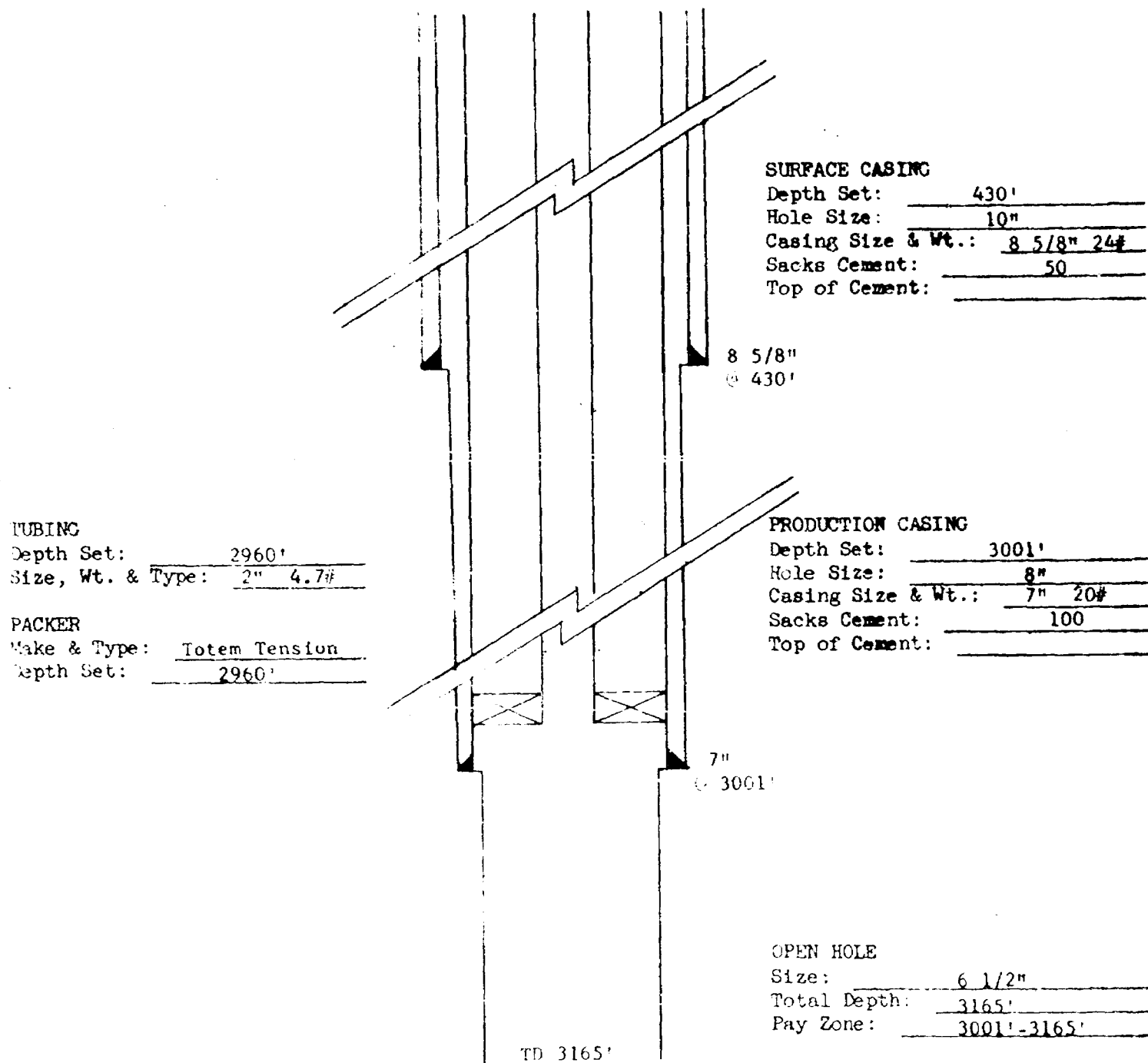
Lease and Well No.: Eeely B #10
Location: 1980 Feet from South line and
660 Feet from East line of
Section 26 TWP 17S RGE 29E
N.M.P.M. Eddy County, New Mexico



28

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

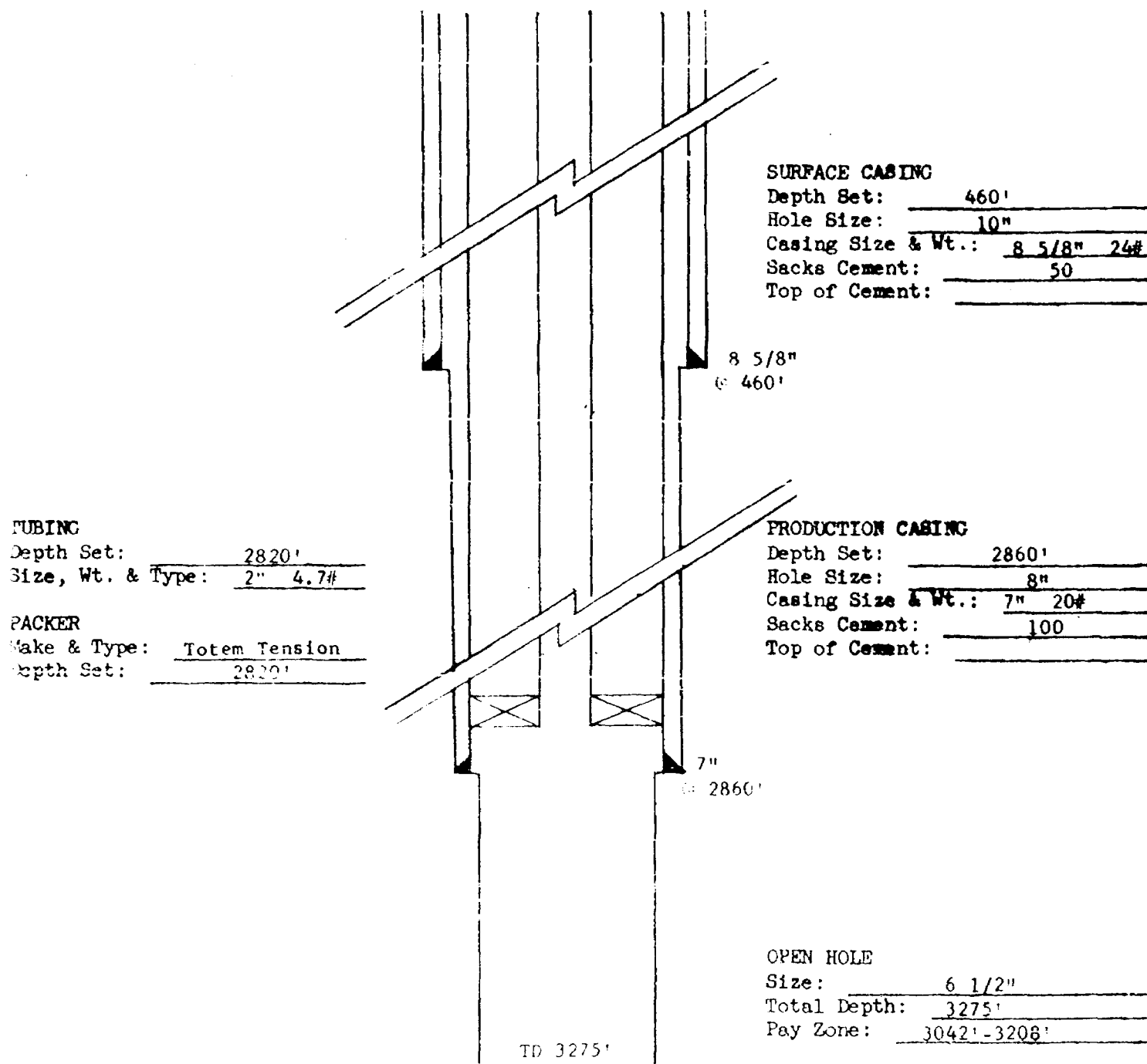
Lease and Well No.: Keely C #10
Location: 1980 feet from North line and
660 feet from West line of
Section 25 TWP 17S RGE 29E
N.M.P.M. Lddy County, New Mexico



