CASE 4343: Application of TEXACO FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

Application Transcripts. Small Exhibits

HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 29, 1970

UXAMINER HEARING

IN THE MATTER OF:

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

Case No. 4343

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING



MR. UTZ: Case 4343.

MR. HATCH: Case 4343. Application of Texaco Inc. for salt water disposal, Lea County, New Mexico.

MR. KEBLY: Booker Kelly of White, Gilbert, Koch and Kelly on behalf of the applicant and I have one witness.

(Whereupon, Applicant's Exhibits 1 through 3 were marked for identification.)

(Witness sworn.)

MR. UTZ: Are there other appearances?

CHARLES H. FINKAY

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

DIRECT EXAMINATION

BY MR. KELLY:

- Q Mr. Finkay, for the record, would you state your name, position and employer?
- A Charles H. Finkay, employed by Texaco as proration engineer in Midland, Texas.
- Q And you have previously qualified as an expert witness in the field of proration engineering before this Commission?
 - Λ I have.
 - Q Referring to what has been marked Exhibit 1, a

plat of the area, would you briefly state what Texaco seeks by this application?

A Texaco is seeking an application to convert "BB" State (NCT-1) Well No. 2 marked by a green arrow on your plat to be a disposal well in the Devonian formation, to dispose of Devonian water in the East Caprock Pool.

Q Now, have you shown all offset operators on this plat within a two-mile radius?

- A We have.
- Q And have those operators been notified?
- Λ Yes, they have, with the original letter of application.
- Q Could you state to the Examiner the present status of the well?

A The present status of the well is shut in; it's a watered out Devonian producing well.

- Q And give the Examiner a brief history of this well.
- A This well was drilled to 11,278 feet and casing was set and cemented; five and a half inch casing at 11,228.

 We then produced from the open hole section from 11,228 to 278 and also to perforations, 11,194 to 198.

This well had produced 800,000 barrels of oil before it watered out.

- Q Now, I think you stated that this well is to inject produced Devonian water, is that right?
 - A Yes, sir.
 - Q What are you doing with your water now?
- A Currently, Texaco has a twenty-five percent interest in the Amerada salt water disposal well, one location just directly south of the proposed well.

This well will not take all of Texaco's water and we are curtailing production at the present time.

- O Do you anticipate that you will have in addition to your water production now increased water production in the future?
- A We are planning to put in another submersible pump in the northwest quarter of Section 11 on the "BH" (NCT-1) when we have additional salt water disposal facilities.
- Q All right. Now, going on to Exhibit No. 2, your sketch of the proposed salt water well, explain the installation.
- A As noted on the sketch, we have 13 and 3/8 casing set at 353 and cement circulated; 8 and 5/8 set at 3646 and cement circulated. We have five and a half inch set at 11,228 and the cement top is at 8535.

We will put in this well 2 and 7/8 inch plasticlined tubing with a packer set at 9,000 feet. The anulus will be loaded with inhibited water and a surface gauge will be put on the braiden head.

- Q Now, what rate do you anticipate injection in?
- A We will initially start injecting at 2900 barrels a day.
 - Ω How high do you think you might go in this well?
- Λ We ultimately will go to 12 to 14,000 barrels a day.
- Q Is that Amerada well immediately south of your injection well taking as much water as that now?
- A We estimate from our twenty-five percent equaling 4,000 barrels, it will take 16,000 barrels a day on gravity.
- Q So, you don't anticipate any problem with your well taking that much water?
 - A Not at all.
- Q Now, is the installation you have shown on Exhibit
 No. 2 in your opinion sufficient to prevent migration of this
 water to any other zone?
- A Yes, it is. The long string is cemented, as well as the surface strings.
- Q How about fresh water in the area; is there any concern there?
 - A There's no concern that, we don't think with our

surface casing set at 3646 feet and cemented, that will be contaminated, plus the long string being cemented back to 8500 feet.

Q Now, in your opinion, will the injection of the volumes of water that you anticipate have any effect on Devonian production?

A We don't think so. We are just re-injecting produced water.

Q Exhibit No. 3 is a log of the injection well. Is there anything you want to point out on that?

A No. The log shows that we drilled this well to the top of the Devonian and set casing on it and the portion we are injecting into is not shown on the log.

There are perforations of the casing, 11,194 to 11,198, which show on the log.

Q Were Exhibits 1 through 3 prepared by you or under your supervision?

A They were.

MR. KELLY: I move the introduction of Texaco's Exhibits 1 through 3.

MR. UTZ: Exhibits 1 through 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 3 were offered and admitted in evidence.)

