

CASE 5845: TEXACO INC. FOR AN UNORTHO-
DOX LOCATION, SAN JUAN COUNTY, NEW
MEXICO.

CASE NO.

5845

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 2, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Inc. for an) CASE
unorthodox location, San Juan County,) 5845
New Mexico.)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Lynn Teschendorf, Esq.
Conservation Commission: Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: William Booker Kelly, Esq.
WHITE, KOCH, KELLY & MCCARTHY
Attorneys at Law
220 Otero Street
Santa Fe, New Mexico

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General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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MELVIN GLERUP

Direct Examination by Mr. Kelly

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Cross Examination by Mr. Nutter

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EXHIBIT INDEX

Offered

Admitted

Texaco Exhibit One, Plat

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9

Texaco Exhibit Two, Structure Map

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Texaco Exhibit Three, Letter

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1 MR. NUTTER: The hearing will come to order, please.
2 We will call next Case Number 5845.

3 MS. TESCHENDORF: Case 5845, application of Texaco,
4 Inc. for an unorthodox location, San Juan County, New Mexico.

5 MR. KELLY: Booker Kelly of White, Koch, Kelly and
6 McCarthy, Santa Fe, on behalf of the applicant. I have one
7 witness to be sworn.

8 (THEREUPON, the witness was duly sworn.)

9 MR. KELLY: Mr. Examiner, do you have the exhibits?

10 MR. NUTTER: Yes, we have them.

11
12 MELVIN GLERUP

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

15
16 DIRECT EXAMINATION

17 BY MR. KELLY:

18 Q Would you please state your name and position and
19 by whom employed?

20 A My name is Melvin Glerup.

21 Q Would you spell that?

22 A G-l-e-r-u-p. Melvin, M-e-l-v-i-n.

23 I'm employed by Texaco, Incorporated, Denver Division,
24 Denver, Colorado. I'm the Senior Development Geologist for
25 the Rocky Mountains.

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1 Q Have you previously qualified in your profession
2 before this Commission?

3 A No, sir.

4 Q Would you give the Examiner a summary of your
5 educational and professional background?

6 A I have a Bachelor of Science degree and a Master of
7 Science degree in Geological Engineering. I have worked for
8 Texaco for sixteen years of which ten years have been
9 associated with the area of Tocito Dome Field and I have
10 been Senior Development Engineer for five of the last seven
11 years, responsible for the development of Tocito Field.

12 MR. KELLY: Are the witness' qualifications
13 acceptable, Mr. Examiner?

14 MR. NUTTER: Yes, they are.

15 Q (Mr. Kelly continuing.) All right, referring to
16 our plat, Exhibit One, would you state what Texaco seeks by
17 this application?

18 A Exhibit A is an ownership plat and a well location
19 plat of the Tocito Dome Pennsylvanian "D" Oil Pool. Texaco
20 seeks approval of an unorthodox location thirteen hundred and
21 forty feet from the south line and thirteen hundred feet from
22 the west line of Section 23, 26 North, 18 West. This proposed
23 well, the Texaco Navajo Tribe "BS" No. 5, is sought to replace
24 "BS" Wells No. 2 and No. 3 which have been lost due to casing
25 failure and have been subsequently plugged and abandoned.

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1 Q Can you give the Examiner the history of those two
2 wells and what happened to them that caused this?

3 A The "BS" No. 2 was completed January 14th, 1975
4 with an IP of three hundred and twenty-six barrels of oil
5 per day and twenty-seven of water. In August of 1975 the casing
6 collapsed approximately below eighteen hundred feet, at which
7 time production ceased and after recovery of approximately
8 seventeen thousand barrels of oil the rate of production on
9 that particular well was about seventy-four barrels of oil
10 per day and thirty barrels of water per day before collapse
11 of the casing.

12 The "BS" No. 3 which is located in the northwest of
13 the southwest of 23 was completed March 26th, 1975 for an
14 IP of a hundred and ninety-six barrels of oil and eighty-five
15 barrels of water per day and in June of 1975 the casing also
16 collapsed below three thousand feet after the well had
17 produced ten thousand, two hundred and forty barrels of oil.
18 The well was then subsequently plugged and abandoned.

19 Q What was the daily production on that well?

20 A The daily production on No. 3 was about eighty-four
21 barrels of oil and twenty-seven barrels of water per day prior
22 to the collapsed casing.

23 Q Now, is this problem of collapsed casing something
24 that Texaco has experienced generally in this Pool?

25 A No, we have not, outside of three wells here we have

1 had only one other well. Other operators in the field have had
2 a couple of wells but it's not a general occurrence. These
3 wells, you know, have been on for twenty years, some of them,
4 approximately twenty years and have not had failure.