26

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

Lease and Well No.: Keely C #12
 Location: 1980' feet from North line and
1980' feet from East line of
 Section 25 TWP 17S RGE 29E
 N.M.P.M. Iddy County, New Mexico



28

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

Lease and Well No.: Keely C. #20
Location: 1980 feet from South line and
260 feet from East line of
Section 25 TWP 17S RCE 29E
N.M.P.M. Eddy County, New Mexico

TUBING
Depth Set: 3080'
Size, Wt. & Type: 2" 4.7#

PACKER
Make & Type: Totem Tension
Depth Set: 3080'

SURFACE CASING
Depth Set: 523'
Hole Size: 10"
Casing Size & Wt.: 8 5/8" 24#
Sacks Cement: 100
Top of Cement: _____

8 5/8"
@ 523'

PRODUCTION CASING
Depth Set: 3119'
Hole Size: 8"
Casing Size & Wt.: 7" 20#
Sacks Cement: 100
Top of Cement: _____

7"
@ 3119'

OPEN HOLE
Size: 6 1/2"
Total Depth: 3330'
Pay Zone: 3179'-3208'

TD 3330'

22

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

Lease and Well No.: Keely C #23
Location: 660 feet from South line and
660 feet from West line of
Section 25 TWP 17S RGE 29E
N.M.P.M. Eddy County, New Mexico

TUBING
Depth Set: 3015'
Size, Wt. & Type: 2" 4.7#

PACKER
Make & Type: Totem Tension
Depth Set: 3015'

SURFACE CASING

Depth Set: 430'
Hole Size: 10"
Casing Size & Wt.: 8 5/8" 24#
Sacks Cement: 50
Top of Cement:

8 5/8"
@ 430'

PRODUCTION CASING

Depth Set: 3055'
Hole Size: 8"
Casing Size & Wt.: 7" 20#
Sacks Cement: 100
Top of Cement:

7"
@ 3055'

OPEN HOLE

Size: 6 1/2"
Total Depth: 3227'
Pay Zone: 3130'-3227'

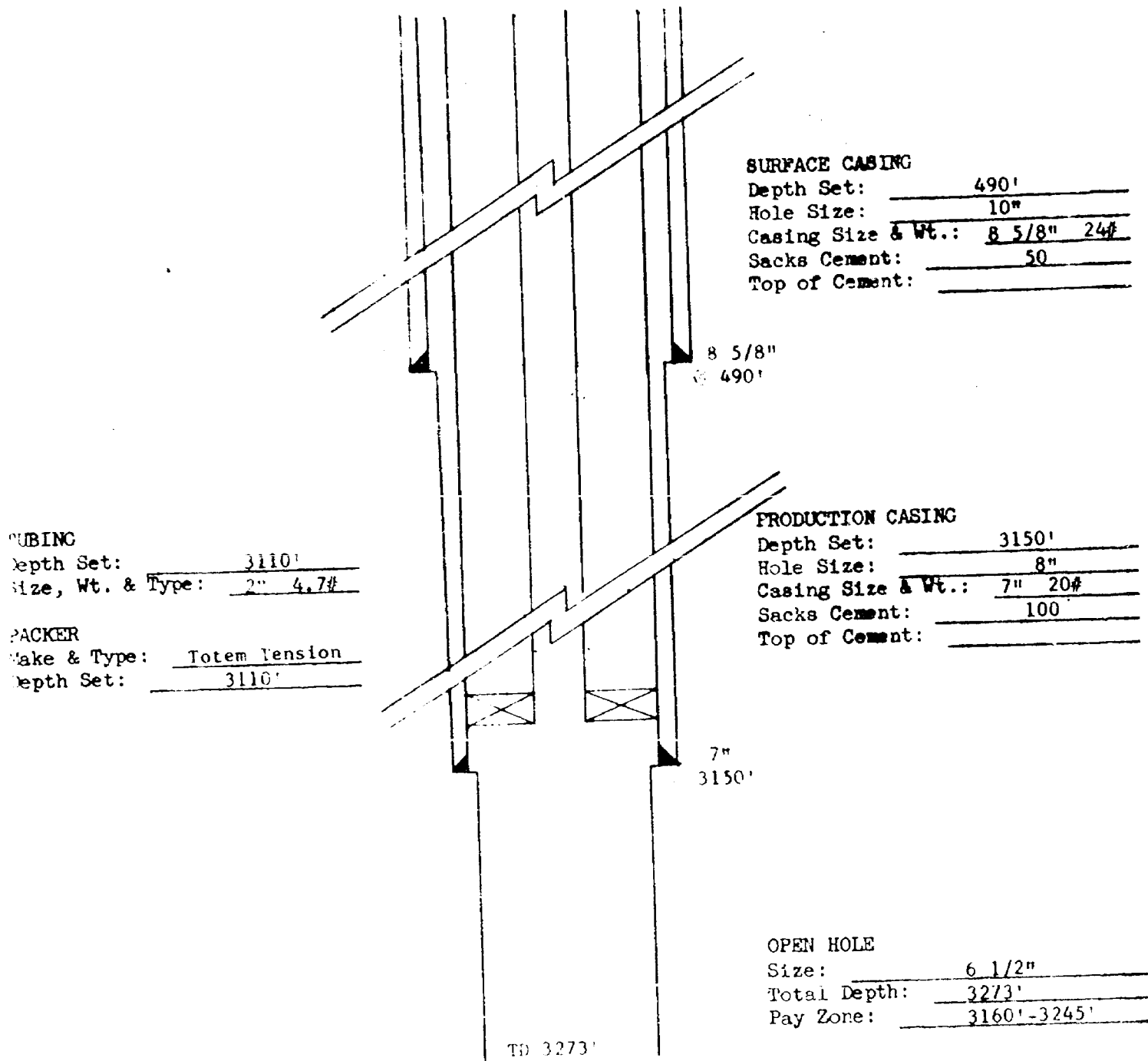
TD 3227'

This well will probably be deepened 15' to 1302'.

