

CASE 3981: Application of TEXACO
FOR SALT WATER DISPOSAL, LEA
COUNTY, NEW MEXICO.

Case Number

3981

Application

Transcripts.

Small Exhibits

ETC.



dearniey-meier recording

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

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

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

December 2, 1968

EXAMINER HEARING

IN THE MATTER OF:)

Application of Texaco, Inc.)
for salt water disposal,)
Lea County, New Mexico.)

Case No. 3981

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Case 3981.

MR. HATCH: Application of Texaco, Incorporated,
for salt water disposal, Lea County, New Mexico.

MR. KELLY: Booker Kelly, of White, Gilbert, Koch,
and Kelly, of Santa Fe, on behalf of the applicant. I have
one witness, and ask that he be sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits
Numbers 1 through 5, inclusive,
were marked for identification.)

C. L. WHIGHAM, JR.

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

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, position, and employer,
please?

A C. L. Whigham, Jr., I am employed by Texaco, Incorporated,
Midland, Texas, as Division Proration Engineer.

Q Have you previously qualified as an expert witness
before this Commission?

A Yes, sir.

Q Now, referring to what has been marked as Exhibit
Number 1, a plat of the subject area, would you state briefly

what Texaco seeks by this application.

A Texaco seeks an order from the Commission approving the use of Texaco's B. V. Lynch "A", Well No. 8 and 11, for salt water disposal purposes.

As shown on Exhibit 1, these two wells are indicated by a red triangle in Section 34, in Township 20 South, Range 34 East.

Q What is the present status of these wells?

A These two wells, at the present time, are producing nominal quantities of oil, and are considered to be at their economic limits. All of the wells completed on this lease and in the immediate vicinity in the Lynch Pool produce significant quantities of water, and Texaco considers that these two wells here are needed in order to dispose of this large volume of produced salt water.

Q In your opinion, both of these wells have definitely reached their economic limit?

A Yes.

Q Now, what zone will the produced water come from?

A From the Lynch Pool. The Lynch Pool produces from the Yates Formation, and also from the Seven Rivers.

Q And will the produced water all come from Texaco's acreage in Section 34?

A Not exactly. It will come from all of Texaco's wells in Section 34, but also from Texaco's nearby leases in Section 27 and in Section 35, possibly some from the south area there in Section 2.

Q Now, referring to what has been marked Exhibits Numbers 2 and 3, the proposed installation of these two wells, will you go through that for the Examiner?

A These two wells, of course, are very similar, both being completed and produced from the Lynch Pool. Both of the wells have the five and a half-inch casing installed, and both will be equipped with a packer and a string of internally plastic-coated tubing to serve as an injection string to use for salt water disposal. The significant difference is that Well No. 11 was previously plugged back with cement. That well currently has perforations open from a depth of 3,538 feet down to 3,565, and also from 3,595 down to 3,617 feet.

The other well, Well No. 8, was originally completed in an open-hole interval extending below the five and a half-inch casing, which was installed and cemented at a depth of 3,689 feet. So the injection interval in Well No. 8 will be the open-hole section from a depth of 3,690 down to total depth of 3,753.

The injection interval for Well No. 11 will be from a

depth of 3,538 feet down to the bottom of the perforations, a depth of 3,617 feet.

Q Now, are you aware of any fresh water in this area?

A Very little in this particular area. But it has been considered necessary to dispose of the water underground because of such large volumes.

Q Will your casing and cementing program, in your opinion, protect against any possible contamination of fresh water in the area?

A Yes, these wells were both cemented very adequately, and there is no chance of it flooding any other zone than the intended injection interval.

Q Will you have inert fluid in your annulus in both wells?

A Yes, there will be.

Q And some sort of a pressure device?

A Yes, sir.

Q What volumes will be injected initially into these two wells?

A Some of these wells on this particular lease produce as much as 400 barrels of water a day. The water production probably averages somewhere in the order of 200 or 300 barrels of water daily. It is estimated that we will initially inject

approximately 700 barrels of water daily at a pressure that could reach as much as 1,500 pounds into each of these two wells, for a total injected rate of approximately 1,600 barrels of water daily.

Q Do you expect that injection to increase substantially as time goes on?

A Well, probably not, because this is an old field, and many of these wells are already producing such large volumes. Their production rate of water may increase, but it would be negligible, probably.

