

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

September 27, 1962

EXAMINER HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

IN THE MATTER OF:)
 Application of Texaco Inc., for per-)
 mission to dispose of salt water, Lea)
 County, New Mexico. Applicant in the)
 above-styled cause, seeks permission)
 to dispose of salt water into the)
 Devonian formation through the Shell)
 State of New Mexico "A" Well No. 3,)
 located 990 feet from the South line)
 and 660 feet from the West line of)
 Section 2, Township 11 South, Range)
 37 East, Echols (Devonian) Pool, Lea)
 County, New Mexico.)

CASE NO.
2646

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

EXAMINER UTZ: We will call case 2646.

MR. PORTER: Mr. Examiner, in connection with Case 2646,
 I have contacted Mr. Charlie White, the attorney for Texaco,
 Incorporated, who advised me he had notified our office by tele-
 phone he wanted the case continued and also filed a Notice of
 Continuance yesterday afternoon and due to the fact that the
 Examiner was absent yesterday, it was not brought to his attention;
 but he requests a continuation of the case to the last Examiner



DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.
PHONE 243-6691

SANTA FE, N. M.
PHONE 983-3971

FARMINGTON, N. M.
PHONE 325-1182

Hearing in October.

EXAMINER UTZ: Which is set for the 24th?

MR. PORTER: Tentatively.

EXAMINER UTZ: Case 2646 will be continued to the last
Examiner Hearing in October.

* * *



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

September 27, 1962

EXAMINER HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

IN THE MATTER OF:

Application of Texaco Inc., for per-
mission to dispose of salt water, Lea
County, New Mexico. Applicant, in the
above-styled cause, seeks permission
to dispose of salt water into the
Devonian formation through the Shell
State of New Mexico "A" Well No. 3,
located 990 feet from the South line and
660 feet from the West line of Section
2, Township 11 South, Range 37 East,
Echols (Devonian) Pool, Lea County,
New Mexico.

CASE NO.
2646

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

EXAMINER UTZ: Case No. 2646.

MR. DURRETT: Application of Texaco Inc., for permission
to dispose of salt water, Lea County, New Mexico.

Off the record.

(Whereupon a discussion was held off the record.)

EXAMINER UTZ: We will continue Case No. 2646 to the
end of the docket. As soon as we hear from them, we will decide.



EXAMINER UTZ: Case 2646 again..

MR. PORTER: Mr. Examiner, in connection with Case 2646, I have contacted Mr. Charlie White, the attorney for the Texaco Company Incorporated, who advised me he had notified our office by telephone he wanted the case continued and also filed a letter yesterday afternoon, and due to the fact that the Examiner was absent yesterday, it was not brought to his attention; but he requests a continuance of the case to the last Examiner docket in October.

EXAMINER UTZ: Which is set for the 24th.

MR. PORTER: A tentative letter has been filed.

EXAMINER UTZ: Case 2646 will be continued to the last Examiner Hearing in October.

* * *

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE SEPTEMBER 27, 1962 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Jason Kellahi	Kellahi & Fox	Santa Fe
Carl W. Jones	Phillips Pet. Co.	Midland, Tex.
Charles Malone	Atwood & Malone	Roswell, N.M.
Lewis C. Colby	Hervey, Dow & Hinkle	Roswell, N.M.
E. Morris	Pioneer Production Corp.	Amarillo, Texas
Don Ezitt	Phillips Pet	Midland Tex
George Latow	Paw American	Farmington
Jim Sharp	Cactus Dry Co.	Albany N.M.
Richard F. Merriam	Cactus Drilling Co.	Santa Fe
W. H. Haney	Tidewater, El Paso	El Paso, Tex
Ganett Whitwood	El Paso Natural Gas	El Paso, Tex.
P. J. McLaughlin	El Paso Nat Gas.	Farmington
A. J. Carter	U.S.G.S	Santa Fe.
B. M. Breining	O.C.C.	Albany
C. L. Wader	Tidewater Oil Co.	"
H. J. Tuffly	" " "	Midland, Tex.

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE SEPTEMBER 27, 1962 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE SEPTEMBER 27, 1962 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 24, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc., for permission to dispose of salt water, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to dispose of salt water into the Devonian formation through the Shell State of New Mexico "A" Well No. 3, located 990 feet from the South line and 660 feet from the West line of Section 2, Township 11 South, Range 37 East, Echols (Devonian) Pool, Lea County, New Mexico.

CASE 2646

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2646.

MR. DURRETT: Application of Texaco Inc., for permission to dispose of salt water, Lea County, New Mexico.