2-6

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

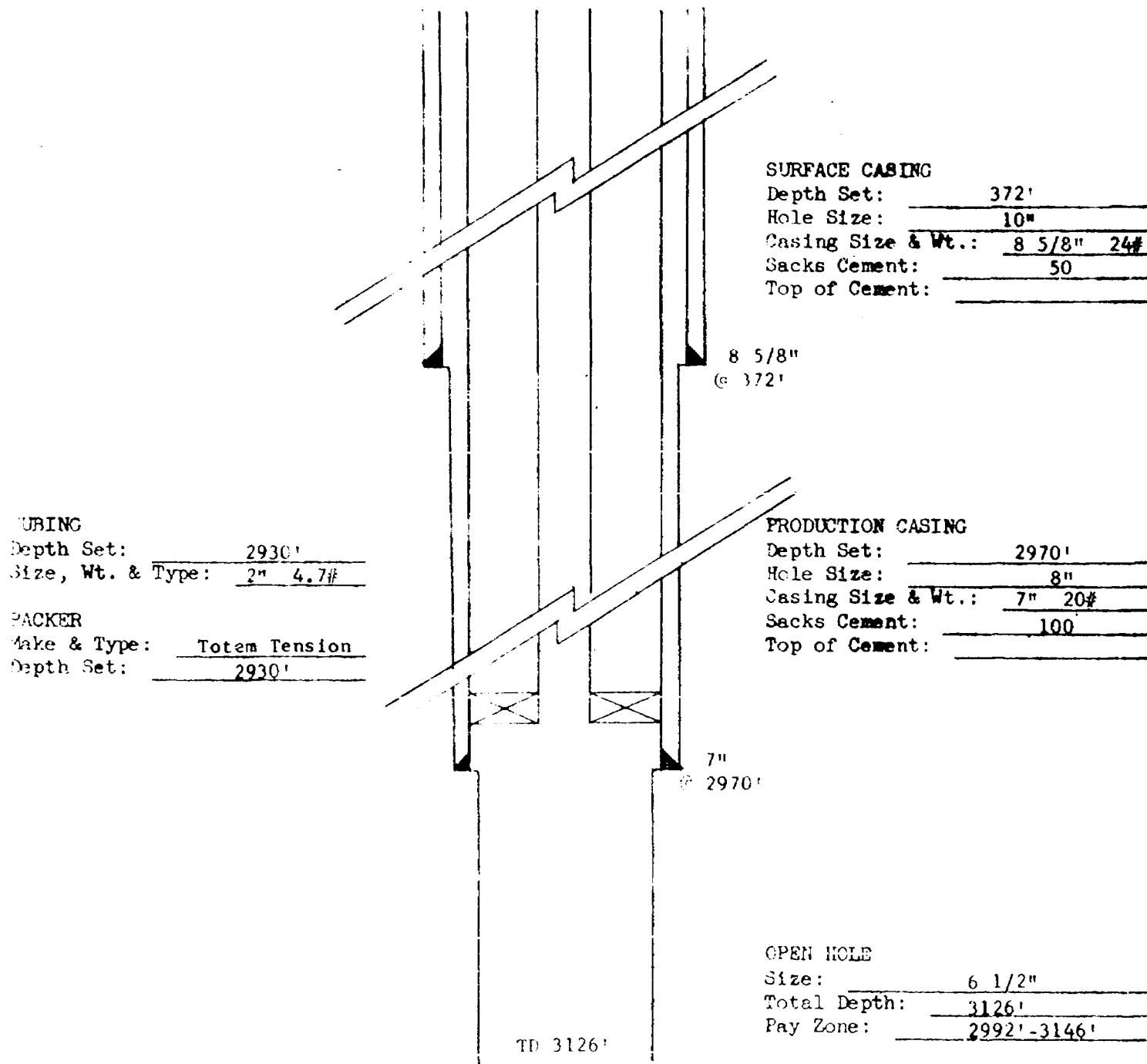
Lease and Well No.: _____ State #2
Location: _____ feet from _____ North line and
_____ feet from _____ West line of
Section _____ TWP _____ RGE _____ NE
N.M.P.M. _____ Eddy _____ County, New Mexico



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

2 9

Lease and well No.: Keely B #11
Location: 640 feet from South line and
1980 feet from East line of
Section 26 TWP 17S RGE 29E
T.M. Eddy County, New Mexico



This well will probably be deepened 75' to 3201'.

2 R

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

Lease and Well No.: Keely C #16
Location: 1980 feet from South line and
1980 feet from West line of
S. 11 N. 26 TWP 17S RGE 29E
N.M.P.M. Eddy County, New Mexico

SURFACE CASING

Depth Set: 410'
Hole Size: 10"
Casing Size & Wt.: 8 5/8" 24#
Sacks Cement: 100
Top of Cement: _____

8 5/8"
@ 410'

PRODUCTION CASING

Depth Set: 2817'
Hole Size: 8"
Casing Size & Wt.: 7" 24#
Sacks Cement: 100
Top of Cement: _____

7"
2817'

OPEN HOLE

Size: 6 1/2"
Total Depth: 3018'
Pay Zone: 2840'-2993'

TD 3018'