Q Do you feel these wells will have any difficulty taking that volume of water?

A No, we don't.

Q Now, Exhibits 4 and 5 are the well logs, is that correct?

A Yes.

Q They show the perforations?

A Yes, they show the -- I don't think they are marked on the log, but the log is a complete log of both of these injection wells.

Q In your opinion, will the granting of this application have any adverse effect on the reservoirs that will be injected into?

A No, none whatsoever.

Q Were Exhibits 1 through 5 prepare by you or under your supervision?

A Yes.

MR. KELLY: I move the introduction of Applicant's Exhibits 1 through 5.

MR. NUTTER: Texaco's Exhibits 1 through 5 will be admitted.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were admitted in evidence.)

MR. KELLY: That is all I have on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q What is the current rate of oil production from the subject leases? What is each well averaging, approximately?

A Well, No. 11, the latest test indicated producing rate of three barrels of oil and 30 barrels of water.

Q How much?

A Three oil and 30 water. And Well No. 8 tested recently three barrels of oil and 60 barrels of water.

Now, Well No. 10 up in the northwestern corner of the lease produces six barrels of oil and 440 barrels of water a day. And Well No. 12 is a high water producer, producing 400

barrels of water a day, and 60 barrels of oil a day.

Well No. 9 produces eleven barrels of oil and 300 barrels of water a day.

I have given you all of the tests except Well No. 2 down in the southeastern corner of the lease, producing eight barrels of oil and 140 barrels of water daily. These are recent tests.

Q Actually, the wells you are talking about converting are producing the least amount of water, but it is the least amount of oil, too?

A That's correct.

Q And you will be disposing of water produced by your B. V. Lynch in Section 34?

A Primarily, yes.

Q And also your Lynch Lease in Section 27, your Lynch Lease in Section 35, and possibly the TA Lease there in Section 2?

A Yes, sir.

Q And that is all of your production in that area?

A Yes, sir.

MR. NUTTER: Are there any further questions of Mr. Whigham?

MR. KELLY: Nothing further.

MR. NUTTER: You may be excused. Do you have anything

further?

MR. KELLY: No, I don't.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 3981? We will take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
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Direct Examination by Mr. Kelly	2
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<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1 through 5	2	7

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 complete record of the proceedings in
 the Premier Hearing of Case No. 3981
 heard by me on 12/2, 1968.

[Signature]
 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

December 9, 1968

Mr. Booker Kelly
White, Gilbert, Koch & Kelly
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico

Re: Case No. 3981
Order No. R-3624
Applicant:
TEXACO INC.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

Bureau of Land Management

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. 3981
Order No. R-3624

APPLICATION OF TEXACO INC.
FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 2, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of December, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Texaco Inc., is the owner and operator of the B. V. Lynch "A" Federal Well No. 8, located in Unit I, and the B. V. Lynch "A" Federal Well No. 11, located in Unit G, both in Section 34, Township 20 South, Range 34 East, NMPM, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced salt water into the Yates and Seven Rivers formations, with injection into the intervals as follows:

The open-hole interval from approximately
3690 feet to 3753 feet in the B. V. Lynch
"A" Federal Well No. 8; and

The perforated interval from approximately
3538 feet to 3617 feet in the B. V. Lynch
"A" Federal Well No. 11.

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CASE No. 3981

Order No. R-3624

(4) That the injection should be accomplished through:

2 7/8-inch plastic-lined tubing installed in a packer set at approximately 3550 feet in the B. V. Lynch "A" Federal Well No. 8; and

2 7/8-inch plastic-lined tubing installed in a packer set at approximately 3500 feet in the B. V. Lynch "A" Federal Well No. 11;

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

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to utilize its following-described wells in Section 34, Township 20 South, Range 34 East, NMPM, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Yates and Seven Rivers formations, with injection to be accomplished as follows:

B. V. Lynch "A" Federal Well No. 8, located in Unit I, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3550 feet, with injection into the open-hole interval from approximately 3690 feet to 3753 feet; and

B. V. Lynch "A" Federal Well No. 11, located in Unit G, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3500 feet, with injection into the perforated interval from approximately 3538 feet to 3617 feet;

PROVIDED HOWEVER, that in each well the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

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CASE No. 3981

Order No. R-3624

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(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


DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

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

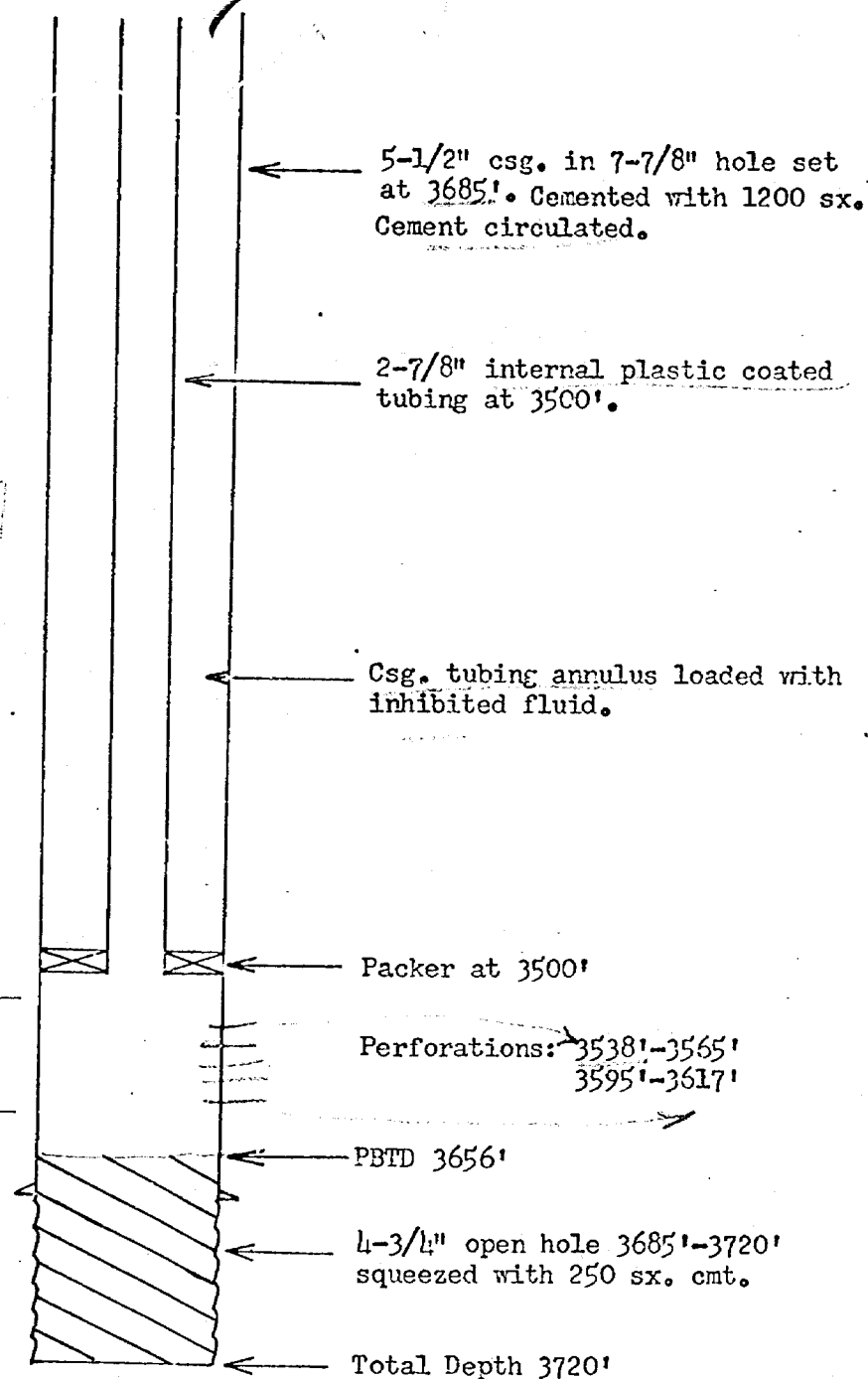
esr/

- CASE 3978: Application of Texas Pacific Oil 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-Queen formations in the perforated interval from 3148 feet to 3450 feet in its McKinney Well No. 1 located in Unit A of Section 36, Township 24 South, Range 36 East, Langlie-Mattix Pool, Lea County, New Mexico.
- CASE 3979: Application of Consolidated Oil & Gas, 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 Abo formation in the perforated and open-hole interval from 8500 feet to 9200 feet in its Shipp Well No. 2 located in the NE/4 SE/4 of Section 17, Township 17 South, Range 37 East, Midway-Abo Pool, Lea County, New Mexico.
- CASE 3980: Application of Coastal States Gas Producing 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 Upper Pennsylvanian formation in the perforated interval from approximately 9791 feet to 9954 feet in its State "22" Well No. 1 located in Unit I of Section 22, Township 14 South, Range 32 East, Tulk-Pennsylvanian Pool, Lea County, New Mexico.
- CASE 3981: 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, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico, through the following two wells located in Section 34, Township 20 South, Range 34 East:
- B. V. Lynch "A" Federal Well No. 8 in Unit I;
Disposal Interval - 3690 feet to 3753 feet;
- B. V. Lynch "A" Federal Well No. 11 in Unit G;
Disposal Interval - 3538 feet to 3617 feet.
- CASE 3982: Application of Texaco, Inc. for a dual completion and water injection, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its C. C. Fristoe "A" Federal NCT-1 Well No. 6 located in Unit D of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas through the casing-tubing annulus from the Jalmat Gas Pool in the perforated interval from 2708 feet to 2796 feet and

