

CASE 4271: Application of TEXACO
FOR A WATERFLOOD EXPANSION AND
AMENDMENT OF ORDER R-2748.

Spec letter

Case Number

4271

Application
Transcripts.

Small Exhibits

ETC.

dearnley-meier

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

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



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 25, 1969

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Application of Texaco, Inc., for a) Case No. 4271
waterflood expansion and amendment)
of Order No. R-2748, Lea County,)
New Mexico.)
)

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 4271.

MR. HATCH: Case 4271. Application of Texaco, Inc., for a waterflood expansion and amendment of Order No. R-2742, Lea County, New Mexico.

MR. WHITE: Mr. Examiner, I. C. White, appearing for the Applicant in this case and we have the same witness, who has previously been sworn.

MR. UTZ: Let the record show the witness has been previously sworn in a previous case.

You may proceed.

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

BILLY R. HENSON

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Henson, you are the same Billy R. Henson who testified in Cases 4262 and 4269?

A Yes, sir.

Q Now, will you state briefly what Texaco is seeking by this subject application?

A Texaco seeks to expand our waterflood project on the roads and "A" leases.

Q Will you refer to Exhibit No. 1, being your plat and explain what this is, please?

A Exhibit 1 is a plat of the area, showing all of the wells within a two-mile radius of the waterflood project -- it is color coated to show the zones that are producing or have produced.

Also, we have outlined in red our present project area. It's in Section 26 and 27 -- parts of it. And outlined in yellow is our proposed expansion. We are showing in triangles, the proposed injection wells, and with arrows, our current injection wells.

Q Will this expansion program; will the injection wells be in the same pattern as the existing project?

A Yes, sir, it will.

Q Does this plat show all of the wells that are within a radius of two miles of the operators --

A Yes, sir, it does.

Q Is there anything significant you wish to point out with regard to wells 16 and 17?

A Those are wells, we think, will probably be drilled after we expand our project and evaluate it --

the northwest quarter of Section 26.

Q At the present time, that's outside of your proposed expansion project or existing project?

A Yes, sir. It's outside of the existing project.

Q Now, refer to Exhibit No. 2, the structure map --

A Exhibit No. 2 is a structure map of the Rhodes Yates Pool, again, contoured on top of the Yates.

It's anticline, trending from northwest to southeast, and the purpose of it is to show the limits of the pool.

Q What kind of mechanism drive does the pool have?

A It's a solution gas.

Q Refer to Exhibit 3, now, and explain that exhibit.

A Exhibit 3 is a diagrammatic sketch of the typical injection well that we propose, showing the size and depth of the surface casing -- cementing program and the cement is circulated.

Further, it shows that we have five and a half inch casing set at thirty-one thirteen, cemented with two hundred sacks, with a calculated cement top at twenty-three hundred feet.

It shows our injection interval and also a liner on this well.

Q And will all of your injection wells be finished in this fashion?

A Yes, sir, they will.

Q And where will your packer be set?

A On this particular well, it's to be set at approximately thirty-one hundred feet, which is sixty foot or so above our -- above our proposed liner.

Q Now, will you refer to your log, Exhibit No. 4 --

A That is a log of the same well that we shown a diagrammatic sketch on. I have marked it to show the top of the Yates and the top of the Seven Rivers, in addition to our five and a half inch casing, which substantially shows the zone that we will be injecting into.

Q Now, explain your injection well data as shown on Exhibit 5.

A Exhibit 5 shows the data for all of our bore wells that we propose to put on injection in the expansion, showing the size and depth of the surface casing and the cementing program, at the top of the cement on the surface, which in this case, is circulated on all wells.

It also shows the size and depth of the production casing and the cementing program on it, along with the calculated top of the cement.

It shows the total depth and our injection interval, with a notation that all of our injection wells will have Fiberglas liner across the open hole interval to prevent caving.

I might add that our packers will be set fifty to one hundred foot above the top of the liner.

Q And to be plastic coated?

A Yes, it will.

Q And how about the annulus?

A It will be loaded with inhibited fluid.

Q And will you have pressure gauges on these wells?

A Yes, sir, we will.

Q For the purpose of the record is there any fresh water in the area?

A Not to my knowledge.

Q Is there any producing zones up structure?

A No.

Q And in your opinion, will this casing program prevent migration?

A Yes, it will.

Q What are your volumes of pressure that you intend to inject?

A We intend to initially inject five hundred barrels of water per day per well, at an estimated six hundred PSI.

Q And what do you figure they will level out as being?

A We intend to stabilize at five hundred barrels per day, at an estimated fourteen to fifteen hundred PSI.

Q And in your opinion, is this zone capable of taking the volume?

A Yes, it is.

Q Now, refer to Exhibit 6 and 7 and explain those exhibits, please.

A Exhibit 6 is a production performance curve on the W. H. Rhodes B, in CT-1 Federal Lease, showing the monthly oil production, the gas-oil ratio, our water volume that we inject each month and a number of producing and injection wells.

You notice that we commenced injection in December of 1964, and got a good response in about twelve months, and production rose from three thousand barrels per month to a peak of sixteen thousand barrels per month.

And only recently, we haven't noticed any water production that is not reflected on this curve.

Exhibit 7 is a same type curve, on the W. H. Rhodes A, NCP-1, Federal Lease, showing the gas-oil ratio, monthly oil production, and there is no water production on this lease.

Q In your opinion, is this in an advanced stage of depletion?

A Yes, sir.

Q Do you also, in this case, request administrative approval to expand the project without benefit of a response?

A Yes, sir, we would.

Q Do you have any calculated reserves on the expanded area?

A We expect to recover as much oil on secondary as we have on primary, which will be in excess of a million thirty-four thousand barrels -- just from the expansion.

Q In your opinion, will the granting of this application allow the recovery of additional hydrocarbons that would otherwise remain in place?

A Yes, it would.

Q Were Exhibits 1 through 7 prepared by you or under your direction?

A Yes, sir.

MR. WHITE: At this time, we offer Exhibits 1

through 7, and that completes our direct examination.

MR. UTZ: Without objection, Exhibits 1 through 7 will be entered into the record in this case.

CROSS EXAMINATION

BY MR. UTZ:

Q Exhibit No. 5 shows your injection wells, but it doesn't show the location: do you have the location anywhere in these exhibits?

