

CASE 2422: Application of TEXACO
for a dual completion of its STATE
"R" NCT-4 WELL NO. 1 in UNIT C.

Case No.

2488

Application, Transcript,
and Exhibits, Etc.

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER



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

P. O. BOX 871
SANTA FE

February 13, 1962

Mr. Booker Kelly
Gilbert, White & Gilbert
P. O. Box 787
Santa Fe, New Mexico

Re: CASE NO. 2488
ORDER NO. R-2185
APPLICANT:
Tuxaco, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A handwritten signature in cursive script that reads "A. L. Porter, Jr.".

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

OTHER

**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. 2488
Order No. R-2185**

**APPLICATION OF TEXACO, INC. FOR
A DUAL COMPLETION, LEA COUNTY,
NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 7, 1962, at Santa Fe, New Mexico, before Daniel S. Futter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

Now, on this 14th day of February, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Daniel S. Futter, 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 State "R" NCT-4 Well No. 1, located in Unit C of Section 7, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico.
- (3) That the applicant proposes to complete said State "R" NCT-4 Well No. 1 as a dual completion (tubingless) in such a manner as to permit the production of oil from an undesignated Drinkard pool and an undesignated Abo pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- (4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

Case No. 2483
Order No. R-2185

(5) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tennesco, Inc., is hereby authorized to complete its State "B" DST-4 Well No. 1 located in Unit C of Section 7, Township 18 South, Range 35 East, NEMM, Lea County, New Mexico, as a dual completion (tubingless) in such a manner as to permit the production of oil from an undesignated Brinkard pool and an undesignated Abo pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That the applicant shall complete, operate and produce said dual completion in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations.

PROVIDED FURTHER, That the operator shall conduct zone segregation tests upon completion, annually during the Annual Gas-Oil Ratio Test Period for the Abo zone and at such other times as the Secretary-Director of the Commission may prescribe.

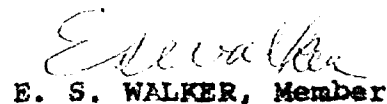
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



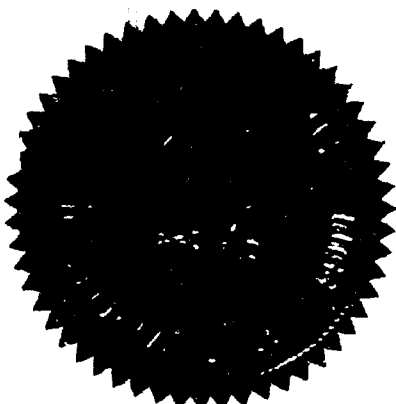
EDWIN L. MECHEM, Chairman



E. S. WALKER, Member



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



MAIN OFFICE OCC 1962 JAN 17 AM 10:47
GILBERT, WHITE AND GILBERT

ATTORNEYS AND COUNSELORS AT LAW

BISHOP BUILDING

SANTA FE, NEW MEXICO

January 12, 1962

CARL H. GILBERT
L. C. WHITE
WILLIAM W. GILBERT
SUMNER S. KOCH
WILLIAM B. KELLY

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

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

Gentlemen:

TEXACO Inc. respectfully requests that a hearing be set to consider its application for a dual tubingless completion in its State of New Mexico "R" NCT-4 Well No. 1 in the Undesignated Drinkard and Undesignated Abo Pools, Lea County, New Mexico. It is anticipated that both zones will be oil completions and will be produced through parallel strings of 2-7/8" OD Buttress tubing cemented in a common well bore. In support of its applications we wish to state the following facts:

1. TEXACO Inc. is the operator of the State of New Mexico "R" NCT-4 Lease which consists of the N/2 of the NW/4 of Section 7, T-18-S, R-35-E, Lea County, New Mexico.
2. The State of New Mexico "R" NCT-4 Well No. 1 is located in Unit C, Section 7, T-18-S, R-35-E.
3. The Drinkard is anticipated to be an oil completion and will be produced through casing perforations 7894-8088'.
4. The Abo is anticipated to be an oil completion and will be produced through casing perforations 8573-8760'.
5. It is anticipated that both the Abo and Drinkard completions will flow initially.