MR. KELLY: Booker Kelly of Gilbert, White and Gilbert, appearing for Texaco. I have one witness.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Nos. 1 through 5 marked for identification.)

C. R. BLACK

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243 6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.FARMINGTON, N. M.
PHONE 325-1182SANTA FE, N. M.
PHONE 983-3971ALBUQUERQUE, N. M.
PHONE 243-6691

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

A C. R. Black, employed by Texaco Inc., as Division Proration Engineer out of Midland, Texas.

Q Would you tell the Commission what Texaco seeks in this application?

A Texaco seeks permission to dispose of salt water into the Devonian formation through the Shell State of New Mexico "A" Well No. 3 in the Echols (Devonian) Pool, Lea County, New Mexico. The disposal will be into the State Shell Well No. 1-A, in which well production has been discontinued from the Devonian formation. The Devonian is productive in the area.

Q Could you give the Commission a brief history of this application?

A Yes, sir. In 1958, Shell Oil Company obtained administrative approval to dispose of salt water into the San Andres formation by Administrative Order SWD-9. This was dated March 6, 1958. A joint operation between Shell, Texaco and Sinclair was formed, and a salt water disposal system was actually created. This system continued in operation until May 8, 1962. At that time Shell notified the other operators that they were plugging their well; their wells had reached the economic limit and therefore they would cease as operator of the system. They gave the date that they would discontinue operation as June 10th of '62. Texaco notified Shell that we would take over operation of the



system as was provided for in the agreement.

Q Excuse me, Mr. Black. Could you refer to Exhibit No. 1 so the Examiner can see the location of the wells that you are referring to?

A Yes, sir. Exhibit No. 1 is a plat showing the area of the Echols (Devonian) Field. The Texaco State of New Mexico "A.R." lease is bordered in yellow and the subject well of the application is circled in red. The disposal, San Andres disposal well I was speaking of is the Shell State No. 1-A located immediately east of the Shell State No. 3-A.

Texaco actually took over operation of this system on June 10th, 1962. We have found, and Shell had found during the operation of this San Andres system that excessive pressures were encountered in disposing into the San Andres formation. They were in the neighborhood of 1600 psi, and the maintenance and expense of the system was what we considered unreasonably high. It's around twelve to thirteen hundred dollars a month just to maintain this system.

When Shell proposed the plugging of their Devonian wells, we investigated the possibility of converting one of their Devonian wells into a salt water disposal well and disposing of the Devonian water back into the Devonian formation below the oil-water contact. We completed, or commenced negotiations with Shell to buy their well for the salvage value, and we have not completed those negotiations. We were waiting the outcome of this hearing

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



before actually purchasing the well from Shell.

We originally set a hearing and it was scheduled for September 27th. However, we were advised by Ralph Lowe that they had acquired this lease from the State in the September State land sale, and that they were considering the possibility of re-entering this well and converting it to a San Andres producer. However, by letter of October 5th, Ralph Lowe advised that they no longer opposed our application to dispose into the Devonian formation. We had asked that the hearing be continued and in view of their withdrawal of their opposition, we proceeded with the hearing scheduled this morning.

Q Do you know whether the Commission has a copy of the letter from Ralph Lowe?

A Yes, sir, a joint letter of October the 5th to Texaco and Shell; a carbon copy of that letter was submitted to the Commission.

MR. KELLY: We ask the Commission to take administrative notice of that letter.

MR. UTZ: The Commission will take administrative notice of the letter from Ralph Lowe, or rather from Fred G. Goodman of Ralph Lowe of October 5th, 1962.

Q (By Mr. Kelly) Can you give an estimate of the cost of maintenance and expense that Texaco would have if this application were granted? I think you stated it is twelve to thirteen hundred dollars under the San Andres formation?

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



A Yes, sir. We now are actually incurring expenses between twelve and thirteen hundred dollars. We estimate that if we're allowed to use the Devonian as a disposal formation, we can reduce our maintenance expense by approximately \$400 a month.

Q Do you feel that this would increase the economic life of your wells?

A Yes, sir. It could certainly increase the economic life by reducing the cost attributable to these wells.

Q Could you refer to and explain your Exhibit 2?

A Exhibit No. 2 is a cross section through the Shell State of New Mexico "A" Well No. 3, and the Texaco State of New Mexico "A.R." Well No. 1, and the State of New Mexico "A.R." Well No. 2.

