

CASE 2591: Application of TEXACO
for an exception to RULE 107 (e),
Lea County, New Mexico

Case 10.
259

Application, Transcript,
and Exhibits, Etc.

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. 2591
Order No. R-2283

APPLICATION OF TEXACO INC.
FOR AN EXCEPTION TO RULE
107 (e), LEA, COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, 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 17th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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., seeks an exception to Rule 107 (e) to permit the completion of its State "AT" Well No. 5, located in Unit M of Section 10, Township 14 South, Range 33 East, NMPM, Lea County, New Mexico, as a tubingless completion with production from the Wolfcamp formation to be through a string of 2 7/8-inch casing set at approximately 10,000 feet.

(3) That inasmuch as the proposed method of completing the subject well will not cause waste, the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That Texaco Inc. is hereby granted an exception to Rule 107 (e) to permit the completion of its State "AT" Well No. 5, located in Unit M of Section 10, Township 14 South, Range 33 East, NMPM, Lea County, New Mexico, as a tubingless completion in the Wolfcamp formation with the production of oil to be through a string of 2 7/8-inch casing set at approximately 10,000 feet.

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CASE No. 2591
Order No. R-2263

(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



E. L. Meschem

EDWIN L. MESCHEM, Chairman

E. S. Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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

esi/

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

July 17, 1962

Mr. Charlie White
Gilbert, White & Gilbert
Box 787
Santa Fe, New Mexico

Re: Case No. 2591
Order No. B-2283
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.

A. L. PORTER, JR.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC ✓
Aztec OCC _____
OTHER _____

Case 2591

Grant Texas's request for an
exception to Rule 167(e) to run
the ~~subpoena~~ case to the Penn-
Penn. of the Saunders problem
their Lt - "AT" well #5. 660/S, 660/W
being 10-745-33P.

John A. [Signature]

DOCKET: EXAMINER HEARING - THURSDAY. - JUNE 28, 1962

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

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

- CASE 2587: Application of Yates Petroleum Corporation for the assignment of an allowable to its Gushwa Well No. 1, located in the S/2 of Section 21, Township 18 South, Range 26 East, Eddy County, New Mexico, for the commencement of gas prorationing in the Atoka-Pennsylvanian Gas Pool July 1, 1961, to the date of connection of said August 12, 1961. Applicant alleges that said well was unreasonably discriminated against by being denied access to a gas transportation facility during said period.
- CASE 2588: Application of Waterflood Associates, Inc., for the establishment of a buffer zone, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of the SE/4 NE/4 of Section 20, and the W/2 NW/4 of Section 21, all in Township 18 South, Range 28 East, Eddy County, New Mexico, as a buffer zone in its proposed waterflood project in the Artesia Pool with wells in said buffer zone to be assigned capacity allowables.
- CASE 2589: Application of Chaco Oil Company for an amendment of Order No. R-1533, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1533 to provide administrative procedures for obtaining approval of unorthodox locations for injection and producing wells in the Red Mountain Oil Pool, McKinley County, New Mexico.
- CASE 2590: Application of J. Glenn Turner for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order of the Commission force-pooling all mineral interests in the Basin-Dakota Gas Pool in the S/2 of Section 14, Township 29 North, Range 10 West, San Juan County, New Mexico.
- CASE 2591: Application of Texaco Inc. for an exception to Rule 107 (e), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 107 (e) to permit the tubingless completion of its State "AT" Well No. 5, located in Unit M, Section 10, Township 14 South, Range 33 East, Lea County, New Mexico. The subject well will be completed

(Case 2591 continued)

in the Wolfcamp Formation and will be produced through a string of 2 7/8 inch casing set at approximately 10,000 feet.

CASE 2592:

Application of Skelly Oil Company for approval of a secondary recovery project, Lea County, New Mexico. Applicant, in above-styled cause, seeks permission to institute a secondary recovery project in the Lovington-San Andres Pool in the Lovington-San Andres Unit Area, comprising portions of Townships 16 and 17 South, Ranges 36 and 37 East, Lea County, New Mexico, by the injection of water into the San Andres formation through 17 wells located in said unit area.