TUBING

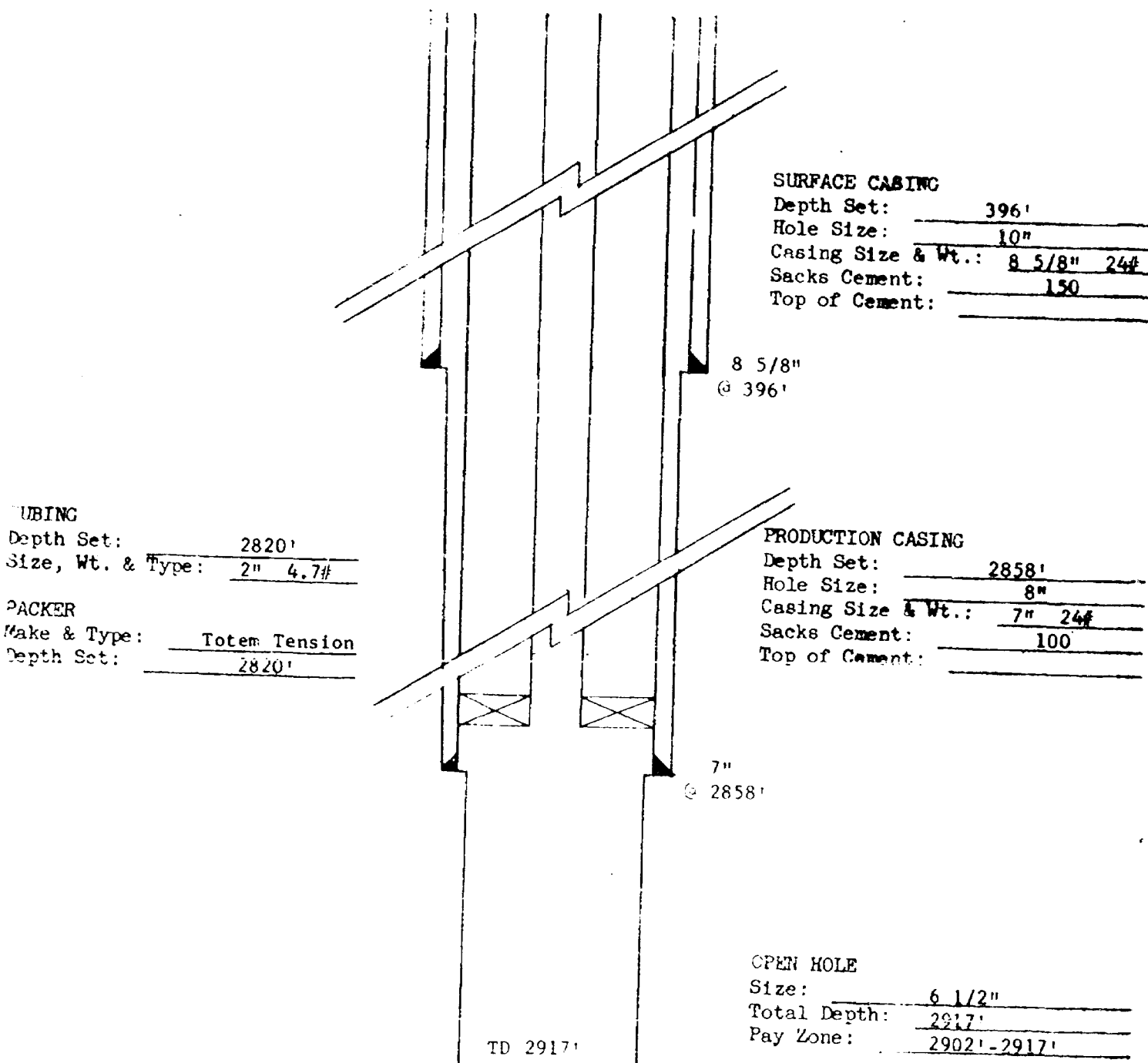
Depth Set: 2780'
Size, Wt. & Type: 2" 4.7#

PACKER

Make & Type: Toten Tension
Depth Set: 2780'

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

Lease and Well No.: Keely C #21
Location: 660 feet from South line and
660 feet from West line of
Section 26 TWP 17S RGE 29E
N.M.P.M. Eddy County, New Mexico

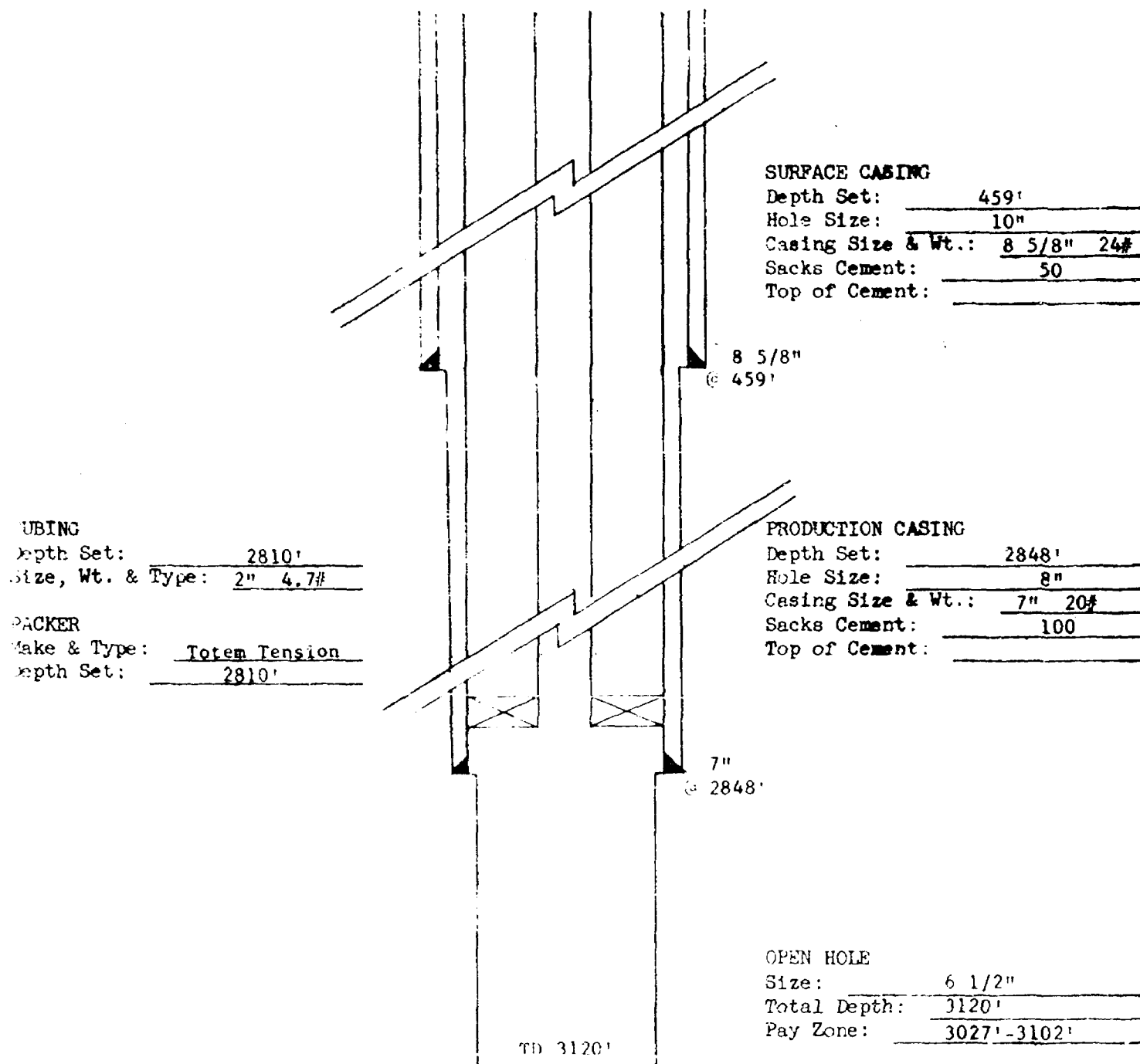


This well will probably be deepened 150' to 3067'.