5 Q What do you think was the problem in these wells?

6 A Well, there are three, one that we did run during
7 the difficult time to get new casing, we run used casing which
8 was inspected and fully judged to be good casing. Possibly
9 another one is shifting of the rock itself, another possibility
10 is extreme corrosive effects from water zones around three
11 thousand feet. Other operators have run new strings and
12 cemented completely to the surface and still have lost one
13 well too.

14 MR. NUTTER: Did they both fail at about the same
15 depth?

16 A Yes, around twenty-seven hundred to thirty-seven
17 hundred and generally across from the Entrada formation.

18 Q (Mr. Kelly continuing.) All right, now, you have
19 a structure map, Exhibit Two, to explain your proposed
20 location.

21 A Exhibit B is a structure map on top of the --

22 Q We are referring to it as Exhibit Two, is that
23 the same?

24 A Exhibit Two, okay. Exhibit Two is a structure map
25 on top of the reservoir, the Pennsylvanian "D" oil reservoir

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1 and it shows to the left sixteen and seventeen, a couple of
2 highs minus five hundred and then dips off into the east into
3 Section 23 where a fault of approximately fourteen hundred feet
4 of throw down to the east is intercepted and cuts the
5 reservoir.

6 The well that we propose in Section 23 is the
7 approximate center of Section 23 and is downdip from the
8 "BS" 2 and "BS" 3 lost wells and will amount to one well
9 replacing two in Section 23.

10 Q Do you feel that this proposed location will
11 effectively drain the area originally served by the two
12 wells?

13 A Yes, the wells, the "BS" 2 and 3 after the limited
14 production did not project out to have enough reserves to
15 sustain the drilling of two wells. However, the proposed
16 unorthodox location would be in an optimum position to drain
17 the reservoir based on the reservoir mechanisms that we see.
18 In operation we see four mechanisms, solution gas, we see gas
19 cap expansion, pressure depletion and a limited water drive
20 and we see gravity drainage. We think that this well is
21 optimally placed for the best reservoir and also in an
22 optimal structural position.

23 Q Now, how about the ownership pattern around the
24 proposed location?

25 A Texaco and Amoco are the only two owners in this

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1 part of the field. Amoco owns Section 22 to the west of the
2 proposed location and we are moving away from that section
3 line. Amoco also owns Section 25 and 36 to the southeast,
4 which is across the fault and would not be affected by this
5 unorthodox request.

6 Q And do you as Exhibit Three have a letter consenting
7 to this application by Amoco?

8 A Yes, sir, and it has been presented, yes. Amoco has
9 no objection to this drilling.

10 Q What is the ownership of this land here?

11 A All of the lands are Navajo Tribal lands, there are
12 no fee or patented. It is Federal government land, they
13 are all Navajo Tribe.

14 Q And has the USGS been contacted on this?

15 A They have been contacted and we are not aware of
16 any objection.

17 Q And all necessary applications have been made to
18 them?

19 A Yes.

20 Q And I take it that in your opinion it would be
21 uneconomic to drill two wells to replace your two marginal
22 wells?

23 A Yes, it definitely would be uneconomic.

24 Q And in your opinion the proposed location would give
25 you the best structural position to develop a good well?

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1 A. Yes. I feel that based on all engineering and
2 geologic data that we have reviewed this well is in the best
3 spot to make the best use of the reservoir energy and that it
4 can efficiently drain the hundred and sixty proration unit,
5 the southwest quarter of Section 23, and we feel that this will
6 be the most efficient method of developing the reserves.

7 Q. And in your opinion would there be any adverse
8 effect on correlative rights of other operators by the
9 granting of this application?

10 A. No, sir. The operator to the west sees no effect,
11 we see no effect, adverse effect, on them and everyone's
12 rights will be protected and I feel it would be the best use
13 of, best development of this field in this particular position.

14 Q. Now, Exhibits One and Two, were they prepared by
15 you or under your direct supervision?

16 A. Yes, they were.

17 Q. And Exhibit Three is an exact copy of the letter
18 from Amoco, is that correct?

19 A. Yes, sir.

20 MR. KELLY: We move Texaco's Exhibits One through
21 Three into evidence at this time.

22 MR. NUTTER: Texaco Exhibits One through Three will
23 be admitted into evidence.

24 (THEREUPON, Texaco Exhibits One through
25 Three were admitted into evidence.)

MR. KELLY: We have nothing further on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Glerup, the spacing in this pool is one hundred and sixty acres, is that correct?

A Yes, sir.

Q And you had two wells on a hundred and sixty acre unit previously?

A Yes, sir.

Q And you just now have one well. I notice that you've also got a location staked immediately north here. Do you propose to drill a new well up there too?