CASE 2593:

Application of Skelly Oil Company for the approval of a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Lovington San Andres Unit Agreement embracing 2470 acres, more or less, of Federal, State and Fee lands in Townships 16 and 17 South, Ranges 36 and 37 East, Lea County, New Mexico.

CASE 2594:

Application of Hill & Meeker for special rules and regulations for the South Crossroads-Devonian Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules and regulations for the South Crossroads-Devonian Pool, Lea County, New Mexico, to include provisions for 80-acre oil proration units therein.

Case 2591
TEXACO
INC.

PETROLEUM PRODUCTS



DOMESTIC PRODUCING DEPARTMENT

P. O. BOX 3109
MIDLAND, TEXAS

June 4, 1962

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

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

Gentlemen:

In accordance with the New Mexico Oil Conservation Commission Rule No. 107, Texaco Inc. respectfully requests that a hearing be set to consider its application to complete the State of New Mexico "AT" Well No. 5 as a tubingless completion at a depth greater than 5000'. In support of this application the following facts are submitted:

1. Texaco Inc. is the operator of the State of New Mexico "AT" lease consisting of the S/2 of the S/2 of Section 10 and all of Section 15, T-14-S, R-33-E, Lea County, New Mexico and containing 800 acres more or less.
2. The State of New Mexico "AT" Well No. 5 is located in Unit M, 660' from the south line and 660' from the west line of Section 10, T-14-S, R-33-E.
3. The completion does not qualify for administrative approval since it is an exception to New Mexico Oil Conservation Commission Rule 107 (e) (1) in that the subject well is completed at a depth greater than 5000'.
4. A production casing string will consist of a string of 2-7/8" OD casing set at approximately 10,000'.
5. The well will be completed in the Wolfcamp formation through casing perforations 9735' to 9950'.

Rocky
Miles
6/15/62

NMOCC

-2-

June 4, 1962

6. It is anticipated that the Wolfcamp completion will be oil and will flow initially.

Attached in triplicate is a plat showing the State of New Mexico "AT" lease and the location of Well No. 5. Also shown on the plat are the offset operators and their mailing addresses. It is requested that this application be set for hearing on the first available examiner hearing docket.