Starting with the well on the left side of the cross section, the Texaco State "A.R." Well No. 1, it is currently completed in an interval from a minus 7471 to a minus 7516. You will notice that this interval straddles the estimated oil-water contact, and at the present time we produce approximately 96 barrels of oil per day along with 739 barrels of water per day from these perforations. Cumulative production as of April 1st, 1961, was 1,010,206 barrels from this well.

This well was originally, at one time has been completed as deep as a minus 7745. We deepened the well to obtain an increase in Devonian production. However, over the period of years from the time this well was originally completed, we have

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



been forced to plug back to squeeze off water and re-complete as oil-free. We have actually seen the oil-water contact gradually encroach into this well.

The Texaco State of New Mexico "A.R." Well No. 2 is currently completed from a minus 7339 to a minus 7347, and it is free of water production. It produces approximately 20 barrels of oil per day. The cumulative production from this well as of March 1st, 1962, was 997,998 barrels. We did have perforations from a minus 7477 to a minus 7497, which straddled the estimated oil-water contact. However, in April -- or excuse me, May of this year we did squeeze those perforations off because we were producing approximately 400 barrels of water per day, and we believe that the oil-water contact had entered into those perforations. We did re-complete higher into the Devonian and now have water-free production.

The Shell State "A" Well No. 3, the well on the right side of the cross section, was drilled to a total depth of 11,750 feet, and was completed in an open hole interval from minus 7739 to minus 7799. Shell perforated an additional section from a minus 7711 to a minus 7730 to obtain an increase in Devonian production, and then they did plug back to a total depth, a new total depth of 11,712 feet, which is a minus 7761. That was in an effort to shut off water production. Their production prior to that plugging back was 89 barrels of oil and 740 barrels of water. Their production after plugging back was



83 barrels of oil and 903 barrels of water. They were unsuccessful in that plug-back. This well was shut in on April 15th of 1962 and during the seven-day period prior to shut-in, the well pumped only 14 barrels of oil and in excess of 7,000 barrels of water. This was Shell's reasoning that it had reached the economic limit and they were plugging and abandoning and discontinuing production from this well. We believe that it is well below the oil-water contact, that injection into this formation will not damage the oil column in this reservoir.

Q Could you go on to Texaco Exhibit No. 3 and explain that to the Commission?

A Exhibit 3 is a diagrammatic sketch of the State "A" Well No. 3. At the present time it has 5-1/2 inch casing set at 11,690 feet. The estimated top of the cement behind that 5-1/2 inch casing is 11,000 feet. It has an open hole interval from 11,690 to 11,712, and the perforated interval from 11,662 to 11,682. Texaco proposes to set a Baker Model "D" Packer at 11,600 feet, and we will run a string of 2-3/8ths inch tubing and latch it into that packer and inject below the packer. We anticipate that we will be disposing of a volume of water of approximately 1500 barrels per day, and current injection tests or injectivity tests into the Devonian formation indicate that we can dispose of that volume at 700 psi. However, this interval was squeezed when Shell plugged back, and they never re-acidized this completed interval. So we feel that with an acid treatment



we can reduce that pressure even below the 700 psi. This will certainly give us a more economical operation than our current 1600 psi disposal into the San Andres formation.

Q You have a copy of the lateral log. Would you produce that as Exhibit 4?

A Yes, I believe the Examiner has a copy of the lateral log of the State Well No. 3 and it shows the perforated interval and the open hole interval shown in red.

Q Have you gotten a waiver from Sinclair Oil and Gas?

A Yes, we have a letter dated September 20th to the Oil Conservation Commission from Mr. Joe Medford, Division Production Superintendent for Sinclair Oil and Gas. It states that Sinclair has no objection to this application, and they will actually be a party in the disposal system.

Q That's Exhibit No. 5?

A Yes, sir.

Q Are you aware of whether the State Engineer of the State of New Mexico has given his approval?

A Yes, sir. The State Engineer was furnished a copy of Texaco's application, and by letter of September 26th to Mr. A. L. Porter, Jr., Secretary-Director of the Oil Conservation Commission, from Mr. S. E. Reynolds, State Engineer, by Frank E. Irby, stated that they had no objection to the granting of this application.

MR. KELLY: We ask the Commission to take administrative



notice of that letter.

MR. UTZ: The Commission has a copy of that letter in the file and will take administrative notice of it.

Q (By Mr. Kelly) Do you feel that the granting of this application will have any adverse effect on the reservoir?

A No, sir, I do not.

Q Were Exhibits 1, 2, and 3 prepared by you or under your direction?

A They were prepared under my supervision.

Q Is that the right numbers on the exhibits?

A 1 through 5, with the exception of 5, which was Sinclair's waiver.

