

CASE 4924: Application of TEXACO
FOR SALT WATER DISPOSAL, LEA
COUNTY, NEW MEXICO.

CASE 4924: Application of TEXACO
FOR SALT WATER DISPOSAL, LEA
COUNTY, NEW MEXICO.

4924

Application
Transcripts.

Small Exhibits

ETC.

dearnley, meier & mc cormick

209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87104

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE
NEW MEXICO CONSERVATION COMMISSION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
March 28, 1973

EXAMINER HEARING

IN THE MATTER OF:

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

Case No. 4924

BEFORE: Daniel S. Nutter
Examiner

TRANSCRIPT OF HEARING

1 MR. NUTTER: Case 4924.

2 MR. CARR: Application of Texaco, Inc. for salt water
3 disposal, Lea County, New Mexico.

4 MR. KELLY: Booker Kelly, White, Koch, Kelly &
5 McCarthy, Santa Fe, appearing on behalf of the Applicant. We
6 have one witness to be sworn.

7 KENNETH L. PETERS

8 was called as a witness and, after being duly sworn according
9 to law, testified as follows:

10 DIRECT EXAMINATION

11 BY MR. KELLY:

12 Q Would you state your name, position, and employer, please.

13 A My name is Kenneth Peters and I am employed as a district
14 production engineer for Texaco, Inc. at Hobbs, New Mexico.

15 Q Have you previously qualified in your field as an expert
16 witness before the Commission?

17 A Yes, I have.

18 Q Would you state briefly what Texaco seeks by this appli-
19 cation.

20 A Texaco seeks authority to dispose of produced salt water
21 into the Devonian formation in the perforated interval
22 from 7025 feet to 7366 feet in its New Mexico "BZ" State
23 Well No. 1 located in Unit K of Section 2, Township 25
24 South, Range 37 East, Lea County, New Mexico.

25 Q Referring to the plat which has been marked as Exhibit 1,

1 will you locate the well and explain your color code.

2 A Exhibit 1 is an ownership plat and the Texaco "BZ"
3 lease is outlined in green. The subject well is indicated
4 by the red arrow. The zones immediately above and below
5 the subject Devonian zone were color coded for this exhibit
6 and this was done at the suggestion of John Runyon, the
7 District 1 Oil Conservation Commission Geologist. The
8 zone immediately above Justis-Devonian is the Justis-Tubb-
9 Drinkard and it is color coded in a green color. The
10 Justis-Fusselman north is a lower zone and color coded with
11 red.

12 Q The subject well is actually completed in another zone,
13 is that correct?

14 A Yes, sir, that's correct. The subject well which is located
15 in Unit K of Section 2, Township 25 South, Range 37 East,
16 was authorized as a completion by administrative order
17 MC12.18 dated 2/13/63 and was completed in the present
18 completion zones on March 12, 1963. With Exhibit 2 I will
19 describe this present completion.

20 Q Okay, refer to Exhibit 2 and give us a little history on
21 the present status of the well.

22 A Exhibit 2 exemplifies the present completion. Three strings
23 of tubing have been cemented into the well. The cement
24 top is at 2700 feet. There are two strings of 2-7/8 inch
25 tubing cemented at 7515 feet and one 2-3/8 inch tubing set

1 at 7498 feet.

2 At the present time the Devonian was acidized with
3 11,000 gallons of acid on completion with a potential
4 for 26 barrels of oil and 40 barrels of water. The
5 Devonian was then set in on June 3rd, 1969, producing 2
6 barrels of oil and no water with an accumulative oil pro-
7 duction of 8,946 barrels.

8 At the present time, the Tubb-Drinkard is producing 6
9 barrels of oil per day and 1 barrel of water. The
10 Blinebary Zone is presently flowing 40 barrels of oil per
11 day and 8 barrels of water per day.

