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 waterflood expansion and amendment of Order No. R-2748, Lea County, New Mexico. Case No. 4271

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-2748, Lea County, New Mexico.

MR. WHITE: Mr. Examiner, L. 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 4268 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 anulus?

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 stablize 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 WTINESS: 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

E X H I B I T S

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, CA FENLEY, 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

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4271, heard by me on Nov. 25, 1969.

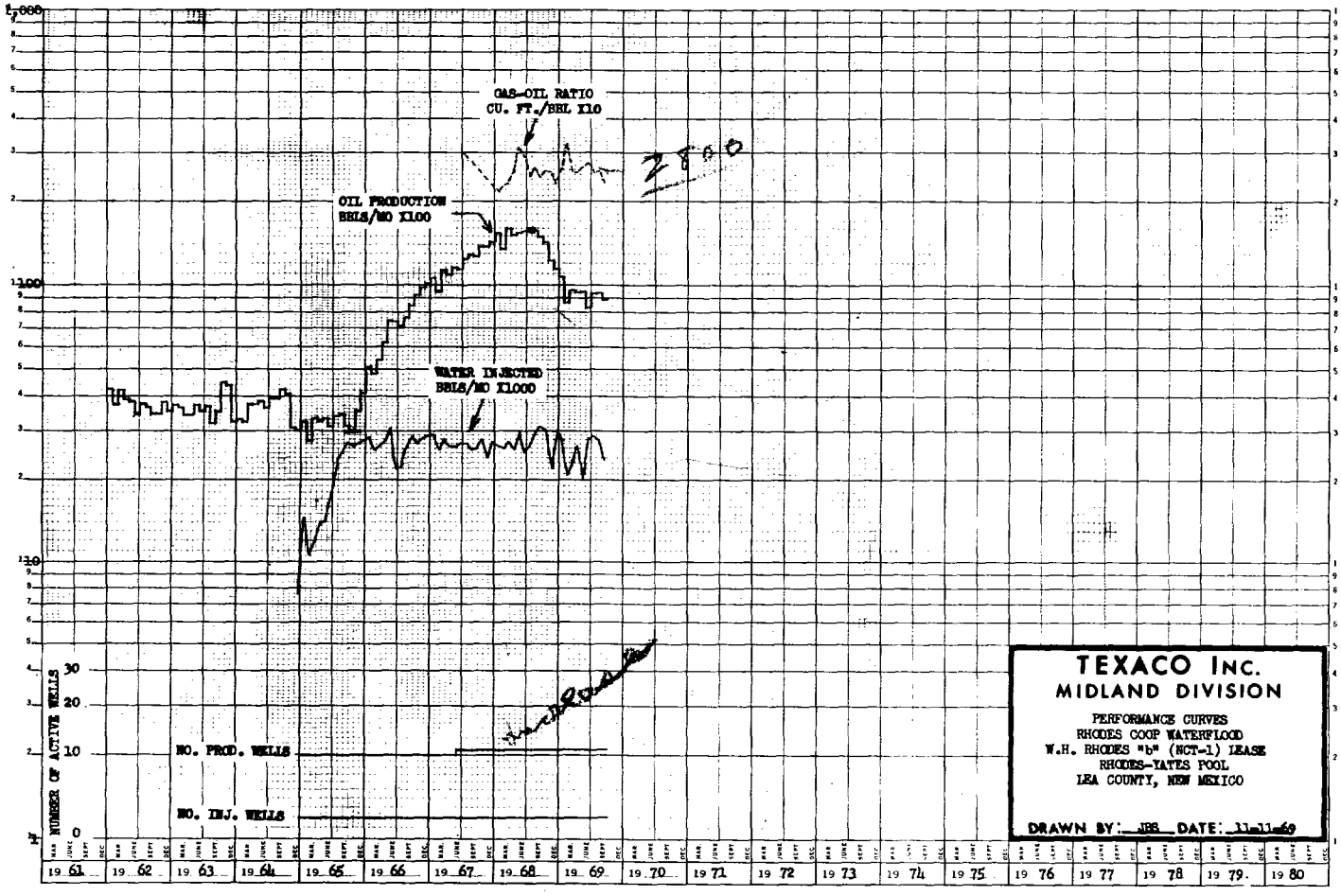
Examiner
New Mexico Oil Conservation Commission

