

CASE 4050: Application of TEXACO  
INC. FOR AN EXCEPTION TO ORDER NO.  
R-3221, AS AMENDED, EDDY COUNTY.

- dse Number

4050

Application

Transcripts.

Small Exhibits

ETC.



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN  
LAND COMMISSIONER  
ALEX J. ARMijo  
MEMBER  
STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

March 3, 1969

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

Re: Case No. 4050  
Order No. R-3687  
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 X

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. 4050  
Order No. R-3687

APPLICATION OF TEXACO INC. FOR AN  
EXCEPTION TO ORDER NO. R-3221, AS  
AMENDED, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8:30 a.m. on February 19, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 28th day of February, 1969, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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 T. W. Heflin Federal Well No. 1, located in Unit O of Section 24, Township 24 South, Range 31 East, NMPM, Cotton Draw-Brushy Canyon Pool, Eddy County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

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CASE No. 4050  
Order No. R-3687

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water produced by applicant's T. W. Heflin Federal Well No. 1 in an unlined surface pit located in Unit O of said Section 24.

(7) That the applicant is presently disposing of approximately two barrels of produced water per day in the subject pit.

(8) That the evidence presented indicates that there are no shallow water wells within four miles of the subject pit.

(9) That there appears to be no water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from said pit.

(10) That the applicant should be permitted to continue to dispose of salt water, produced by applicant's said T. W. Heflin Federal Well No. 1, in the above-described surface pit.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to continue to dispose of water produced in conjunction with the production of oil or gas, or both, by its T. W. Heflin Federal

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CASE No. 4050

Order No. R-3687

Well No. 1, located in Unit 0 of Section 24, Township 24 South, Range 31 East, NMPM, Cotton Draw-Brushy Canyon Pool, Eddy County, New Mexico, in the unlined surface pit located in said Unit 0 until further order of the Commission.

(2) That the Commission may by administrative order rescind such authority whenever it reasonably appears to the Commission that such rescission would serve to protect fresh water supplies from contamination.


(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

  
ALEX J. ARMILLO, Member

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

  
esr/

DOCKET: REGULAR HEARING - WEDNESDAY - FEBRUARY 19, 1969

OIL CONSERVATION COMMISSION - 8:30 A. M. - MORGAN HALL, STATE LAND OFFICE  
BUILDING, SANTA FE, NEW MEXICO

- ALLOWABLE: (1) Consideration of the oil allowable for March, 1969;
- (2) Consideration of the allowable production of gas for March, 1969, from thirteen prorated pools in Lea, Eddy, and Roosevelt Counties, New Mexico; consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico.

CASE 3834: (Reopened):

In the matter of Case No. 3834 being reopened pursuant to the provisions of Order No. R-3479, which order suspended for a period of one year beginning August 1, 1968, certain portions of Rules 14 (A) and 15 (A) of the General Rules and Regulations for the prorated gas pools of Northwest New Mexico, promulgated by Order No. R-1670, as amended. All interested parties may appear and show why said Order No. R-3479 should or should not be rescinded.

CASE 3996 (Continued from the January 15, 1969, Regular Hearing)

Application of Martin Yates, III, for an exception to Order No. R-3221, as amended, Eddy 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, after January 1, 1969. Said exception would be for the applicant's Cordie King Well No. 1 located in Unit L of Section 22, Township 23 South, Range 26 East, Kark Canyon (Delaware) Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid quarter-quarter section.

CASE 4026 (Continued from the January 15, 1969, Regular Hearing)

Application of Fred Pool Drilling Company for an exception to Order No. R-3221, as amended, Eddy 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, after January 1, 1969. Said exception would be for the applicant's leases located in Sections 8 and 9, Township 25 South, Range 30 East, Corral Canyon-Delaware Pool, Eddy

(Case 4026 continued)

County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in three unlined surface pits located in the SW/4 NW/4 and the SE/4 SE/4 of said Section 8, and the SW/4 SW/4 of said Section 9.

CASE 4027: (Continued from the January 15, 1969, Regular Hearing) Application of MacDonald Oil Corporation for an exception to Order No. R-3221, as amended, Eddy 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, after January 1, 1969. Said exception would be for the applicant's Sinclair Parke Well No. 1 located in Unit F of Section 22, Township 17 South, Range 30 East, Jackson Abo Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid Unit F.

CASE 4046: Application of Texaco, Inc., for an exception to Order No. R-3221, as amended, Lea 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 or gas on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's New Mexico State CR Lease located in Section 32, Township 19 South, Range 32 East, Lusk Field, Lea County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in Unit F of said Section 32. In the alternative, applicant seeks the extension of that area excepted from the provisions of Order (3) of said Order No. R-3221 by Order No. R-3221-B to include the aforesaid Section 32.