MR. KELLY: I have no further questions on direct.

CROSS EXAMINATION

BY MR. UTZ:

- Q Mr. Finkay, you say your well is watered out. Do you know whether this is interstitial water or whether you are in a water table or water cone or what?
- A This Devonian is under an active water drive and it is natural, indigenous water.
- Q So, actually, you will be injecting here into the water table?
 - A Into the water table, yes, sir.

MR. UTZ: Other questions? The witness may be excused.

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WITNESS		PAGE
CHARLES H. FINKAY		
Direct Examination by Mr. Kelly		2
Cross Examination b	Cross Examination by Mr. Utz	
EXHIBIT	MARKED	OFFERED AND ADMITTED
Applicant's 1 through 3	2	7

STATE OF NLW MEXICO)

COUNTY OF BERNALILLO)

I, GLENDA BURKS, 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.

Olonda Burks NOTARY PUBLIC

My Commission Expires:

March 12, 1973

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OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2066 - BANTA FE 97801 GOVERNOR DAVID F. CARGO CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

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

May 4, 1970

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ALP/ir Copy of order also sent to: Hobbs OCC x Artesia OCC Aztec OCC Other State Engineer Office	ce	

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. 4343 Order No. R-3954

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 April 29, 1970, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 4th day of May, 1970, 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 New Mexico "BB" State (NCT-1) Well No. 2, located in Unit N of Section 11, Township 12 South, Range 32 East, NMPM, East Caprock-Devonian Pool, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the perforated and open-hole interval from approximately 11,194 feet to 11,278 feet.
- (4) That the injection should be accomplished through 2 7/8-inch plastic-lined tubing installed in a packer set at approximately 9000 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

be attached to the annulus 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 New Mexico "BB" State (NCT-1) Well No. 2, located in Unit N of Section 11, Township 12 South, Range 32 East, NMPM, East Caprock-Devonian Pool, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 9000 feet, with injection into the perforated and open-hole interval from approximately 11,194 feet to 11,278 feet;

PROVIDED HOWEVER, that 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.

- (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
ON, CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

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A. L. PORTER, Ur., Member Secretary

Case 4343

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Rec. 4-29-70

Shark Dexard request for permission to convert their A. They, 173 B' LY. (NCT-1) # 2 to a .5 WD well.

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11198 & open bold from 11,198-11,275.

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DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 29, 1970

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 4340: Application of Tesoro Petroleum Corporation for three water-flood projects and unorthodox injection well locations, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute three waterflood projects in the South Hospah Upper Sand Oil Pool by the injection of water through nine injection wells to be drilled at unorthodox locations in Section 1, Township 17 North, Range 9 West, and in Sections 6 and 7, Township 17 North, Range 8 West, McKinley County, New Mexico. Applicant further seeks a procedure whereby additional injection wells and producing wells at unorthodox locations within the project areas may be approved administratively.
- CASE 4341: Application of Pan American Petroleum Corporation for two non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of two non-standard gas proration units for its State "C" Tract 13 Well No. 5, a dual completion, located 1980 feet from the North line and 660 feet from the West line of Section 36, Township 21 South, Range 37 East, Lea County, New Mexico, said units to be comprised as follows:

Blinebry Gas Pool - 240 acres - NW/4 and W/2 NE/4
Tubb Gas Pool - 200 acres - W/2 NW/4, NE/4
NW/4 and W/2 NE/4

CASE 4342: Application of Dearing, Wright, Gibbins, and Church, doing business as New Mexico Petroleum Company, for authority to operate an oil treating plant, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to install and operate a chemical and heating process oil treating plant in the vicinity of Tatum, New Mexico, for the reclamation of sediment oil to be obtained from tank bottoms, waste pits, and drip tanks.

- CASE 4343: 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 Devonian formation in the perforated and open-hole interval from 11,194 feet to 11,278 feet in its New Mexico "BB" State (NCT-1) Well No. 2 located in Unit N of Section 11, Township 12 South, Range 32 East, East Caprock-Devonian Pool, Lea County, New Mexico.
- CASE 4344: Application of Texaco Inc. for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 11,230 feet to 11,503 feet in its B. E. Spender "B" Federal Well No. 1 located in Unit D of Section 28, Township 15 South, Range 30 East, Little Lucky Lake-Devonian Pool, Chaves County, New Mexico.
- CASE 4345: Application of Yates Drilling Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers and possibly other formations in the open-hole interval from 68 feet to 100 feet in its Galvin Well No. 8 and from 68 feet to 90 feet in its Galvin Well No. 14, both located in Unit N of Section 12, Township 20 South, Range 26 East, West McMillan-Seven Rivers Pool, Eddy County, New Mexico.
- CASE 4346: Application of Yates Drilling Company for a pressure maintenance expansion and promulgation of rules therefor, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand the S. P. Yates West McMillan Anderson Pressure Maintenance Project in the West McMillan Seven Rivers-Queen Pool, Eddy County, New Mexico, authorized by Order No. R-3852, by the conversion to water injection of two additional wells located in Units O and P. Section 11, Township 20 South, Range 26 East. Applicant further seeks the designation of a project area, promulgation of rules governing said project, and a procedure whereby other methods of flooding in the subject project may be authorized administratively.
- CASE 4347: Application of Yates Drilling Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Yates North Vacuum (San Andres) Unit Area comprising 800 acres, more or less, of State lands in Sections 1, 2, 11, and 12, Township 17 South, Range 34 East, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico,