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

24

Lease and Well No.: Keely C. #8
Location: 660 feet from North line and
660 feet from East line of
Section 25 TWP 17S RGE 29E
N.M.P.M. Eddy County, New Mexico

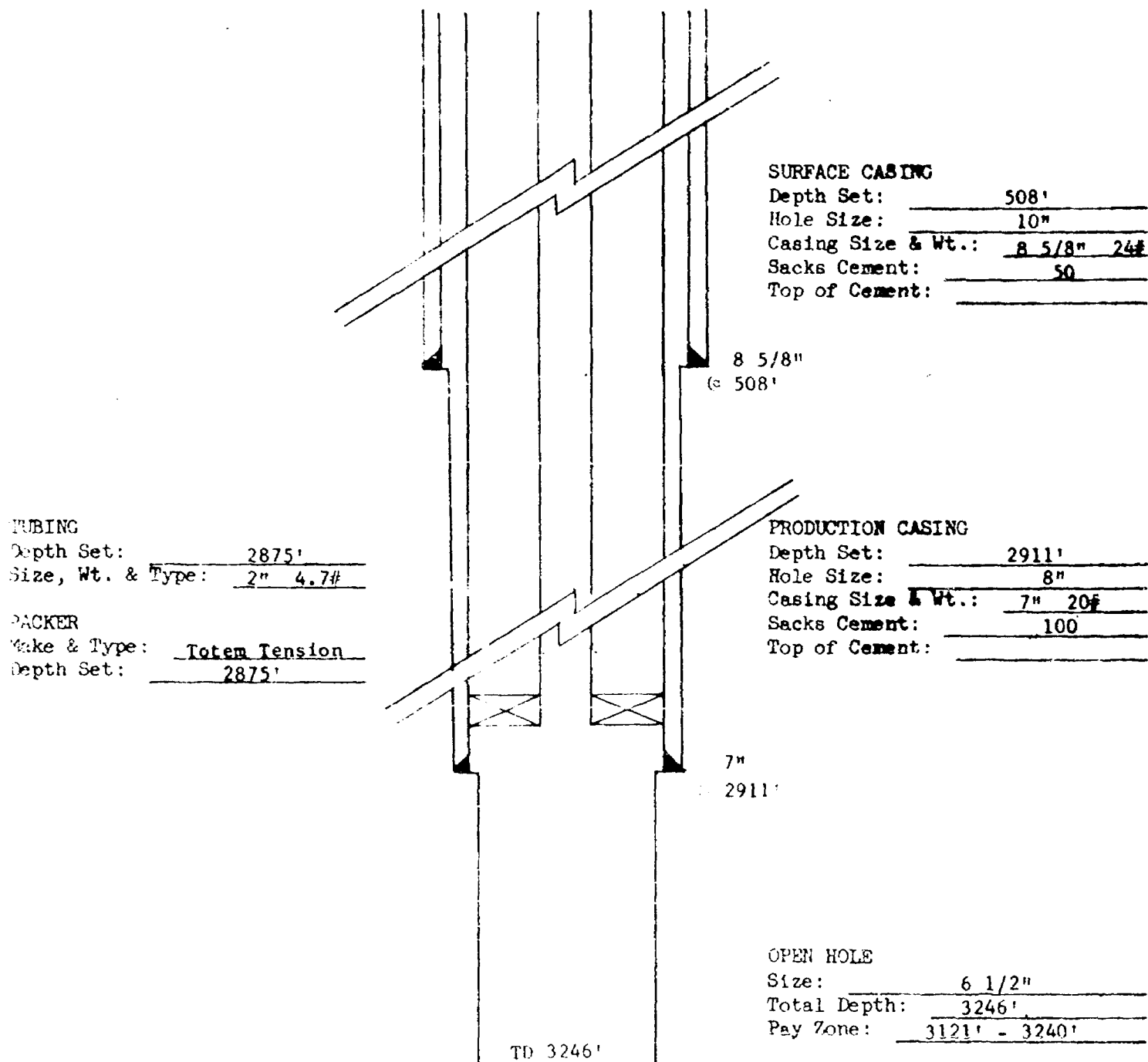


This well will probably be deepened 75' to 3195'.

2-R

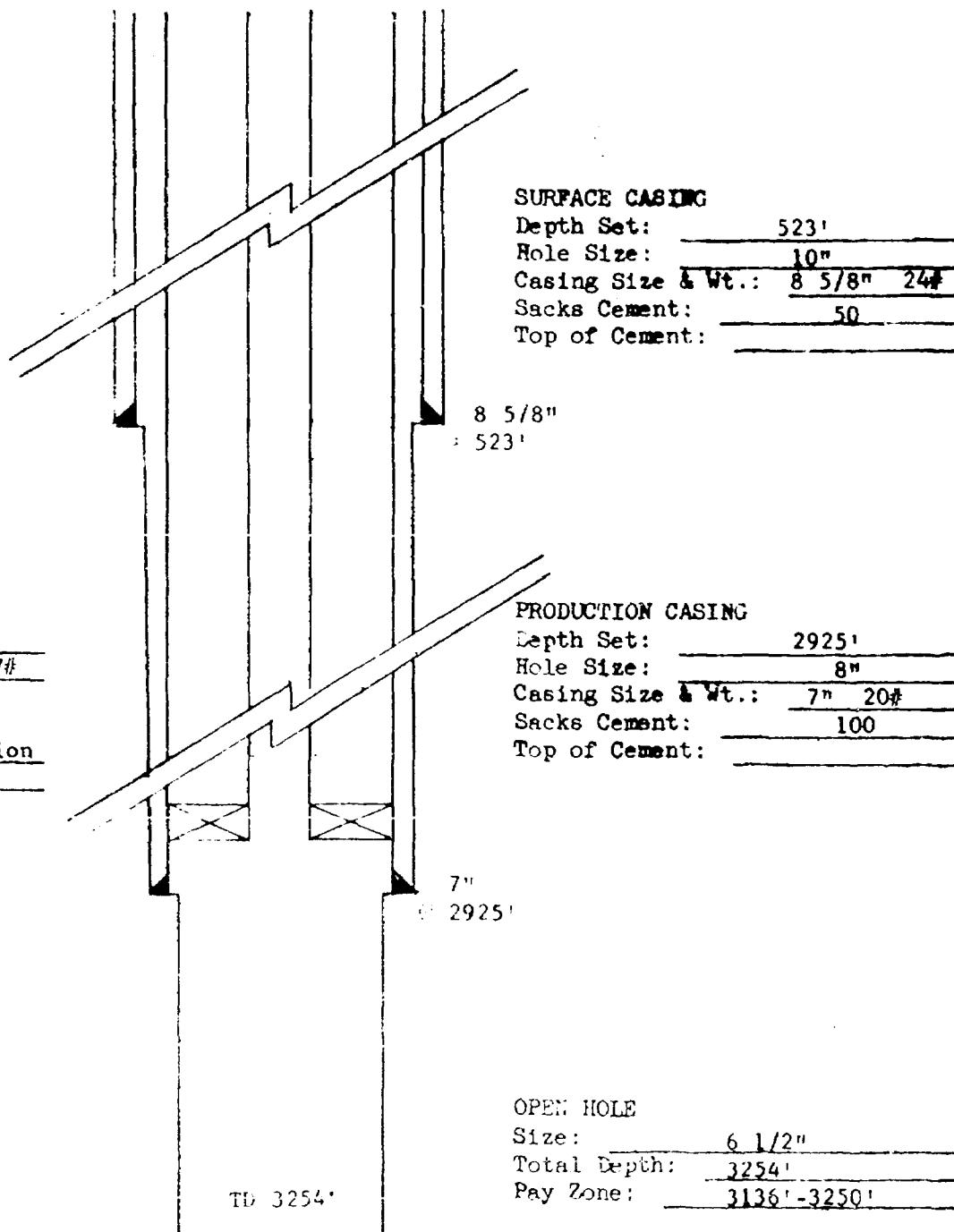
GENERAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