CASE 4047: Application of Larry C. Squires for an exception to Order No. R-3221, as amended, Lea 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 or gas on the surface ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would authorize the applicant to dispose of produced salt water into three natural salt lakes located in Lea County, New Mexico, as follows:



(Continued Case 4047:)

Laguna Plata, sometimes referred to as Laguna Grande located in Sections 2, 3, 9, 10, and 11, Township 20 South, Range 32 East;

Laguna Gatuna, sometimes referred to as Salt Lake, located in Sections 7, 17, 18, 19, and 20, Township 20 South, Range 33 East;

Laguna Tonto, located in Sections 32 and 33, Township 19 South, Range 33 East, and Section 4, Township 20 South, Range 33 East.

CASE 4048: Application of C. W. Trainer for an exception to Order No. R-3221, as amended, Lea 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 or gas on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's leases located in Section 24, Township 19 South, Range 33 East and in Sections 19, 20, 29, 30, Township 19 South, Range 34 East, undesignated Queen pool, Lea County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells completed on said leases in unlined surface pits on said leases.

CASE 3993: (De Novo)

Application of Coastal States Gas Producing Company for the creation of a new pool and for special pool rules, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian oil pool to be designated the North Baum-Upper Pennsylvanian Pool comprising the following-described lands:

TOWNSHIP 13 SOUTH, RANGE 33 EAST, Lea County, N.Mex.  
Section 19: E/2  
Section 20: NW/4 and S/2  
Section 21: SW/4

and for the promulgation of temporary special rules therefor, including a provision for 160-acre spacing and proration units and the assignment of 80-acre allowables.

Applicant further seeks the contraction of the Lazy J-Pennsylvanian Pool by the deletion from said pool of the E/2 of Section 20 and the W/2 of Section 21, both in the aforesaid Township and Range.

(Case 3993 continued)

Upon application of Max W. Coll, II, this case will be heard De Novo under the provisions of Rule 1220.

CASE 4049: Application of Standard Oil Company of Texas for an exception to Order No. R-3221, as amended, Lea 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 or gas on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January, 1969. Said exception would be for the applicant's wells located in Section 5, Township 24 South, Range 38 East, and in Section 32, Township 23 South, Range 38 East, Stateline-Ellenburger Pool, Lea County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the NE/4 of said Section 5.

CASE 4050: Application of Texaco Inc. for an exception to Order No. R-3221, as amended, Eddy 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 or gas on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's T. W. Heflin Federal Well No. 1 located in Unit O of Section 24, Township 23 South, Range 31 East, Cotton Draw Brushy Canyon Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined pit located in said Unit O.

CASE 4051: Southeastern nomenclature case calling for an order for the creation, extension, and contraction of certain pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico:

(a) Create a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Revelation-Delaware Pool comprising the following:

TOWNSHIP 22 SOUTH, RANGE 25 EAST, NMPM  
Section 18: NW/4 SE/4

Further, for the assignment of approximately 18,120 barrels of oil discovery allowable to the discovery well Marathon

(Case 4051 continued)

Oil Company's Miller Ranch Unit Well No. 1, located in Unit J of said Section 18.

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for San Andres Production and designated as the West Sawyer-San Andres Pool comprising the following:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM  
Section 33: SW/4 SW/4

Further, for the assignment of approximately 24,720 barrels of oil discovery allowable to the discovery well Coastal States Gas Producing Company's Santa Fe Well No. 1, located in Unit M of said Section 33.

(c) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Cisco production and designated as the Fordinkus-Cisco Gas Pool. The discovery well is Charles B. Read's Anderson State Well 1 Y, located in Unit 3 of Section 14, Township 18 South, Range 24 East. Said pool should comprise:

TOWNSHIP 18 SOUTH, RANGE 24 EAST, NMPM  
Section 14: E/2

(d) Create a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the Midway-Devonian Pool. The discovery well is Union Oil Company of California's Midway State Well No. 1, located in Unit F of Section 12, Township 17 South, Range 36 East, NMPM. Said pool should comprise:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM  
Section 12: NW/4

(e) Create a new pool in Chaves County, New Mexico, classified as a gas pool for Grayburg-San Andres production and designated as the Sams Ranch Grayburg-San Andres Gas Pool. The discovery well is Midwest Oil Corporation Federal A No. 1 located in Unit L of Section 10, Township 14 South, Range 28 East, NMPM. Said pool should comprise:

TOWNSHIP 14 SOUTH, RANGE 28 EAST, NMPM  
Section 10: SW/4  
Section 15: NW/4

Regular Hearing-February 19, 1969

Pocket No. 5-69

(f) Contract the Inbe Permo-Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM  
Section 15: S/2, NE/4, and E/2 NW/4