Attached in triplicate are an Application for Dual Completion and a plat of the State of New Mexico "R" NCT-4 Lease. It is requested that this hearing be set on the first available Examiner hearing docket.

Very truly yours,

L. C. White

L. C. WHITE

*Books
Mailed
1-26-62*
LCW/ab
Encls.

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

| | | | | | | | |
|---------------------|------|---|----------|--------|--------------------------|----------|---------|
| Field Name | | Undesignated Drinkard and Undesignated Abo | | County | Lea | Date | 1-12-62 |
| Operator | | TEXACO Inc. | | Lease | State of N. M. "R" NCT-4 | Well No. | 1 |
| Location of Well | Unit | Section | Township | Range | | | |
| | C | 7 | 18-S | 35-E | | | |

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES _____ NO X
2. If answer is yes, identify one such instance: Order No. _____; Operator, Lease, and Well No.:

| 3. The following facts are submitted: | Upper Zone | Lower Zone |
|--|------------|------------|
| a. Name of reservoir | Drinkard | Abo |
| b. Top and Bottom of Pay Section (Perforations) | 7884-8088' | 8573-8760' |
| c. Type of production (Oil or Gas) | Oil | Oil |
| d. Method of Production (Flowing or Artificial Lift) | Flowing | Flowing |

4. The following are attached. (Please mark YES or NO)

- NO a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- NO c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
- NO d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

The Ohio Oil Company - P. O. Box 2107, Hobbs, New Mexico

Tidewater Oil Company - P. O. Box 547, Hobbs, New Mexico

Forest Oil Corporation - P. O. Box 4486, Midland, Texas

Humble Oil and Refining Company - P. O. Box 2347, Hobbs, New Mexico

N. G. Penrose Inc. - Suite 417 Midland Tower Bldg., Midland, Texas

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES _____ NO X. If answer is yes, give date of such notification _____.