INJECTION WELL DATA

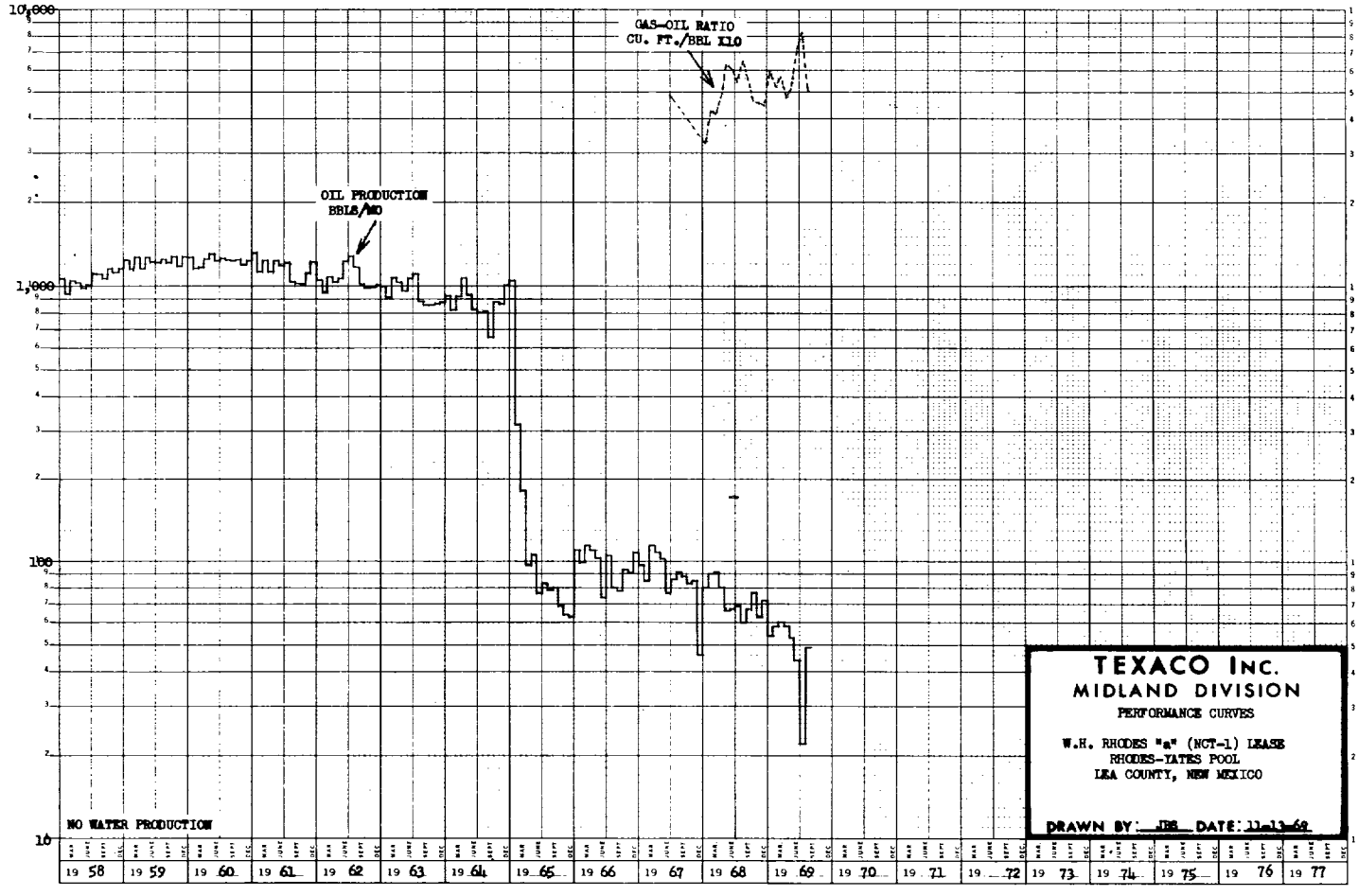
Well Name and Number	Surface Casing Size	Surface Casing Depth	Surface Casing Cement	Surface Casing Top of Cement	Production Casing Size	Production Casing Depth	Production Casing Cement	Production Casing Top of Cement	Total Depth	Injection Interval
W. H. Rhodes "A" Fed. No. 4 N-22-26-37	8-5/8"	1,190'	200 Sx.	Circulated	5-1/2"	3,080'	200 Sx.	2,250'	3,250'	3,080' - 3,250'
W. H. Rhodes "B" Fed. (NCT-1) No. 4 H-27-26-37	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. (NCT-1) No. 5 B-27-26-37	8-5/8"	1,206'	200 Sx.	Circulated	5-1/2"	3,113'	200 Sx.	2,300	3,265'	3,113' - 3,265'
W. H. Rhodes "B" Fed. (NCT-1) No. 9 P 27-26-37	8-5/8"	1,201'	350 Sx.	Circulated	5-1/2"	3,154'	300 Sx.	2,000'	3,325'	3,154' - 3,325'