Lease and Well No.: Burch E. #10
Location: 660 feet from North line and
1980 feet from West line of
Section 30 TWP 17S RGE 30E
N.M.P.M. Eddy County, New Mexico



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

Lease and Well No.: Burch B #11
Location: 1980 feet from North line and
660 feet from West line of
Section 30 TWP 17S RGE 30E
N.M.P.M. Eddy County, New Mexico



GENERAL AMERICAN OIL COMPANY OF TEXAS

DATA ON WELLS TO BE CONVERTED TO WATER INJECTION

OPERATOR:	CAOC	CAOC	CAOC	CAOC	CAOC
WELL NO.:	Keely B #6	Keely B #10	Keely C #10	Keely C #12	Keely C #20
LOCATION:	660 FNL & 1980 FNL	1980 FSL & 660 FEL	1980 FNL & 660 FNL	1980 FNL & 1980 FEL	1980 FSL & 660 FEL
ELEVATION:	Sec 25 - 17S - 29E 3599'	Sec 26 - 17S - 29E 3578'	Sec 25 - 17S - 29E 3596'	Sec 25 - 17S - 29E 3590'	Sec 25 - 17S - 29E 3590'
COMPLETION DATA:					
TOTAL DEPTH:	3082'	3166'	3155'	3275'	3330'
P.B. TOTAL DEPTH:					
SURFACE CASING @:	420'	415'	430'	460'	523'
SIZE & WT.:	8 5/8" 28#	8 5/8" 24#	8 5/8" 24#	8 5/8" 24#	8 5/8" 24#
NO. SACKS:	50	50	50	50	50
PRODUCTION CASING @:	2819'	2980'	3001'	2860'	3119'
SIZE & WT.:	7" 20#	7" 20#	7" 20#	7" 20#	7" 20#
NO. SACKS:	100	100	100	100	100
PRODUCING ZONE:	San Andres	San Andres	San Andres	San Andres	San Andres
INTERVAL:	2930' - 3082'	3000' - 3140'	3001' - 3165'	3042' - 3208'	3179' - 3208'
TREATMENT RECORD:					
TYPE TREATMENT:	Acid	Acid	Acid	Acid	Acid
INTERVAL:	2819' - 3082'	2980' - 3166'	3001' - 3165'	2860' - 3275'	3138' - 3215'
VOLUME:	Acidized with 4500 Gallons 20% HCL.	3 Stages 20% Acid Totaling 3750 Gallons.	Acidized with 4500 Gallons of 20% HCL.	5 Stages Totaling 13500 Gallons 20% HCL Acid.	4 Stages Totaling 10000 Gallons 20% HCL Acid.
REMARKS:	This well will probably be deepened 75' to 3157'.				

ON COMPLETION OF
 WORK ON WELL NO. 44-29
 CRSE NO. 44-29

GENERAL AMERICAN OIL COMPANY OF TEXAS

DATA ON WELLS TO BE CONVERTED TO WATER INJECTION

STAGE 11

OPERATOR:	CAOC	CAOC	CAOC	CAOC
WELL NO.:	Keely C #23	State #2	Keely B #11	Keely C #16
LOCATION:	660 FSL & 660 FWL Sec 25 - 17S - 29E	660 FNL & 1980 FWL Sec 36 - 17S - 29E	660 FSL & 1980 FSL Sec 26 - 17S - 29E	1980 FSL & 1980 FWL Sec 26 - 17S - 29E
ELEVATION:	3579'	3575'	3573'	3575'
COMPLETION DATA:				
TOTAL DEPTH:	3227'	3273'	3126'	3018'
P.B. TOTAL DEPTH:				2917'
SURFACE CASING (G):	430'	490'	272'	410'
SIZE & WT.:	8.5/8" 24#	8.5/8" 24#	8.5/8" 24#	8.5/8" 24#
NO. SACKS:	50	50	50	50
PRODUCTION CASING (G):	3055'	3150'	2970'	2817'
SIZE & WT.:	7" 20#	7" 20#	7" 20#	7" 24#
NO. SACKS:	100	100	100	100
PRODUCING ZONE:	San Andres	San Andres	San Andres	San Andres
INTERVAL:	3130' - 3227'	3160' - 3245'	2992' - 3146'	2840' - 2993'
TREATMENT RECORD:				
TYPE TREATMENT:	Acid	Acid	Acid	Acid
VOLUME:	3055' - 3227'	3200' - 3259'	2970' - 3126'	2817' - 3018'
	2 Stages Totaling 6000 Gallons 20% HCL Acid	3 Stages Totaling 10300 Gallons 20% HCL Acid	3 Stages of 20% Acid Totaling 7500 Gallons	Acidized with 4000 Gallons 20% HCL
REMARKS:	This well will probably be deepened 75' to 3302'.		This well will probably be deepened 75' to 3201'.	This well will probably be deepened 150' to 3067'.