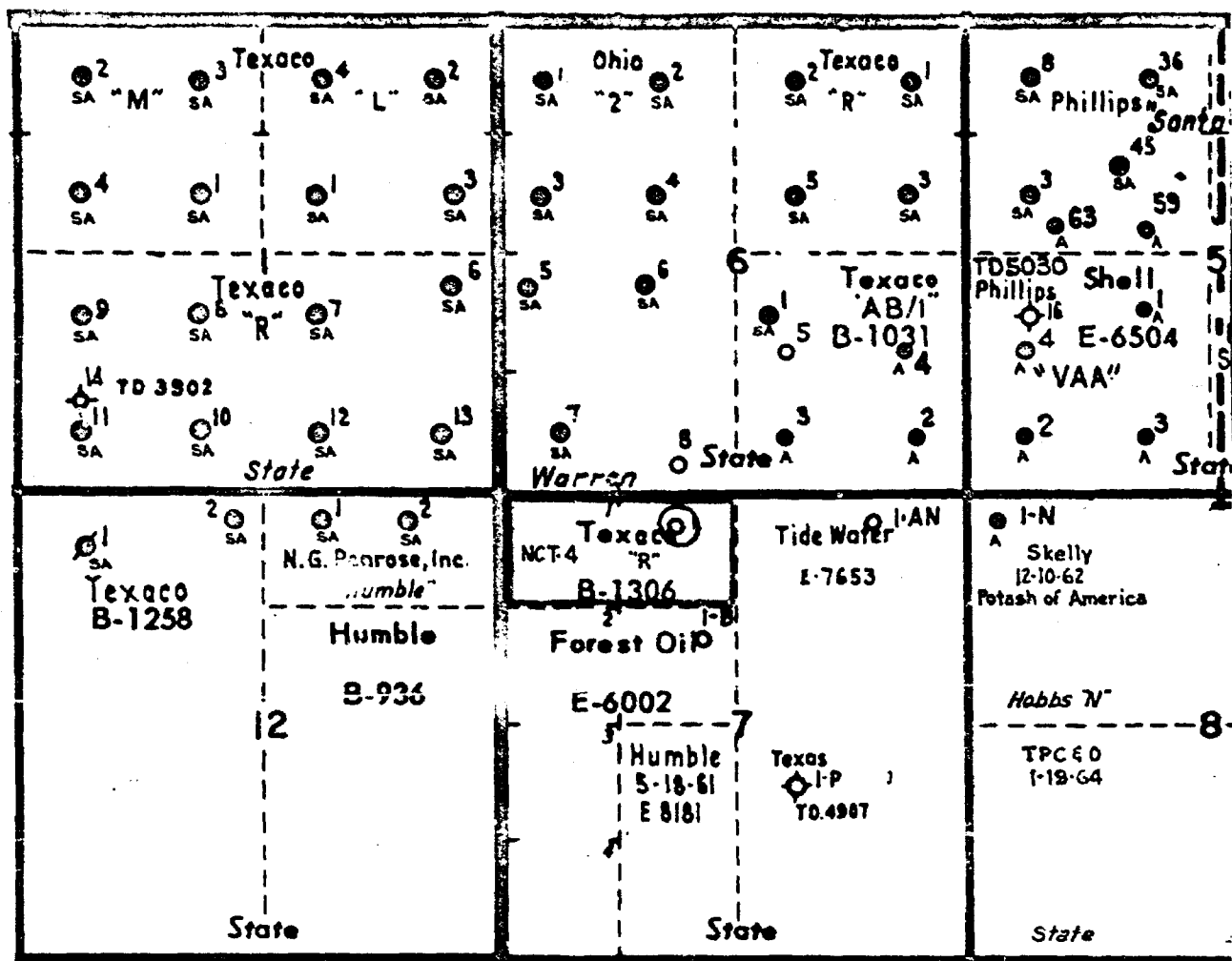
CERTIFICATE: I, the undersigned, state that I am the Asst. Divn. Pror. Engr. of xx TEXACO Inc. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

C. R. Black
C. R. Black Signature

- * Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

R-34-E

R-35-E



Plat Showing
 TEXACO Inc.
 State of New Mexico "R" NCT-4 Lease
 Lea County, New Mexico

Legend

A - Vacuum Abo Pool
 SA - Vacuum Grayburg-San Andres

Offset Operators

The Ohio Oil Company, P. O. Box 2107,
 Hobbs, New Mexico
 Tidewater Oil Company, P. O. Box 547,
 Hobbs, New Mexico
 Forest Oil Corporation, P. O. Box 4486,
 Midland, Texas
 Humble Oil & Refining Co., P. O. Box 2347,
 Hobbs, New Mexico
 N. G. Penrose Inc., Suite 417 Midland
 Tower Bldg., Midland, Texas

NO. 4-62

DOCKET: EXAMINER HEARING - WEDNESDAY, FEBRUARY 7, 1962

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, as alternate examiner:

CASE 2487: Application of Gulf Oil Corporation for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its W. A. Ramsay (NCT-C) Well No. 3, located 1650 feet from the South line and 330 feet from the West line of Section 36, Township 24 South, Range 37 East, Lea County, New Mexico, as a triple completion (conventional), in the North Justis-Ellenburger, North Justis-Fusselman and North Justis-McKee Pools with the production of oil from all zones to be through parallel strings of 2 3/8-inch tubing.

CASE 2488: Application of Texaco Inc., for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its State "R" NCT-4 Well No. 1, located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, as a dual completion (tubingless) in an undesignated Drinkard pool and an undesignated Abo Pool with the production of oil from both zones to be through parallel strings of 2 7/8-inch casing cemented in a common well bore.