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Texas EXHIBIT NO. 2
CASE NO. 3781

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO.

Proposed Injection Interval



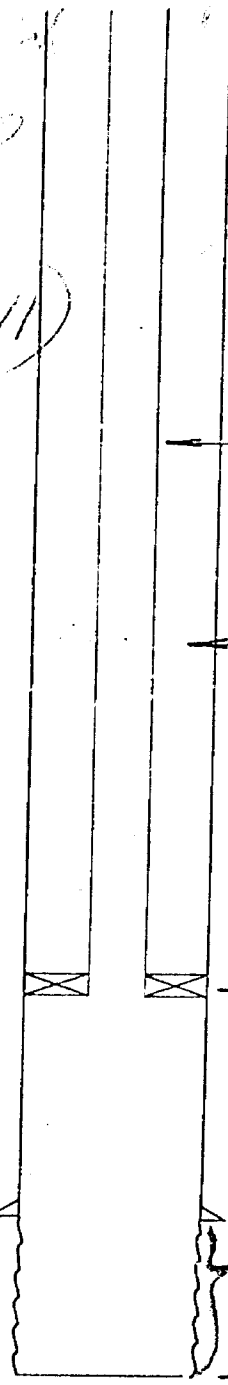
TEXACO INCORPORATED
Schematic Diagram
Proposed Salt Water Disposal Completion
B.V. LYNCH "A" FEDERAL NO. 11
LYNCH YATES SEVEN RIVERS POOL
LEA COUNTY, NEW MEXICO

jbs 10-11-68

Handwritten notes:
 800 gals
 could reach 1500
 psi into pack
 well (H & H)

BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 TEXACO EXHIBIT NO. 3
 CASE NO. 3981

Proposed Injection Interval



5-1/2" csg. in 7-7/8" hole
 set at 3689'. One string of
 pipe set, cemented from top
 to bottom.

2-7/8" internal plastic coated
 tubing at 3550'.

Csg. tubing annulus loaded
 with inhibited fluid.

Packer at 3550'

Open hole 3690'-3753'

Total Depth 3753'

TEXACO INCORPORATED
 Schematic Diagram
 Proposed Salt Water Disposal Completion
 B. V. LYNCH "A" FEDERAL NO. 8
 LYNCH YATES SEVEN RIVERS POOL
 LEA COUNTY, NEW MEXICO

jbs 10-10-68



PETROLEUM PRODUCTS

PRODUCING DEPARTMENT
UNITED STATES
MIDLAND DIVISION
DARRELL SMITH
DIVISION MANAGER

NOV 15 AM 8 20

TEXACO INC.
P. O. BOX 3100
MIDLAND, TEXAS 79701

November 13, 1968

Case 2981

SALT WATER DISPOSAL
LYNCH POOL
LEA COUNTY, NEW MEXICO

Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

It is respectfully requested that an Examiner hearing be scheduled on the next available docket in Santa Fe, New Mexico to consider the application of Texaco Inc. to convert its B. V. Lynch "A" Federal Wells No. 8 and 11, Lynch Yates-Seven Rivers Pool, to salt water disposal service. The subject wells are located in Units I and G respectively both in Section 34, Township 20 South, Range 34, East, Lea County, New Mexico.

