

CASE 3531: Application of TEXAS

PACIFIC for a waterflood project, \_\_\_\_\_  
Lea County, New Mexico.

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CASE No.  
3331

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

Union Oil and Gas Division: Central Region

Union Oil Company of California  
Route One, Tatum Highway, Lovington, New Mexico 88260  
Telephone (505) 396-3608



February 14, 1977  
Lovington, New Mexico

Mr. Joe D. Ramey, Secretary-Director  
Oil Conservation Commission  
State of New Mexico  
P. O. Box 2068  
Santa Fe, New Mexico 87501

Gentlemen:

Corrosion rate in the salt water  
Disposal system, Federal "A" No. 1,  
Morton (Wolfcamp) Field, Lea County,  
New Mexico.

Please be advised that a corrosion rate of 0.01 MPY was measured, using coupons,  
for the 1st quarter of 1977 on the subject salt water disposal system. This  
system was authorized by order No. R-3531.

Yours very truly,

A handwritten signature in cursive script, reading "D. K. Spradlin".

D. K. Spradlin  
Area Superintendent

DKS/mrf  
cc: J. Tyler

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. 3531  
Order No. R-3200

APPLICATION OF TEXAS PACIFIC OIL  
COMPANY FOR A WATERFLOOD PROJECT,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 8, 1967,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 14th day of March, 1967, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

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

(2) That the applicant, Texas Pacific Oil Company, seeks  
permission to institute a waterflood project in the South Eunice  
Pool by the injection of water into the Seven Rivers-Queen forma-  
tions through six injection wells in Sections 5, 8, and 9, Town-  
ship 22 South, Range 36 East, NMPM, Lea 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.

-2-  
CASE NO. 3831  
Order No. R-3200

IT IS THEREFORE ORDERED:

(1) That the applicant, Texas Pacific Oil Company, is hereby authorized to institute a waterflood project in the South Eunice Pool by the injection of water into the Seven Rivers-Queen formations through the following-described wells in Township 22 South, Range 36 East, NMPM, Lea County, New Mexico:

<u>Lease</u>	<u>Well No.</u>	<u>Unit</u>	<u>Section</u>
Texas Pacific Oil Company			
State "A" A/c-2	33	O	5
State "A" A/c-2	49	C	8
State "A" A/c-2	25	A	8
State "A" A/c-2	3	G	8
State "A" A/c-2	24	I	8
State "A" A/c-2	30	E	9

(2) That the subject waterflood project is hereby designated the Texas Pacific South Eunice State Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

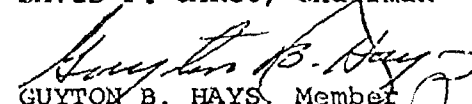
(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

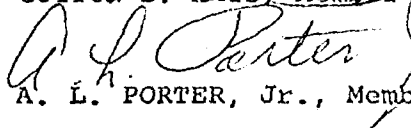
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
GUYTON B. HAYS, Member

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

S E A L

esr/

LAW OFFICES OF  
JOHN F. RUSSELL  
SUITE 1010 SECURITY NATIONAL BANK BUILDING  
P.O. DRAWER 640  
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641  
AREA CODE 505

February 13, 1967

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

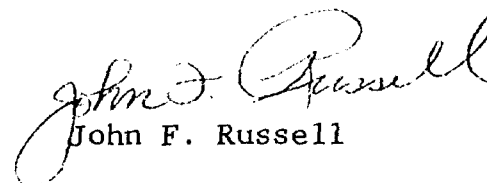
Re: No. 3531

Dear Mr. Porter:

I enclose herewith in triplicate an Amended Application in the above numbered case. The publication of the prior Application contained an erroneous location of one of the production wells and referred to the production wells as injection wells. I discussed this with Mr. Nutter and we were both of the opinion that I should refile and have the case reset for hearing in March.

There will be no change in Exhibits which have already been forwarded to you under the above case number.

Very truly yours,

  
John F. Russell

JFR/wa

1 Enc:

Amended App. (trip)

cc: Mr. Frank Irby w/enc.  
Mr. Ron Freel w/enc.  
Mr. Fred Hughey w/enc.

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF )  
TEXAS PACIFIC OIL COMPANY FOR AN )  
ORDER AUTHORIZING IT TO COMMENCE A )  
WATERFLOOD PROJECT CONSISTING OF THE )  
W $\frac{1}{2}$  AND THE SE $\frac{1}{4}$  OF SECTION 5, E $\frac{1}{2}$  AND )  
THE SW $\frac{1}{4}$  OF SECTION 7, ALL OF SECTION )  
8, W $\frac{1}{2}$  AND THE NE $\frac{1}{4}$  OF SECTION 9, ALL )  
IN TOWNSHIP 22 SOUTH, RANGE 36 EAST, )  
IN THE SOUTH EUNICE POOL, LEA COUNTY, )  
NEW MEXICO. )  
----- )

No. 3531

AMENDED APPLICATION

COMES NOW Applicant, Texas Pacific Oil Company, by its attorney, John F. Russell, and for its Amended Application, states:

1. It is the Operator of its State A Account No. 2 Lease which includes, among other lands, W $\frac{1}{2}$  and the SE $\frac{1}{4}$  of Section 5, E $\frac{1}{2}$  and the SW $\frac{1}{4}$  of Section 7, All of Section 8, W $\frac{1}{2}$  and the NE $\frac{1}{4}$  of Section 9, all in Township 22 South, Range 36 East, in the South Eunice Pool, Lea County, New Mexico.

2. It proposes to institute a waterflood project for a secondary recovery of oil from the above described lands and attaches hereto a plat marked Exhibit "A", showing the proposed pilot project and the location of all other lands within a radius of two miles from said injection wells.

Applicant proposes to convert the following producing wells to water injection wells:

- (a) Well No. 33 located in Unit "O" of Section 5;
- (b) Well No. 49 located in Unit "C", Well No. 25 located in Unit "A", Well No. 3 located in Unit "G", and Well No. 24 located in Unit "I", all in Section 8;
- (c) Well No. 30 located in Unit "E" of Section 9, all in Township 22 South, Range 36 East, N.M.P.M., <sup>Lea Co.</sup> ~~Eddy County~~, New Mexico.

*Mr. Russell*  
2-15-67 *AK*

3. A diagramatic sketch of the proposed method of completing all injection wells is attached hereto.

4. Applicant, at the hearing, will present such logs as may be available covering the proposed injection wells.

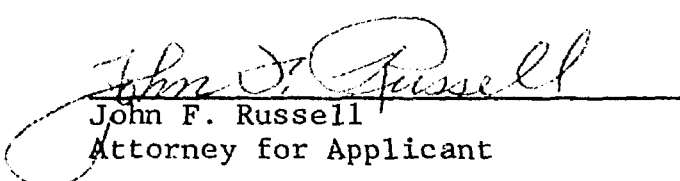
5. In the event the pilot waterflood project proves successful, Applicant proposes to expand the project as shown by the Exhibit attached hereto and designated as Predicted Future Water Injection Wells.

6. Applicant proposes to inject water within the vertical limits of the South Eunice Oil Pool as defined by the Oil Conservation Commission. The water will be injected initially at the rate of 300 barrels per well per day at an average pressure of 1,000 psig. Water for injection will be by means of produced water from their Well No. 6 located in Unit "B" of Section 7 and Well No. 22 located in Unit "N" of Section 7, Township 22 South, Range 36 East.

7. A copy of this Application and all attachments are being furnished to the State Engineer.

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 Amended Application.

Respectfully submitted,

  
John F. Russell  
Attorney for Applicant

P. O. Drawer 640  
Roswell, New Mexico 88201

DATED: February 13, 1967



Docket No. 6-67

DOCKET: EXAMINER HEARING - TUESDAY - FEBRUARY 21, 1967

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

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

CASE 3530: Application of Atlantic Richfield Company for suspension of cancellation of underproduction, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order suspending the cancellation of underproduction attributable on July 31, 1966, to its State "A" Gas Com. Well No. 1 located in Unit G, Section 36, Township 29 North, Range 11 West, and to its State "B" Gas Com. Well No. 1 located in Unit N of Section 16, Township 29 North, Range 10 West, Basin-Dakota Gas Pool, San Juan County, New Mexico, said underproduction not having been made-up during the 6-month period ending January 31, 1967, due to said wells having been shut-in November, 1966, upon the transfer of the connecting pipeline from an intrastate status to an interstate status and subsequent unavoidable delay in obtaining FPC approval for the sale of gas from said wells in interstate commerce.

CASE 3531: Application of Texas Pacific Oil Company for two waterflood projects, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute two waterflood projects in the South Eunice Pool by the injection of water into the Seven Rivers-Queen formations through one well in Unit N of Section 7, and one well in Unit N of Section 9, both in Township 22 South, Range 36 East, Lea County, New Mexico.

CASE 3243: (Reopened)

In the matter of Case No. 3243 being reopened pursuant to the provisions of Order No. R-2919, which order established 640-acre spacing for the Dagger Draw-Morrow Gas Pool, Eddy County, New Mexico, for a period of one year after first pipeline connection in the pool. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

CASE 3532: Application of Henry S. Birdseye for a waterflood project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Menefee zone of the Mesaverde formation through one well located in Unit P of Section 21, Township 20 North, Range 9 West, Chaco Wash-Mesaverde Oil Pool, McKinley County, New Mexico. Applicant further seeks an administrative procedure for expansion of said project and for the drilling of injection wells and producing wells at unorthodox locations.

LAW OFFICES OF  
JOHN F. RUSSELL  
SUITE 1010 SECURITY NATIONAL BANK BUILDING  
P. O. DRAWER 640  
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641  
AREA CODE 505

January 27, 1967

*Opal 3531*

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

Dear Mr. Porter:

I enclose herewith in triplicate the Application of Texas Pacific Oil Company for a waterflood project in the South Eunice Oil Pool.

The exhibits are not ready as yet but will be forwarded to your office as soon as received. I am sending the Application at this time in order that publication may start in time to make the hearing scheduled for February 21.