A Yes, the "BS" No. 4 well also had collapsed casing in November of 1976.

Q Is that right?

A And we are proposing to re-drill that also and that would not require an unorthodox permission. The original location was a hundred and fifty feet west of the center of the forty, this well is a hundred and fifty feet east, so it would be just three hundred feet east but we will follow the rules set up by the Commission.

Q Now, did the original well there have that used casing in it too?

A Yes.

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1 Q Was it drilled about the same time as these other
2 two wells?

3 A Yes, the "BS" 4 was drilled in January of '75, the
4 "BS" 2 was January of '75, the "BS" 3 was March of '75.

5 MR. NUTTER: Are there any further questions of the
6 witness? He may be excused.

7 (THEREUPON, the witness was excused.)

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

9 MR. KELLY: Nothing further.

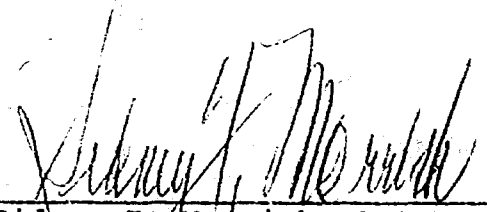
10 MR. NUTTER: Does anyone have anything they wish to
11 offer in Case Number 5845? We will take the case under
12 advisement.

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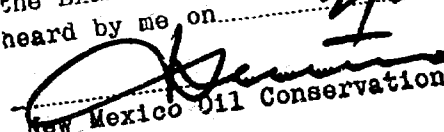
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5845
heard by me on 2/2, 19 72.
, Examiner
New Mexico Oil Conservation Commission

- CASE 5845: Application of Texaco Inc. for an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Navajo Tribe "BS" Well No. 5 to be drilled 1340 feet from the South line and 1300 feet from the West line of Section 23, Township 26 North, Range 18 West, Tootie Dome Penn "D" Pool, San Juan County, New Mexico.
- CASE 5846: Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its South Empire Deep Unit Well No. 13 to be drilled 660 feet from the South line and 1597 feet from the West line of Section 30, Township 17 South, Range 29 East, South Empire Field, Eddy County, New Mexico, the S/2 of said Section 30 to be dedicated to the well.
- CASE 5810: (Continued from the January 19, 1977, Examiner Hearing)
- Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Stonewall "EP" Com Well No. 1, located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico, to produce gas from the North Burton Flat-Wolfcamp Gas Pool and an undesignated Morrow gas pool.
- CASE 5847: Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Gossett "EU" Well No. 1, located in Unit K of Section 26, Township 17 South, Range 25 East, Eddy County, New Mexico, in such a manner as to produce gas from the Lower Wolfcamp or Upper Pennsylvanian and the Lower Pennsylvanian formations through the casing-tubing annulus and tubing, respectively.
- CASE 5848: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Pipkin HE Well No. 1 to be drilled 660 feet from the South and West lines of Section 4, Township 18 South, Range 25 East, Eddy County, New Mexico, the S/2 of said Section 4 to be dedicated to the well.
- CASE 5849: Application of King Resources Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Long Canyon Unit Area comprising 18,880 acres, more or less, of State and Federal lands in Townships 19 and 20 South, Ranges 19 and 20 East, Chaves County, New Mexico.
- CASE 5850: Application of Pennzoil Company for adoption of pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the adoption of pool rules for the North Mescalero-Cisco Pool, Lea County, New Mexico, including provision for a special gas-oil ratio limit of 4,500 to one.
- CASE 5117: (Reopened)
- In the matter of Case 5117 being reopened pursuant to the provisions of Order No. R-4691-A, which order extended the temporary special pool rules for the North Dagger Draw-Upper Pennsylvanian Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said North Dagger Draw-Upper Pennsylvanian Pool should not be developed on less than 160-acre proration units and why the special depth bracket allowable should be retained.
- CASE 5851: Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tapacito-Pictured Cliffs, Blanco Mesaverde, and Basin-Dakota production in the wellbore of his Tribal Wells Nos. 1 and 2 located in Unit D of Section 16 and Unit L of Section 9, respectively, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5852: Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Wildhorse-Gallup and Basin-Dakota production in the wellbore of his Apache Wells Nos. 3 and 4, located in Units D and L, respectively, of Section 19, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5853: Application of Carl Engwall for an exception to casing and cementing requirements of Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing and cementing requirements of Order No. R-111-A to eliminate the salt protection casing string in a well he proposes to drill in Unit L of Section 27, Township 20 South, Range 34 East, Lynch-Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 5854: Application of Palmer Oil and Gas Company for an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Stevenson Well No. 2 to be drilled 1850 feet from the North line and 1150 feet from the West line of Section 8, Township 26 North, Range 2 West, Blanco-Mesaverde Pool, Rio Arriba County, New Mexico, the N/2 of said Section 8 to be dedicated to the well.