12 The Devonian reservoir in this field is essentially
13 depleted with the exception of two wells. Referring to
14 Exhibit 1 again, you will see those two wells are the Shell
15 "JP" Well No. 1 located in Ur't C of the same section,
16 and it is presently producing 13 barrels of oil per day
17 and 3 barrels of water per day and is structurally one
18 foot high to the subject well. The second exception is
19 the Texaco Irwin B Well No. 4 located in Township 24 South,
20 Range 37 East in Section 35, Unit O. It is 18 feet low to
21 the subject well and is producing 32 barrels of oil per
22 day and 3 barrels of water per day.

23 Q Except for those two wells, the other wells are presumably
24 depleted and should be shut in, is that correct?

25 A Yes, sir.

1 Q Referring to Exhibit 3, will you describe your planned
2 completion.

3 A Texaco will, with the approval of this application, inject
4 water -- will install a 1-1/2 inch plastic coated tubing
5 string set at a depth of 6975 feet and secured with a
6 plastic covered packer at that depth. Texaco will then
7 inject into the Devonian Zone from the interval of 7025
8 feet to 7366 feet and this will be at a rate of 70 barrels
9 per day on gravitation.

10 This produced water will be coming solely from the
11 sub-lease, the Tract Ten Lease.

12 Q Do you expect that that rate will go up?

13 A Yes, it may go up to 200 barrels before the primary deple-
14 tion of the sub-lease, and this will be in a four to five
15 year period.

16 Q What are you doing with the water presently?

17 A The water is presently being trucked or hauled from this
18 location.

19 Q Now, you are going to have a pressure gauge, are you not?

20 A Yes, sir.

21 Q Do you think that the installation you have shown on
22 Exhibit 3 will prevent the migration of this water to any
23 other producing zone?

24 A Yes, sir.

25 Q Do you feel that injecting this much water, as high as 200

1 barrels a day, will have any adverse affect on any of the
2 Devonian wells in the area?

3 A No, sir, I do not.

4 Q Do you have any calculations to show how much water it will
5 take to reach the Shell Well?

6 A Reservoir calculations based on an initial rate of 70
7 barrels per day indicate that the proposed injection inter-
8 val would take 77 years for the injected fluids to reach
9 the well bore of the nearest Devonian completion, which
10 is the Shell "JP" Well No. 1 located in Unit C of Township
11 25 South, Range 37 East.

12 Q And Exhibit 4 is your log showing your perforations?

13 A Exhibit 4 is a gamma ray sonic log of the subject well
14 from 4400 to 4500 feet. The proposed perforations are
15 indicated by the red brackets on the log and the top of
16 the Devonian formation is at 7000 feet.

17 Q In your opinion, would the granting of this application
18 have any adverse affect on the correlative rights of any
19 of the operators in the area?

20 A No, it will not.

21 Q Were Exhibits 1 through 4 prepared by you or under your
22 supervision?

23 A Yes, sir.

24 MR. KELLY: At this time we move for the introduction
25 of Exhibits 1 through 4.

1 MR. NUTTER: Texaco Exhibits 1 through 4 will be ad-
2 mitted in evidence without objection.

3 (Whereupon Applicant's Exhibits 1 through 4 were
4 admitted in evidence.)

5 MR. KELLY: I have nothing further on direct examina-
6 tion, Mr. Examiner.

7 CROSS EXAMINATION

8 BY MR. NUTTER:

9 Q How much do these two wells that are presently producing
10 in the Devonian make?

11 A The Shell "JP" Well is producing 13 barrels of oil per
12 day and 3 barrels of water per day. The Texaco No. 4
13 is presently producing 32 barrels of oil per day and 3
14 barrels of water per day.

15 MR. NUTTER: Are there any other questions of Mr.
16 Peters?

17 (No response)

18 MR. NUTTER: He may be excused.

19 (Witness excused)

20 MR. NUTTER: Do you have anything further, Mr. Kelly?

21 MR. KELLY: Nothing further.


22 MR. NUTTER: Does anyone wish to offer any testimony
23 in Case 4924?

24 (No response)

25 MR. NUTTER: Case 4924 will be taken under advisement.

I, RICHARD E. McCORMICK, a Certified Shorthand Reporter,
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.

Richard E McCormick
Certified Shorthand Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner Hearing of Case No. 4924,
heard by me on 3/28, 1979.