(g) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM  
Section 15: All

(h) Extend the Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 33 EAST, NMPM  
Section 31: NE/4

TOWNSHIP 14 SOUTH, RANGE 32 EAST, NMPM  
Section 1: SE/4

(i) Extend the East Benson-Yates Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 31 EAST, NMPM  
Section 18: N/2 SW/4

(j) Extend the East Bluitt-San Andres Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM  
Section 18: SW/4

(k) Extend the Bluitt-Wolfcamp Gas Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 37 EAST, NMPM  
Section 32: E/2

(l) Extend the Cato-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM  
Section 5: SW/4

(m) Extend the West Henshaw-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 30 EAST, NMPM  
Section 4: Lot 8

(n) Extend the North Indian Hills-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM  
Section 8: All  
Section 16: All  
Section 17: All

(o) Extend the Lazy J-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 33 EAST, NMPM  
Section 19: NE/4  
Section 20: NW/4

(p) Extend the McMillan-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM  
Section 19: All

(q) Extend the Quail-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM  
Section 11: E/2

(r) Extend the Sulimar-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM  
Section 13: S/2 SE/4  
Section 24: NW/4 NE/4

Regular Hearing - February 19, 1969

Docket No. 5-69

(s) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM  
Section 24: SE/4

(t) Extend the vertical limits of the North Baum--Upper Pennsylvanian Pool in Lea County, New Mexico, to include all of the Upper Pennsylvanian formation in the interval from 9554 feet to 9814 feet on the log of the Coastal States Federal "20" Well No. 2, located in Unit N of Section 20, Township 13 South, Range 33 East, NMPM.

TEXACO  
INC.

PETROLEUM PRODUCTS



101  
JAN 30 1969

DRAWER 728

HOBBS, NEW MEXICO 88240

January 29, 1969

*Case 40-50*

REQUEST FOR HEARING

Exception to Order No. R-3221  
Cotton Draw Brushy Canyon Pool  
Eddy County, New Mexico

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

Gentlemen:

It is respectfully requested that a hearing be scheduled before the Oil Conservation Commission to consider the application of TEXACO Inc. for an exception to Order No. R-3221, as amended. It is proposed that TEXACO Inc. be allowed to continue to dispose of produced salt water in an unlined pit located in Unit O, Section 24, Township 24 South, Range 31 East, Eddy County, New Mexico. This pit serves TEXACO's T. W. Reflin Federal Well No. 1, Cotton Draw Brushy Canyon Pool, which is also located in the above stated location.

Pauley Petroleum, Inc., 514 Bank of the Southwest Building, Midland, Texas 79701, and the United States Geological Survey, Drawer 1857, Roswell, New Mexico 88201, are being notified of the application by copy of this letter.

Yours very truly,

C. L. Whigham, Jr.  
Division Proration Engineer

EDMc-cmc

WDH

CC: Pauley Petroleum, Inc.  
U.S.G.S. - Roswell, N. M.

By: *E. D. McCarter*  
E. D. McCarter

DOCKETED

Date *2-10-69*



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

February 19, 1969

REGULAR HEARING

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IN THE MATTER OF: )

Application of Texaco, )  
Inc., for an exception to )  
Order No. R-3221, as )  
amended, Eddy County, New )  
Mexico. )  
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Case No. 4050

BEFORE: A. L. Porter, Jr., Secretary, Director  
Alex J. Armijo, Land Commissioner  
George Hatch, Counsel

TRANSCRIPT OF HEARING



MR. PORTER: Case 4050.

MR. HATCH: Case 4050, Application of Texaco, Inc.,  
for an exception to Order No. R-3221, as amended, Eddy County,  
New Mexico.

MR. WHITE: May the record show the same appearances,  
and the same witness, and that he has duly been sworn?

MR. PORTER: Let the records so show.

(Witness sworn.)

(Whereupon, Applicant's Exhibits  
Numbers 1 through 7, inclusive,  
were marked for identification.)

CARL L. WHIGHAM

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Whigham, this is a similar application for an  
exception to R-3221 for Texaco's T. W. Heflin Federal Well No. 1,  
is it not?

A Yes, sir.

Q Will you refer to Exhibit Number 1, and explain the  
plat?

A Exhibit 1 is a map of the Cotton Draw Unit area. The  
hatched line encompasses a broad area, in excess of 50 or 60

square miles, which is known as the Cotton Draw Exploration Unit. All of the oil pools and gas pools that produce in this vicinity are marked, and Texaco's T. W. Heflin lease is located in the pool shown and designated as the Cotton Draw Brushy Canyon Pool. This is located in Section 24, Township 24 South, Range 31 East.