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. 5845
Order No. R-5365

APPLICATION OF TEXACO INC. FOR
AN UNORTHODOX LOCATION, SAN JUAN
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 2, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 8th day of February, 1977, 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., seeks approval of an unorthodox location for its Navajo Tribe "BS" Well No. 5 to be drilled at a point 1340 feet from the South line and 1300 feet from the West line of Section 23, Township 26 North, Range 18 West, NMPM, Tocito Dome Pennsylvanian "D" Pool, San Juan County, New Mexico.

(3) That the SW/4 of said Section 23 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the oil and gas underlying the proration unit.

(5) That no offset operator objected to the proposed unorthodox location.

-2-
Case No. 5845
Order No. R-5365

(6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the oil and gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox oil well location for the Texaco Inc. Navajo Tribe "BS" Well No. 5 is hereby approved, said well to be located at a point 1340 feet from the South line and 1300 feet from the West line of Section 23, Township 26 North, Range 18 West, NMPM, Tocito Dome Pennsylvanian "D" Pool, San Juan County, New Mexico.

(2) That the SW/4 of said Section 23 shall be dedicated to the above-described well.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

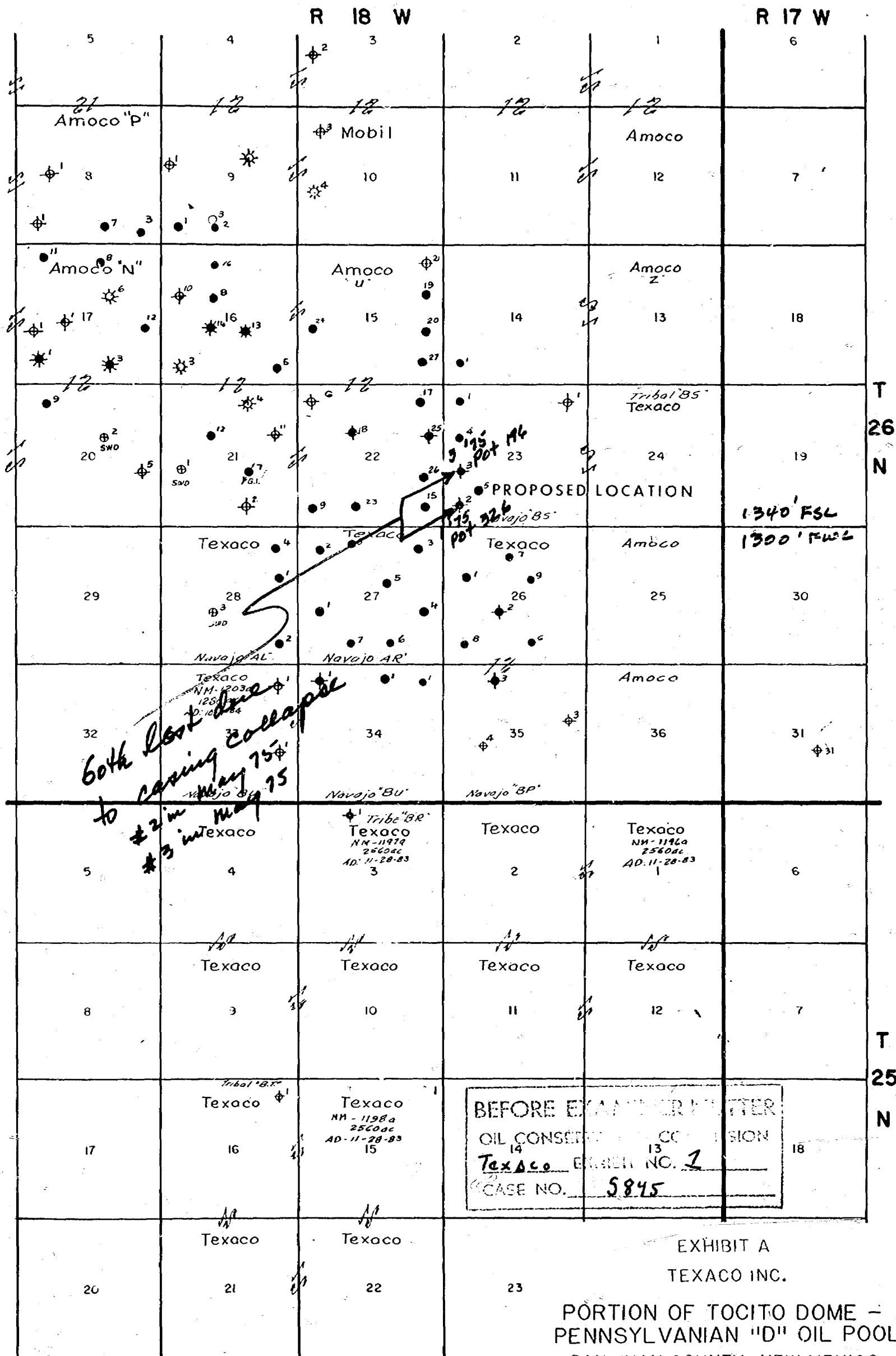

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/



All Lands - Navajo Tribe
Land Net from Protraction Diagrams

[illegible]

APPLICATION FOR LOCATION EXCEPTION
TOCITO DOME-PENNSYLVANIAN "D" OIL POOL
SAN JUAN COUNTY, NEW MEXICO

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

Amoco Production Company has received a copy of Texaco's captioned application. The application has been reviewed and Amoco finds no reason to object to Texaco's proposal to drill the Navajo Tribe "BS" Well No. 5 at a location 1300 feet from the west line and 1340 feet from the south line of Section 23, Township 26 North, Range 18 West, San Juan County, New Mexico. Therefore, Amoco hereby waives objection to Texaco's application.

Very truly yours,

Date _____

cc: P. T. McGrath