Very truly yours,

*John F. Russell*  
John F. Russell

JFR/wa  
1 Enc:  
Application (trip)

cc: Mr. Frank Irby  
Mr. Ron Freel  
Mr. Fred Hughey

DOCKET MAILED

Date 2-9-67  
*h*

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF )  
TEXAS PACIFIC OIL COMPANY FOR AN )  
ORDER AUTHORIZING IT TO COMMENCE A )  
WATERFLOOD PROJECT CONSISTING OF THE )  
W $\frac{1}{2}$  AND THE SE $\frac{1}{4}$  OF SECTION 5, E $\frac{1}{2}$  AND )  
THE SW $\frac{1}{4}$  OF SECTION 7, ALL OF SECTION )  
8, W $\frac{1}{2}$  AND THE NE $\frac{1}{4}$  OF SECTION 9, ALL )  
IN TOWNSHIP 22 SOUTH, RANGE 36 EAST, )  
IN THE SOUTH EUNICE POOL, LEA COUNTY, )  
NEW MEXICO. )  
----- )

No. 3531

APPLICATION

COMES NOW Applicant, Texas Pacific Oil Company, by its attorney, John F. Russell, and states:


1. It is the Operator of its State A Account No. 2 Lease which includes, among other lands, W $\frac{1}{2}$  and the SE $\frac{1}{4}$  of Section 5, E $\frac{1}{2}$  and the SW $\frac{1}{4}$  of Section 7, All of Section 8, W $\frac{1}{2}$  and the NE $\frac{1}{4}$  of Section 9, all in Township 22 South, Range 36 East, in the South Eunice Pool, Lea County, New Mexico.
2. It proposes to institute a waterflood project for the secondary recovery of oil from the above described lands and attaches hereto a plat marked Exhibit "A", showing the location of the six proposed injection wells for its pilot project and the location of all other lands within a radius of two miles from said injection wells.
3. A diagramatic sketch of the proposed injection wells.
4. Applicant, at the hearing, will present such logs as may be available covering the proposed injection wells.
5. Attached hereto is a plat showing the proposed injection for the waterflood project as expanded.

6. Applicant proposes to inject water within the vertical limits of the South Eunice Oil Pool as defined by the Oil Conservation Commission. The water will be injected initially at the rate of 300 barrels per well per day at an average pressure of 1,000 psig. Water for injection will be by means of produced water from their well No. 6 located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 9 and well No. 22 located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 7, Township 22 South, Range 36 East.

7. A copy of this Application and all attachments are being furnished to the State Engineer.

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  
Attorney for Applicant

P. O. Drawer 640  
Roswell, New Mexico 88201

DATED: January 27, 1967

LAW OFFICES OF  
JOHN F. RUSSELL  
SUITE 1010 SECURITY NATIONAL BANK BUILDING  
P. O. DRAWER 640  
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641  
AREA CODE 505

February 7, 1967

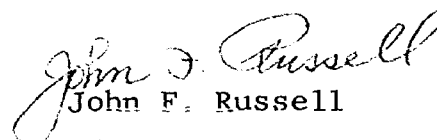
3531

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

Dear Mr. Porter:

Reference is made to the application of Texas Pacific Oil Company for a waterflood project on its State "A" Account No. 2 lease which was forwarded to your office under my letter dated January 27, 1967. I enclose herewith in triplicate a plat showing the proposed injection wells for the pilot project, a plat showing the proposed injection waterflood project as expanded, and a diagrammatic sketch of the proposed method of completing the existing wells as water injection wells. Texas Pacific Oil Company is in the process of having a diagrammatic sketch made for each of the six proposed injection wells which I shall furnish you upon receipt.

Very truly yours,

  
John F. Russell

JFR/wa  
Encs. in trip.

LAW OFFICES OF  
JOHN F. RUSSELL  
SUITE 1010 SECURITY NATIONAL BANK BUILDING  
P. O. DRAWER 640  
ROSWELL, NEW MEXICO 88201

TELEPHONE 822-4641  
AREA CODE 505

February 7, 1967

Mr. Frank E. Irby  
Chief, Water Rights Division  
State Engineer Office  
Santa Fe, New Mexico 87501

Dear Frank.

C  
O  
P  
Y  
I enclose herewith a copy of each of the exhibits to accompany the application of Texas Pacific Oil Company for a waterflood project in Sections 5, 7, 8 and 9, Township 22 South, Range 36 East.

The schematic drawing of the proposed method of completing the injection well is typical of the method to be used in completing the wells. The draftsman is in the process of preparing one of these drawings for each of the proposed injection wells and as soon as I receive them I will send you copies. I felt you would like to have the proposed plan as soon as possible.

The proposed water production wells, being Texas Pacific well No. 6 in Section 9 and well No. 22 in Section 7, are classified as oil wells and it is the water produced with the oil which will be used for injection.

We do not have an analysis of the water at this time but I have requested that one be made and I shall furnish it to you upon receipt.

Very truly yours,

*John F. Russell*  
John F. Russell

JFR/wa  
Encs.

cc: Oil Conservation Commission

Docket No. 7-67

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 8, 1967

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

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

CASE 3533: Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Devonian formation in its Continental Nix Well No. 24-1, located 330 feet from the North line and 660 feet from the West line of Section 24, Township 18 South, Range 35 East, Reeves-Devonian Pool, Lea County, New Mexico.

CASE 3534: Application of Newmont Oil Company for a waterflood expansion and unorthodox well locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its West Grayburg No. 4 Sand Waterflood Project, Loco Hills Pool, by drilling a water injection well at an unorthodox location 175 feet from the South line and 1500 feet from the East line of Section 10, and further, to drill two production wells at unorthodox locations 2600 feet from the North line and 1200 feet from the West line of Section 10, and 1190 feet from the North line and 150 feet from the East line of Section 11, all in Township 18 South, Range 29 East, Eddy County, New Mexico.

CASE 3531 (Readvertised)

Application of Texas Pacific Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the South Eunice Pool by the injection of water into the Seven Rivers-Queen formations through six wells in Sections 5, 8 and 9, Township 22 South, Range 36 East, Lea County, New Mexico.

CASE 3535: Application of Pennzoil Company for the creation of a new pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Lower Wolfcamp production for its Gallagher State Well No. 1, located in Unit A of Section 3, Township 17 South, Range 34 East, Lea County, New Mexico, and for the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

-2-

Examiner Hearing March 8, 1967

CASE 3536: Application of Tenneco Oil Company for two unorthodox gas well locations, San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox Blanco-Mesaverde Gas Pool location of its Dawson Federal Well No. 1, located 835 feet from the North line and 1150 feet from the West line of Section 26, Township 27 North, Range 8 West, San Juan County, and its Jicarilla "C" Well No. 8, located 1850 feet from the North line and 790 feet from the West line of Section 13, Township 26 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 3206 (Reopened)

In the matter of Case No. 3206 being reopened pursuant to the provisions of Order No. R-2874-A which continued the special rules and regulations for the High Plains-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why the pool should not be developed on 80-acre or 40-acre spacing units.

CASE 3537: Application of Texaco Inc. for a waterflood project, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Bisti Lower-Gallup Oil Pool by the injection of water into the Lower Gallup formation through its Northeast Bisti Unit Well No. 3 located in Unit O of Section 15, Township 25 North, Range 11 West, San Juan County, New Mexico.

ir/





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

February 21, 1967

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87501

*Case 3531*

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

Dear Mr. Porter:

Reference is made to the application of Texas Pacific Oil Company which seeks authority for a waterflood project in Sections 5, 7, 8 and 9 in T. 22 S., R. 36 E., which is docketed as Case 3531.

In view of the fact that the injection water which is produced with oil will be injected through plasticcoated tubing with packers set at the end of the tubing at 3550' to 3600' (below the top of the cement surrounding 5½" and 7" casing) and casing tubing annulus filled with chemically treated water, it appears that no threat of contamination to the fresh waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of the application.

FEI/ma  
cc-John F. Russell  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

By: *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Div.

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

March 8, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Texas Pacific Oil Company)  
for a waterflood project, Lea County, )  
New Mexico. )

Case No. 3531

BEFORE: DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

dearnley-meier reporting & video inc.

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

1120 SIMMAS BLDG. • P. O. BOX 1092 • PHONE 243-6671 • ALBUQUERQUE, NEW MEXICO



MR. NUTTER: Call Case 3531.

MR. HATCH: Application of Texas Pacific Oil Company  
for a waterflood project, Lea County, New Mexico.

MR. RUSSELL: John F. Russell, Roswell, New Mexico,  
appearing on behalf of the Applicant. I have one witness.

(Witness sworn.)

(Whereupon, Applicant's Exhibits  
1 through 9 marked for  
identification.)

F R E D H U G H E Y, called as a witness herein, having been  
first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Will you please state your name, address, by whom  
you are employed, and in what capacity?

A I am Fred Hughey, living in Midland, Texas.

MR. NUTTER: How do you spell that last name?

A H-u-g-h-e-y.

MR. NUTTER: Thank you.

A Work for Texas Pacific Oil Company in the capacity  
of Area Engineer.

Q (By Mr. Russell) Have you previously qualified to  
give testimony before the Commission and the Examiner?

A Yes, sir.

Q Are you familiar with the application of Texas

Pacific Oil Company filed in Case 3531?

A I am.

Q Will you briefly explain what the purpose of this application is?

A Texas Pacific Oil Company respectively requests permission to initiate pilot waterflood operation on its State A Cow 2 lease located, among other lands, in the west half southeast quarter of Section 5, east half of southwest quarter of Section 7, all of Section 8, and the west half and northeast quarter of Section 9, all in Township 22 South, Range 36 East, in the South Eunice Pool, Lea County, New Mexico.

Q Now, I will refer you to Applicant's Exhibit Number 1 and ask you if you will explain what that exhibit reflects and the various symbols and colors on it?

A Yes, sir. This is a plat of the acreage as described previously, colored in the yellow. The different completions are denoted by different colors on this plat. The red completions are the South Eunice Pool completions in which we plan to initiate our secondary recovery operations, the blue circles denote Eumont completions, the orange circles denote the Arrowhead completions, and the brown circles denote Jal Mat completions.