MR. KELLY: We ask the introduction of Texaco's exhibits.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Nos. 1 through 5 admitted in evidence.)

MR. KELLY: That's all we have.

CROSS EXAMINATION

BY MR. UTZ:

Q Am I correct in that you intend to inject water through the same perforations that the well produced from?

A That is correct.

Q And your testimony as to the producing history of this



well would indicate in your opinion that this water will be injected below the water-oil contact of the pool?

A Yes, sir, that is correct.

Q The packer will be set below the top of the cement and above the perforations?

A Yes, sir.

Q This will be permanent type packer?

A It will be a Baker Model "D" permanent type packer.

Q What type tubing?

A 2-3/8ths inch tubing.

Q Will this be plastic coated?

A At the present time we do not plan to plastic coat it.

We certainly will continue close observation of the tubing casing annulus and if we note any increase in pressure, then we will take the necessary steps to correct a possible leak in the tubing.

Q Is this tubing already in the well?

A No, sir, it is not.

Q Do you intend to load the annulus with inert liquid?

A Yes, sir, we intend to load the annulus with a non-corrosive fluid.

Q And you will keep a check on the pressures in the annulus?

A Yes, sir, we intend to.

MR. UTZ: Any other questions of the witness?



MR. DURRETT: Yes, sir, I have one question.

BY MR. DURRETT:

Q Mr. Black, I may have missed this on your direct examination. Did you state where you proposed to obtain the salt water?

A The salt water production is water that is produced along with the Devonian oil production. The Commission's order of October 25, 1958, Order No. 1224-A, prohibited the disposal of salt water into surface pits in the Echols (Devonian) Field.

Q This is all produced salt water?

A This is all produced salt water. This is not a secondary recovery or waterflood operation. This is merely a salt water disposal application.

MR. DURRETT: Thank you.

MR. UTZ: Any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in this case? If not, the case will be taken under advisement.

We'll take a ten-minute recess.

(Whereupon, a short recess was taken.)

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



NEW MEXICO OIL CONSERVATION COMMISSION

Examiner Hearing

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE October 24, 1962

TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Gary W Seinger	Skelly Oil Co	Tulsa Okla.
Ronald J Jacob	Skelly Oil Co.	Tulsa, Okla.
Charles E. Davis	Skelly Oil Co.	Tulsa, Okla.
A. J. Losee	Losee & Stewart	Artesia
Charles J. Lane	SKELLY OIL CO.	HOBBS, N.M.
Robert B. Kennedy	Kennedy Oil Co	Artesia N.M.
Jason Kellah	Kellah & Fox	Santa Fe
R. T. Wright	El Paso Natural Gas	Jel, N.M.
C. R. Black	Texaco Inc	Midland Texas
A. E. Snyder	Amerada Petroleum	Hobbs, N.M.
C. R. ANDRIST	AMERADA PETROLEUM	MONUMENT, N.MEX.
J. H. STROUD	UNION PRODUCE CO	SHAEEVORT, LA
A. E. Elliott	JACK L HAMON	Midland, Tex
L. K. Booth	Union Prod. Co.	Midland, Tex.
H. G. Anderson	Pure Oil	Midland Tex
G. B. Sabine	The Pure Oil Co.	Houston, Tex
J. W. Luckett, Jr.	the Pure Oil Co.	Midland, TEX

NEW MEXICO OIL CONSERVATION COMMISSION

Examiner Hearing

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE

October 24, 1962

TIME:

9 A.M.

NAME:	REPRESENTING:	LOCATION:
J. E. Sperling	Kern County Land Co	
J. C. Hurdall	Kern County Land Co	San Francisco, Calif
Richard F. Morris	Asst. Montgomery Federal & Andrews	Santa Fe
W. W. Norton	Union Oil Co of Calif	Roswell
DR Murphy Jr	The Pure Oil Co	Midland
C. O. Fletcher	Union Producing Co.	Midland
J. H. Hoover	Half ...	Roswell
W. W. Kaster		
M. J. Peyton	The Pure Oil Co	Midland
W. J. Farley	VBC	Farmington
J. W. Wederle	Southwest Prod. Co	Farmington
Richard S. Hunt	Shur-Alon Oil Co	Deming, Colo
V. J. Stevens Jr.	Shur-Alon Oil Co	Albuquerque
Guy Buell	Pan Am	FORT WORTH
Booker	S. F.

NEW MEXICO OIL CONSERVATION COMMISSION

Examiner Hearing

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE October 24, 1962 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
<i>P. E. Mackey</i>	<i>Union Producing Co.</i>	<i>Shreveport, La</i>