A No, sir. I believe I have it --

Q We can get the location accurately enough for our purposes, I guess --

A I have got a list of wells.

Q Well, if you do have, will you let us have it?

A Yes, sir. That exhibit shows all of the producing and injection wells (indicating).

MR. WHITE: Do you want to name off the injection wells so we can mark them?

THE WITNESS: Yes. W. H. Rhodes A, Federal Number 4, W. H. Rhodes B, Federal NCT-1, Number 4, W. H. Rhodes B, Federal NCT-1, Number 5.

MR. UTZ: I lost you there already -- I can't find the number 4 -- NCT-1 or number 6 --

THE WITNESS: It will be in Section 27.

MR. WHITE: It's not on here.

MR. UTZ: Number 5 --- number 9 is not on here -- we didn't gain much from this.

MR. WHITE: We have a list of the proposed injection wells, but we don't have the locations.

MR. UTZ: We don't have two of them on there, unless you have changed the name.

THE WITNESS: No, we haven't changed the name.

MR. WHITE: Can you give the locations of those wells?

THE WITNESS: Yes, sir. W. H. Rhodes Federal Number 4, it will be in Unit "M", Section 22, 26 South, 37 East. And W. H. Rhodes Lee Federal NCT-1, Well Number 4, Unit "H", Section 27, 26 South, 37 East; W. H. Rhodes B Federal NCT-1, Well Number 5, Unit "B", Section 27, 26 South, 37 East.

W. H. Rhodes B Federal NCT-1, Well Number 9, Unit "P", Section 27, 26 South, 37 East.

MR. UTZ: Are these two different leases?

THE WITNESS: They are in the same base lease.

Q (By Mr. Utz) What is the difference between the "A" and the "B"? In other words, what we need to know is are they the same under both leases?

A I have that in here -- let me see --

The Rhodes, that "A" lease, USGS, has five percent royalty interest and seven and a half percent is held by individuals.

The "B" lease is twelve and a half percent, USGS.

Q And that's all -- and the other is five percent and fifty-seven and a half percent?

A By individuals, right.

MR. UTZ: What does that do to us?

MR. HATCH: We may have to put it as two projects -- we have accepted letters from all parties concerned. So, it will be treated as one project.

MR. WHITE: Can we have the case left open until we get the letters of consent? That would be from Federal and the royalty owners.

MR. HATCH: Yes, sir.

MR. WHITE: Very good.

MR. UTZ: Okay. A working agreement --

MR. HATCH: Yes, sir.

MR. UTZ: Either a working agreement or a unitization.

MR. WHITE: We will supply one or the other two to you, if possible.

MR. UTZ: All right.

THE WITNESS: If you call it two projects, then the -- keep the production separate from each one, it will be acceptable.

MR. UTZ: They would be handled as two projects -- just like your ADJ lease.

THE WITNESS: Yes.

MR. UTZ: Any other questions of the witness?

The witness may be excused.

(Witness excused).

MR. UTZ: Statements in this case? The case will be taken under advisement.

I N D E X

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[Signature]
Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings of
the Executive Hearing of Case No. 4221
heard by me on Dec. 25, 1969.
[Signature]
New Mexico Oil Conservation Commission

Case 4271

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

December 3, 1969

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

Dear Mr. White:

Enclosed herewith is Commission Order No. R-2748-A, entered in Case No. 4271, approving the expansion of the Texaco Rhodes Federal "B" Waterflood Project and the creation of the Texaco Rhodes Federal "A" Waterflood Project.

Injection into each of the four newly authorized water injection wells shall be through internally plastic-coated tubing which shall be set in a packer located from 50 to 100 feet above the top of the liner set through the pay. The casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge at the surface.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which the Rhodes "B" project will be eligible to receive under the provisions of Rule 701-E-3 is 588 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less and the maximum for the Rhodes "A" project is 168 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly

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

notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Enclosures

ALP/DSN/ir

cc: Oil Conservation Commission
Hobbs, New Mexico

U. S. Geological Survey
Box 1838
Hobbs, New Mexico 88240

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

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. 4271
Order No. R-2748-A

APPLICATION OF TEXACO INC. FOR A
WATERFLOOD EXPANSION AND AMENDMENT
OF ORDER NO. R-2748, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 25, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 3rd day of December, 1969, 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 operator of the Texaco Rhodes "B" Federal Waterflood Project in the Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico, approved by Commission Order No. R-2748.

(3) That the applicant now seeks authority to expand said waterflood project by the injection of water into the Yates and Seven Rivers formations through three additional wells in Units B, H, and P of Section 27, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(4) That the applicant further seeks to institute an additional waterflood project in said pool by the injection of

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CASE No. 4271

Order No. R-2748-A

water into the Yates and Seven Rivers formations through one well located in Unit N of Section 22 of said Township and Range.

(5) That the wells in the project areas are in an advanced state of depletion and should properly be classified as "stripper" wells.

(6) That the proposed expansion of the Rhodes "B" Federal Waterflood Project authorized by said Order No. R-2748 and the institution of the proposed new waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) That the applicant further seeks the establishment of an administrative procedure whereby said projects could be expanded to include additional lands and injection wells in the area of said projects as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

(8) That the subject application should be approved and the projects should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized to expand its Rhodes "B" Federal Waterflood Project in the Rhodes (Yates-Seven Rivers) Pool, authorized by Order No. R-2748, by the injection of water into the Yates and Seven Rivers formations through the following-described three additional wells in Section 27, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico:

W. H. Rhodes "b" (NCT-1) Well No. 5 located in Unit B
W. H. Rhodes "b" (NCT-1) Well No. 4 located in Unit H
W. H. Rhodes "b" (NCT-1) Well No. 9 located in Unit P

(2) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the Rhodes (Yates-Seven Rivers)

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CASE No. 4271

Order No. R-2748-A

Pool, to be designated the Texaco Rhodes "A" Federal Waterflood Project, by the injection of water into the Yates and Seven Rivers formations through its W. H. Rhodes "A" Federal Well No. 4 located in Unit W of Section 22, Township 26 South, Range 37 East, NMPN, Lea County, New Mexico.