ALL INJECTION WELLS WILL HAVE FIBERGLASS LINERS 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

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:

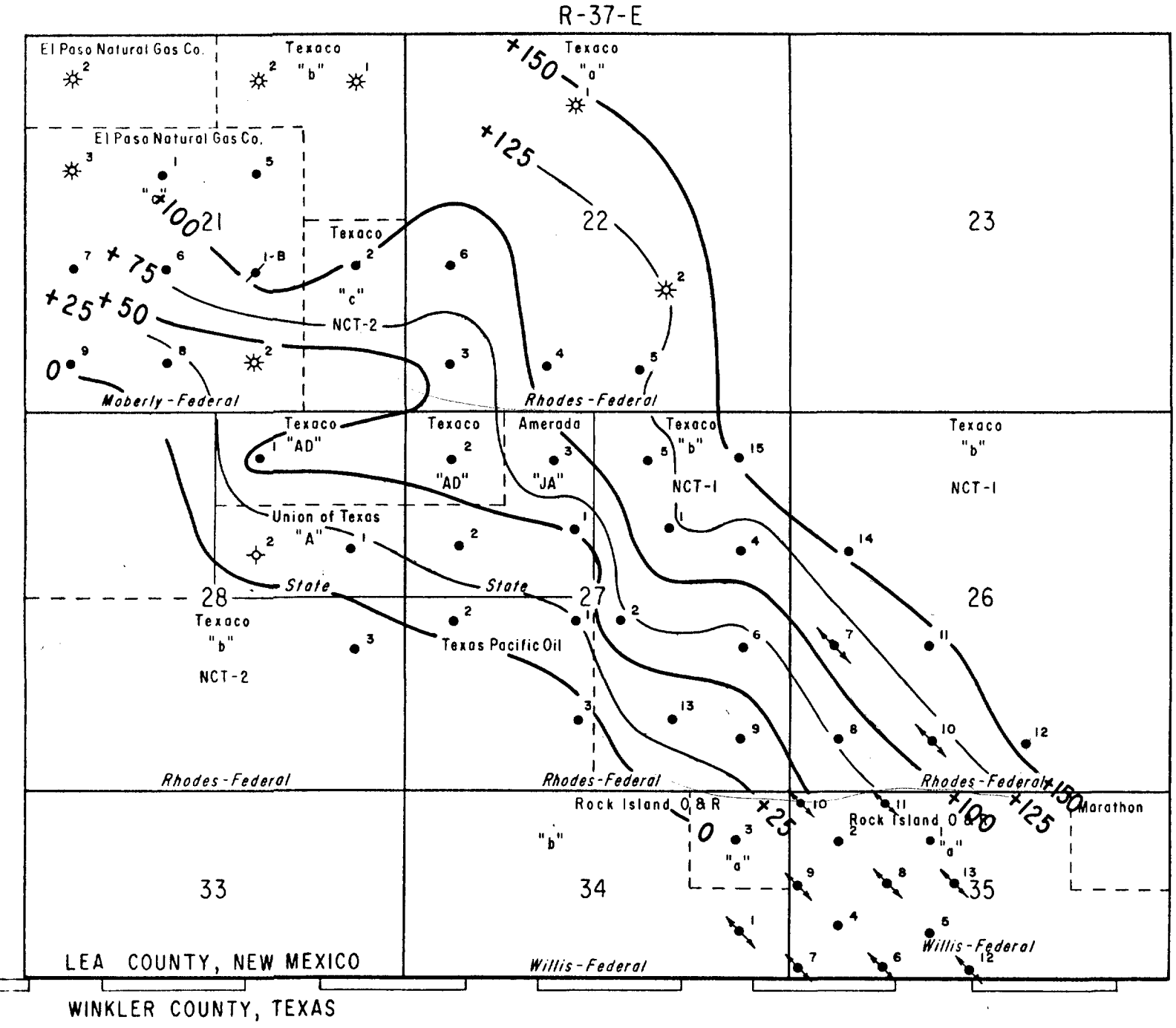
Enclosed are exhibits required for Texaco's Request for Hearing for the Expansion of the Rhodes Cooperative Waterflood. Our letter of November 6, 1969, requested a hearing to be set for November 25, 1969.