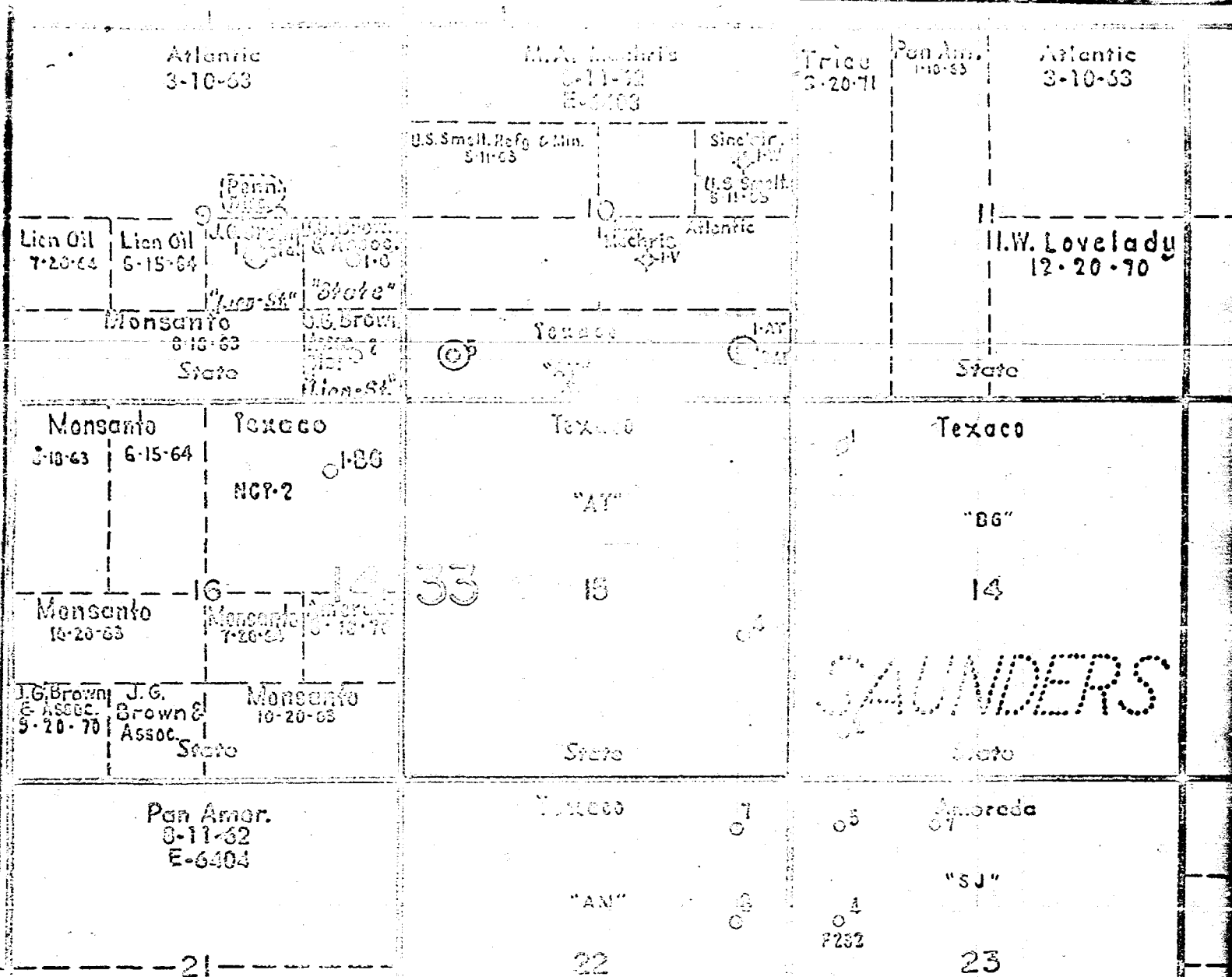
Yours very truly,

C. R. Black

C. R. Black
Assistant Division
Proration Engineer

CRB-MM

Attach.



TEXACO INC.
STATE OF NEW MEXICO "AT" LEASE
SAUNDERS POOL
LEA COUNTY, NEW MEXICO
SCALE 1" = 2000'

OFFSET OPERATORS:

Amerada Petroleum Corp. - P. O. Drawer-D, Monument, New Mexico
Atlantic Refining Co. - P. O. Box 1978, Roswell, New Mexico
J. G. Brown & Assoc. - P. O. Box 1625, Midland, Texas
Monsanto Chemical Co. - 1401 South Coast Bldg., Houston, Texas
Pan American Petroleum Corp. - P. O. Box 68, Hobbs, New Mexico
Trice Production Co. - P. O. Box 2232, Longview, Texas

Case 2591

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 28, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc. for an exception to Rule 107 (e), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 107 (e) to permit the tubingless completion of its State "AT" Well No. 5, located in Unit M, Section 10, Township 14 South, Range 33 East, Lea County, New Mexico. The subject well will be completed in the Wolfcamp formation and will be produced through a string of 2 7/8 inch casing set at approximately 10,000 feet.

CASE 2591

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: We will take Case 2591.

MR. MORRIS: Application of Texaco Inc. for an exception to Rule 107 (e), Lea County, New Mexico.

MR. WHITE: Charles White, Gilbert, White and Gilbert of Santa Fe, appearing on behalf of Texaco.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 and 2 marked for identification.)