Disposal into B. V. Lynch "A" Federal Well No. 8 will be down 2-7/8" internally plastic coated tubing set on a packer at approximately 3550' and into the open hole interval 3690' to 3753'. Disposal into B. V. Lynch "A" Federal Well No. 11 will be down 2-7/8" internally plastic coated tubing set on a packer at approximately 3500' and into the perforated interval 3538' to 3617'. Produced water from Texaco's B. V. Lynch "A" Federal, B. V. Lynch "B" Federal and New Mexico "A" State Leases, Lynch Yates-Seven Rivers Pool, will be disposed of into the proposed SWD wells. Current water production from these three leases is approximately 2400 BWPD. It is anticipated that equal volumes of water will be disposed of in each well and that the injection pressure will be approximately 1500 psi.

In compliance with Statewide Rule 701, we attach radioactivity well logs for both of the proposed injection wells, diagrammatic sketches showing the proposed subsurface installation in both wells, an area map showing the location of the two injection wells and other wells in the vicinity, and a list of offset operators. A copy of this letter requesting a hearing is

into both zones
DOCKET MAILED

11-21-68

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

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November 13, 1968

being mailed this date to each of the ten offset operators.

Yours very truly,

Darrell Smith

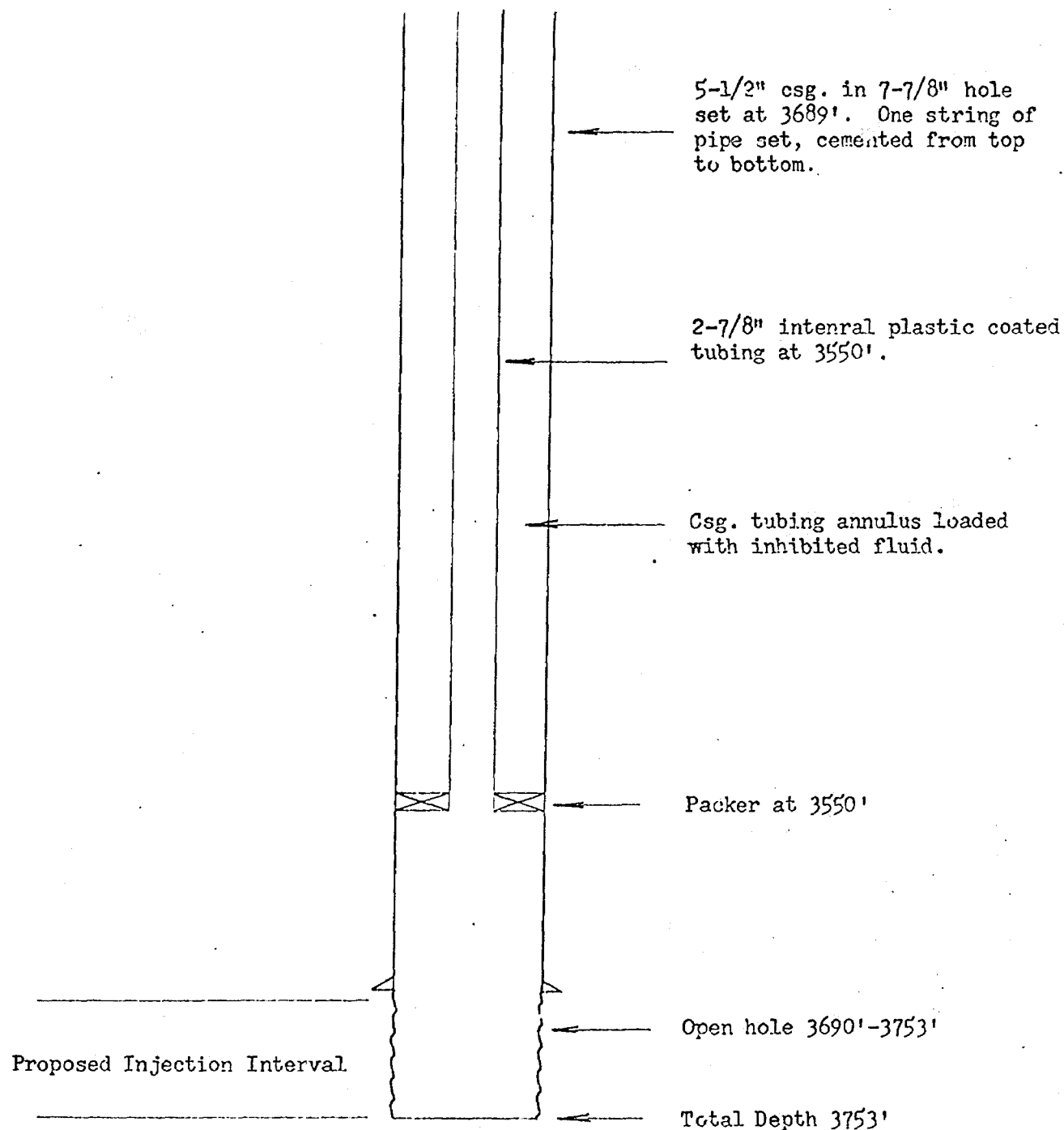
By


C. L. Whigham

CLW-JH

Attachments

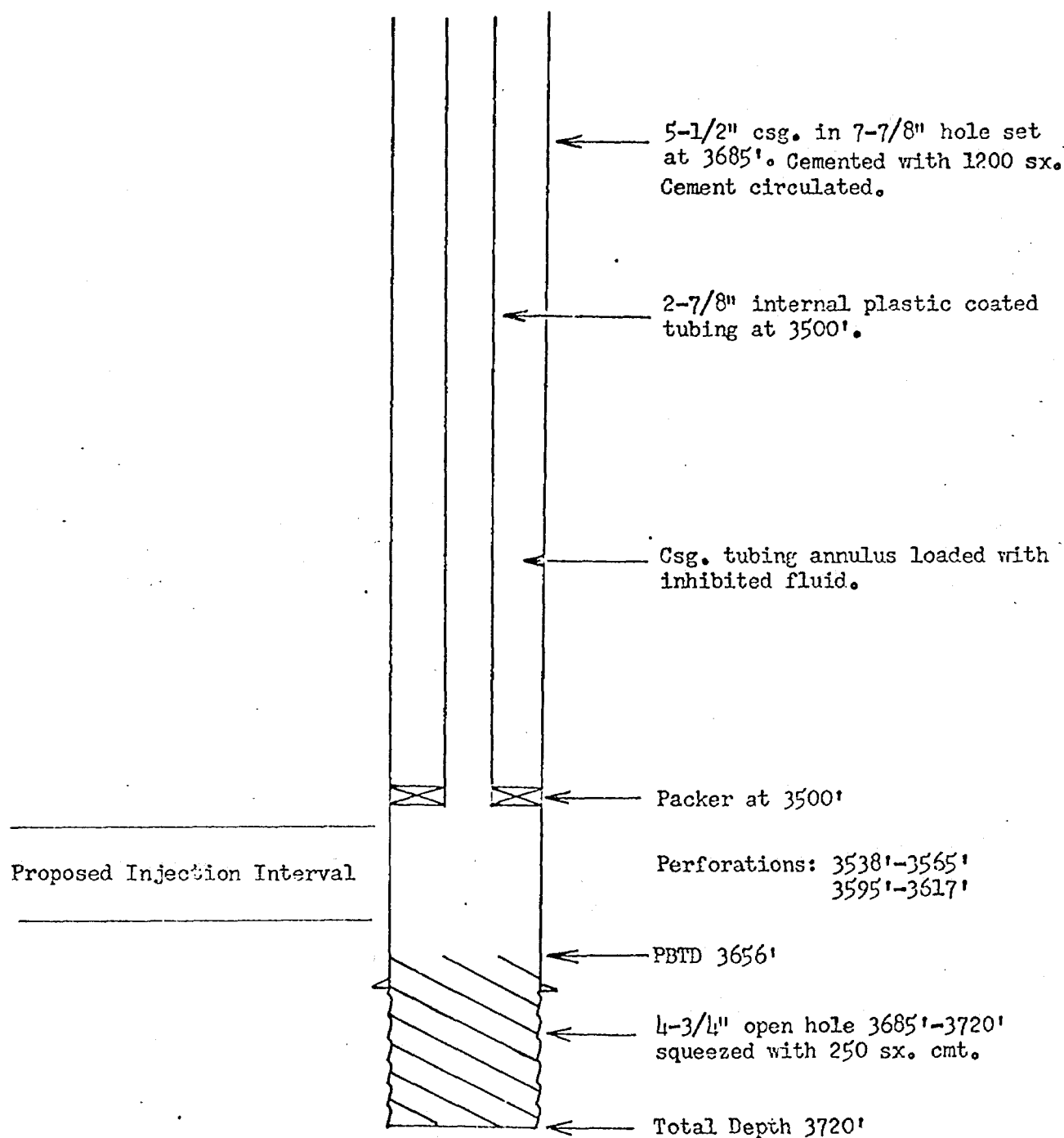
cc-Offset Operators



TEXACO INCORPORATED
 Schematic Diagram
 Proposed Salt Water Disposal Completion
 B. V. LYNCH "A" FEDERAL NO. 8
 LYNCH YATES SEVEN RIVERS POOL
 LEA COUNTY, NEW MEXICO

Case 3981

jbs 10-10-68



TEXACO INCORPORATED