_____, Examiner
New Mexico Oil Conservation Commission

1

I N D E X

2

WITNESSPage

3

KENNETH L. PETERS

4

Direct Examination by Mr. Kelly

3

5

Cross Examination by Mr. Nutter

8

6

EXHIBITSOfferedAdmitted

7

Applicant's Exhibit 1 - ownership plat

4

8

8

Applicant's Exhibit 2 - general plan

4

8

9

Applicant's Exhibit 3 - planned instal-
lation

6

8

10

11

Applicant's Exhibit 4 - perforations log

7

8

12

13

14

15

16

17

18

19

20

21

22

23

24

25



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

April 19, 1973

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMijo
MEMBER

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

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

Re: Case No. 4924

Order No. R-4506

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

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

OTHER State Engineer Office

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. 4924
Order No. R-4506

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 March 28, 1973, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 19th day of April, 1973, 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 "BZ" State Well No. 1, a triple tubingless completion in the Justis-Blinbry, Justis Tubb-Drinkard and North Justis-Devonian Pools, located in Unit K of Section 2, Township 25 South, Range 37 East, NMPM, 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 interval from approximately 7,025 feet to 7,090 feet.

(4) That the injection should be accomplished through 1 1/2-inch plastic-lined tubing installed in a packer set at approximately 6,975 feet in the 2 7/8-inch casing; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus 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.

-2-

Case No. 4924
Order No. R-4506

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to utilize its New Mexico "BZ" State Well No. 1 a triple tubing-less completion in the Justis-Blinbry, Justis Tubb-Drinkard, and North Justis Devonian Pools located in Unit K of Section 2, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 1 1/2-inch tubing installed in a packer set at approximately 6,975 feet in the 2 7/8-inch casing with injection into the perforated interval from approximately 7,025 feet to 7,090 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 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.

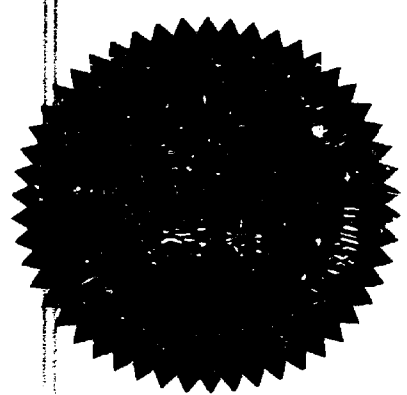
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


BRUCE KING, Chairman


ALEX J. ARMIJO, Member


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


S E A L

dr/

- CASE 4923: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 360-acre non-standard gas proration unit comprising lots 16, 17, and 18 and the SE/4 and E/2 SW/4 of Section 4, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Meyer B-4 Well No. 4 located in Unit S of said Section 4.
- CASE 4924: 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 interval from 7025 feet to 7366 feet in its New Mexico "BZ" State Well No. 1, a triple tubingless completion, located in Unit K of Section 2, Township 25 South, Range 37 East, North Justis-Devonian Pool, Lea County, New Mexico.
- CASE 4925: Application of Shenandoah Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Robinson-Jackson Unit Area comprising 1160 acres, more or less, of Federal lands in Township 17 South, Range 29 East, Eddy County, New Mexico.
- CASE 4926: Application of Shenandoah Oil Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Robinson-Jackson Unit Area by the injection of water into the Grayburg-San Andres formation through 16 wells in Sections 27, 34, and 35, Township 17 South, Range 29 East, Grayburg-Jackson Pool, Eddy County, New Mexico.
- CASE 4927: 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 into the Devonian formation in the perforated interval from 12,000 feet to 12,010 feet in its Federal "D" Well No. 2 located in Unit J of Section 31, Township 9 South, Range 36 East, West Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4928: Application of Union Oil Company of California for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to the Atlantic Richfield Oil Company Pure-Federal Well No. 11 located in Unit K of said Section 11. Applicant further seeks a provision for the payment of proper costs to be borne by applicant for such well and the related well equipment, a provision for allocation of actual operating costs, and the establishment of charges for supervision of such well and the designation of an operator thereof; and for such other relief as proper. Also to be considered will be the risk involved in drilling the subject well.