The proposed water injection wells are the red triangles approximately in the center of the plat.

Q What wells do you propose to convert from production wells to injection wells?

A The six proposed injection wells are Well Number 33 located in Proration Unit O of Section 5; Well Number 49 located in Proration Unit C in Section 8; Well Number 25 in Proration Unit A of Section 8; Well Number 3 located in Unit G of Section 8; Well Number 30 located in Unit E of Section 9, and Well Number 24 located in Unit I of Section 8, all in Township 22 South, Range 36 East, Lea County, New Mexico.

Q Do you contemplate that if this application is approved and the pilot is successful, to expand the injection wells?

A Yes, sir. The primary purpose of the pilot flood is to insure that secondary recovery program can be economically carried out in this area and if successful, it will be expanded to a full scale operation.

Q Are the injection wells on your anticipated expansion shown on what has been marked as Exhibit 2?

A Yes, sir. This is a plat of the Texas Pacific acreage, again in yellow, and the possible proposed cooperative injection wells on an expanded pattern at some future date.

Q Does that plat show one additional injection well which would have to be drilled to complete the pattern?

A Yes, sir. This is a possibility in the proration unit Section C of Section 9, Township 22 South, Range 36 East in order to completely fill out the pattern, but again, this is in the future.

Q Texas Pacific Oil Company is the owner of this State lease, is it not?

A Yes, sir.

Q And all the acreage involved here is State acreage?

A Yes, sir.

Q Now, I'll refer you to a group of logs which have been marked Applicant's Exhibits 3 through 8 and ask if you will identify each of the logs?

A Yes, sir. These are the logs taken on our six proposed pilot injection wells, showing the top of the Queen formation and the subsequent top of the South Eunice Pool, and also the top of the Yates and top of the Jalmat Pool above that. This Exhibit 3 through 8, are for each of the injection wells.

Q And show the same information as you have testified as to Exhibit 3 there?

A Yes, sir.

Q Is there anything on any one particular one of those well logs that you would like to bring to the attention of the Examiner at this time?

A No, sir.

Q Now, I'll refer you to what has been marked as Applicant's Exhibit 9, which consists of six sketches stapled together in the form of one exhibit, and ask you to identify that?

A These are diagrammatic sketches of the proposed condition of each of the six pilot injection wells, showing the proposed total depth, the size, casing involved, the calculated cement top for each casing string, and illustrating that injection will be through two inch plasti-coated tubing on a packer slightly above a liner.

The wells will be selectively perforated in the desired injection interval. The annulus will be filled with chemically corrosion inhibitor treated water.

Q Those are copies of the same diagrammatic sketches which were furnished to the State Engineer, are they not?

A Yes, sir.

Q Where do you intend to get the water that you are going to use in this waterflood project?

A The water used will come primarily from two oil wells on the west side of the lease, from Well Number 6, located in Unit B of Section 7, Well Number 22, located in Unit N of Section 7, Township 22 South, 36 East, Lea County, New Mexico.

Q Now, these wells are presently producing water in large quantities?

A Yes, sir.

Q Now, if it becomes necessary, do you intend to add some of the other oil well water production to this waterflood project?

A Yes, sir. We initially planned to utilize all produced water on the lease and to inject it all as it is produced.

Q Now, approximately at what rate do you anticipate you will be initially injecting this water?

A Initial injection rates are anticipated to be 300 barrels per day per injection well at an estimated pressure of 1,000 psi.

Q If this application is approved, in your opinion, will it protect correlative rights, prevent waste and recover the greatest possible amount of oil in this reservoir under your lease?

A Yes, sir, that's true.

Q Do you have anything further you would like to bring out on your application to the Examiner?

A One other thing is that the initial production on this lease when the wells were drilled in the late 1930's was above top allowable at the time, ranging from 150 to 1150 barrels of oil per hour and now have declined to an average rate of



approximately eight barrels of oil per day per well.

Q That's on the entire lease?

A Yes, sir.

Q Anything further?

A No, sir.

Q Were Exhibits 1 through 9 prepared by you or under your direction and supervision?

A Yes, sir.

MR. RUSSELL: I move the introduction into evidence of Applicant's Exhibits 1 through 9.

MR. NUTTER: Applicant's Exhibits 1 through 9 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 9 offered and admitted in evidence.)

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

MR. NUTTER: Are there any questions of Mr. Hughey?

CROSS EXAMINATION

BY MR. NUTTER:

Q I note there on your Exhibit Number 9, the schematic diagrams of the wells, some of these indicate that the theoretical top of the cement would be at the surface. The theoretical top may be at the surface or it must not be, or you would have shown cement calculated, is that correct?

A As I stated earlier, these wells were drilled in 35 and 38 and our records are not too complete back in those days. I assume that they were at or near the surface. In each case, these sketches are theoretical cement tops, none of them are cement tops unless in some cases they do say -- I thought I had one or two of them -- Yes, sir, the last one says "cement circulated", this is the one that had such a notation in our well files.

Q Which well is that?

A The Well 49, the last one in the series in your surface casing.

Q Well, the cement circulated on the eight and five-eighths?

A Yes, sir.

Q I was talking about the production string.

A No, sir.

Q The production string in each case, you have a theoretical top?

A Yes.

Q In any event, Mr. Hughey, how near to the perforations are these packers going to be set? We don't have the actual perforated interval?

A No, sir. The packer will be set no nearer than 50 feet within the perforation and probably no nearer than 100 feet.

Q I am not so concerned about no nearer, I am more concerned about no farther than.

A As noted in here, our packers are all set at approximately 3550 feet, which would be within a hundred feet of the perforations. The packer setting depth is determined more by the top of the liner in order to give us sufficient working space above this than by our perforations.

Q The thing that I was concerned with, was to be sure that this packer is set below the top of the cement. We don't have an actual top for the cement?

A This is correct. The packer will be set as noted here, within 50 feet of the top of the liner and the liner will be set within --

Q Now, Mr. Hughey, take, for example, your Well Number 30, your liner will be from 3840 to 3600, but your packer is 3550, that would be 300 feet or actually, 290 feet?

A No, sir. 3840 is the bottom of the liner. The 3660 is the top.

Q Oh, the 3600 -- That is correct. Could the Commission, in its letter of approval in which we lay out the casing program, rather than put it in the order, could the Commission safely require that the packer be set within 100 feet of the top of the liner?

A Yes, sir, this would be satisfactory.

Q Good. Now, there are a few South Eunice completions over on the far west side of this A-2 lease. You don't anticipate that these will be flooded in the near future, I presume?

A You are talking about Section 9?

Q Yes, -- Section 7.

A No, sir. These are deeply dipping formations over here and we will get below water-oil contact.

Q That's where you are making so much water over there now?

A Yes, sir.

Q So you won't flood in that part of the lease?

A No plans at present.

MR. NUTTER: Are there any other questions of Mr. Hughey? He may be excused.

(Witness excused.)

MR. RUSSELL: I have nothing further, Mr. Examiner.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3531?

MR. HATCH: Letter from the State Engineer's Office dated February 21, 1967, "It appears that no threat of contamination to the fresh water which may exist in the area will occur, therefore, this office offers no objection to the granting of the application. Frank E. Irby."



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PAGE 12

MR. NUTTER: Does anyone else have anything they wish to offer in the case? We will take Case 3531 under advisement.

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I N D E X

WITNESS	PAGE
FRED HUGHEY	
Direct Examination by Mr. Russell	2
Cross Examination by Mr. Nutter	8

E X H I B I T S

NUMBER	MARKED FOR IDENTIFICATION	OFFERED	ADMITTED
App. Ex. 1 - 9	2	8	8

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PAGE 14

STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Notary Public 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.

Witness my Hand and Seal this 9th day of March, 1967.

*Ada Dearnley*  
NOTARY PUBLIC

My Commission Expires:

June 19, 1967

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3531 heard by me on 3/8, 1967.  
*James*, Examiner  
New Mexico Oil Conservation Commission

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico

# Oil Conservation Commission



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

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

P. O. BOX 2088  
SANTA FE

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

Re: Case No. 3531  
Order No. R-3200  
Applicant:  
  
**TEXAS PACIFIC OIL CO.**

**Dear Sir:**

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.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/lr

Carbon copy of order also sent to:

Hobbs OCC \_\_\_\_\_ x  
 Artesia OCC \_\_\_\_\_  
 Aztec OCC \_\_\_\_\_  
 State Engineer x

Other



OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

March 29, 1967

C

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

O

Dear Sir:

P

Reference is made to Commission Order No. R-3200, recently entered in Case No. 3531, approving the Texas Pacific South Eunie State Waterflood Project.

Y

Initial injection is to be through the six authorized water injection wells, each of which shall be equipped with internally plastic-coated tubing and a packer, the packer being set at from 3550 to 3600 feet. The casing-tubing annulus shall be filled with a corrosion-inhibited fluid and the annulus left open or equipped with a pressure gauge to permit detection of a tubing or packer leak.

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 924 barrels per day when the normal unit allowable is 42 barrels or less. This maximum allowable is based on six injection wells and 16 wells producing from the South Eunie Pool in the waterflood project area. If and when the proposed well in Unit P of Section 8 has been completed, and when Unit M of Section 5, Units E and J of Section 8, and Unit K of Section 9 have South Eunie completions on them, the allowable would be increased accordingly, of course.

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

-2-

Mr. John Russell  
Attorney at Law  
Roswell, New Mexico

March 29, 1967

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.

C

O

P

Y

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

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

Oil Conservation Commission  
Hobbs, New Mexico

February 21, 1967

Mr. John F. Russell  
Attorney at Law  
Roswell, New Mexico

*Case 3531*

Dear Mr. Russell:

Your letter of February 20, 1967 pertaining to the amended application of Texas Pacific Oil Company, Oil Conservation Commission Case No. 3531 and the enclosed diagrammatic sketches and water analysis are gratefully acknowledged.