CASE 2489: Application of Caulkins Oil Company for an amendment of Rule 5, Order No. R-1191, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Rule 5 of the Special Rules and Regulations for the South Blanco-Tocito Oil Pool, Order No. R-1191, to permit bottom hole pressure tests on all wells to be taken annually during the month of October of each year instead of semi-annually as Rule 5 presently prescribes.

CASE 2490: Application of O. H. Randel for a 50-acre non-standard oil proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to establish a 50-acre non-standard oil proration unit in the Abo formation, comprising Lot 3 and the North 702 feet of Lot 4, all in Section 19, Township 17 South, Range 31 East, Eddy County, New Mexico, said unit to be dedicated to a well to be drilled at a location 1629 feet from the South line and 537 feet from the West line of said Section 19.

CASE 2491: Application of D. W. Falls, Inc., for the promulgation of special rules governing oil wells in the Basin-Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, and for four non-standard oil proration units. Applicant, in the above-styled cause, seeks the promulgation of special rules governing

oil wells in the Basin-Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, including a provision defining an oil well in said pool as a well having a gas-oil ratio of 30,000 to 1, or less, and producing liquid hydrocarbons with a gravity of 49° API, or less; applicant seeks rules establishing 160-acre oil proration units and fixing well location requirements for said wells. Applicant further seeks the establishment of the four following non-standard oil proration units, all in Township 28 North, Range 13 West, San Juan County:

E/2 of Section 10, comprising 137.58 acres;
W/2 of Section 10, comprising 137.78 acres;
E/2 of Section 11, comprising 137.78 acres;
W/2 of Section 11, comprising 137.58 acres;

CASE 2492:

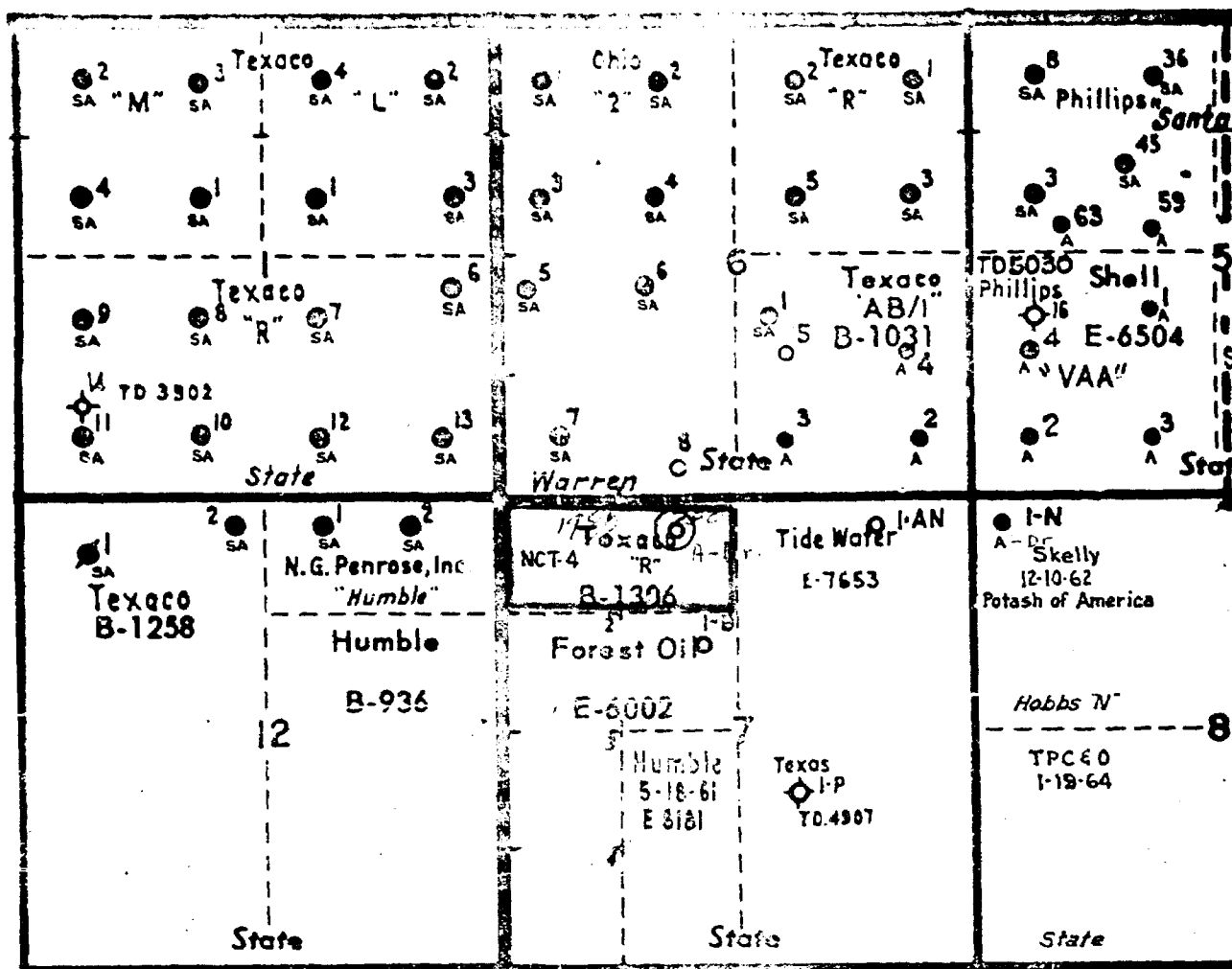
Application of Western Development Company and Yates Petroleum Corporation for a waterflood in the Artesia Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Artesia Pool on the State 648 Lease located in Section 10, Township 19 South, Range 28 East, Eddy County, New Mexico; the injection of water into the Grayburg formation initially will be through six wells located on said lease, said project to be governed by the provisions of Rule 701.