C. R. BLACK

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

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-8891



DIRECT EXAMINATION

BY MR. WHITE:

Q State your name, please.

A I am C. R. Black. I am employed by Texaco as a Petroleum Engineer.

Q Have your qualifications as a Petroleum Engineer previously been accepted by the Commission?

A Yes, they have.

Q Will you briefly state the purpose of the subject application?

A This is the application of Texaco Inc. for an exception to Rule 107 (e), in that we intend to complete our State of New Mexico "AT" Well No. 5 as a tubingless completion at a depth greater than 5,000 feet.

Q Will you refer to Exhibit 1 and among other things point out the location of the well?

A Exhibit No. 1 is a location plat showing the Texaco State of New Mexico "AT" lease, it's bordered in yellow. The "AT" No. 5 is circled in red. It's located 660 feet from the south and west lines of Section 10, Township 14 South, Range 33 East. Also shown on this plat are the offset operators and their mailing addresses.

Q What's the status of the well at the present time?

A At the present time this well is drilling at a depth below 8500 feet.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



Q Will you refer to Exhibit No. 2 and explain the proposed installation?

A Exhibit 2 is a diagrammatic sketch of the tubingless completion installation. We drilled a 15 inch hole to 370 feet and at that point we set 10-3/4 inch casing, circulated cement to the surface. We then proceeded with a 9-7/8 inch hole to 4143 feet, and set 7-5/8 inch casing at 4143.

Exhibit 2 should be amended from 4150 to 4143. We cemented with a total of 700 sacks of cement, and we estimate that the top of the cement is at approximately 2450 feet. We then proceeded and are currently drilling a 6-3/4 inch hole. We plan to go to a total depth of 10,000 feet, and at that point we will set 2-7/8 inch casing and cement it with sufficient cement to bring the cement back to 8700 feet.

Q What are the crude characteristics expected to be?

A We expect to complete in the Permo-Pennsylvanian, or Wolfcamp formation. We perforate four intervals ranging from 9750 to 9950. We expect an intermediate sweet crude with a gravity of 42.5 degrees. We expect a gas-oil ratio to be approximately 1200 cubic feet per barrel, with an estimated bottom hole pressure of 1600 psi. We expect this zone to flow for one year at the rate of a top allowable of 129 barrels of oil per day.

Q Is this installation suitable for artificial lifting?

A Yes, sir, at the time it becomes necessary to artifi-

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FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



ficially lift the installation, it will be possible.

Q Do you anticipate any corrosion, scale, or paraffine problems?

A We anticipate some corrosion problems. We plan to control this corrosion by pumping a liquid inhibitor mixed with crude oil back into the formation in a batch treatment. We will take periodic coupon surveys to determine at what time it's necessary to recharge the formation with this inhibitor.

Q How about your scale problems?

A With regard to scale, we are expecting some scale problems from the water production. We do expect approximately 30 barrels of water per day initially. We will control the scale by packing the casing from a point above the perforations to the plug-back total depth with a solubility control phosphate crystals. These are small crystals approximately 3/8ths of an inch in diameter, and based on calculations as to when it will be necessary to recharge the casing and also water analysis, we will know at what time to recharge the casing and prevent scale. With regard to paraffine, we expect no paraffine whatsoever in this installation.

Q In regard to controlling this scale, have you used this method before and has it proved satisfactory?

A Yes, we have. It's a relatively new process in the industry; however, we have it in several installations in Southeast New Mexico and West Texas and find it is controlling scale.

Q Are there any similar installations of this nature in the

DEARNLEY-MEIER REPORTING SERVICE, Inc.

HARRINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



area?

A Upon review, we found that the closest installation we could find completed in the Wolfcamp formation is approximately 25 miles to the north. It's the Cabeen Exploration Company State "K" Well No. 1. It's a tubingless completion in the Permian-Pennsylvanian or Wolfcamp formation. It's completed in the Mescalero- North Wolfcamp Field and it was completed on June 14, 1960.

Q Did the Commission approve this installation?