FEI/ma  
cc=Oil Conservation Comm.  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

By:  
Frank E. Irby  
Chief  
Water Rights Div.

LAW OFFICES OF  
JOHN F. RUSSELL  
SUITE 1010 SECURITY NATIONAL BANK BUILDING  
P. O. DRAWER 640  
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641  
AREA CODE 505

February 20, 1967

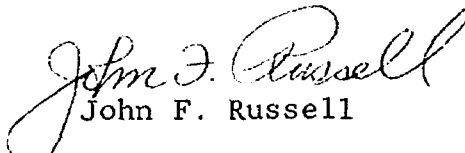
Mr. A. L. Porter, Jr.  
Secretary-Director  
New Mexico Oil Conservation  
Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Amended Application of  
Texas Pacific Oil Company  
Case No. (3531)

Dear Mr. Porter:

Enclosed please find three sets of diagrammatic  
sketches for filing in the above-referenced Case.

Very truly yours,

  
John F. Russell

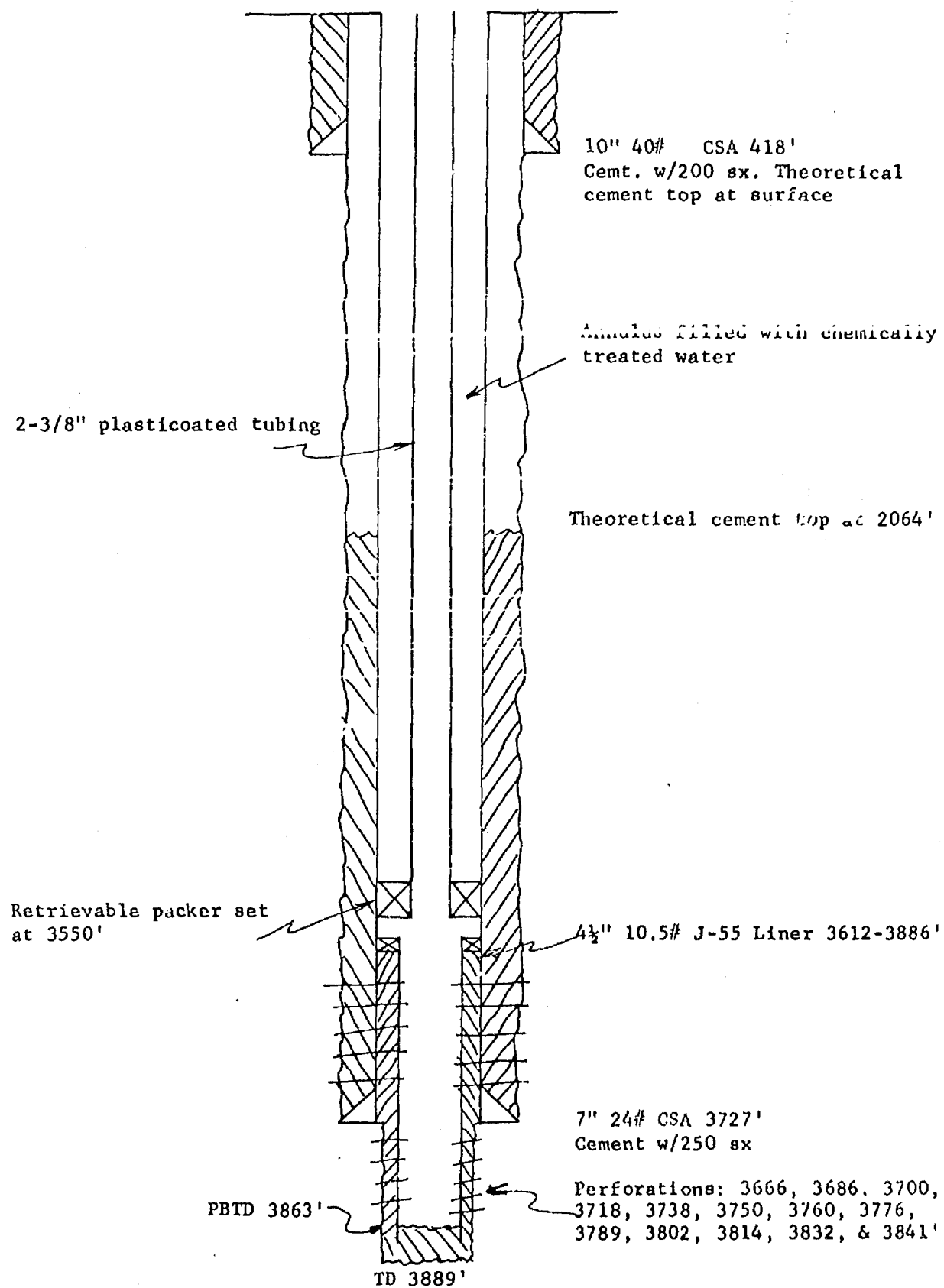
JFR/wa  
1 Enc:  
Sketches (trip)

DOCKET MAILED

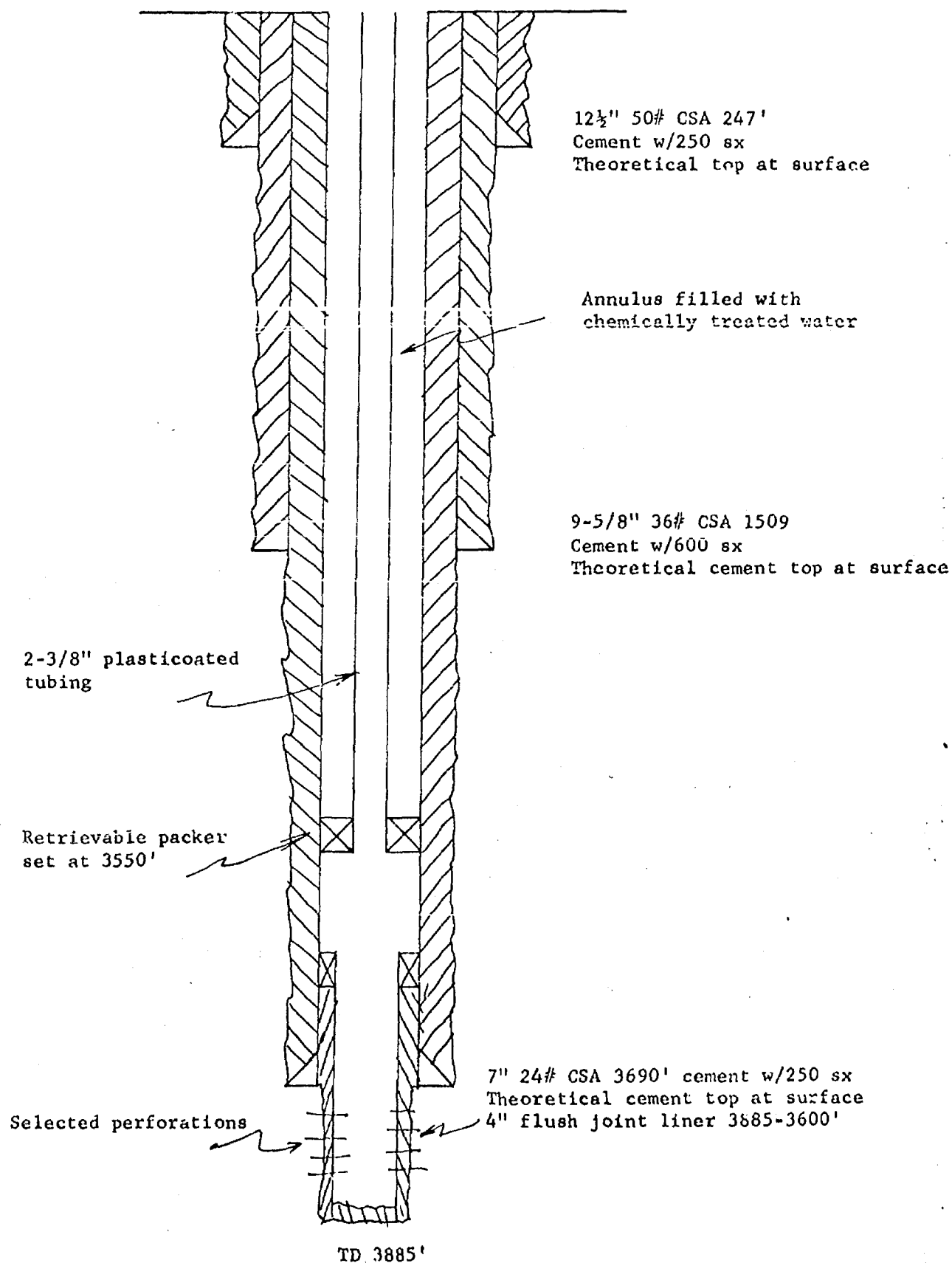
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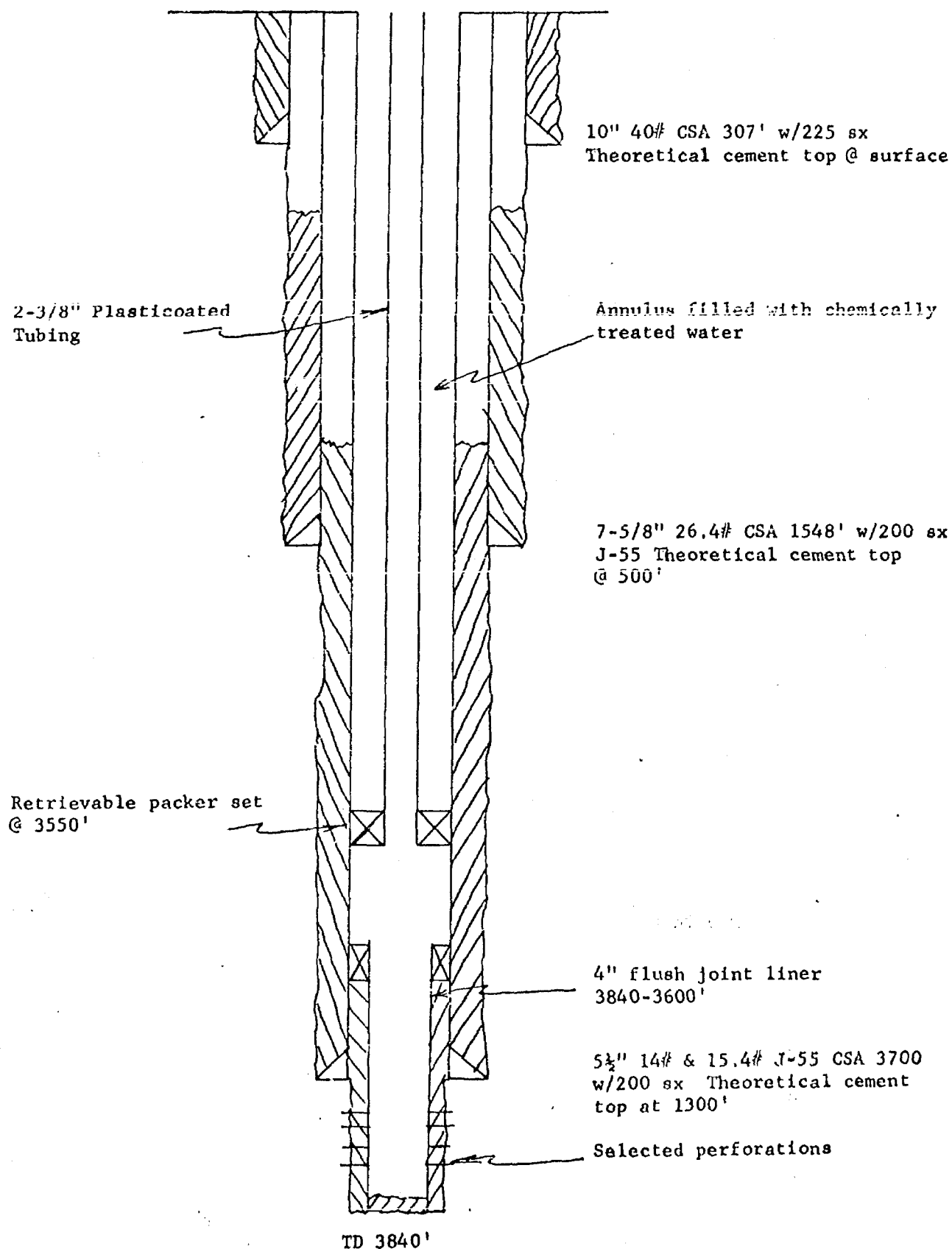
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 New Mexico State "A" A/c-2 Well No. 24  
 1980' RSL & 660' REL Section 8, 1-22-S, R-36-E  
 Lea County, New Mexico