CASE 2493:

Application of Waterflood Associates, Inc., Western Development Company and Yates Petroleum Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Artesia Pool on the State 14 and State 647 Leases located in Section 14, Township 18 South, Range 28 East, Eddy County, New Mexico; the injection of water into the Grayburg formation initially will be through six wells located on said leases, said project to be governed by the provisions of Rule 701.

R-34-E

R-35-E



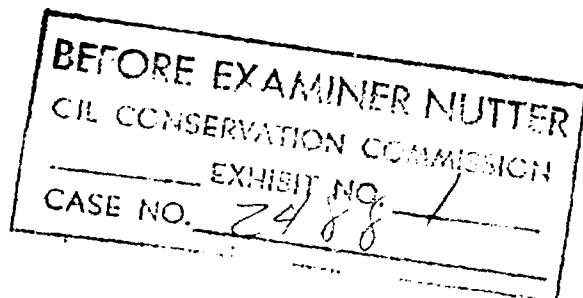
Plat Showing
 TEXACO Inc.
 State of New Mexico "R" NCT-4 Lease
 Lea County, New Mexico

Legend

A - Vacuum Abo Pool
 SA - Vacuum Grayburg-San Andres

Offset Operators

The Ohio Oil Company, P. O. Box 2107,
 Hobbs, New Mexico
 Tidewater Oil Company, P. O. Box 547,
 Hobbs, New Mexico
 Forest Oil Corporation, P. O. Box 4486,
 Midland, Texas
 Humble Oil & Refining Co., P. O. Box 2347,
 Hobbs, New Mexico
 N. G. Penrose Inc., Suite 417 Midland
 Tower Bldg., Midland, Texas



DIAGRAMMATIC SKETCH OF DUAL COMPLETION INSTALLATION

Abo (Flowing) ←

→ Drinkard (Pumping)