A Yes. The Commission approved it by Order No. R-1743 dated August 4th of 1960. At the present time this well is currently producing top allowable of 102 barrels of oil per day. They've experienced no apparent difficulties with it.

Q Are there any other wells in this pool within a mile of the subject well?

A Yes, sir, this well is offset directly to the west and to the northwest by wells completed in the Saunders Pool, and then our State of New Mexico "AT" No. 1, 3, and 4 are also completed in the Saunders Pool.

Q Do you anticipate any pressure problems?

A No, sir, we expect none whatsoever.

Q Do you intend to ever dually complete the well?

A No, sir. We have no indication of any formation above the Wolfcamp being productive in this area; and due to this installation it would be relatively impossible to complete it at a

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formation at a lower depth.

Q Will a log be submitted upon the completion of the well?

A When the well is logged and completed, we will submit a log to the Commission.

Q In your opinion, will this installation lend itself to the prevention of waste and to the protection of correlative rights?

A Yes, sir.

MR. WHITE: At this time we offer Exhibits 1 and 2.

MR. UTZ: Without objection, Exhibits 1 and 2 will be entered into the record.

Q (By Mr. White) Do you have any further statements to make, Mr. Black?

A That's all I have.

MR. WHITE: That concludes our direct.

CROSS EXAMINATION

BY MR. UTZ:

Q What is the producing formation in the Saunders Pool?

A It's the Permo-Pennsylvanian or the Wolfcamp formation. There's some difference of opinion as to whether it's Permian or Pennsylvanian, so we call it the Permo-Pennsylvanian.

Q Which is the same formation which you intend to complete the subject well in?

A That is correct.

Q I believe you testified that the 7-5/8 casing was set at 4143?

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1162

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

A Yes, sir.

Q Top of your cement on your 2-7/8ths was 8700?

A Yes, sir.

Q Which leaves something like 4557 open hole?

A Yes, sir.

Q How about the water zones and producing zones in the area?

A We feel that the intermediate casing has all fresh water zones cased off because it is below the base of the salt section. There are no indicated producing zones between 8700 and 4143 feet. We've experienced no difficulty with older wells in the Saunders Pool with regard to corrosion problems, external corrosion problems on the production casing.

Q Is that much open hole prevalent in the other completions in the pool?

A In most of our completions in the pool, they are completed in a very similar manner to this, with the exception we set 5-1/2 or 4-1/2 inch casing rather than the 2-7/8ths.

Q What was the chemical again that you were going to use for scale?

A We're going to use solubility control phosphate crystals which, they dissolve at a rate proportional to the area exposed to the water being produced. These crystals dissolve in the produced water and keep the calcium carbonate scale in suspension until it's produced at the surface, and thereby reduce the scale deposits



at the formation and in the tubing string.

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

(Witness excused.)

MR. UTZ: Any other statements in this case?

MR. WHITE: We have none.

MR. UTZ: The case will be taken under advisement.

* * * * *

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal supervision; that the same is a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

WITNESS my Hand and Notarial Seal this 3rd day of July, 1962.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