U. S. Geological Survey
P. O. Box 959
Farmington, NM 87401

Mr. J. C. White
Texaco Inc.
P. O. Box 2100
Denver, CO 80201

BEFORE EXAMINED BUTTER
OIL CONSERVATION
Texaco EXHIBIT NO. 3
CASE NO. 5845

Exhibit 3

Case 5845



PETROLEUM PRODUCTS

PRODUCING DEPARTMENT
WEST UNITED STATES
DENVER DIVISION
J. C. WHITE
ASSISTANT DIVISION MANAGER

January 6, 1977

JAN 12 1977
TEXACO INC.
P. O. BOX 2100
DENVER, COLORADO 80201

APPLICATION FOR LOCATION EXCEPTION
TOCITO DOME-PENNSYLVANIAN "D" OIL POOL
SAN JUAN COUNTY, NEW MEXICO
6.02-1

NSL-
For hearing

CERTIFIED MAIL NO. 303358
RETURN RECEIPT REQUESTED

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

Attached are two copies of Texaco's verified application requesting approval of an exception location for the Texaco Navajo Tribe "BS" Well No. 5 proposed for drilling in Tocito Dome-Pennsylvanian "D" oil pool, San Juan County, New Mexico. It is requested that the application be approved administratively.

Please note that copies of the application have also been sent to Mr. A. R. Kenrick in the Commission's Aztec office and to Mr. P. T. McGrath of the USGS in Farmington.

Very truly yours,

J. C. White

LEA:RJM

cc: Mr. A. R. Kendrick
New Mexico Oil Conservation Commission
1000 Rio Brazos Road
Aztec, NM 87410

Mr. P. T. McGrath
U. S. Geological Survey
P. O. Box 959
Farmington, NM 87401

Attach. Two copies of application

This is recycled paper

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)
TEXACO INC. FOR AN ADMINISTRATIVE)
ORDER APPROVING AN EXCEPTION LOCATION)
IN TOCITO DOME-PENNSYLVANIAN "D" OIL)
POOL, SAN JUAN COUNTY, NEW MEXICO)

CASE NO. 5845

A P P L I C A T I O N

COMES NOW, the Applicant, Texaco Inc., a Delaware Corporation, duly authorized to do business in the State of New Mexico, and respectfully makes application to the Secretary-Director of the New Mexico Oil Conservation Commission for approval to drill a well to be known as the Texaco Navajo Tribe "BS" Well No. 5 to be located, as an exception to Order No. R-2758, 1300 feet from the west line and 1340 feet from the south line, Section 23, Township 26 North, Range 18 West, San Juan County, New Mexico. In support of this application, Applicant respectfully states and shows the following:

- 1) Exhibit A is an ownership map showing the proposed location exception, the locations of wells which have been drilled in the area, and owners of lands adjacent to the lease on which the proposed well is to be located.
- 2) The proration unit consisting of the southwest quarter of Section 23, Township 26 North, Range 18 West had two wells on it at one time, but both wells have been plugged and abandoned because of casing failures. Consequently, there is no producing well in the southwest quarter of Section 23 at this time.
- 3) One of the plugged and abandoned wells is the Texaco Navajo Tribe "BS" Well No. 2, located in the southwest quarter of the southwest quarter of Section 23. It was completed January 3, 1975 with an initial producing rate of 326 barrels of oil per day and 27 barrels of water per day with a gas-oil ratio of 801 cubic feet per barrel. Prior to abandonment, the well was producing 50 barrels of oil per day and 26 barrels of water per day with a gas-oil ratio of 2440 cubic feet per barrel. When abandoned May 18, 1976, cumulative production was 17,972 barrels of oil, 34,557,000 cubic feet of gas, and 7290 barrels of water.
- 4) The other well plugged and abandoned because of casing failure is the Texaco Navajo Tribe "BS" Well No. 3, located in the northwest quarter of the southwest quarter of Section 23. It was completed March 20, 1975 with an initial producing rate of 196 barrels of oil per day and 85 barrels of water per day, with a gas-oil ratio of 1704 cubic feet per barrel. Prior to abandonment, the well was producing 109 barrels of oil per day and 38 barrels of water per day with a gas-oil ratio of 2550 cubic feet per barrel. When abandoned May 12, 1976, cumulative production was 10,240 barrels of oil, 28,039,000 cubic feet of gas, and 3314 barrels of water.

- 5) Applicant cannot justify drilling two wells to replace Navajo Tribe "BS" Well Nos. 2 and 3, but one additional well in this proration unit is warranted to replace the two wells that have been lost.
- 6) Rule 4 of Order No. R-2758, dated August 3, 1964, specifies that all wells drilled in the Tocito Dome-Pennsylvanian "D" oil pool shall be located within 150 feet of the center of a governmental quarter-quarter section. In order to attain optimum ultimate recovery, Applicant desires to drill the replacement well as far away as possible from the two wells that have been plugged and abandoned. However, the two remaining center-forty locations in the southwest quarter of Section 23 that satisfy Rule 4 of Order R-2758 are in an unfavorable geologic position.
- 7) Production from the Tocito Dome-Pennsylvanian "D" oil pool is from the Barker Creek member of the Pennsylvanian Paradox Formation. The trapping mechanism is a combination of structural and stratigraphic features. The eastern flank of the structure, in the vicinity of the proposed well, is quite steep structurally, making a location further to the east undesirable.
- 8) Based on reservoir performance and geological data, the most favorable location for the replacement well is near the center of the southwest quarter of Section 23. More specifically, the proposed location is 1300 feet from the west line and 1340 feet from the south line, Section 23, Township 26 North, Range 18 West.
- 9) The proposed location for the Texaco Navajo Tribe "BS" Well No. 5 is in a direction away from Amoco's Navajo Tribe "U" lease in Section 22 which offsets Texaco's "BS" lease to the west. Texaco's "BS" lease covers all of Sections 23 and 24. In addition, Texaco owns the Navajo Tribe "AR" lease in Section 27, southwest of the proposed location as well as the Navajo Tribe "BP" lease in Section 26, south of the proposed location. The only other lease in the vicinity not owned by Texaco is an Amoco lease that covers Section 25, Township 26 North, Range 18 West, which is not productive.
- 10) Applicant hereby certifies that Amoco Production Company, as owner of offset leases, has been notified of this filing by sending to them a copy of this application certified mail, return receipt requested.
- 11) Applicant alleges that granting the exception location herein requested will be in the public interest, will not infringe on the correlative rights of any offset operator, and will result in the conservation of natural resources and prevent waste.

NOW, THEREFORE, Applicant respectfully requests that this application receive administrative approval without hearing in the event neither the offset operator nor the Secretary-Director files an objection. If an objection is filed, Applicant respectfully requests that this matter be set down for hearing before an

examiner, that notice thereof be given as required by law, and that upon evidence produced at such hearing, the Commission enter its order approving the proposed well location exception in the Tocito Dome-Pennsylvanian "D" oil pool, San Juan County, New Mexico.

Dated at Denver, Colorado, this 7th day of January, 1977.

Respectfully submitted,

TEXACO INC.