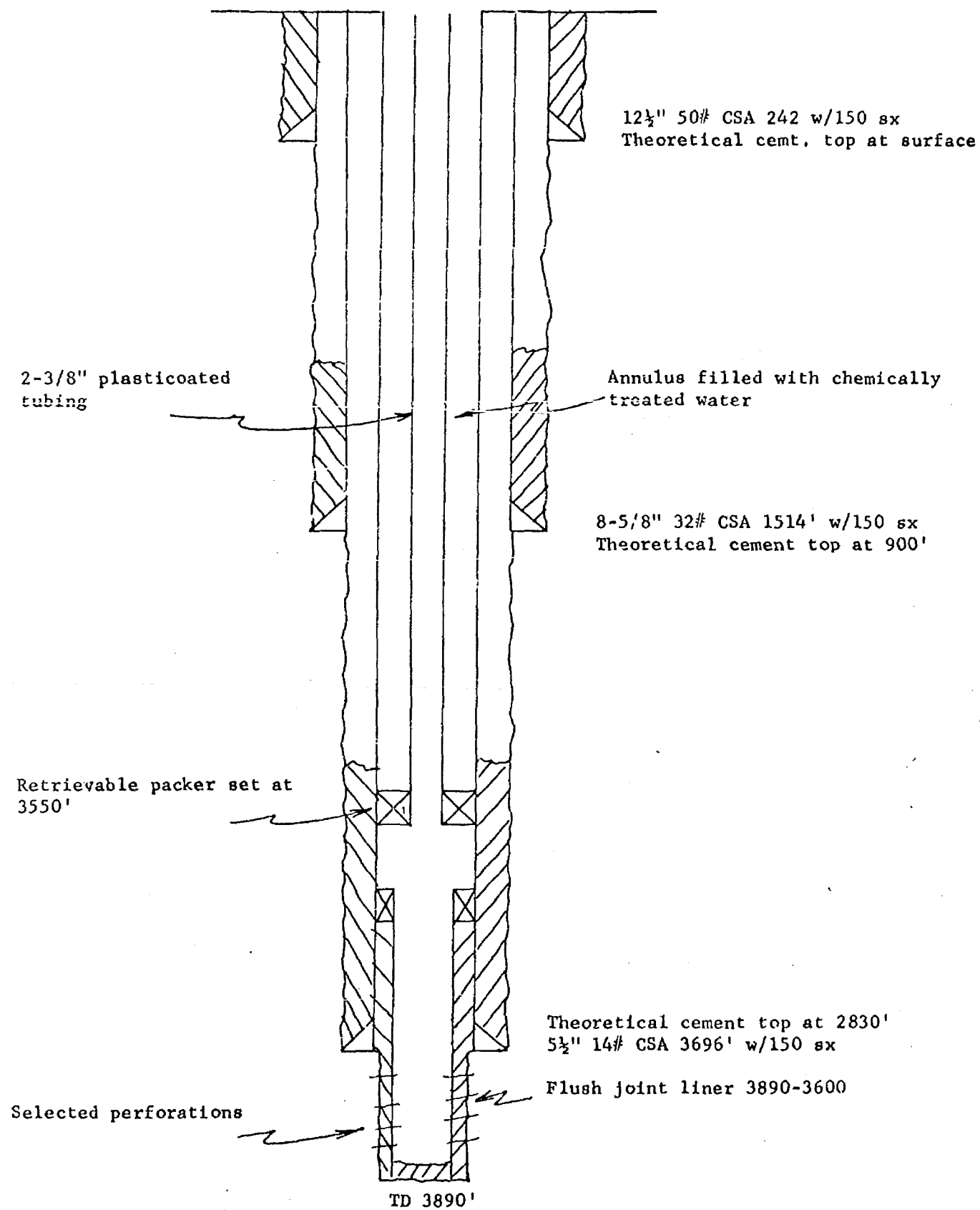
Present Condition  
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 660' FWT. & FWT, Section 8, T 22 S, R-36-E  
 Lea County, New Mexico



Proposed Condition  
 New Mexico State "A" A/c-2 Well No. 30  
 1980' FNL & 660' FWL Section 9, T-22-S, R-36-E  
 Lea County, New Mexico

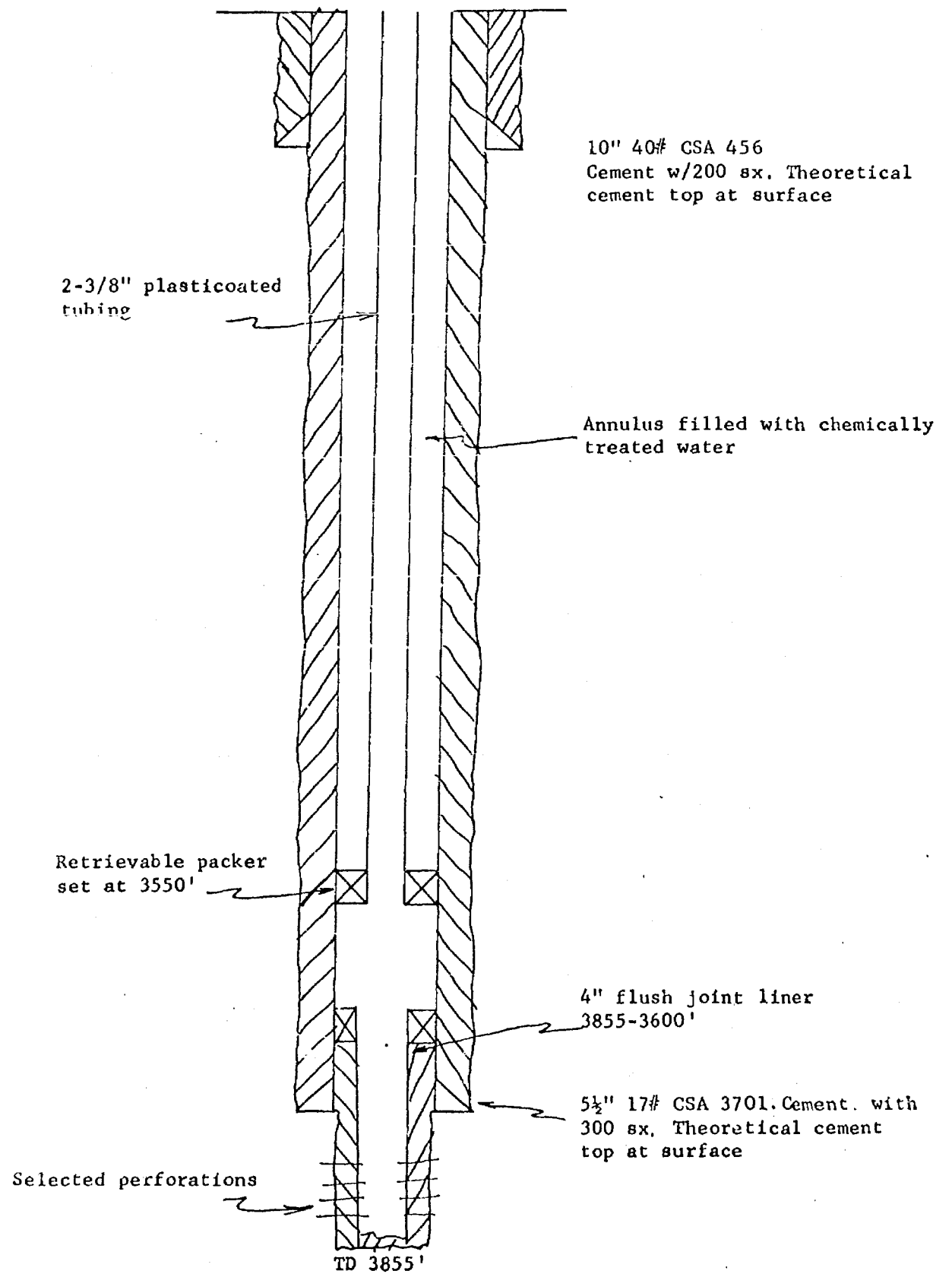


Present Condition  
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Lea County, New Mexico