Schematic Diagram
Proposed Salt Water Disposal Completion
B.V. LYNCH "A" FEDERAL NO. 11
LYNCH YATES SEVEN RIVERS POOL
LEA COUNTY, NEW MEXICO

Case 3981

jbs 10-11-68

OFFSET OPERATORS

TEXACO INC.
B. V. LYNCH 'A' FEDERAL LEASE
LYNCH POOL
LEA COUNTY, NEW MEXICO

D. C. Berry
P. O. Box 67
St. Jo, Texas 76265

Pennzoil Company
1007 Midland Savings Bldg.
Midland, Texas 79701

Barbee Drilling Company
P. O. Box 899
McCamey, Texas 79752

Phillips Petroleum Company
Phillips Building
Odessa, Texas 79760

Burk Royalty Company
800 Oil & Gas Bldg.
Wichita Falls, Texas 76301

Sinclair Oil & Gas Company
P. O. Box 1470
Midland, Texas 79701

L. M. Gelb
Address Unknown

Texas Pacific Oil Company
P. O. Box 747
Dallas, Texas 75221

Hudson & Hudson
1510 1st Nat'l Bank Bldg.
Fort Worth, Texas 76100

Union Oil Company of Calif.
Union Building
Midland, Texas 79701

Case 3981

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. 3981

Order No. R- 3624

APPLICATION OF TEXACO INC.
FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 2, 1968,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

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

FINDS:

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

(2) That the applicant, Texaco Inc., is the owner and
operator of the B. V. Lynch "A" Federal Well No. 8, located in
Unit I, and the B. V. Lynch "A" Federal Well No. 11, located in
Unit G, both in Section 34, Township 20 South, Range 34 East,
Lynch Yates-Seven Rivers Pool,
NMPM,/Lea County, New Mexico.

(3) That the applicant proposes to utilize said wells to
dispose of produced salt water into the Yates and Seven Rivers
formations, with injection into the intervals as follows:

The Open hole interval from approximately
3690 feet to 3753 feet in the B. V. Lynch
Federal