(3) That the subject waterflood projects shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the above-described waterflood projects to include such additional lands and injection wells in the area of said projects as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

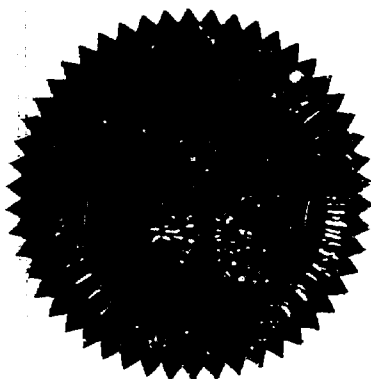
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMIJO, Member


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



esr/

Case 4271

Heard 11-25-69

Rec. 11-26-69.

Grant Texaco's request for 2 new injection wells on Elmer Waterflood authorized by R-274F.

1. W.H. Rhodes 'B' NCT-1 - ~~#4~~ #5 - 27-26-37
2. " " " " " " #9 P - " - "

also grant amendment of R-274F for 2 wells on the expansion of the Flood. i.e.:

1. W.H. Rhodes 'B' NCT-1 #5 B 27-26-37
2. W.H. Rhodes 'A' #4 N 22-26-37

Injection shall be thru int. plastic coated tubing under a packer & into the zone - S.R. fur.

Gauge to be used at annulus surface w/ annulus filled w/ inert. fluid.

Thos. W. J.

ROUGH DRAFT FOR WATERFLOOD LETTER

Mr. Charles White
White, Gilbert, Koch & Kelly
Attorneys at Law - P. O. Box 787
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith Commission Order No. R-2748-A, entered in Case No. 4271, approving the *expansion of the Texaco Rhodes Federal "A" water flood Project* and the creation of the Texaco Rhodes Federal "A" water flood Project. *Injection into the four newly authorized water injection wells shall be through internally plastic-coated tubing which shall be set in a packer located from 50 to 100 feet above the top of the liner set through the pay. The casing-tubing annulus shall be loaded with an inhibited fluid and*

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which *the Rhodes "A" project* will be eligible to receive under the provisions of Rule 701-E-3 is 588 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less *and the maximum for the Rhodes "A" project is 168 barrels per day.*

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OCC: Hobbs X
Artesia
Aztec

USGS Hobbs

~~Mr. Frank Irby~~, State Engineer Office, Santa Fe, New Mexico
Mr. D. E. Gray

Enclosed within a purchase order at the surface.

DEC 1 1969

TEXACO
INC.

PETROLEUM PRODUCTS



DRAWER 728
HOBBS, NEW MEXICO 88240

November 26, 1969

[Handwritten signature]

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

Re: Case No. 4271
Application For Waterflood
Expansion and Amendment of
Order No. R-2748

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

Gentlemen:

At the Examiner Hearing on November 25, 1969, to consider TEXACO Inc.'s application to expand waterflood operations in the Rhodes (Yates-Seven Rivers) Pool, it was brought out that different royalty interests existed on the two leases involved, the W.H. Rhodes 'A' Federal and the W.H. Rhodes 'B' Federal (NCT-1). Mr. E.A. Utz and Mr. G.M. Hatch advised that it would probably be necessary to either consider the leases as separate projects or unitize the two leases. At this time, TEXACO has no plans to unitize the leases and respectfully requests that the Commission consider the two leases as separate waterflood projects. Production on the two leases has been produced into separate tank batteries in the past and will be produced into separate batteries in the future. This method of operation will protect the rights of all parties involved in the two leases.

The 12.5% royalty interest on the W.H. Rhodes 'B' Federal (NCT-1) Lease is held exclusively by the U.S.G.S. The 12.5% royalty interest on the W.H. Rhodes 'A' Federal Lease is divided between the U.S.G.S. and some thirty-six (36) other parties.

Please advise if additional information is needed regarding the subject application.

Yours very truly,

[Handwritten signature: W. E. Morgan]
W. E. Morgan
District Superintendent

BRH-bh
VSP

White, Gilbert, Koch & Kelly
P.O. Box 787 - Santa Fe, N.M. 87501

NOTE: DUE TO THE THANKSGIVING HOLIDAY, THIS HEARING IS SCHEDULED FOR TUESDAY RATHER THAN WEDNESDAY AS CUSTOMARY.

Docket No. 32-69

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 25, 1969

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

- CASE 4259: Application of Aztec Oil & Gas Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 5112 feet to 5138 feet in its State "SS" Well No. 1 located in Unit F of Section 24, Township 17 South, Range 36 East, Spencer-San Andres Pool, Lea County, New Mexico.
- CASE 4260: Application of Tamarack Petroleum Company, Inc. for a water-flood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Northeast Pearl Queen Unit Waterflood Project, Pearl-Queen Pool, by the conversion to water injection one additional injection well, its Unit Well No. 18, located in Unit L of Section 23, Township 19 South, Range 35 East, Lea County, New Mexico.
- CASE 4261: Application of Pennzoil United, Inc., for special pool rules and unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Quail Ridge-Morrow Gas Pool, Lea County, New Mexico, including a provision for 320-acre spacing units. Applicant further seeks approval of the unorthodox location in said pool for its Mescalero Ridge Well No. 1 at a location 660 feet from the South line and 660 feet from the West line of Section 20, Township 19 South, Range 34 East.
- CASE 4262: Application of Plains Radio Broadcasting 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 the applicant's White Ranch Well No. 1 located in Unit E of Section 34, Township 11 South, Range 29 East, White Ranch Siluro-Devonian Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of salt

water produced by said well in an unlined surface pit located in the vicinity of said well. In the alternative, applicant seeks authority to dispose of said produced water into the Siluro-Devonian formation in the perforated interval from 8743 feet to 8750 feet in its White Ranch Well No. 3 located in Unit M of said Section 34.

CASE 4263: Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "E" Well No. 3, to be located 590 feet from the South line and 1590 feet from the West line of Section 13, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4264: Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "J" Well No. 1, to be located 2390 feet from the South line and 2410 feet from the East line of Section 11, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4265: 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 Yates, San Andres and other formations in the open-hole interval from approximately 4450 feet to 5890 feet in its Midway State Well No. 3 located in Unit J, Section 12, Township 17 South, Range 36 East, Lovington Field, Lea County, New Mexico.