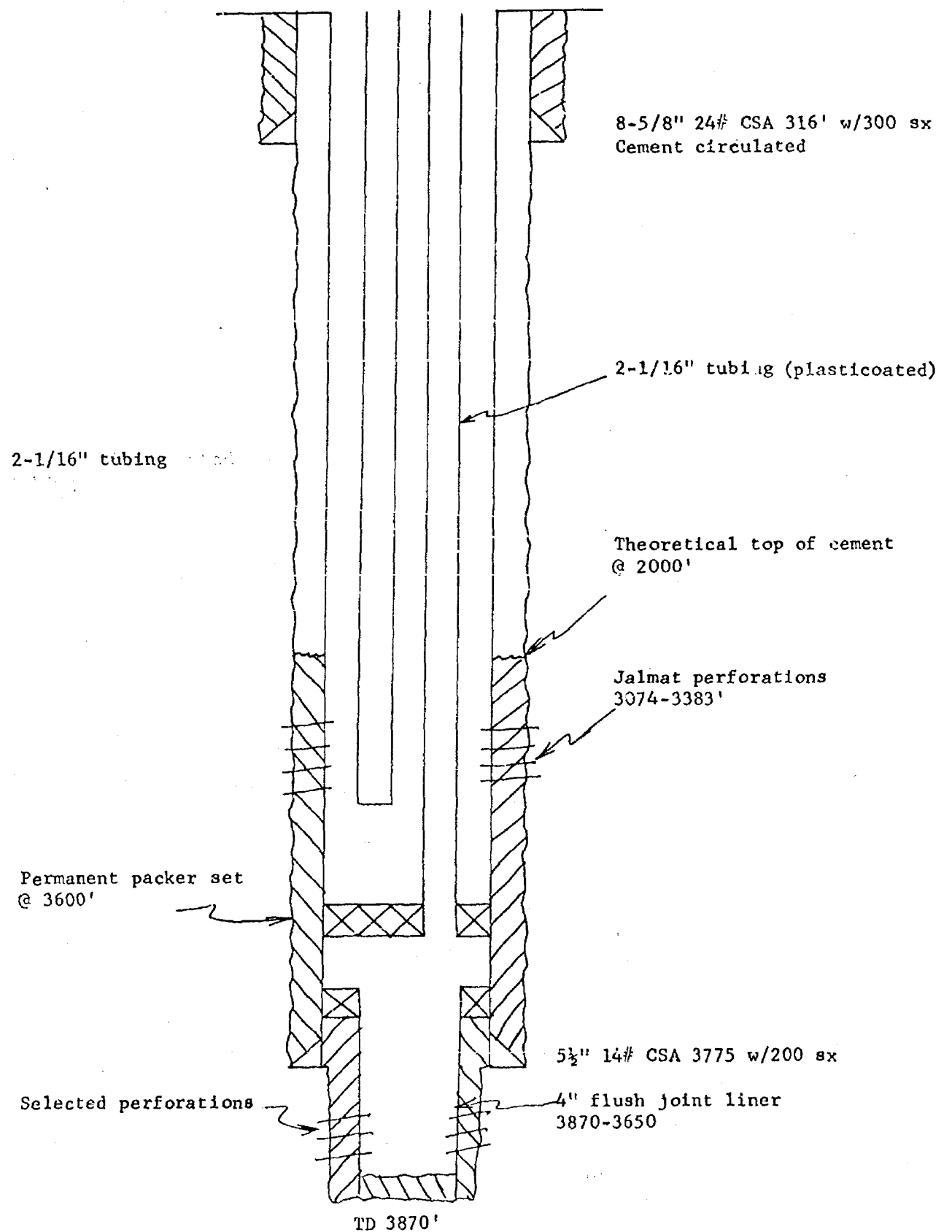




Present Condition  
 New Mexico State "A" A/c-2 Well No. 25  
 660' FNL & FEL Section 8, T-22-S, R-36-E,  
 Lea County, New Mexico



Present Condition  
 New Mexico State "A" A/c-2 Well No. 49  
 660' FNL & 1980' FWL Section 8, T-22-S, R-36-E  
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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 21, 1967

EXAMINER HEARING

IN THE MATTER OF: ) )

Application of Texas Pacific Oil )  
Company for two waterflood projects, )  
Lea County, New Mexico )

Case No. 3531

BEFORE:

ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

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PAGE 2

MR. UTZ: Hearing will come to order, please.  
The first case on the docket will be a continued case of 3531.

MR. HATCH: Case 3531: Application of Texas Pacific Oil Company for two waterflood projects, Lea County, New Mexico. The applicant in this case has requested that the case be continued and readvertised due to a mistake in the application. I would like to move at this time that it be continued and readvertised for March 8, 1967.

MR. UTZ: The error was in the application of the Applicant due to location of injection wells, calling injection wells production wells and so forth, is that correct?

MR. HATCH: Yes.

MR. UTZ: So that the ad as put out would not have been a legal ad?

MR. HATCH: Right.

MR. UTZ: The case will be continued to the March 8th hearing and will be readvertised.

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STATE OF NEW MEXICO     )  
                                  ) ss  
COUNTY OF BERNALILLO    )

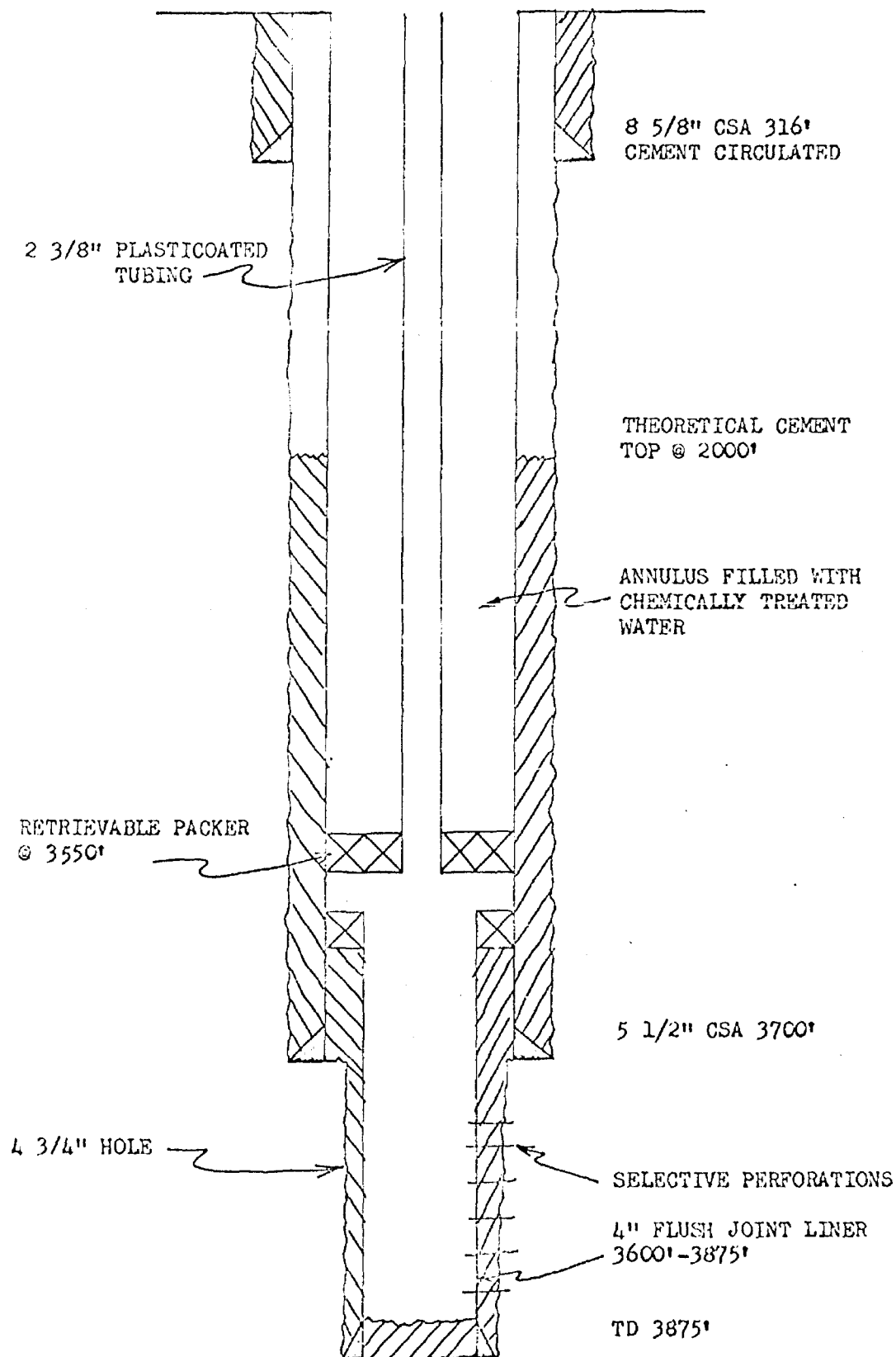
I, KAY EMBREE, Court Reporter, do hereby certify  
that the foregoing and attached transcript of  
proceedings before the New Mexico Oil Conservation  
Commission Examiner at Santa Fe, New Mexico, is a true  
and correct record to the best of my knowledge, skill and  
ability.