Again, in this map as in the previous case, we have designated the water wells in this vicinity numerically in red circles. The nearest well is shown on this map to be located about three miles southwest from the Cotton Draw Brushy Canyon Oil Pool.

The No. 2 well is located about six miles northeast of the Cotton Draw Brushy Canyon Pool.

The No. 3 well is about a mile south of the No. 2 well.

Then the No. 4 well is located three miles southwest from the Cotton Draw Brushy Canyon Oil Pool. This particular pool is a one-well pool, producing from Texaco's Heflin lease well No. 1.

Q How much water does this one well produce?

A This well is producing approximately two barrels of water daily.

Q So what we are asking for is an exception for seven barrels?

A Two barrels daily, or one barrel in excess of what is

already permitted by the Commission.

Q How much oil does this well produce?

A Oil production is less than 2 and a half barrels a day.

Q In your opinion, has that well reached its economic limit?

A It is at its economic limit. It makes a very small profit on an annual basis, if no work is required on the well.

Q And production is declining both in oil and water?

A Yes, sir.

Q What is the approximate amount of water that has been disposed of in this pit up to date?

A Since the well was completed in 1952, approximately 22,000 barrels of water have been disposed of in that pit.

Q What additional amount of water in the future do you figure it will produce?

A At two barrels a day for another year would be less than a thousand barrels of water.

Q When do you anticipate the life of this well to expire?

A Based upon the production performances and curves, it could be estimated that the well would require abandonment in approximately one year.

Q Will you refer to Exhibit Number 2, and explain the well performance?

A Yes, this exhibit is a plat of the gas-oil ratio, the oil production, and the water production since the well was completed in 1959. The gas-oil ratios are averaging about 1,500 cubic feet per day. The oil production has declined to approximately two to two and a half barrels of oil per day. And the water production is down to approximately two barrels of water daily.

Q Would you explain Exhibit 3?

A Exhibit 3 is a listing of the water wells that were mentioned in conjunction with our explanation of Exhibit Number 1.

Number 1 well is located about three miles southwest of the subject lease, and producing from the Triassic at a depth of about 420 feet.

Well No. 2 is located in Section 3, approximately six miles northeast of the subject lease, and also produces from the Triassic at a total depth of 500 feet.

Immediately south of well No. 2 is well No. 3, listed here as being in Section 3, and it produces from the Quaternary alluvium at a depth of about 60 feet.

And then the well designated as No. 4 is located in Section 33, about three miles southeast from the subject lease, and produces from the Triassic at a depth of about 367 feet.

Then No. 5 designates the numerous water wells that have been drilled in Section 2, completed in the Triassic and also in the Pustler. There are five wells here. This group of water wells supplies the makeup water for the water flooding operation conducted down in the Paducah-Delaware Pool, located in the southern portion of the Cotton Draw Unit.

Q Refer to Exhibits 4, 5, and 6, and explain those, please?

A Exhibits 4, 5, and 6 are the water analyses for the wells designated 1 through 5 just discussed. The analyses shows that most of this water is of good quality. Well No. 1 has--

Q I don't believe their exhibits show the well numbers.

A Exhibit Number 4 contains three analyses. The one to the extreme right designated by a windmill is the one that applies to well No. 1, and shows that the water is brackish with chlorides in the amount of 1,400 parts per million.

Exhibit Number 5 contains three analyses, and reading from left to right, they would be numbered 2, 3, and 5.

And then Exhibit Number 6 is the water analysis for well No. 4. Well No. 4 is shown to exhibit a chloride content of 14,000 parts per million. Water is hauled into this area to give to the stock.

Q Now, will you explain the oil gas water production as

shown on Exhibit 7?

A This exhibit shows the pertinent information concerning all of the fields in this immediate vicinity. The Paduca-Delaware Pool produces practically all of the brine water, or the produced salt water in this area. It produces 300 barrels per day. However, all of this is reinjected into the water flood area there in the Paduca-Delaware Unit. The only other pool producing significant quantities of water is the Double X Delaware, where Tenneco and Continental hold most of the leases up there. That field produces 110 barrels of water daily. All of the other pools produce less than 25 barrels of water daily and, of course, the first one listed here is Texaco's one-well pool, the Cotton Brushy Canyon, producing only two barrels of water daily.

Now, it might be appropriate at this time to mention that the Paduca-Delaware East produces 13 barrels of water a day. This is a one-well pool located in Section 14, Township 25 South, Range 32 East. And on a recent date, O'Neill, the operator of this well, made application and received approval for an exception to the no pit order for the Paduca-Delaware East.