CASE 4245: (Continued from the November 5, 1969, Examiner Hearing) Application of Texas Pacific Oil Company, Inc., for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dedication and rededication of certain acreage and the establishment of the following non-standard gas proration units in Townships 22 and 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico:

(Case 4245 continued)

A 160-acre unit comprising the W/2 SE/4 and the E/2 SW/4 of Section 8, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 56 located in Unit J of said Section 8;

A 200-acre unit comprising the NW/4 and the NW/4 SW/4 of Section 11, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 42 located in Unit E of said Section 11;

A 280-acre unit comprising the SE/4, S/2 SW/4, and the NE/4 SW/4 of Section 11, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 36 located in Unit M of said Section 11;

A 200-acre unit comprising the N/2 NE/4, the SE/4 NE/4, and the NE/4 NW/4 of Section 15 and the SE/4 SW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 31 located in Unit H of said Section 15;

A 160-acre unit comprising the S/2 NW/4, SW/4 NE/4 and the NW/4 NW/4 of Section 15, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 33 located in Unit F of said Section 15;

A 240-acre unit comprising the SW/4 of Section 3, and the N/2 NW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 35 located in Unit L of said Section 3;

A 160-acre unit comprising the S/2 NW/4 and N/2 SW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 37 located in Unit F of said Section 10.

CASE 4266: Application of Texas Pacific Oil Company, Inc., for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dedication and rededication of certain acreage and the establishment of the following non-standard gas proration units in Township 22 South, Range 36 East, Ulatat Gas Pool, Lea County, New Mexico:

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(Case 4266 continued)

A 280-acre unit comprising the SW/4 of Section 9 and the E/2 SE/4 and SW/4 SE/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 38 located in Unit K of said Section 9;

A 160-acre unit comprising the E/2 SW/4, SW/4 SW/4 and NW/4 SE/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 56 located in Unit J of said Section 8;

A 120-acre unit comprising the S/2 NW/4 and NW/4 SW/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 51 located in Unit F of said Section 8;

A 160-acre unit comprising the SW/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 41 located in Unit M of said Section 5;

A 160-acre unit comprising the NW/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 44 located in Unit F of said Section 5;

A 160-acre unit comprising the SE/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 27 located in Unit P of said Section 5.

CASE 4267: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Edward M. Kriss and all other interested parties to appear and show cause why the Edward M. Kriss Little Chama Valley Company Well No. 1, a wildcat well, located 545 feet from the North line and 1530 feet from the West line of Section 2, Township 1 North, Range 2 East, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4268: Application of Texaco Inc., for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the State "CD" Unit Area comprising 160 acres, more or less, of State lands in the NW/4 of Section 27, Township 26 South, Range 37 East, Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico.

- CASE 4269: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its State "JD" Unit Area by the injection of water into the Yates-Seven Rivers formations through two wells located in Unit D and Unit E of Section 27, Township 26 South, Range 37 East, Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico.
- CASE 4270: Application of Byron McKnight for an exception to Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to drill to a depth of approximately 3800 feet in the Yates formation two exploratory wells located in the SW/4 NE/4 and SE/4 NE/4 of Section 26, Township 19 South, Range 33 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string required by said Order No. R-111-A provided the production string would be cemented to the surface.
- CASE 4271: Application of Texaco Inc. for a waterflood expansion and amendment of Order No. R-2748, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its waterflood project in the Rhodes (Yates-Seven Rivers) Pool, authorized by Order No. R-2748, by the injection of water through four additional wells in Sections 22 and 27 of Township 26 South, Range 37 East, Lea County, New Mexico. Applicant further seeks amendment of said order to establish a procedure whereby additional injection wells as may be necessary to complete an efficient injection pattern may be approved administratively.
- CASE 4272: Application of Shell Oil Company for an unorthodox oil well location and to directionally drill. Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Sanger Well No. 6 at an unorthodox surface location in Unit E 1490 feet from the North line and 330 feet from the West line of Section 27, Township 18 South, Range 38 East, Hobbs (Grayburg-San Andres) Pool, Lea County, New Mexico. Applicant further seeks authority to directionally drill said well in such a manner as to bottom the well in the subject pool at a point in Unit D of said Section 27 approximately 200 feet north of said surface location. Applicant proposes to dedicate said Unit D to the well.