Cemented down three strings
with 1300 sacks. Cement top
at 2700'.

1 1/2" tubing

gauge

*will install
1 1/2" plastic
coated
tubing
6975' w/ packer
70 BWPD dip.
all from
BZ 10 team*

DEVONIAN

BLINEBRY

TUBB-DRINKARD

11-3/4" csg. set at 258'.
Cemented with 300 sacks.
Cement circulated

8-5/8" csg. set at 3500'.
Cemented with 1450 sacks.
Cement circulated

2-3/8" csg. set at 7498'.

2-7/8" csg. set at 7515'.

2-7/8" csg. set at 7515'.

BLINEBRY

PERF:
5116' to 5620'

TUBB-DRINKARD

PERF:
5936' to 6197'

DEVONIAN

PERF:
7025' to 7090'

*after acid w/ 46000 gals.
26 BO to BO potential in 63*

5I in 64 prod 2 BOPD

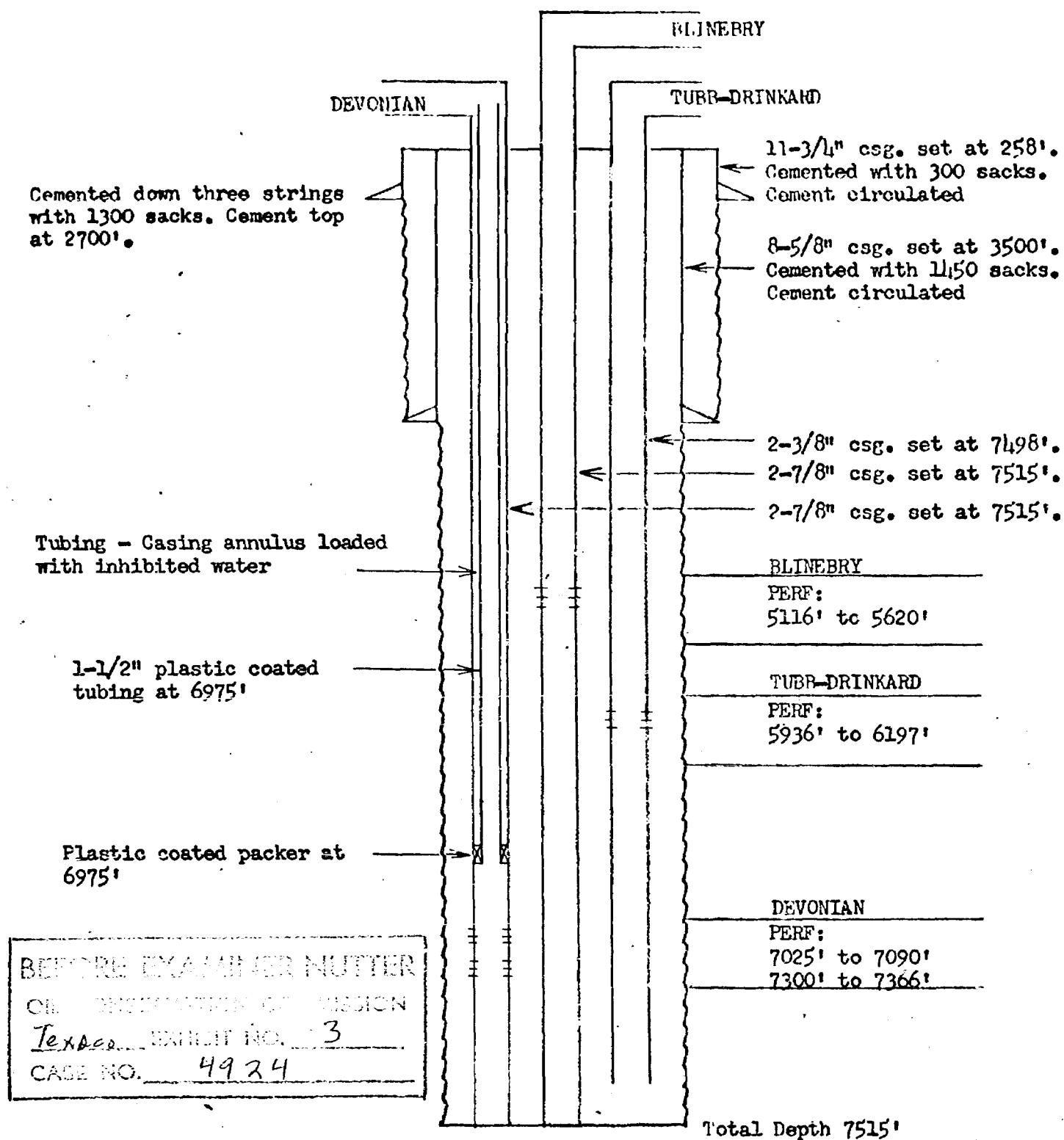
6946 cum prod

Total Depth 7515' from Dev

Texaco
4934

PRESENT COMPLETION
TEXACO INC.

NEW MEXICO "BZ" STATE (NCT-10) WELL NO. 1
NORTH JUSTIS (BLINEBRY, TUBB-DRINKARD, DEVONIAN)
LEA COUNTY, NEW MEXICO



PROPOSED COMPLETION
 TEXACO INC.
 NEW MEXICO "BZ" STATE (NCT-10) WELL NO. 1
 NORTH JUSTIS (BLINEBRY, TUBB-DRINKARD, DEVONIAN)
 LEA COUNTY, NEW MEXICO

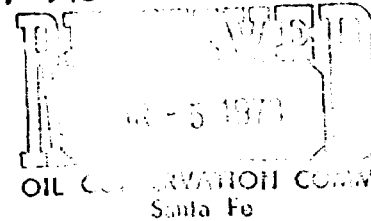


PETROLEUM PRODUCTS

March 1, 1973

TEXACO INC.
DRAWER 728
HOBBS, NEW MEXICO 88240

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



REQUEST FOR EXAMINER HEARING
New Mexico 'BZ' State (NCT-10) Well No. 1
Justis Devonian North Pool
Lea County, New Mexico


Gentlemen:

It is requested that an examiner hearing be scheduled to consider the application of Texaco Inc. for approval to dispose of produced water in the Justis Devonian North Pool, Lea County, New Mexico.

At this hearing, Texaco will ask permission to dispose of produced salt water into their New Mexico 'BZ' State (NCT-10) Well No. 1 located in Unit K, Section 2, Township 25 South, Range 37 East, Lea County, New Mexico. Disposal will be via plastic coated tubing into a perforated interval from 7025 feet to 7366 feet. Initially, the disposal rate into the well will be 70 barrels of water per day by gravitation.