Q Since the preparation of this exhibit, did you ascertain the chloride content in this lease 13 in this Paduca-Delaware East?

A Yes, sir. The chloride content of the produced water there, I believe, is in excess of 150,000 parts per million.

Q Will this pit provide adequate storage space and evaporative surface?

A Yes, sir, it surely will.

Q In your opinion, will the granting of this application prevent waste and prolong the economic life of this well?

A It will provide for the continued operation of this well.

Q Does that complete your testimony?

A Yes, sir.

Q Were these exhibits prepared by you or under your direction?

A Yes, they were.

MR. WHITE: At this time, we offer the exhibits.

MR. PORTER: The exhibits will be admitted into the record.

(Whereupon, Applicant's Exhibits  
Numbers 1 through 7, inclusive,  
were admitted in evidence.)

MR. SUMER: That concludes our testimony.

MR. PORTER: Any questions?

9

CROSS EXAMINATION

BY MR. NUTTER:

Q Simply to recap your testimony, Mr. Whigham, your big map is Exhibit Number 1?

A Yes, sir.

Q Now, in Exhibit Number 1, you show all the water wells that exist in this area?

A Yes, sir.

Q How many of those water wells could be classified as shallow Quaternary water wells?

A Only No. 3.

Q What is the distance of that well No. 3 to your disposal pit?

A About three and a half miles northeast.

MR. NUTTER: Thank you.

MR. PORTER: Does anyone else have any questions?

The Commission will take the case under advisement.

MR. HATCH: I notice that on the Gocket the location of this well was incorrectly shown as located in Township 23 South. If the legal advertisement is correct, it should read 24 South.

MR. PORTER: Will it be necessary to readvertise?

MR. HATCH: No.