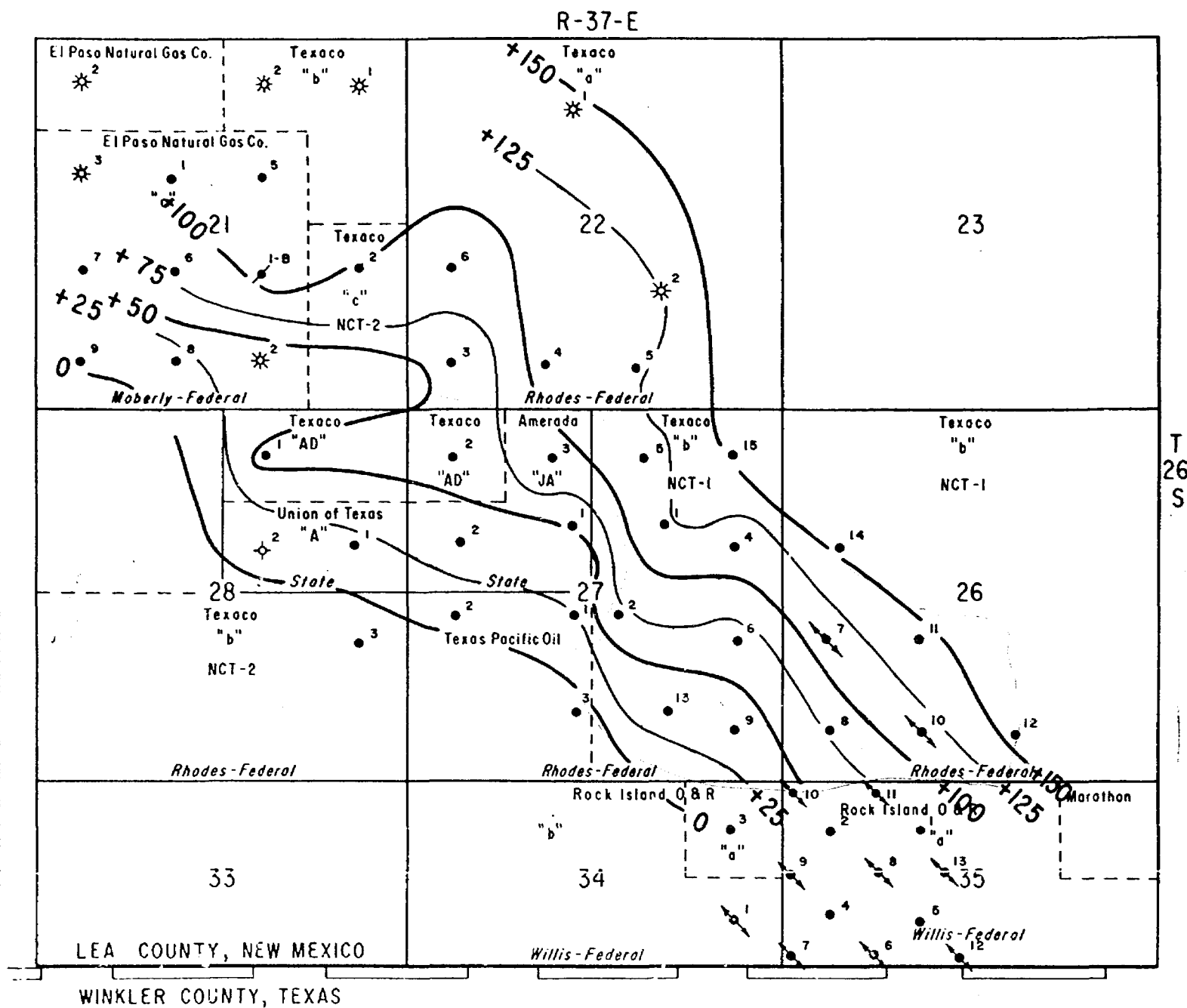
November 25, 1969 - Examiner Hearing

Case No. 32-69

-6-

CASE 4273: Application of Tesoro Petroleum Corporation for an unorthodox oil well location and amendment of Order No. R-2807-A, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox oil well location of its Well No. 59, formerly classified as a water injection well, located 1430 feet from the South line and 2625 feet from the East line of Section 36, Township 18 North, Range 9 West, Hospah Upper Sand Oil Pool, McKinley County, New Mexico. Applicant further seeks the amendment of Order No. R-2807-A to permit a procedure whereby additional producing and injection wells in its Hospah Unit Area may be approved administratively.

CASE 4274: Application of Pan American Petroleum Corporation for an unorthodox oil well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Navajo Tribal "N" Well No. 11 at an unorthodox location 1150 feet from the West line and 560 feet from the North line of Section 17, Township 26 North, Range 18 West, Tocito Dome-Pennsylvanian "D" Oil Pool, San Juan County, New Mexico.



STRUCTURE MAP

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 2
CASE NO. 4271

CONTOURS ON
TOP OF
YATES

CONTOUR INTERVAL - 25'
DLH 2-20-67

RHODES FIELD
LEA COUNTY, NEW MEXICO
SCALE: 1" = 2000'

Tubing-casing annulus filled
with inhibited water.

8-5/8" csg. in 11" hole set at
1206'. Cemented with 200 sacks.
Cement circulated.

5-1/2" csg. in 7-7/8" hole set
at 3113'. Cemented with 200
sacks. Calc. cement top at 2300'.

2-3/8" internally plastic
coated tubing at 3100'.

JOHNSON 101-S tension-type
Blockwall packer at 3100'.

2.85" C.D. Fiberglass liner
in 4-3/4" hole set at 3265'.
Bottom 90' Slotted.

Total Depth 3265'

WATER INJECTION WELL

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 3
CASE NO. 4271

TEXACO INC.

WELL NO. 5
SEVIN RIVER (SEVIN RIVER) POOL
LEA COUNTY, NEW MEXICO

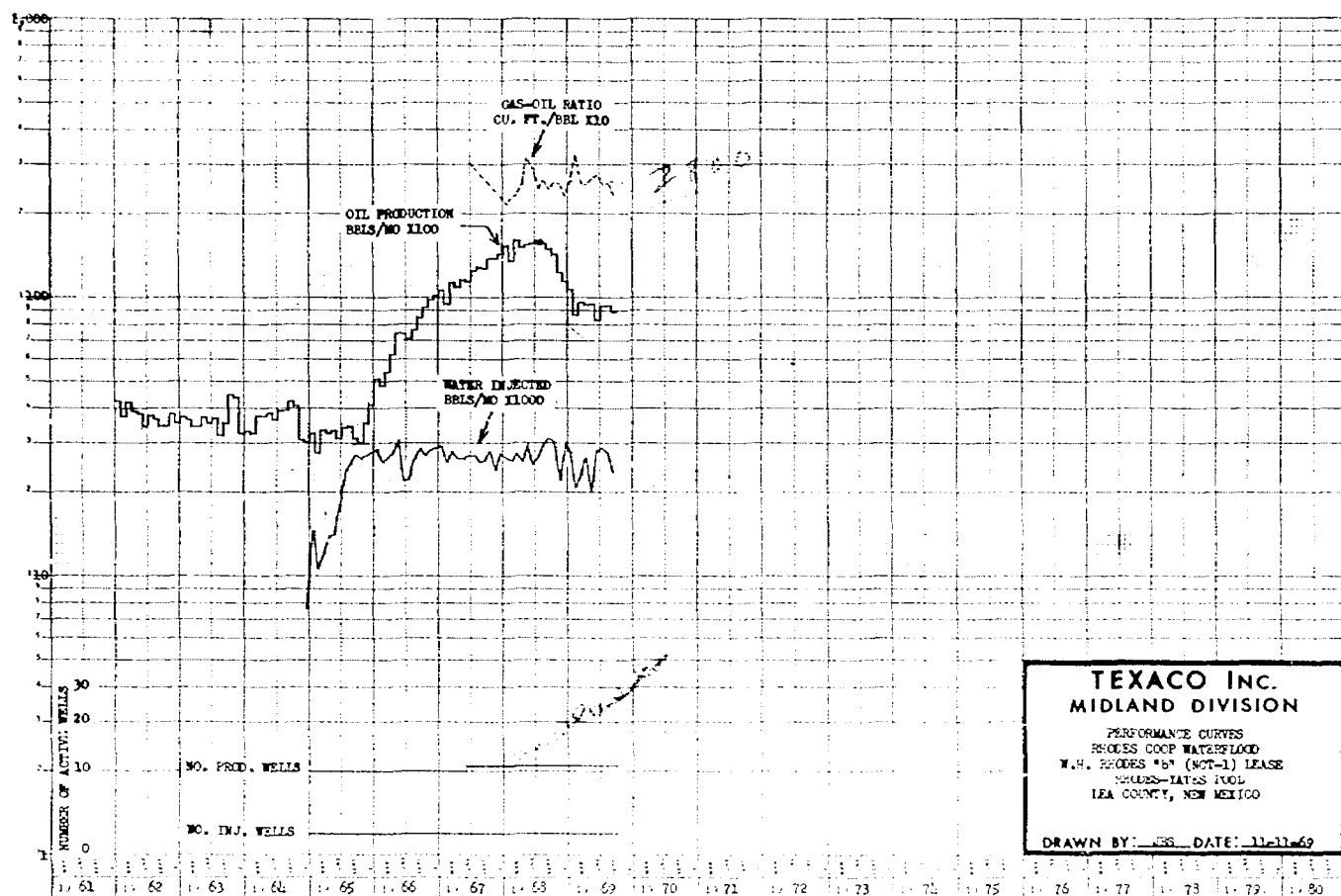
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INJECTION WELL DATA