GENERAL AMERICAN OIL COMPANY OF TEXAS

DATA ON WELLS TO BE CONVERTED TO WATER INJECTION

STAGE III			
OPERATOR:	CAOC	CAOC	CAOC
WELL NO.:	Keely C #8	Burch B #10	Burch B #11
LOCATION:	660 PNL & 660 FEL Sec 23 - 17S - 29E	660 PNL & 1980 FWL Sec 30 - 17S - 30E	1980 PNL & 660 FWL Sec 30 - 17S - 30E
ELEVATION:	3602'	3612'	3607'
COMPLETION DATA:			
TOTAL DEPTH:	3120'	3246'	3254'
P.B. TOTAL DEPTH:			
SURFACE CASING (g):	459'	508'	523'
SIZE & WT.:	8 5/8" 24#	8 5/8" 24#	8 5/8" 24#
NO. SACKS:	50	50	50
PRODUCTION CASING (g):	2848'	2911'	2925'
SIZE & WT.:	7" 20#	7" 20#	7" 20#
NO. SACKS:	100	100	100
PRODUCING ZONE:	San Andres	San Andres	San Andres
INTERVAL:	3027' - 3102'	3121' - 3240'	3136' - 3250'
TREATMENT RECORD:			
TYPE TREATMENT:	Acid	Acid	Acid
INTERVAL:	2848' - 3120'	2911' - 3246'	3119' - 3254'
VOLUME:	Acidized with 1500 Gallons of 20% HCL	2 Stages Totaling 4500 Gallons 20% HCL Acid	2 Stages Totaling 5500 Gallons 20% HCL Acid
REMARKS:	This well will probably be deepened 75' to 3195'.		

GRAYBURG COOPERATIVE AND UNIT AGREEMENT (1-370)
EDDY COUNTY, NEW MEXICO

GRAYBURG ZONE: SUMMARY OF OPERATIONS FOR THE PERIOD JANUARY 1, 1968 THROUGH NOVEMBER 30, 1968 AND AMENDMENT TO ORIGINAL PLAN OF OPERATIONS COVERING THE PERIOD DECEMBER 1, 1968 THROUGH DECEMBER 31, 1969.

TO: Mr. John A. Anderson
Regional Oil and Gas Supervisor
United States Geological Survey
P. O. Drawer 1857
Roswell, New Mexico 88201

It is intended by General American Oil Company of Texas, the Unit Operator designated for the Grayburg Cooperative and Unit Agreement, Eddy County, New Mexico, that the Plan of Operation for the Grayburg Zone under the Grayburg Cooperative and Unit Agreement, Originally approved by the Oil and Gas Supervisor on April 6, 1944 shall remain in effect for the period December 1, 1968 through December 31, 1969 with the modifications and amendments contained herein.

1. DEVELOPMENT TO DATE. Cumulative oil production from 119 wells completed in the Grayburg Zone amounted to 11,132,534 barrels through November 30, 1968. There were 74,196 barrels of oil produced during eleven months of 1968 from 83 active wells.

2. PLAN OF DEVELOPMENT:

(a) PROPOSED WELLS:

There are no new wells proposed for 1969.

(b) OPERATIONS OF WATERFLOOD PROJECT:

Total water injected into the original pilot Flood amounts to 1,653,800 barrels. Injection into the original pilot area has been temporarily discontinued but may be resumed at a later date. No water was injected into this area during 1968.

Operations of the Grayburg Jackson Pilot Waterflood #2 were continued during the first eleven months during 1968 with a cumulative injection to December 1, 1968 of 1,283,659 barrels. Injection has been into Keely C #18, Keely C #25 and Keely C #37.

(c) EXPANSION OF PROJECT:

The Operator plans to expand its waterflood project during 1969 to include 13 additional water injection wells. The expansion will be accomplished in three stages. Attached is a map showing the proposed first stage expansion in yellow which will include the conversion of seven wells to water injection. This stage will be instigated as soon as the project has been approved by the Oil Conservation Commission.

The second stage shown in brown would include the conversion of three additional wells to water injection and would be put into effect as soon as Sinclair converts their line wells to water injection.

The third stage shown in green will be converted to balance acreage swaps on leases which have overriding royalty and leases which do not have overriding royalty.

The Operator plans to seek approval from the New Mexico Oil Conservation Commission for this project at the earliest date possible. The Operator will seek to put all stages approved under one order. Providing cooperation with Sinclair can be finalized, all stages should be completed during 1969.

APPROVED BY:
OIL CONSERVATION COMMISSION
Eddy County, New Mexico
4/10/69
4/10/69

3. MODIFICATION OF PLAN: With the approval of the Oil and Gas Supervisor, this plan may be modified from time to time by the Unit Operator to meet changed conditions or take advantage of information from deepening of any well and to meet changed conditions which may develop in the operation of the water injection program as outlined herein. The original Plan of Operation, with this modification to remain in effect through December 31, 1969 on or about which date the Unit Operator shall submit for approval of the Oil and Gas Supervisor, a new Plan of Operation or appropriate modification or amendment of the Plan for the calendar year 1970.

Respectfully submitted,

GENERAL AMERICAN OIL COMPANY OF TEXAS

By: W. E. Walter
W. E. Walter
District Superintendent

Dated this _____ day of _____, 1968

APPROVED this _____ day of _____, 19__

W. E. Walter
Regional Oil and Gas Supervisor
Roswell, New Mexico



SINCLAIR OIL CORPORATION

P. O. Box 1470
MIDLAND, TEXAS 79701

January 15, 1969

SOUTHERN REGION (WEST TEXAS)
DOMESTIC OIL & GAS DIVISION

General American Oil Company of Texas
P. O. Box 416
Loco Hills, New Mexico 88255

Attention Mr. Roy Crow

Gentlemen:

We have reviewed your proposed waterflood pattern submitted with your letter of January 9, 1969, concerning the expansion of your San Andres lime pilot flood in cooperation with our Robinson leases.

This is to advise that your plans appear to conform with Sinclair's proposed flood pattern and to advise that we have no objections to your application with the Oil Conservation Commission.

Yours very truly,

SINCLAIR OIL CORPORATION

R. M. Anderson
R. M. Anderson
Region Regulatory Engineer

RMA/nr

BEFORE EXAMINED
APPROVED
APPROVED
CASE NO. 4029

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

January 15, 1969

1969 JAN 15 PM 1 20

TELEPHONE 622-4641
AREA CODE 505

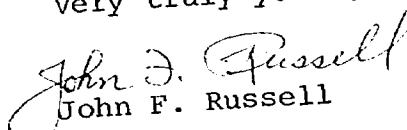
Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Re: General American Oil Co.
of Texas, Case No. 4029

Dear Mr. Porter:

I transmit herewith in triplicate four Exhibits, for
filing with the Application in the above numbered case.

Very truly yours,


John F. Russell

JFR:vj
Encls.

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

December 27, 1968

TELEPHONE 622-4641
AREA CODE 505

DEC 30 14 0 19

Case 4029

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Porter:

I transmit herewith, in triplicate, the Application of General American Oil Company of Texas for an expansion of its waterflood project authorized under Order No.R-2324 entered in Case No. 2640.