advised that

I N D E X

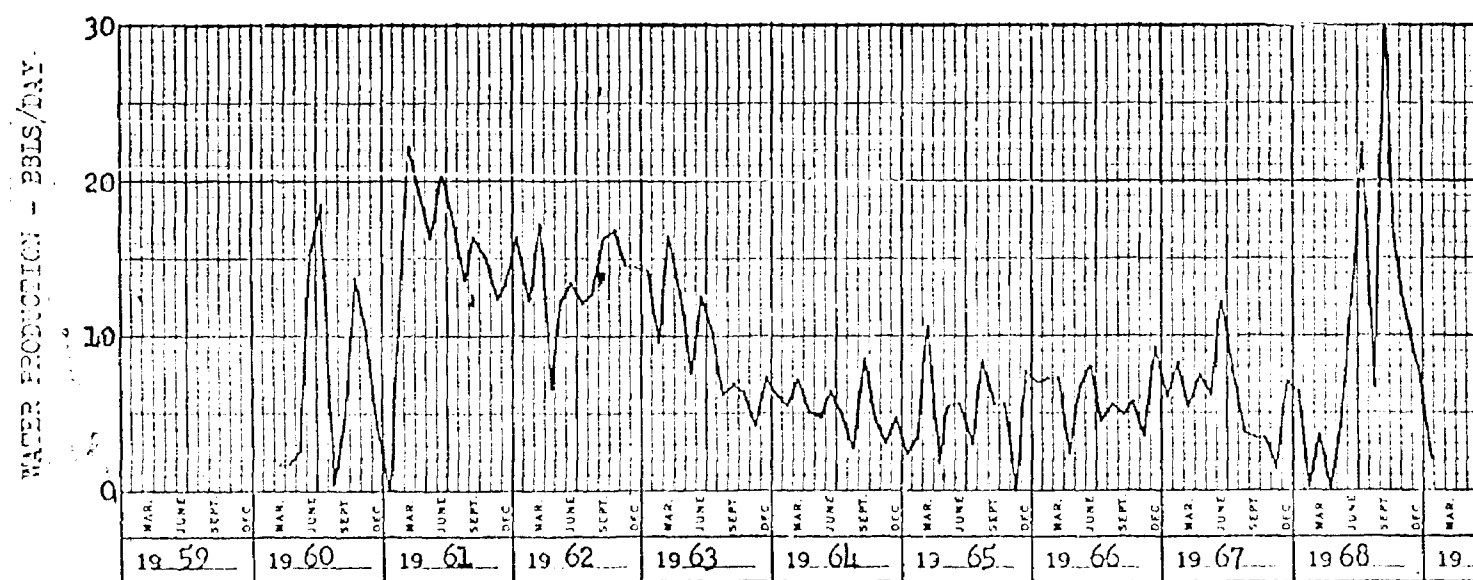
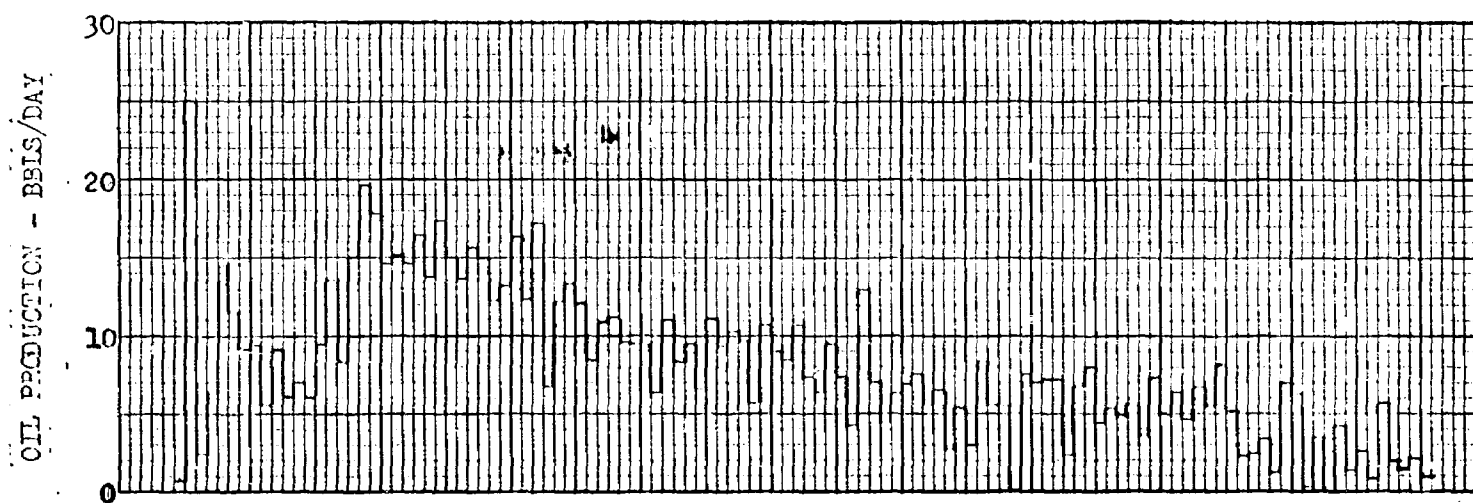
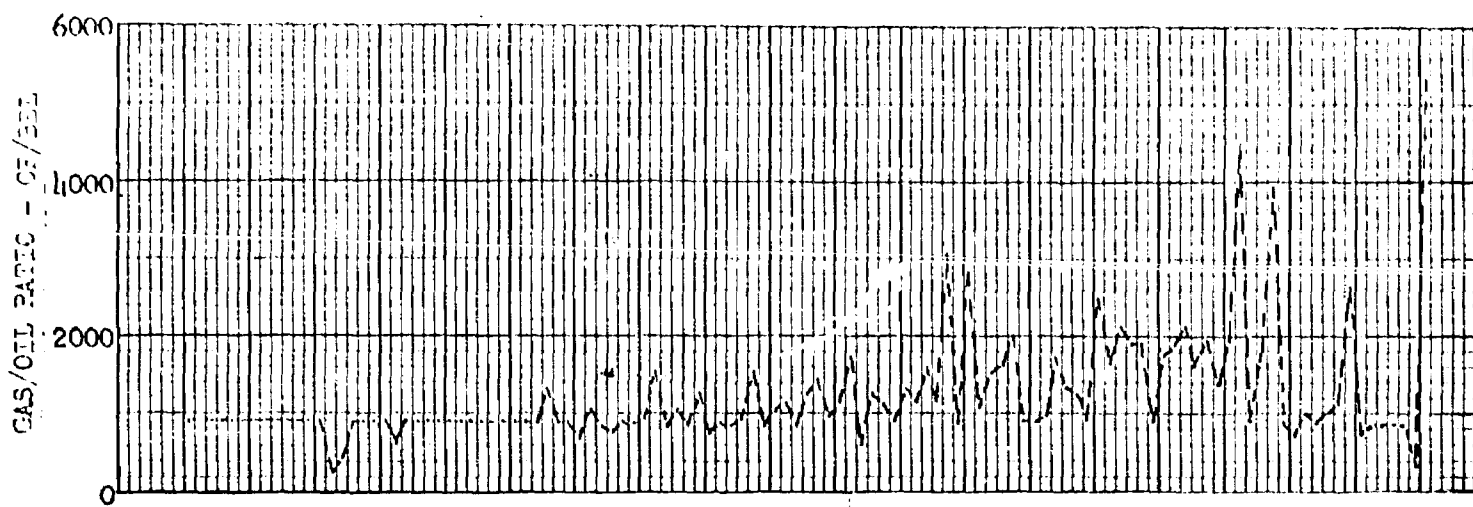
<u>WITNESS</u>	<u>PAGE</u>
CARL L. WHIGHAM	2
Direct Examination by Mr. White	2
Cross Examination by Mr. Nutter	2

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1 through 7	2	8

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.