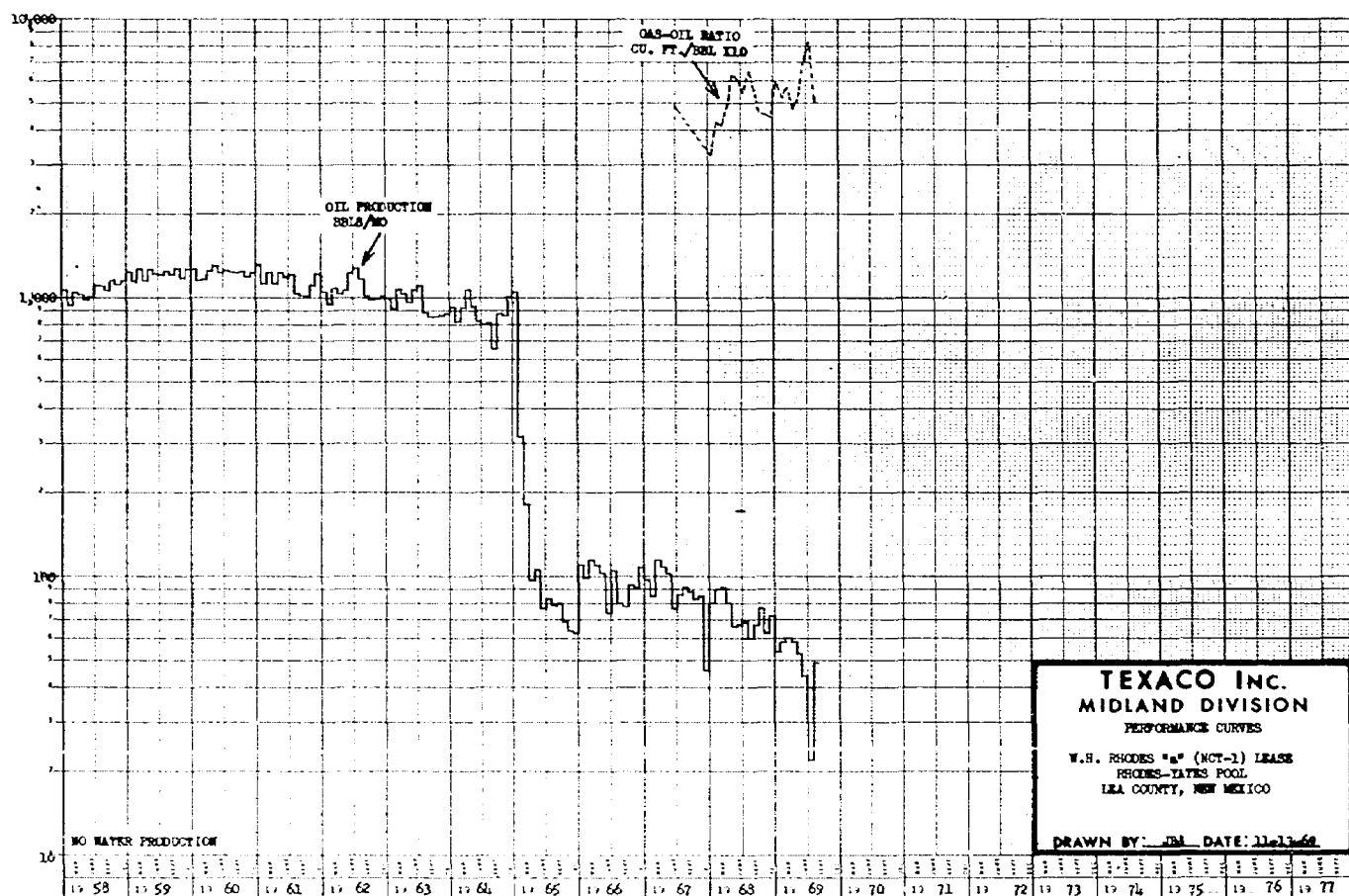
Well Name and Number	Surface Casing			Top of Cement	Production Casing			Top of Cement	Total Depth	Injection Interval
	Size	Depth	Cement		Size	Depth	Cement			
W. H. Rhodes "A" Fed. No. 4 <i>N-22-26-37</i>	8-5/8"	1,190'	200 Sx.	Circulated	5-1/2"	3,050'	200 Sx.	2,250'	3,250'	3,080' - 3,250'
W. H. Rhodes "B" Fed. No. 5 <i>H-27-26-37</i>	8-5/8"	1,179'	200 Sx.	Circulated	5-1/2"	3,116'	200 Sx.	2,300'	3,270'	3,116' - 3,270'
W. H. Rhodes "B" Fed. No. 6 <i>B-27-26-37</i>	8-5/8"	1,006'	200 Sx.	Circulated	5-1/2"	3,113'	200 Sx.	2,300'	3,265'	3,113' - 3,265'
W. H. Rhodes "B" Fed. No. 9 <i>P-27-26-37</i>	8-5/8"	1,001'	350 Sx.	Circulated	5-1/2"	3,154'	300 Sx.	2,000'	3,325'	3,154' - 3,325'

ALL INJECTION WELLS WILL HAVE FIBERGLASS LINING ACROSS THE OPEN HOLE INTERVALS TO PREVENT CAVING IN.