- CASE 4348: Application of Yates Drilling Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its North Vanuum (San Andres) Unit Area by the injection of water into the San Andres formation through 9 wells located in Sections 1, 2, 11, and 12, Township 17 South, Range 34 East, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 4349: Application of Tenneco Oil Company for a waterflood expansion and uncrthodox injection well locations, McKinley County, New Mexico. Appplicant, in the above-styled cause, seeks to expand the waterflood project in its South Hospah Unit Area by the injection of water into the South Hospah Upper Sand Oil Pool, McKinley County, New Mexico, through two additional injection wells at uncrthodox locations in Section 12, Township 17 North, Range 9 West, as follows:

Unit Well No. 41 - 5 feet from the North line and 1650 feet from the East line;

Finit Well No. 42 - 3000 from the North line and 5 feet from the East line.

- GASE 4350: Application of Cities Service Oil Company for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's Snyder Federal lease comprising the S/2 NE/4 and N/2 SE/4 of Section 26, Township 15 South, Range 29 East, Sulimar-Queen Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells on said lease in an unlined surface pit located in Unit H of said Section 26.
- CASE 4351: Application of Humble Oil & Refining Company for well reclassification and simultaneous dedication of acreage, Lea
 County, New Mexico. Applicant, in the above-styled cause,
 seeks the reclassification of its New Mexico "G" State Well No.
 5 from an oil well in the Eumont Pool to a gas well in said
 pool. Applicant further seeks the dedication of a standard
 640-acre gas promation unit comprising all of Section 23, Township 21 South, Range 36 East, Lea County, New Mexico, to said
 Well No. 5 and to applicant's New Mexico "G" State Well No. 9,

located, respectively in thats E and G of said Section 25, and authority to produce the allowable assigned to said unit from either of said walks in any proportion.

CASE 4352: Application of Jack I. McClellan for the creation of a new gas pool or, in the alternative, the establishment of public rules for two existing pools, Chaves and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Queen gas prol comprising the following-described acreage:

CHAVES COUNTY, NEW MEXICO

Township 15 South, Range 29 East
Section 11: SE/4
Section 12: SW/4
Section 13: NW/4
Section 14: E/2
Section 23: NE/4 and SW/4

In the alternative applicant seeks the promulgation of special rules for the Sulimar-Queen Pool, Chaves County, and Double L-Queen Pool, Chaves and Dea Counties, New Mexico, as separate or as consolidated pools, including previsions for the classification of oil and gas wells, spacing and well location requirements for oil and gas wells, and an allocation formula for withdrawals by oil wells and gas wells.

CASE 4353: Application of Lone Star Producing Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Tres Papalotes-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units.

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PRODUCING DEPARTMENT-UNITED STATES MIDLAND DIVISION APR

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TEXACO INC. P. O. BOX 3109 MIDLAND, TEXAS 79701

March 31, 1970

Cac 4343

REQUEST FOR EXAMINER HEARING

SALT WATER DISPOSAL

NEW MEXICO "BB" STATE (NCT-1) NO. 2

EAST CAPROCK DEVONIAN POOL

LEA COUNTY, NEW MEXICO

State of New Mexico
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

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

Gentlemen:

It is requested that an examiner hearing be scheduled for April 29, 1970 at Santa Fe, New Mexico, to consider the application of Texaco Inc. for permission to dispose of produced salt water in the East Caprock Devonian Pool, Lea County, New Mexico.

At this hearing Texaco will ask for permission to dispose of produced salt water into their New Mexico "BB" State (NCT-1) Well No. 2 located in Unit N of Section 11, T-12-S, R-32-E, Lea County, New Mexico. Disposal will be into the Devonian through perforations 11,194' to 11,198' and open hole 11,228' to 11,278'. The disposal well will be equipped with plastic coated tubing set on a packer at 9,000 feet. The annulus will be filled with treated water. Initial disposal rates will be 2,900 BWPD. The water should go into the Devonian on gravity.