  
COURT REPORTER



BEFORE  
OIL CONSERVATION  
COTTON DRAW BRUSHY CANYON POOL  
EDDY COUNTY, NEW MEXICO  
1/1/59

TEXACO INC.  
MIDLAND DIVISION

PERFORMANCE CURVES

T. HEFLIN FEDERAL LEASE  
COTTON DRAW BRUSHY CANYON POOL  
EDDY COUNTY, NEW MEXICO

DRAWN BY: JBS DATE: 2-17-69

WATER WELL INFORMATION

Township 24 South, Range 31 East

- ① Sec. 33 SW/4 NE/4 Triassic  
T.D. 420'  
Stock - Well originally drilled by Pan  
American for drilling purposes.

Township 24 South, Range 32 East

- ② Sec. 3 SE/4 NW/4  
T.D. 500'  
Domestic and Stock
- ③ Sec. 10 SE/4 SW/4 Quaternary  
T.D. 604'  
Domestic and Stock
- ④ Sec. 33 NW/4 SE/4 Triassic  
T.D. 367'  
Stock - Drinking water is hauled in.

Township 25 South, Range 31 East

- ⑤ Sec. 2 NE/4 and NE/4 SE/4 Triassic and Rustler  
5 Wells  
T.D. 900' to 1017'  
Used for secondary recovery in Paduca  
Delaware Pool.

DEPT. OF COMMERCE  
BUREAU OF MINES  
WASHINGTON, D. C.  
Field No. 3  
Circ. No. 4436

## HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY

MIDLAND DIVISION

## LABORATORY WATER ANALYSIS

No. W1-043-69

To Texaco, Inc.Date January 30, 1969Box 728Hobbs, New Mexico 88240Attention: E. D. McCarter

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_

Date Rec. 1-24-69

Well No. \_\_\_\_\_

Depth \_\_\_\_\_

Formation \_\_\_\_\_

County \_\_\_\_\_

Field \_\_\_\_\_

Source \_\_\_\_\_

	<del>N.M. "CR" St.</del>	<del>T. Heflin Fed.</del>	<del>Windmill</del>
Resistivity	<del>.066 @ 77 F</del>	<del>.048 @ 77 F</del>	<del>1.42 @ 77 F</del>
Specific Gravity	<del>1.087</del>	<del>1.193</del>	<del>1.002</del>
pH	<del>5.7</del>	<del>6.2</del>	<del>7.8</del>
Calcium (Ca)	<del>10,200</del>	<del>30,000</del>	<del>880</del> *MPL
Magnesium (Mg)	<del>2,280</del>	<del>3,600</del>	<del>210</del>
Chlorides (Cl)	<del>80,500</del>	<del>177,500</del>	<del>1,400</del>
Sulfates (SO <sub>4</sub> )	<del>110</del>	<del>35</del>	<del>940</del>
Bicarbonates (HCO <sub>3</sub> )	<del>70</del>	<del>105</del>	<del>145</del>
Soluble Iron (Fe)	<del>30</del>	<del>35</del>	<del>N11</del>
Sample from	<del>Separator</del>	<del>Treater</del>	<del>3 mi. SW of T. Heflin</del>

cc: Texaco Inc.  
Attn: A. Wilkinson  
Hobbs, New Mexico Box 458

Remarks:

\*Milligrams per liter

Respectfully submitted,

Frank Whitfield

Analyst: \_\_\_\_\_

cc:

HALLIBURTON COMPANY

By Frank Whitfield  
DIVISION CHIEF

## NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

**HALLIBURTON DIVISION LABORATORY**  
**HALLIBURTON COMPANY**  
**MIDLAND DIVISION**

**LABORATORY WATER ANALYSIS**No. **WL-043-69**To **Texaco, Inc.**Date **January 30, 1969**Box **728****Hobbs, New Mexico 88240****Attention E. D. McCarter**