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 4271



BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 6
 CASE NO. 4271



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 4271

TEXACO

Hobbs, New Mexico

November 11, 1969

Huff NOV 13 1969
file - Case 4271

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

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

Re: Request for Hearing
Expansion of Rhodes
Cooperative Waterflood
Rhodes Yates Pool
Lea County, New Mexico

Gentlemen:

Enclosed are exhibits required for Texaco's Request for Hearing for the Expansion of the Rhodes Cooperative Waterflood. Our letter of November 6, 1969, requested a hearing to be set for November 25, 1969.

Yours very truly,

D. E. Dawson

D. E. Dawson
District Engineer

BRH-ac

Enclosures

NOV 10 1969



PETROLEUM PRODUCTS

PRODUCING DEPARTMENT
UNITED STATES
MIDLAND DIVISION
DARRELL SMITH
DIVISION MANAGER

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

Case 4271

November 6, 1969

DNA

REQUEST FOR HEARING
EXPANSION OF RHODES COOPERATIVE WATERFLOOD
RHODES YATES OIL POOL
LEA COUNTY, NEW MEXICO

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

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

Gentlemen:

It is respectfully requested that a hearing be scheduled at Santa Fe, New Mexico, November 25, 1969 to consider the application of Texaco Inc. to expand the waterflood project authorized by Order No. R-2748 (Case No. 2086), which was entered on the 29th day of July, 1964, and to amend said order to provide for future expansion by administrative application without notice and hearing.

The presently operating waterflood project includes two injection wells in Units L and N of Section 26, Township 26 South, Range 37 East, Lea County, New Mexico, on Texaco's W. H. Rhodes "B" Federal NCT-1 Lease and adjacent developed units. At the requested hearing November 25, 1969 Texaco Inc. will request authority to expand the project by converting to water injection service three existing wells on Units B, H, and P of Section 27 and one existing well on Unit N of Section 22, same township and range. The expanded project area would also include adjoining and adjacent developed units on the same lease. The east half of Section 27, where the Unit B, H, and P proposed injection wells are located, adjoins and is a part of the same W. H. Rhodes "B" Federal NCT-1 Lease where the original project authorized by Order No. R-2748 is located. The proposed injection well on Unit N of Section 22 is on an adjoining tract designated as W. H. Rhodes "A" Federal Lease comprised of Section 22; however, this Section 22 is included in the same base lease as the adjoining tracts of Section 26 and E/2 Section 27 having identical working interest and royalty interest ownership. It is

DOCKET MAILED

Date 11-14-69

November 6, 1969

therefore, proposed to include the portion of Section 22, W. H. Rhodes "A" Federal Lease, as a part of the proposed expansion of the existing waterflood project on the W. H. Rhodes "B" Federal NCT-1 Lease. The attached plat shows the four additional injection wells and the adjoining developed units that would be included in the enlarged project area. The present project area is outlined in blue and the expansion that will be requested at the forthcoming hearing is outlined in red.

Water will be injected into the four new injection wells at a rate of 500 barrels per day per well at a surface injection pressure of approximately 600 psi. The water will be obtained principally from water wells located in the southwest quarter of Section 9, Township 26 South, Range 37 East, Lea County, New Mexico, approximately two miles north of the project area. This will be fresh water obtained from the Ogallala formation. In addition, fresh water from the Santa Rosa formation in the project area will be used as well as formation water produced with the oil and gas from the Yates-Seven Rivers formation. In the near future, the water supply system will be such that the combined Ogallala, and Santa Rosa system will supply not only the expanded Rhodes Cooperative flood but also the adjoining proposed State "JD" Unit.

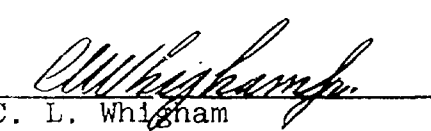
The common source of supply or producing formation of the Rhodes Cooperative Waterflood Project is the Yates-Seven Rivers formation designated the Rhodes Yates Oil Pool. The attached plat shows all tracts and wells involved; however, under separate cover we are forwarding a larger map, well log, and diagrammatic sketch as requested by Rule 701.

All of the area involved is Federal acreage and a copy of this letter requesting a hearing is being sent to the United States Geological Survey. A copy of this letter is also being sent to each of the offset operators as listed below and to Amerada Petroleum Corporation and Cities Service Oil Company which each owns a one-third interest with Texaco Inc. in the W. H. Rhodes "B" Federal NCT-1 Lease and the W. H. Rhodes "A" Federal Lease.