Enclosed with this request are three copies of a plat of the area showing the proposed SWD well, three copies of the log of the well, and a diagrammatic sketch of the proposed disposal well.

Yours very truly,


J. V. Gannon
District Superintendent

KLP:wg
MAS, Jr.
JSR
Enclosures

DOCKET MAILED
Date 3/15/73

DRAFT

dr/

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. 4924

Order No. R- 4506

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 March 28, 1973,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of April, 1973, 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 "BZ" State Well No. 1
a triple tubingless completion in the Stanton Justice
located in Unit K of Section 2, Township 25 South, Range
Blueberry, Stanton Tubingless Completion and North Justice-Devonian Pools,
37 East, NMPM, A, 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 interval
from approximately 7,025 feet to 7,366 feet.

(4) That the injection should be accomplished through

1 1/2-inch plastic-lined tubing installed in a packer set at

approximately 1975 feet ^{in the 2 7/8-inch casing;} 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, Texaco Inc., is hereby authorized to utilize its New Mexico "BZ" State Well No. 1 ^{a triple tubingless completion in the North Justis-Devonian, North Justis Tubb-Drinking, and North Justis Devonian Pools} located in Unit 2 of Section 25, Township 25 South, Range 37 East, NMPM, North Justis-Devonian Pool, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 1 1/2-inch tubing installed in a packer set at approximately 6975 feet ^{in the 2 7/8-inch casing} with injection into the perforated interval from approximately 7,025 feet to 7,366 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 ~~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.