Included with this request for a hearing are, three copies of,

- 1. Plat of the area with the SWDW designated
- 2. Log of the proposed disposal well
- 3. Diagrammatic sketch of the disposal well

DOCKET MAILED

Date 4-17-70

-5-

Copies of this letter are being sent to the offset operators and the Land Commissioner with exhibits.

Yours very truly,

Darrell Smith Division Manager

Ву

C. L. Whigham
Division Proration Engineer

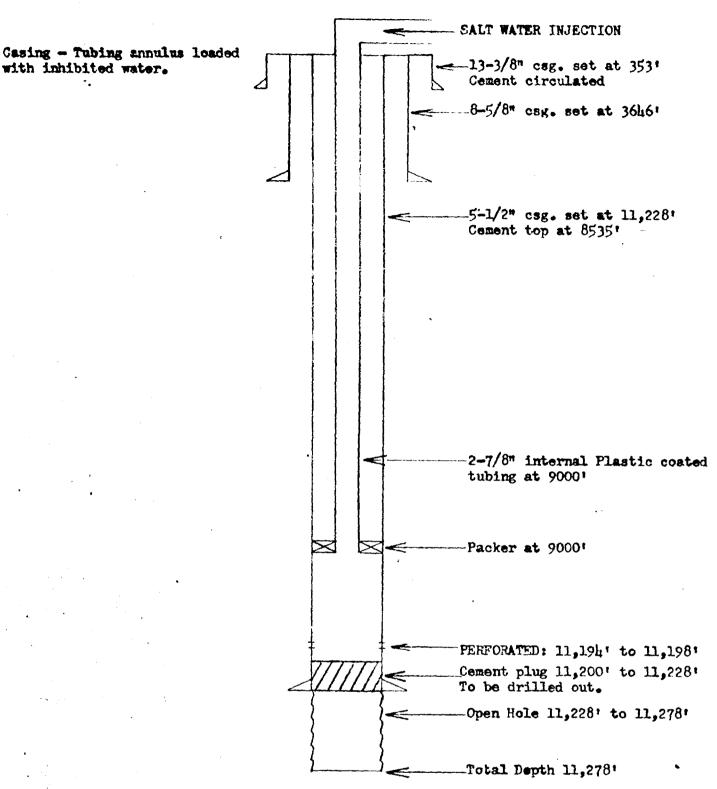
CHF/pw

Attachments

cc: Land Commissioner
P. O. Box 1148
Santa Fe, New Mexico 87501

Amerada Div.-Amerada Hess Corp. P. O. Box 312 Midland, Texas 79701

Union Oil Company of California Union Oil Building Midland, Texas 79701



COMPANY:

TEXACO INC.
NEW MEXICO "BB" STATE (NCT-1) WELL NO. 2 LEASE:

EAST CAPROCK DEVONIAN POOL:

COUNTY:

LEA

STATE: NEW MEXICO . DATE: MARCH 17, 1970

Cac 4343

GMH/esr

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BEFORE THE CIL 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. 4343 Order No. R-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 April 29, 1960, at Santa Fe, New Mexico, before Examiner Elvis A. Utz NOW, on this____ day of May, 19670, 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 New Mexico "BB" State (NCT-1) Well No. 2, located in Unit N of Section 11 , Township 12 South , Range 32 East, NMPM, East Caprock-Devonian Pool , Lea County, New Mexico. (3) That the applicant proposes to utilize said well to dispose of produced salt water into the ____ Devonian perforated and formation, with injection into the __ open-hole __ interval from approximately 11,194 feet to 11,278 feet. (4) That the injection should be accomplished through 2 1/8 -inch plastic-lined tubing installed in a packer set at

approximately <u>9000</u> feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus 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,
is hereby authorized to utilize its New Mexico "BB" State (NCT-1) Well No. 2,
located in Unit N of Section 11, Township 12 South , Range
32 East, NMPM, East Caprock-Devonian Pool , Lea
County, New Mexico, to dispose of produced salt water into the
Devonian formation, injection to be accomplished through
278 -inch tubing installed in a packer set at approximately
9000 feet, with injection into the open-hole interval
from approximately 11,194 feet to 11,278 feet;
PROVIDED HOWEVER, that the tubing shall be plastic-lined;
that the casing-tubing annulus shall be filled with an inert

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 nereinabeta designated.

CASE 4344: Application of TEXACO INC. FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.