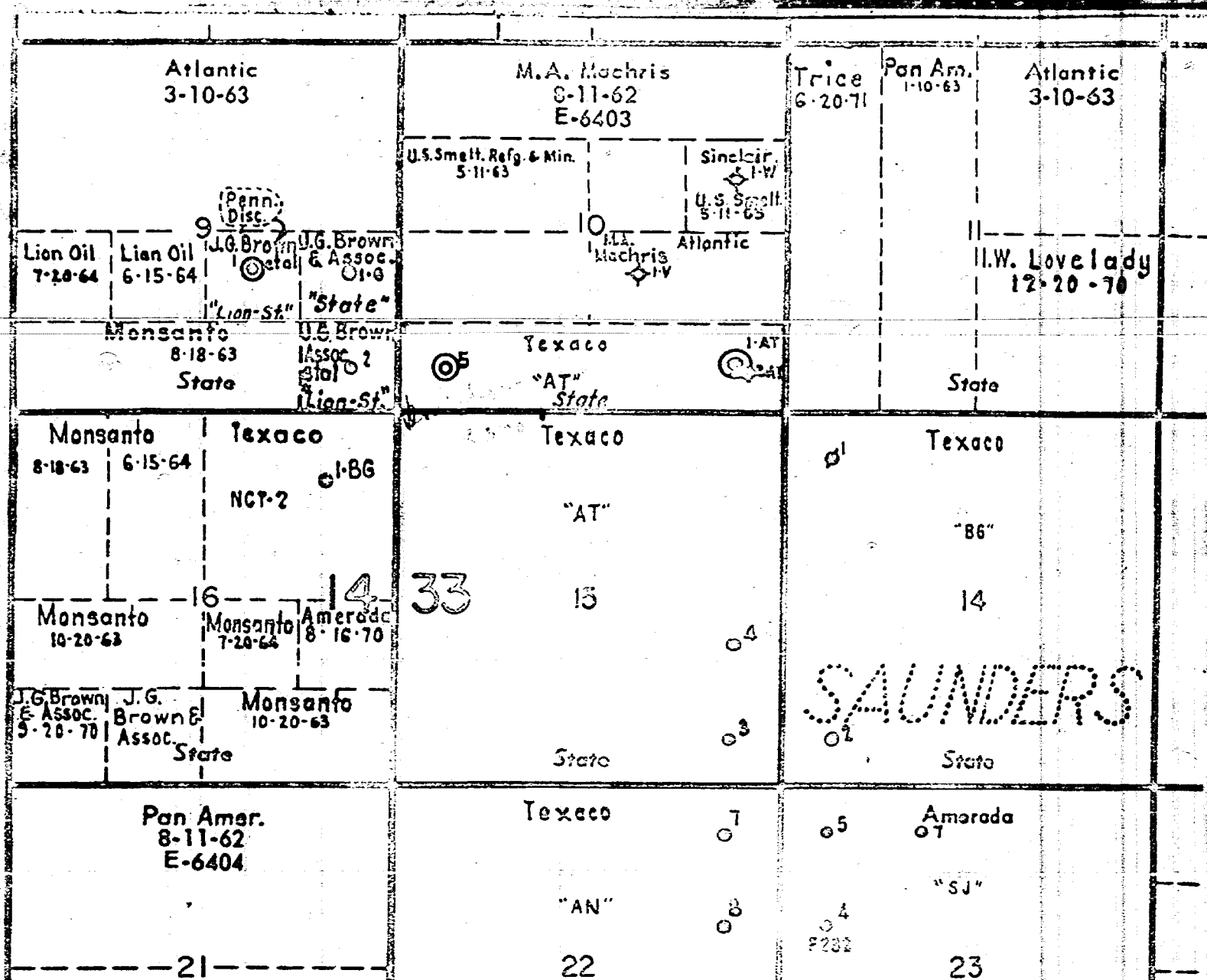
I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2591, heard by me on June 28, 1962.
[Signature]
Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691