"A"/Well No. 8; and

The perforated interval from approximately 3538 feet to 3617 feet in the B. V. Lynch Federal "A"/Well No. 11.

- (4) That the injection should be accomplished through:

2 7/8-inch plastic-lined tubing installed in a packer set at approximately 3550 feet in the B. V. Lynch "A"/Well No. 8; and

2 7/8-inch plastic-lined tubing installed in a packer set at approximately 3500 feet in the B. V. Lynch "A"/Well No. 11;

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

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

IT IS THEREFORE ORDERED:

- (1) That the applicant, Texaco Inc., is hereby authorized to utilize its following-described wells in Section 34, Township 20 South, Range 34 East, NMPM, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Yates and Seven Rivers formations, with injection to be accomplished as follows:

B. V. Lynch "A" Federal Well No. 8 located in Unit I, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3550, with injection into the open hole interval from approximately 3690 feet to 3753 feet; and

B. V. Lynch "A" Federal Well No. 11 located in

Unit G, injection to be accomplished through
2 7/8-inch tubing installed in a packer set
at approximately 3500 feet, with injection
into the perforated interval from approximately
13617
3538 feet to ~~3716~~ feet;

PROVIDED HOWEVER, that in each well the tubing shall be
plastic-lined; that the casing-tubing annulus shall be filled
with an inert fluid; and that a pressure gauge shall be attached
to the annulus ~~or the annulus left open~~ at the surface in order
to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its
disposal operations in accordance with Rules 704 and 1120 of the
Commission Rules and Regulations.

(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.