The Application is being filed at this time in order to make the deadline for the January 22nd hearing. The Exhibits referred to in the Application will be forwarded immediately upon receipt.

Very truly yours,

John F. Russell
John F. Russell

JFR:d
Enclosures

DOCKET ADDED

Date *1-5-69*
21-9-66

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 AMENDING ORDER
NO. R-2324 ENTERED IN CASE NO. 2640
TO PERMIT THE EXPANSION OF THE WATER-
FLOOD IN THE GRAYBURG-JACKSON POOL,
EDDY COUNTY, NEW MEXICO.

Case 4029

APPLICATION

COMES NOW General American Oil Company of Texas by its At-
torney John F. Russell and states:

1. It desires to expand the waterflood project authorized by
Order No. R-2324 entered in Case No. 2640.

Applicant seeks to expand the project in three stages as
follows:

Stage 1. The additional wells to be converted to
injection wells are as follows:

Keely B #6 located in Unit "C" of Sec.25, T.17S., R29E.	1	✓
Keely B #10 located in Unit "I" of Sec.26, T.17S.,R29E.	2	✓
Keely C #10 located in Unit "E" of Sec.25, T.17S.,R29E.	3	✓
Keely C #12 located in Unit "G" of Sec.25, T.17S.,R29E.	4	✓
Keely C #20 located in Unit "I" of Sec.25, T.17S.,R29E.	5	✓
Keely C #23 located in Unit "M" of Sec.25, T.17S.,R29E.	6	✓
State #2 located in Unit "C" of Sec.36, T.17S.,R29E.	7	✓

Stage II. The additional wells to be converted to injection
wells are as follows:

Keely B #11 located in Unit "O" of Sec.26, T.17S.,R29E.	8	✓
Keely C #16 located in Unit "K" of Sec.26, T.17S.,R29E.	9	✓

Keely C #21 located in Unit "M" of Sec.26, T.17S., R29E. 10 ✓

The additional wells to be converted to injection wells are as follows:

Stage III.

Burch B #10 located in Unit "C" of Sec.30, T.17S., R30E. 11 ✓

Burch B #11 located in Unit "E" of Sec.30, T.17S., R30E. 12 ✓

Keely C #8 located in Unit "A" of Sec.25, T.17S., R29E. 13 ✓
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2. The area to be covered by the expanded waterflood project is as follows:

Township 17 South, Range 30 East,

Sec. 19 - SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW SW, SW SE

Sec. 30 - NW $\frac{1}{4}$, NW NE

Township 17 South, Range 29 East,

Sec. 24 - SE $\frac{1}{4}$ SE $\frac{1}{4}$ and SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW SE, SW SW

Sec. 25 - W $\frac{1}{2}$, NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$

Sec. 26 - S $\frac{1}{2}$ and SE $\frac{1}{4}$ NE $\frac{1}{4}$

Sec. 36 - NE $\frac{1}{4}$ NW $\frac{1}{4}$ containing ¹⁴⁸⁰~~1280~~ acres, more or less.

3. Attached hereto as Exhibit "1", a plat showing all producing wells within a two mile radius of the proposed injection wells.

4. Attached hereto as Exhibit "2", a schematic drawing showing the manner in which the proposed injection wells will be completed.

5. All well logs which are available will be presented at the time of the hearing.

6. It proposes to expand the existing flood by injection into the Grayburg Zone of the San Andres Formation at depths ranging from from approximately 2950 feet to 3250 feet. The water used will be

purchased from Caprock Water Company.

WHEREFORE Applicant requests that the Commission set this matter down for hearing before its Examiner, publish notices required by law, and after hearing, issue its Order authorizing the expansion of this waterflood as aforesaid.

Respectfully submitted,

GENERAL AMERICAN OIL COMPANY OF TEXAS

By John F. Russell
John F. Russell
P.O. Box 640
Roswell, New Mexico 88201

Attorney for Applicant

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. 4029

Order No. R-3664

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 22, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this day of January, 1969, 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 authority to expand its pilot waterflood project in
the Grayburg zone of the San Andres formation in the Grayburg-
Jackson Pool, Eddy County, New Mexico, authorized by Order No.
R-2324, by the conversion to water injection of 13 additional
injection wells located in Township 17 South, Ranges 29 and 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 expanded pilot waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste; provided, however, that unless agreed to by all parties, the transfer of allowables across lease lines where royalty ownership is diverse should not be authorized.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to expand its pilot waterflood in the Grayburg zone of the San Andres formation project in the Grayburg-Jackson Pool, Eddy County, New Mexico, authorized by Order No. R-2324, by converting to water injection the following-described 13 additional injection wells in Eddy

County, New Mexico:

<u>Township 17 South, Range 29 East</u>			
Lease	Well no.	Unit	Section
Keely "C"	8	A	25
Keely "B"	6	C	25
Keely "C"	10	E	25
Keely "C"	12	G	25
Keely "C"	20	I	25
Keely "C"	23	M	25
Keely "C"	10	L	26
Keely "B"	11	J	26
Keely "B"	13	K	26
Keely "C"	21	N	26
Keely "C"	2	C	36
State			

<u>Township 17 South, Range 30 East</u>			
Lease	Well no.	Unit	Section
Keely "B"	1	A	20
Keely "C"	11	E	20

(4) That the proposed expanded pilot waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste; provided, however, that unless agreed to by all parties, the transfer of allowables across lease lines where royalty ownership is diverse should not be authorized.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, General American Oil Company of Texas, is hereby authorized to expand its pilot waterflood in the Grayburg zone of the San Andres formation project in the Grayburg-Jackson Pool, Eddy County, New Mexico, authorized by Order No. R-2324, by converting to water injection the following-described 13 additional injection wells in Eddy County, New Mexico:

<u>Township 17 South, Range 29 East</u>			
<u>Lease</u>	<u>Well No.</u>	<u>Unit</u>	<u>Section</u>
Keely "C"	8	A	25
Keely "D"	6	C	25
Keely "C"	10	E	25
Keely "C"	12	G	25
Keely "C"	20	I	25
Keely "C"	23	M	25
Keely "C"	10	T	26
Keely "B"	11	S	26
Keely "C"	16	K	26
Keely "C"	21	M	26
Keely "C"	2	C	36
State			

<u>Township 17 South, Range 29 East</u>			
<u>Lease</u>	<u>Well No.</u>	<u>Unit</u>	<u>Section</u>
Church "B"	10	C	25
Church "C"	11	E	25

(2) That the expanded pilot waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations, including the allowable provisions thereof;

PROVIDED HOWEVER, that unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this expanded waterflood shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(3) That monthly progress reports of the expanded 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.