11-3/4" OD Surface Casing Set at 336'
Cement Circulated

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 2488

8-5/8" OD Intermediate Casing Set at
3128'
Cement top 3000'

DRINKARD REEF (OIL)

Top: 7880'

| | | |
|---------------|---------|-----------|
| Perforations: | 7884-90 | 7897-7900 |
| | 7908-10 | 7915-20 |
| | 7997-01 | 8008-14 |
| | 8030-38 | 8053-57 |
| | 8063-70 | 8084-87 |

Bottom: 8132'

Abo REEF (OIL)

Top: 8380'

| | | |
|---------------|---------|---------|
| Perforations: | 8573-82 | 8600-07 |
| | 8620-27 | 8642-46 |
| | 8684-89 | 8709-11 |
| | 8734-44 | 8750-52 |
| | | 8758-60 |

Bottom: 8800'

Plug at 8799'

2-7/8" OD Casing set at 8836'
Drilled Total Depth 8843'

Plug at 8803'

2-7/8" OD Casing set at 8832'

COMPANY: TEXACO Inc.

LEASE: State of New Mexico "R" NCT-4 Well No. 1

FIELD: Vacuum Abo

DATE: February 2, 1962

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

February 7, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc., for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its State "R" NCT-4 Well No. 1, located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, as a dual completion (tubingless) in an undesignated Drinkard pool and an undesignated Abo Pool with the production of oil from both zones to be through parallel strings of 2 7/8-inch casing cemented in a common well bore.

CASE NO.
2488'

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call the next case, Case No. 2488.

MR. WHITFIELD: Application of Texaco Company, Inc., for a dual completion in Lea County, New Mexico.

MR. KELLY: I am Booker Kelly, Gilbert, White & Gilbert, Santa Fe, New Mexico, appearing for Texaco Company, Inc. I have one witness and ask for him to be sworn.

(Witness sworn.)

C. R. BLACK,

called as a witness, having been first duly sworn on oath, was



examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Will you state your name?

A C. R. Black.

Q By whom are you employed and in what position?

A I am employed by Texaco Company, Inc., as a petroleum engineer out of Midland, Texas.

Q Have you previously testified before this Commission?

A Yes, sir, I have.

MR. KELLY: Are the witness's qualifications accepted?

MR. NUTTER: Yes.

Q (by Mr. Kelly) What does Texaco Company, Inc., seek by their application in this case?

A It is the application of Texaco Company, Inc., for a dual tubingless completion in their State of New Mexico NCT Well No. 1. This well is to be in the Drinkard-Abo Pool, designated as a Drinkard zone production. Each zone will be produced through our parallel tubing, cemented in a common well bore.

Q What is the status of the well now?

A At the present time, this well has reached a total depth and we have successful completion in the Abo zone. We are currently leading the Drinkard zone.

(Texaco's Exhibits 1 through 3 marked for identification)

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



Q (by Mr. Kelly) Referring to what has been marked Exhibit No. 1, would you explain that, please, sir?

A Exhibit No. 1 is a plat showing the immediate area surrounding the State of New Mexico "R" lease. The lease is shown bordered in yellow. The subject well is shown circled in red. Also shown are offset operators and their wells with the properly assigned designations being shown below each of the offset wells. At the base of the exhibit is a list showing the offset operators and their mailing addresses. The location of the State of New Mexico "R" No. 1 is 1980 feet from the West line and 330 feet from the North line of Section 7, Township 18 South, Range 35 East.

Q Are there any similar duals in the area?

A The Skelly Hobson Well No. 1 is located approximately three-quarters of a mile east, is a dual completion in the Abo Pool, as an undesignated Drinkard. The Drinkard zone is correlative into the Texaco Company's well. This well is not a tubingless completion. It is a conventional dual completion, but it is employed in the same two zones.

Q Now, referring to Exhibit No. 2, would you explain that, please?