Kay Embree  
Court Reporter

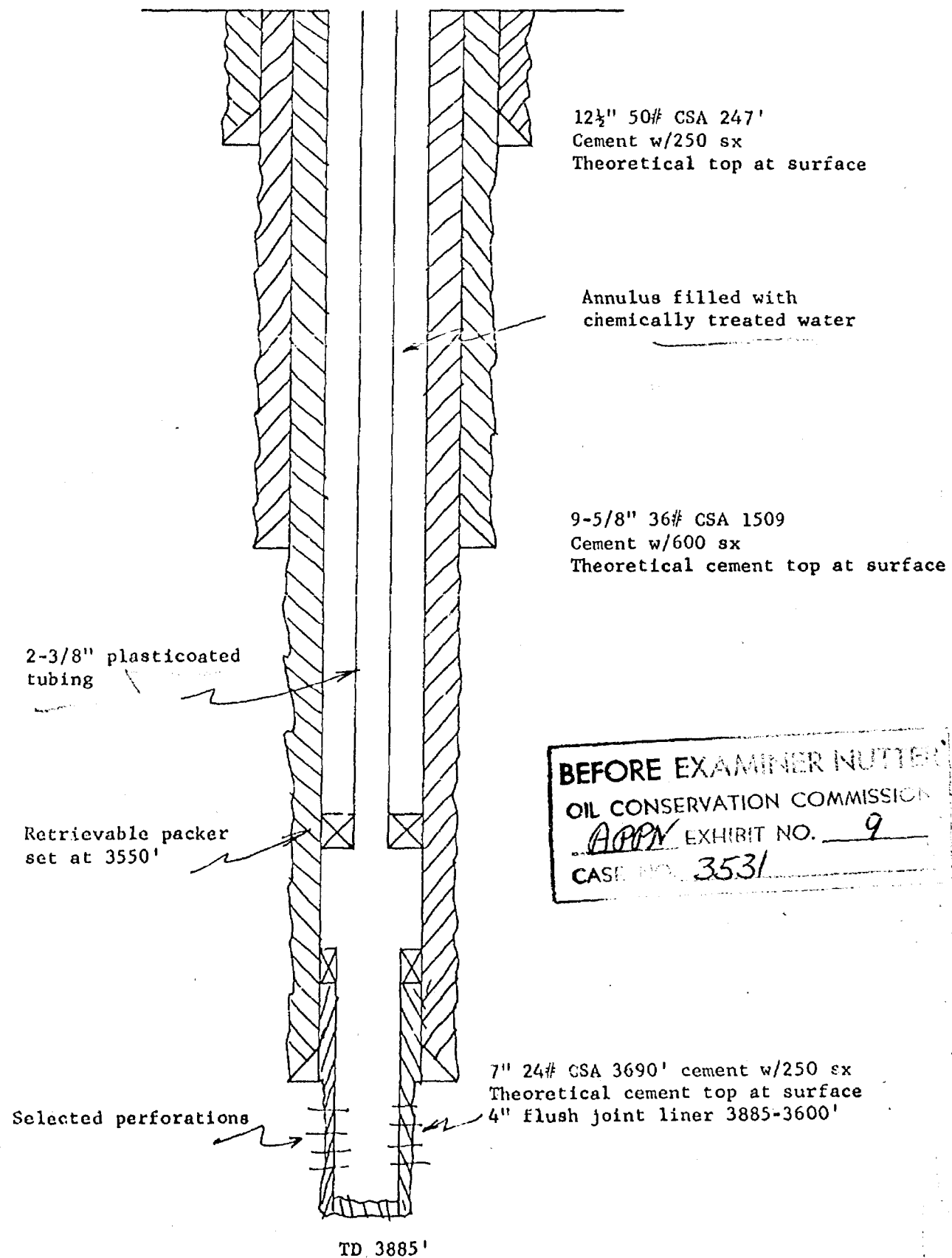
I do hereby certify that the foregoing is  
a true and correct record of the proceedings in  
the hearing of Case No. 3521.  
Held on Feb. 24, 1962.  
Thurston, Examiner  
New Mexico Oil Conservation Commission

Page 3531

TYPICAL INJECTION WELL  
PROPOSED PILOT WATERFLOOD - NEW MEXICO  
STATE "A" A/C-2 LEASE - LEA COUNTY, NEW MEXICO

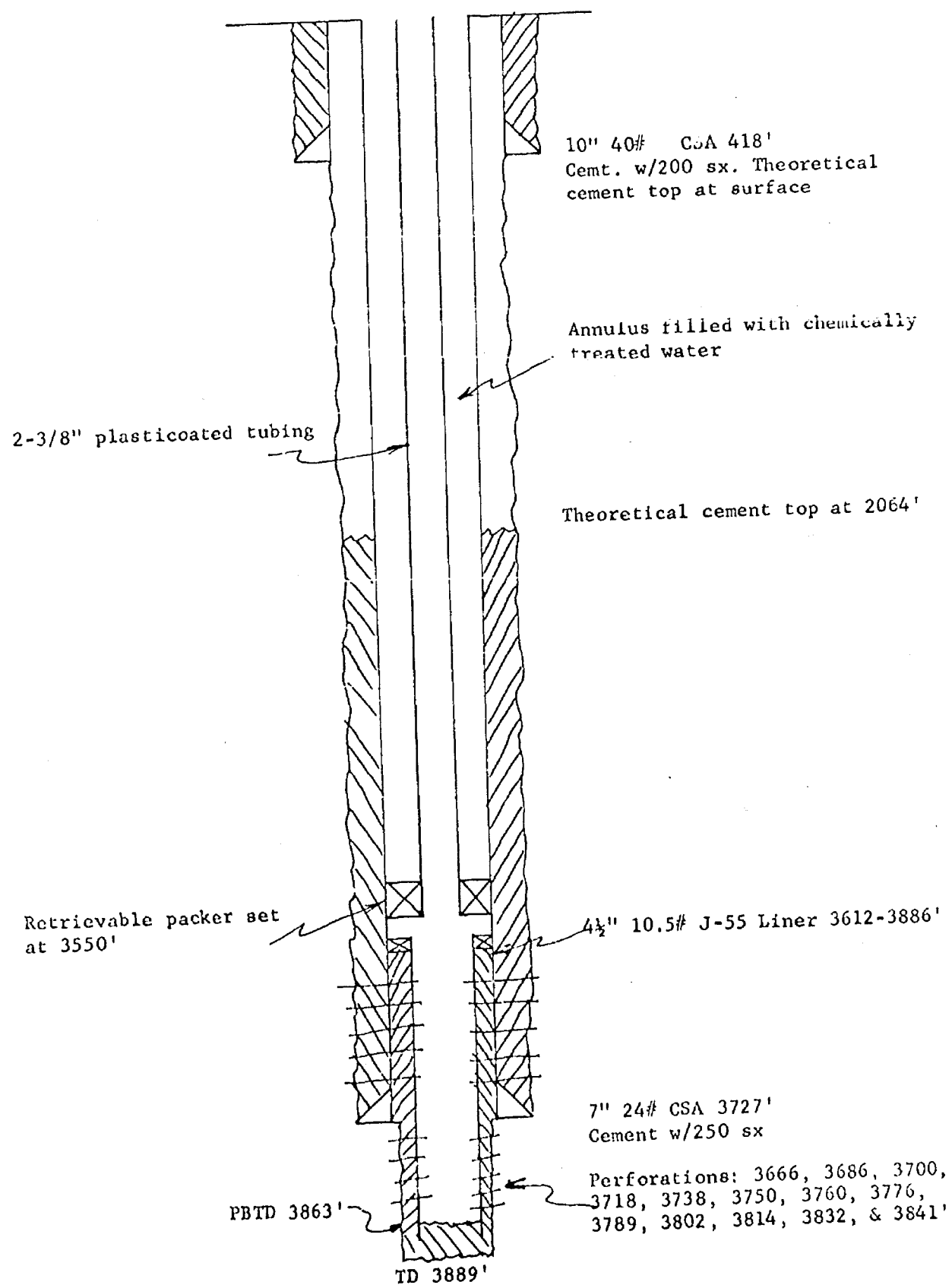


Present Condition  
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660' FNL & FEL, Section 8, T-22-S, R-36-E  
Lea County, New Mexico