Yours very truly,

D. E. Dawson
District Engineer

BRH-ac

Enclosures



STRUCTURE MAP

CONTOURS ON TOP OF YATES

CONTOUR INTERVAL - 25'

DLH 2-20-67

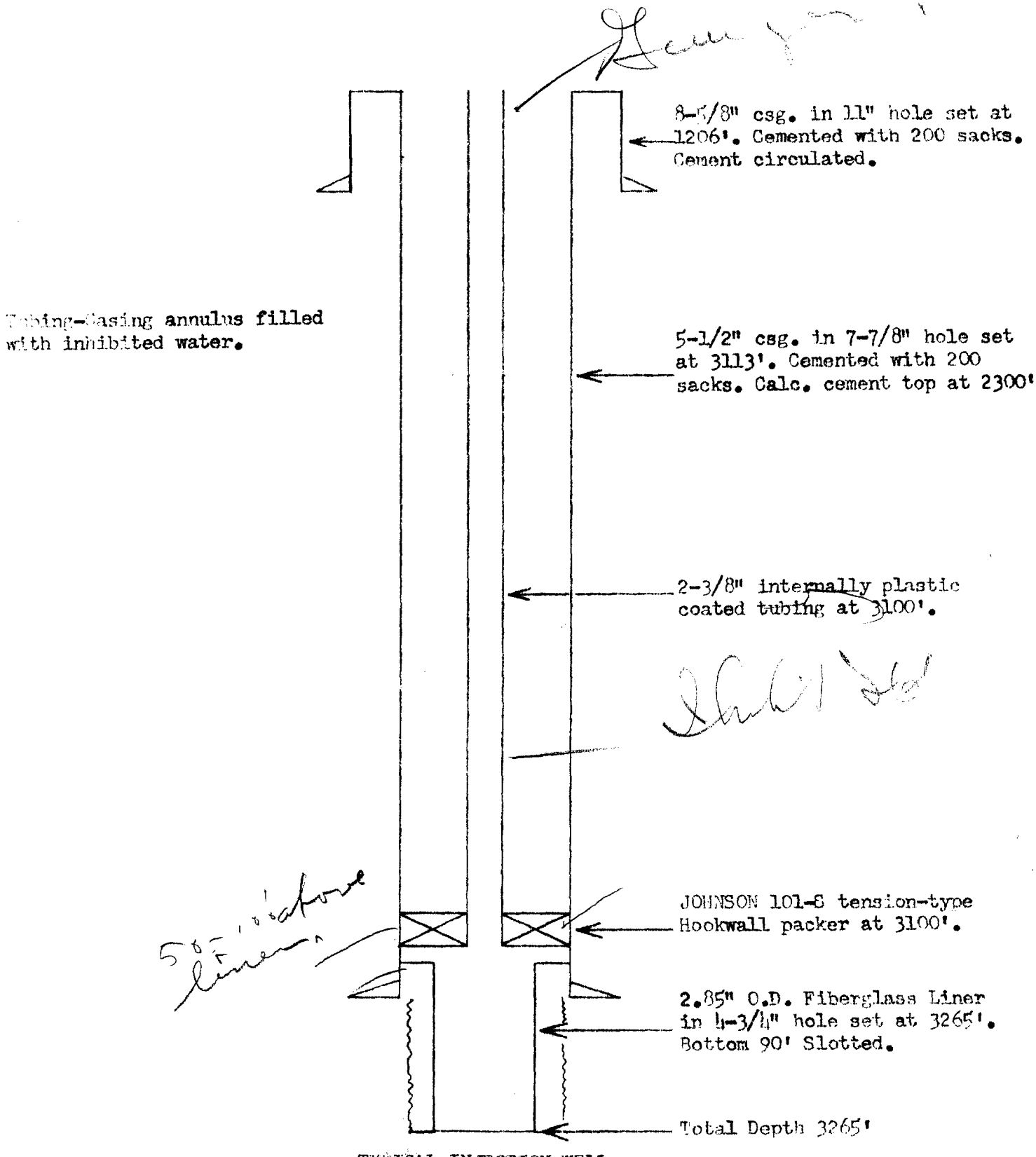
RHODES FIELD

LEA COUNTY, NEW MEXICO

SCALE: 1" = 2000'

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4271

FMR Dec. 1967



TYPICAL INJECTION WELL

TEXACO INC.
W. I. RHODES "b" (NCT-1) WELL NO. 5
RHODES-YATES (SEVEN RIVERS) POOL
LEA COUNTY, NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4271