A Exhibit No. 2 is a diagrammatic sketch of the dual completion installation. A 13 3/8-inch hole was drilled to 336 feet. At that point it was cemented with 250 sacks of cement and cement did circulate to the surface. We continued with the



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

13 3/8-inch hole to 3,128 feet. At that point we set 8 5/8-inch casing and cemented it with 900 sacks. Assuming that we would get fifty percent fillup, the calculated top of the cement was at 1400 feet or 100 feet above the zone. We then continued with a 6 3/4-inch hole to 8,843 feet, which is the total depth. We set two strings of 2 7/8 inch casing and cemented it with a total of 1180 sacks. The top of the cement behind the two long strings was found at 3,000 feet, which was up into the intermediate casing.

Q Can you give the crude characteristics?

A The Abo zone was perforated through at various intervals from 5,873 to 8,740. Those perforations are shown on Exhibit 2. The API is 8,983. The gas-oil rates is 1,050 to 2,000. The bottomhole pressure for this well is 3137. This was determined by a 72-hour shut-in on the bottomhole pressure on the Texaco Company State of New Mexico Well No 2, located approximately a half mile northeast of the subject well. This pressure was measured at minus 4,795 feet. On potential test dated January 17, 1962, this zone employed 141 barrels of oil and no water in eight hours, with the gas-oil ratio of 1,050 cubic feet per barrel. The tubing pressure was 200 pounds. The Drinkard zone has been perforated through at various intervals from 7,884 to 8,087. It is estimated that there will be an intermediate crude with an API gravity of 32.2. The estimated gas-oil ratio is 6000 cubic feet per barrel. The estimated barrels is approximately 100 psi. The last swabbing test, this zone was swabbing 90 barrels of oil in twenty-four hours.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

Q Do you **expect** any corrosion or paraffin problems?

A No, sir. At the present time, we do not. However, the surveys will be taken; if corrosion is found to be existing, we will, at that time, take the necessary steps to prevent corrosion from deteriorating the installation.

Q Are you pumping any of those zones?

A The Drinkard zone, it is anticipated it will be pumped and the Abo will flow, initially.

Q Well, if you have to pump both zones, do you expect that you can?

A Yes, sir. If and when it is necessary to pump both zones simultaneously, we can.

Q Now, referring to Exhibit No. 3, would you explain that?

A Exhibit No. 3 is a log of the subject well with the top of the Drinkard reef and the top of the Abo reef being marked and various perforated intervals shown on that log.

Q In your opinion, would the granting of this application be in the best interests of conservation and the prevention of waste?

A Yes, sir, it would.

Q Was Exhibit 1, 2 and 3 prepared by you or under your supervision?

A Yes, sir.

MR. KELLY: I would move to introduce into evidence



Texaco's Exhibits 1, 2, and 3.

MR. NUTTER: Texaco's Exhibits 1, 2, and 3 will be entered into evidence.

Are there any further questions of Mr. Black?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Black, how many sacks of cement was used on the 7 5/8" casing?

A We used 900 sacks of cement.

Q You calculated the top to be 1500 feet?

A That would be assuming 50% fillup. If we had 100% fillup, we would not circulate.

Q And how many sacks for the 2 7/8?

A We cemented at that time with a total of 1180 sacks.

Q And temperature surveys indicated the top was 3,000 feet?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Black?

You may be excused.

(Witness excused.)

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

MR. KELLY: That is all.

MR. NUTTER: Does anyone have anything they wish to offer in this case?

We will take the case under advisement.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243 6691

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, CECIL LANGFORD, NOTARY PUBLIC in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of hearing was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

Cecil Langford
NOTARY PUBLIC

My Commission Expires:

I do hereby certify that the foregoing is a complete record of the proceedings in the Bernalillo hearing of case No. 2488 heard by me on 2/7, 1962.

John, Examiner
New Mexico Oil Conservation Commission