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_ Date Rec. **1-24-69**

Well No. \_\_\_\_\_ Depth \_\_\_\_\_ Formation \_\_\_\_\_

County \_\_\_\_\_ Field \_\_\_\_\_ Source \_\_\_\_\_

	<b>James Bros. Ranch</b>	<b>James Ranch</b>	<b>Water Well</b>
Resistivity	<b>14.0 @ 78 F</b>	<b>14.0 @ 78 F</b>	<b>2.64 @ 78 F</b>
Specific Gravity	<b>.998</b>	<b>.998</b>	<b>1.000</b>
pH	<b>8.2</b>	<b>7.9</b>	<b>7.6</b>
Calcium (Ca)	<b>45</b>	<b>60</b>	<b>590</b> *MPL
Magnesium (Mg)	<b>30</b>	<b>25</b>	<b>125</b>
Chlorides (Cl)	<b>75</b>	<b>75</b>	<b>250</b>
Sulfates (SO <sub>4</sub> )	<b>20</b>	<b>15</b>	<b>490</b>
Bicarbonates (HCO <sub>3</sub> )	<b>110</b>	<b>95</b>	<b>120</b>
Soluble Iron (Fe)	<b>N11</b>	<b>N11</b>	<b>N11</b>
Sample from	<b>N.E. of T. Heflin</b>	<b>N. E. of T. Heflin</b>	<b>Cotton Draw</b>
	<b>N. Windmill</b>	<b>S. Windmill</b>	
	<b>(2)</b>	<b>(3)</b>	<b>(5)</b>

cc: **Texaco Inc.**  
**Attn: A. Wilkinson**  
**Hobbs, New Mexico**

Remarks:

\*Milligrams per liter

Respectfully submitted,

Analyst: **Frank Whitfield**

cc:

HALLIBURTON COMPANY

By *Frank Whitfield*  
 DIVISION CHEMIST

**NOTICE**

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

TO TEXACO, INC  
MORRIS, N. M.  
WATERFLOOD \_\_\_\_\_

COUNTY \_\_\_\_\_

Milchem, Inc.  
Chemical, Div.

Source and Date of Sample

1. T. Heflin & S.E. Windmill
- 2.
- 3.
- 4.
- 5.

COMPONENT PPM	SAMPLE NO.				
	④ 1	2	3	4	5
Hardness, Calcium	1,350				
Total	20				
Sulfate	14,000				
Chlorides	2.4				
Iron					
Silica	8.0				
PH					
Oxygen, Dissolved					
Hydrogen Sulfide					
Bacteria/ml.					
Aerobic					
Sulfate Reducing					
Specific Gravity	1.000				
Magnesium	30				

# 6  
CA 4050



**OIL, GAS, AND WATER PRODUCTION  
COTTON DRAW AREA**

<u>Pools</u>	<u>No of Wells</u>	<u>BCFD</u>	<u>BWPD</u>	<u>Chlorides</u>	<u>Date Pool Discovered or Created</u>
Cotton Draw Brushy Canyon	1	1	2	177,500	1959
Double X Delaware	19	115	110	123,000	1961
Paduca Delaware	69	800	300	187,000	1963
Paduca Delaware, East	1	18	13	257,000	1967
Paduca Delaware, North	2	13	17	122	1958
Paduca Morrow (Gas)	1	18,000 MCF	2	49,725	1967
Paduca Wolfcamp (Gas)	1	700 MCF	3	159,100	1966
Paduca Devonian (Gas)	1	300 MCF	0		

*159,200*

*Ex 7  
A 4080*

JH/esr  
2-20-69

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

*KMR*  
IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4050

Order No. R-3687

APPLICATION OF TEXACO INC. FOR AN  
EXCEPTION TO ORDER NO. R-3221, AS  
AMENDED, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8:30 a.m. on February 19, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this \_\_\_\_\_ day of February, 1969, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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 T. W. Heflin Federal Well No. 1, located in Unit O of Section 24, Township 24 South, Range 31 East, NMPM, Cotton Draw-Brushy Canyon Pool, Eddy County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water produced by applicant's T. W. Heflin Federal Well No. 1 in an unlined surface pit located in Unit O of said Section 24.

(7) That the applicant is presently disposing of approximately two barrels of ~~produced~~ water per day in the subject pit.

(8) That the evidence presented indicates that there are no shallow water wells within four miles of the subject pit.

(9) That there appears to be no water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from said pit.

(10) That the applicant should be permitted to continue to dispose of salt water, produced by applicant's said T. W.

Heflin Federal Well No. 1, in the above-described surface pit.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to continue to dispose of water produced in conjunction with the production of oil or gas, or both, by its T. W. Heflin Federal Well No. 1, located in Unit O of Section 24, Township 24 South, Range 31 East, NMPM, Cotton Draw-Brushy Canyon Pool, Eddy County, New Mexico, in the unlined surface pit located in said Unit O until further order of the Commission.

(2) That the Commission may by administrative order rescind such authority whenever it reasonably appears to the Commission that such rescission would serve to protect fresh water supplies from contamination.

(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.