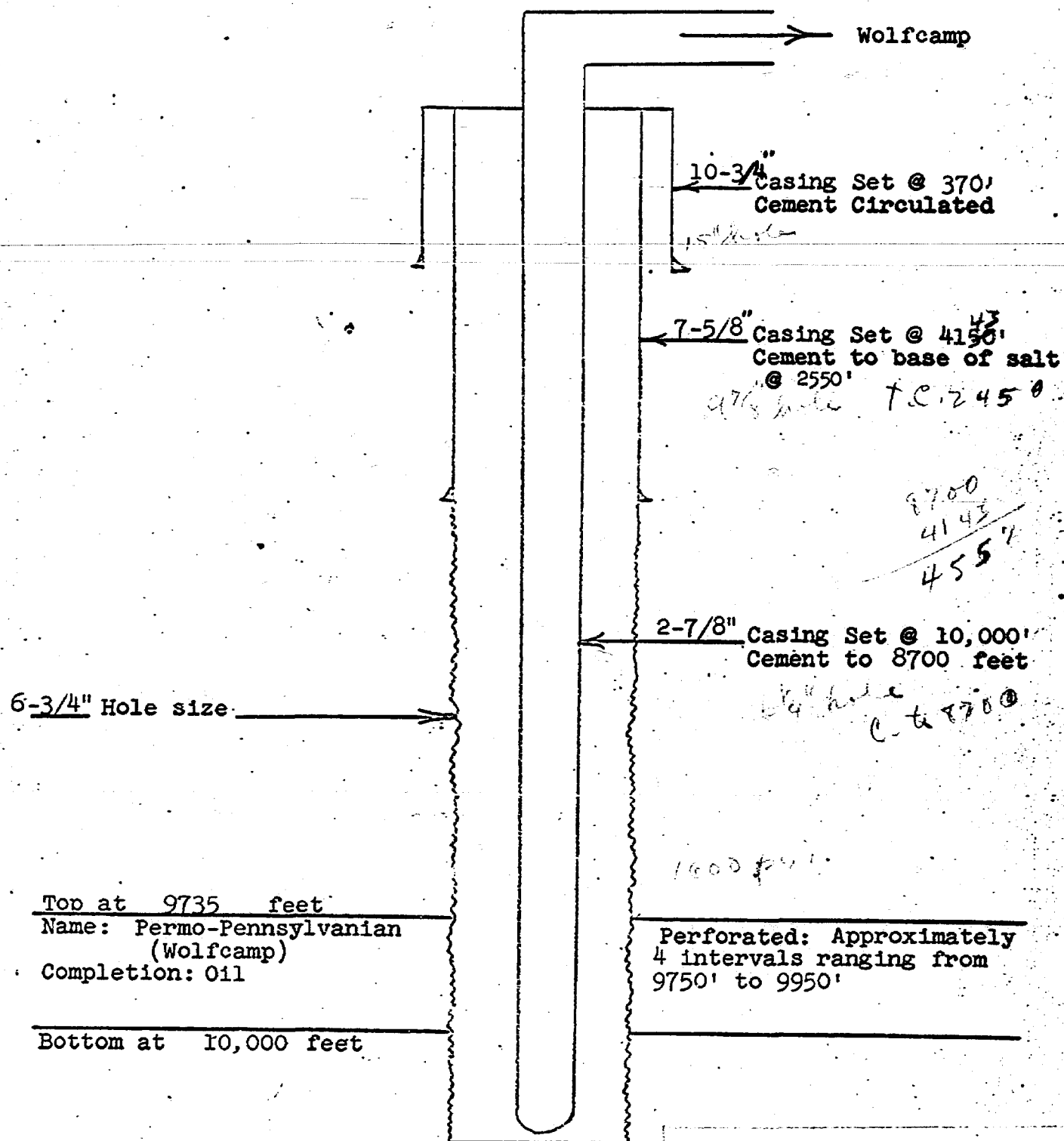
TEXACO INC.
STATE OF NEW MEXICO "AT" LEASE
SAUNDERS POOL
LEA COUNTY, NEW MEXICO
SCALE 1" = 2000'

OFFSET OPERATORS:

Amerada Petroleum Corp. - P. O. Drawer D, Monument, New Mexico
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Pan American Petroleum Corp. - P. O. Box 68, Hobbs, New Mexico
Trice Production Co. - P. O. Box 2232, Longview, Texas

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 2591

DIAGRAMMATIC SKETCH OF SINGLE COMPLETION (TUBINGLESS)



TEXACO Inc.

Lease: State of New Mexico "AT" Well No. 5
Field: Saunders
Date: June 4, 1962

BEFORE EXAMINER USE
OIL CONSERVATION COMMISSION
CASE NO. 2591