Yours very truly,

Darrell Smith

By

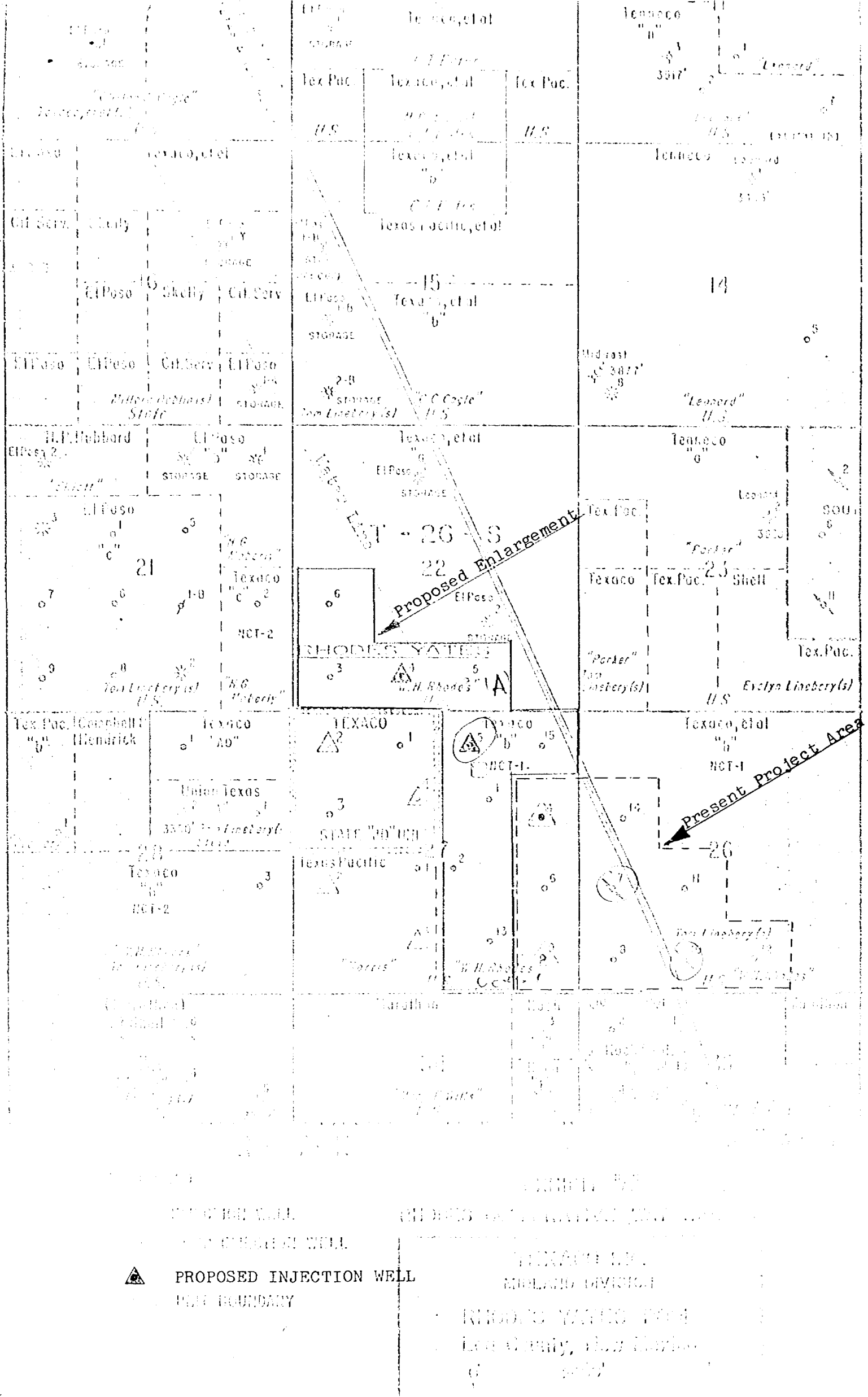

C. L. Whigham

Division Proration Engineer

CLW-MM
Attach.

cc: El Paso Natural Gas Co.
Tenneco
Marathon

Texas Pacific Oil Company
Shell Oil Company
Koch Exploration Co. (Divn. of
Koch Industries, Inc.)



DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 4271

Order No. R-2748-A

APPLICATION OF TEXACO INC. FOR A
WATERFLOOD EXPANSION AND AMENDMENT
OF ORDER NO. R-2748, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 25, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 26th day of Dec, 1969, 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 operator of a
waterflood project in the Rhodes (Yates-Seven Rivers) Pool, Lea
County, New Mexico, approved by Commission Order No. R-2748.

(3) That the applicant now seeks authority to expand said
waterflood project by the injection of water into the ^{Yates and}
^{Seven Rivers}
formations through ^{these} ~~four~~ additional wells in ^{Units B, H, and P of} Sections ~~26 and~~ 27,
Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(4) That the applicant further seeks to institute
an additional waterflood project in said pool
by the injection of water into the Yates and Seven
Rivers formations through a well located
in Unit N of Section 22, said Township and
Range.

~~(7) (5)~~ That the applicant further seeks ~~the amendment of said~~
~~Order No. R-2748 to provide for~~ the establishment of an adminis-
trative procedure whereby said project^s could be expanded to
include additional lands and injection wells in the area of said
project^s as may be necessary in order to complete an efficient
injection pattern; that said administrative procedure should
provide for administrative approval for conversion to water
injection in exception to the well response requirements of
Rule 701 E-5 of the Commission Rules and Regulations.

(8) ~~that~~ That the subject application should be approved and
the project^s should be governed by the provisions of Rules 701,
702, and 703 of the Commission Rules and Regulations; provided,
however, that the showing of well response as required by Rule
701 E-5 shall not be necessary before obtaining administrative
approval for the conversion of additional wells to water injec-
tion.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc., is hereby authorized
to expand its waterflood project in the Rhodes (Yates-Seven
Rivers) Pool, authorized by Order No. R-2748, by the injection
of water into the ^{Yates and} ~~Seven Rivers~~ formations through the following
~~three~~ ^{Section 27,} described additional wells in ^A Township 26 South, Range 37 East,
NMPM, Lea County, New Mexico:

W.H. Rhodes "B" (NCT-1) Well No. 5 located in Unit B
W.H. Rhodes "B" (NCT-1) Well No. 4 located in Unit H
W.H. Rhodes "B" (NCT-1) Well No. 9 located in Unit P

~~(2) That Order (2) of Commission Order No. R-2748 is hereby~~
amended to read in its entirety as follows:

(2) That the applicant, Texaco Inc., is hereby authorized to institute a waterflood project in the Rhodes (Yates-Seven Rivers) Pool, to be designated the Texaco Rhodes "A" Federal Well Waterflood Project, by the injection of water into the Yates and Seven Rivers formations through its W. H. Rhodes "A" Federal Well No. 4 located in Unit N of Section 22, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the subject waterflood projects shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, That the Secretary-Director of the Commission may approve expansion of the above-described waterflood projects to include such additional lands and injection wells in the area of said projects as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(4) 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.

Texaco Inc

"25

expand Rhodes Cooperative Wtr fld ^{Proj.}
R-2748 Co 3086
7/29/64

Rhodes Gas Oil Pool

Amendment of R-2748 to
provide for administrative
expansion.

4 new inj wells

Sec 27, T 26 S, R 37 E

W.H. Rhodes "B" Fed (NCT-1)

#4 H

#5 B

#9 P

~~W.H.~~

S 22, T 26 S, R 37 E

W.H. Rhodes "A" Fed

#4 N

CASE 4272: Application of SHELL
OIL CO. FOR AN UNORTHODOX OIL WELL
LOCATION AND DIRECTIONALLY DRILL.