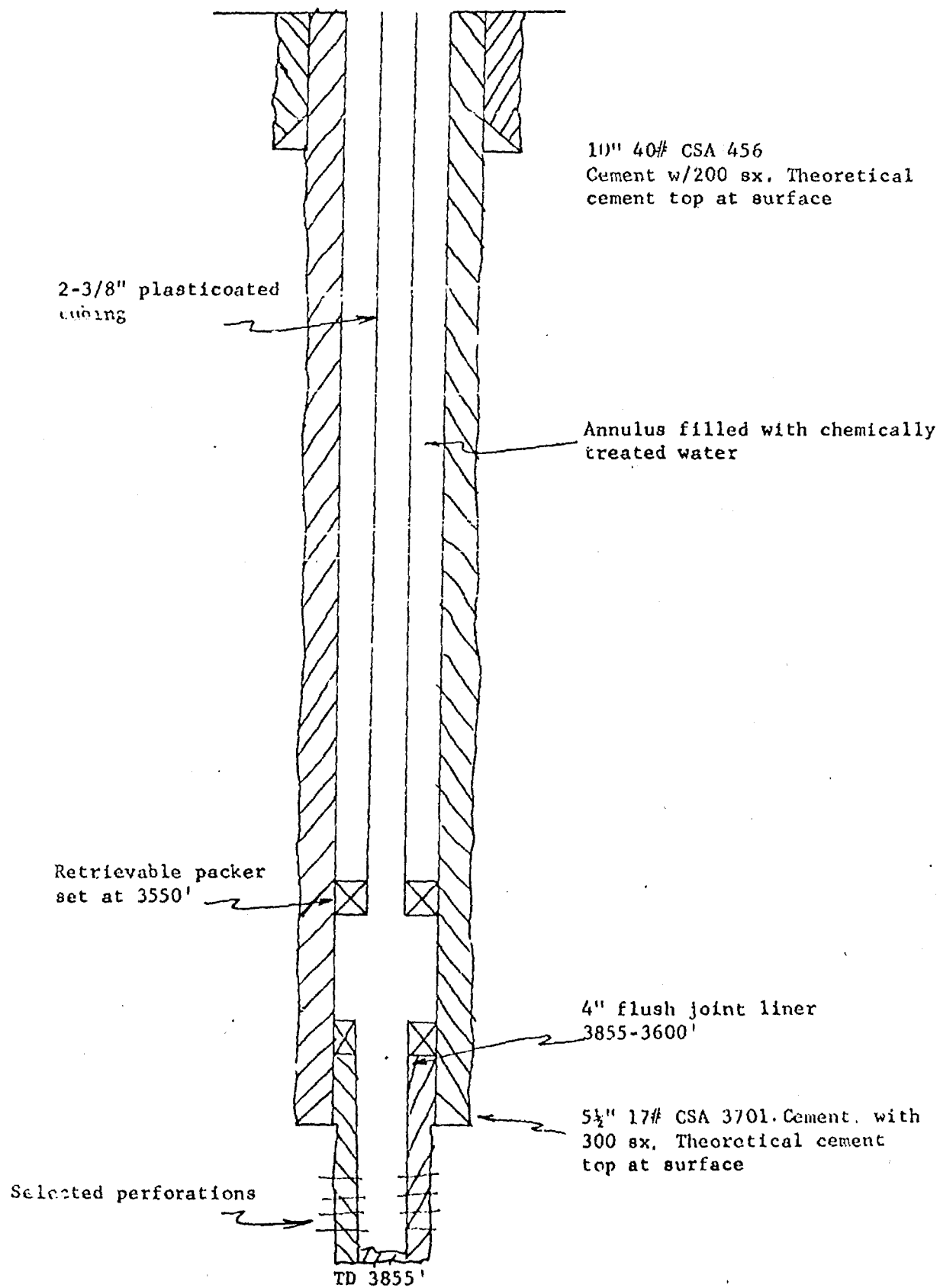
BEFORE EXAMINER NOTED  
OIL CONSERVATION COMMISSION  
APPR EXHIBIT NO. 9  
CASE NO. 3531

Proposed Condition  
 New Mexico State "A" A/c-2 Well No. 24  
 1980' FSL & 660' FEL Section 8, T-22-S, R-36-E  
 Lea County, New Mexico

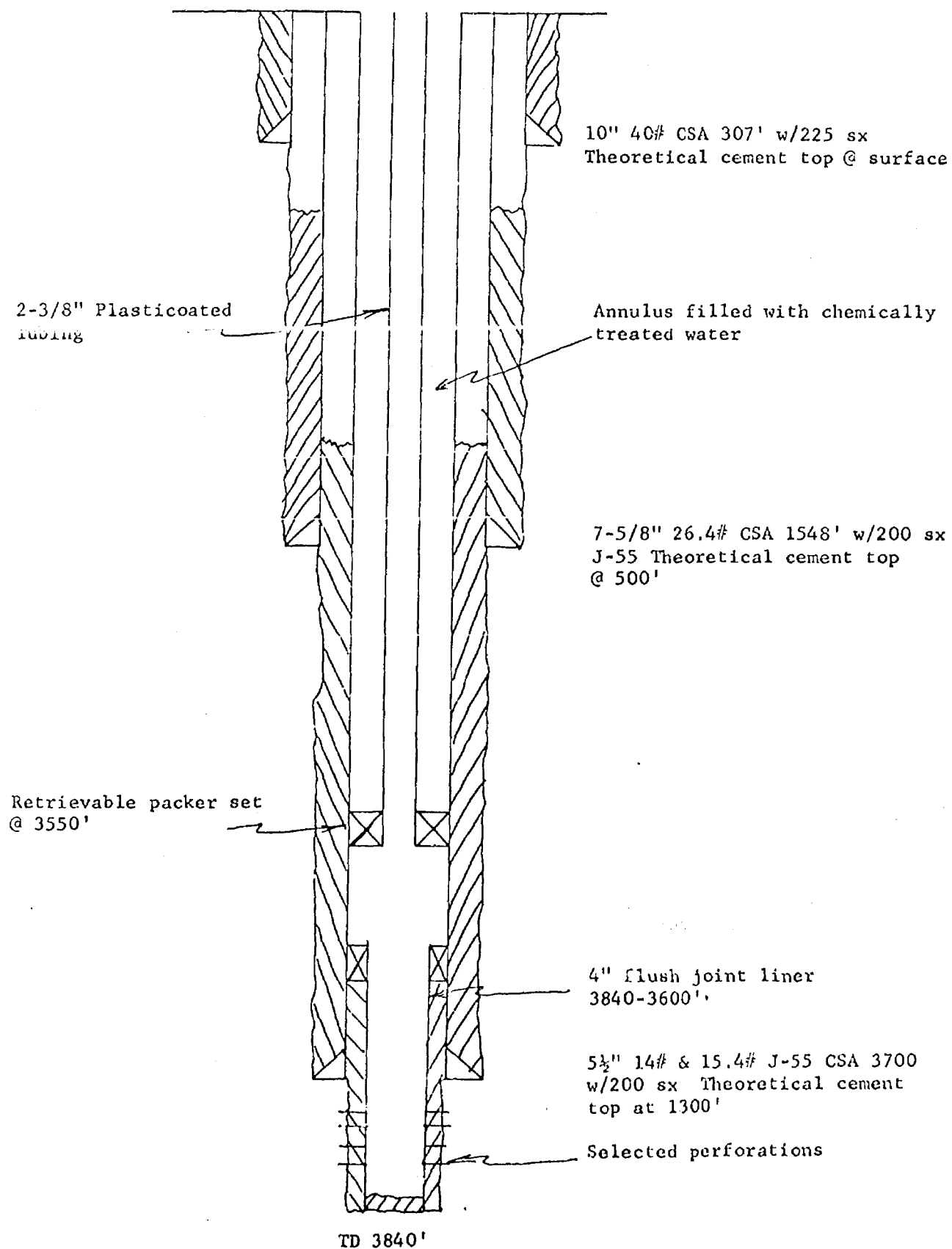




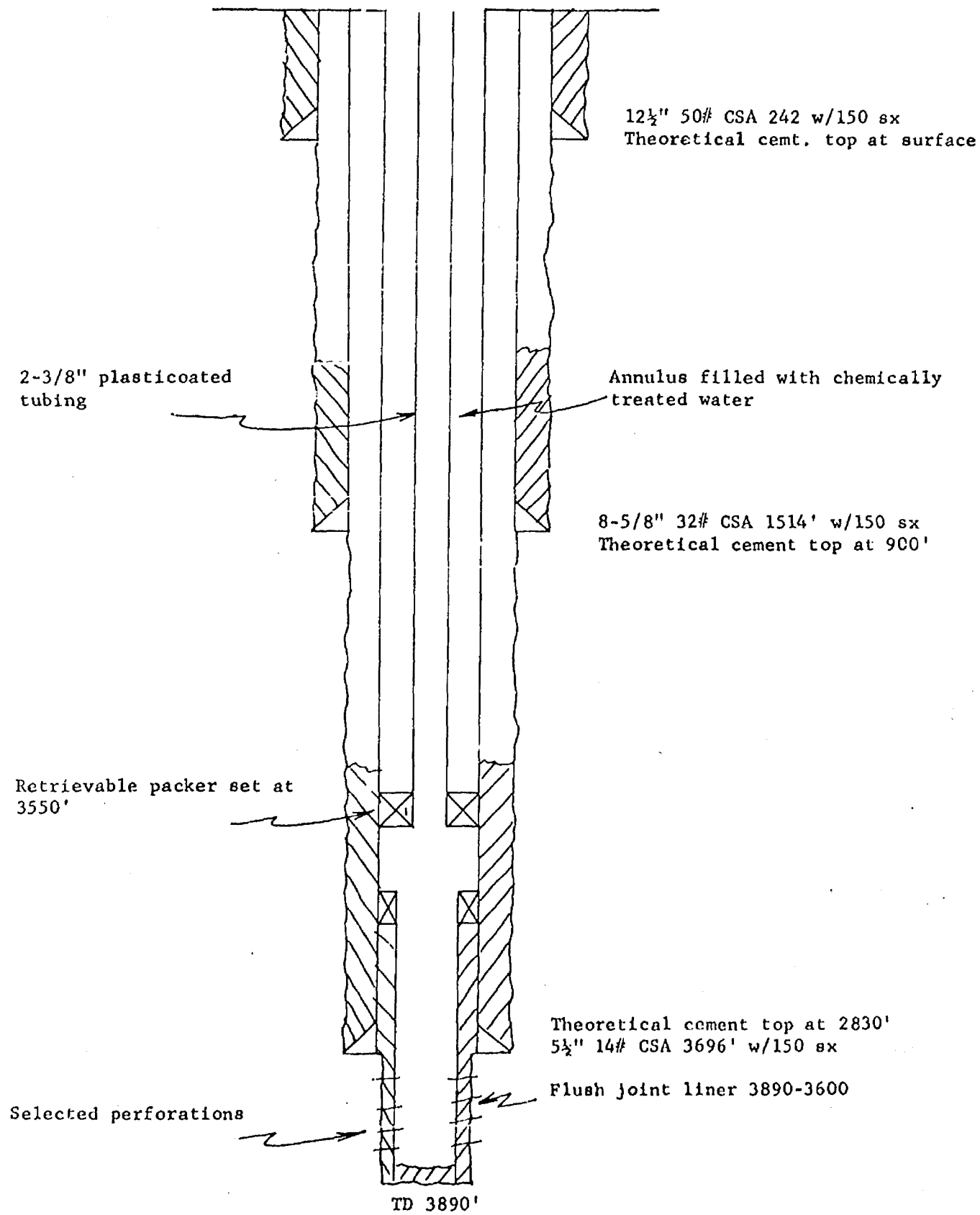
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Present Condition  
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