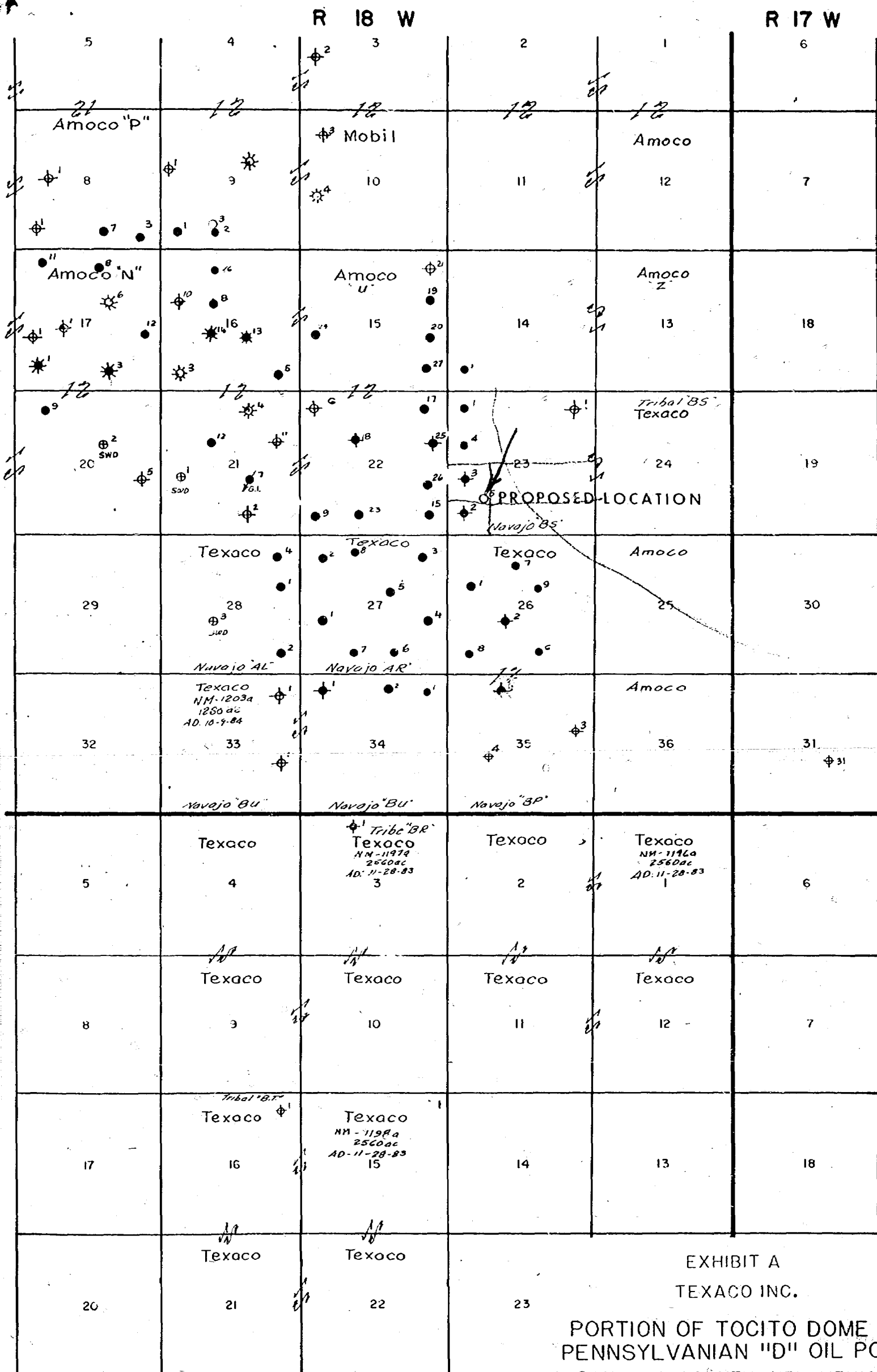
By J. C. [signature]



Sworn to before me and signed in my presence this 7th day of January, 1977.

Robert J. Shiller
Notary Public

My Commission Expires: May 26, 1980



All Lands - Navajo Tribe
Land Net from Protraction Diagrams

PORTION OF TOCITO DOME -
PENNSYLVANIAN "D" OIL POOL
SAN JUAN COUNTY, NEW MEXICO
OWNERSHIP MAP

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)
TEXACO INC. FOR AN ADMINISTRATIVE)
ORDER APPROVING AN EXCEPTION LOCATION)
IN TOCITO DOME-PENNSYLVANIAN "D" OIL)
POOL, SAN JUAN COUNTY, NEW MEXICO)

CASE NO. 5845

A P P L I C A T I O N

COMES NOW, the Applicant, Texaco Inc., a Delaware Corporation, duly authorized to do business in the State of New Mexico, and respectfully makes application to the Secretary-Director of the New Mexico Oil Conservation Commission for approval to drill a well to be known as the Texaco Navajo Tribe "BS" Well No. 5 to be located, as an exception to Order No. R-2758, 1300 feet from the west line and 1340 feet from the south line, Section 23, Township 26 North, Range 18 West, San Juan County, New Mexico. In support of this application, Applicant respectfully states and shows the following:

- 1) Exhibit A is an ownership map showing the proposed location exception, the locations of wells which have been drilled in the area, and owners of lands adjacent to the lease on which the proposed well is to be located.
- 2) The proration unit consisting of the southwest quarter of Section 23, Township 26 North, Range 18 West had two wells on it at one time, but both wells have been plugged and abandoned because of casing failures. Consequently, there is no producing well in the southwest quarter of Section 23 at this time.
- 3) One of the plugged and abandoned wells is the Texaco Navajo Tribe "BS" Well No. 2, located in the southwest quarter of the southwest quarter of Section 23. It was completed January 3, 1975 with an initial producing rate of 326 barrels of oil per day and 27 barrels of water per day with a gas-oil ratio of 801 cubic feet per barrel. Prior to abandonment, the well was producing 50 barrels of oil per day and 26 barrels of water per day with a gas-oil ratio of 2440 cubic feet per barrel. When abandoned May 18, 1976, cumulative production was 17,972 barrels of oil, 34,557,000 cubic feet of gas, and 7290 barrels of water.
- 4) The other well plugged and abandoned because of casing failure is the Texaco Navajo Tribe "BS" Well No. 3, located in the northwest quarter of the southwest quarter of Section 23. It was completed March 20, 1975 with an initial producing rate of 196 barrels of oil per day and 35 barrels of water per day, with a gas-oil ratio of 1704 cubic feet per barrel. Prior to abandonment, the well was producing 109 barrels of oil per day and 38 barrels of water per day with a gas-oil ratio of 2550 cubic feet per barrel. When abandoned May 12, 1976, cumulative production was 10,240 barrels of oil, 28,039,000 cubic feet of gas, and 3314 barrels of water.

- 5) Applicant cannot justify drilling two wells to replace Navajo Tribe "BS" Well Nos. 2 and 3, but one additional well in this proration unit is warranted to replace the two wells that have been lost.
- 6) Rule 4 of Order No. R-2758, dated August 3, 1964, specifies that all wells drilled in the Tocito Dome-Pennsylvanian "D" oil pool shall be located within 150 feet of the center of a governmental quarter-quarter section. In order to attain optimum ultimate recovery, Applicant desires to drill the replacement well as far away as possible from the two wells that have been plugged and abandoned. However, the two remaining center-forty locations in the southwest quarter of Section 23 that satisfy Rule 4 of Order R-2758 are in an unfavorable geologic position.
- 7) Production from the Tocito Dome-Pennsylvanian "D" oil pool is from the Barker Creek member of the Pennsylvanian Paradox Formation. The trapping mechanism is a combination of structural and stratigraphic features. The eastern flank of the structure, in the vicinity of the proposed well, is quite steep structurally, making a location further to the east undesirable.
- 8) Based on reservoir performance and geological data, the most favorable location for the replacement well is near the center of the southwest quarter of Section 23. More specifically, the proposed location is 1300 feet from the west line and 1340 feet from the south line, Section 23, Township 26 North, Range 18 West.
- 9) The proposed location for the Texaco Navajo Tribe "BS" Well No. 5 is in a direction away from Amoco's Navajo Tribe "U" lease in Section 22 which offsets Texaco's "BS" lease to the west. Texaco's "BS" lease covers all of Sections 23 and 24. In addition, Texaco owns the Navajo Tribe "AR" lease in Section 27, southwest of the proposed location as well as the Navajo Tribe "BP" lease in Section 26, south of the proposed location. The only other lease in the vicinity not owned by Texaco is an Amoco lease that covers Section 25, Township 26 North, Range 18 West, which is not productive.
- 10) Applicant hereby certifies that Amoco Production Company, as owner of offset leases, has been notified of this filing by sending to them a copy of this application certified mail, return receipt requested.
- 11) Applicant alleges that granting the exception location herein requested will be in the public interest, will not infringe on the correlative rights of any offset operator, and will result in the conservation of natural resources and prevent waste.

NOW, THEREFORE, Applicant respectfully requests that this application receive administrative approval without hearing in the event neither the offset operator nor the Secretary-Director files an objection. If an objection is filed, Applicant respectfully requests that this matter be set down for hearing before an

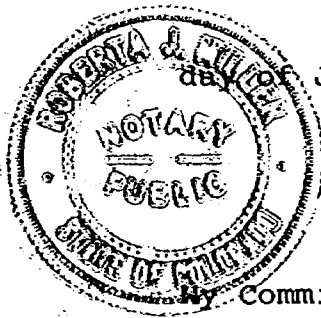
examiner, that notice thereof be given as required by law, and that upon evidence produced at such hearing, the Commission enter its order approving the proposed well location exception in the Tocito Dome-Pennsylvanian "D" oil pool, San Juan County, New Mexico.

Dated at Denver, Colorado, this 7th day of January, 1977.

Respectfully submitted,

TEXACO INC.

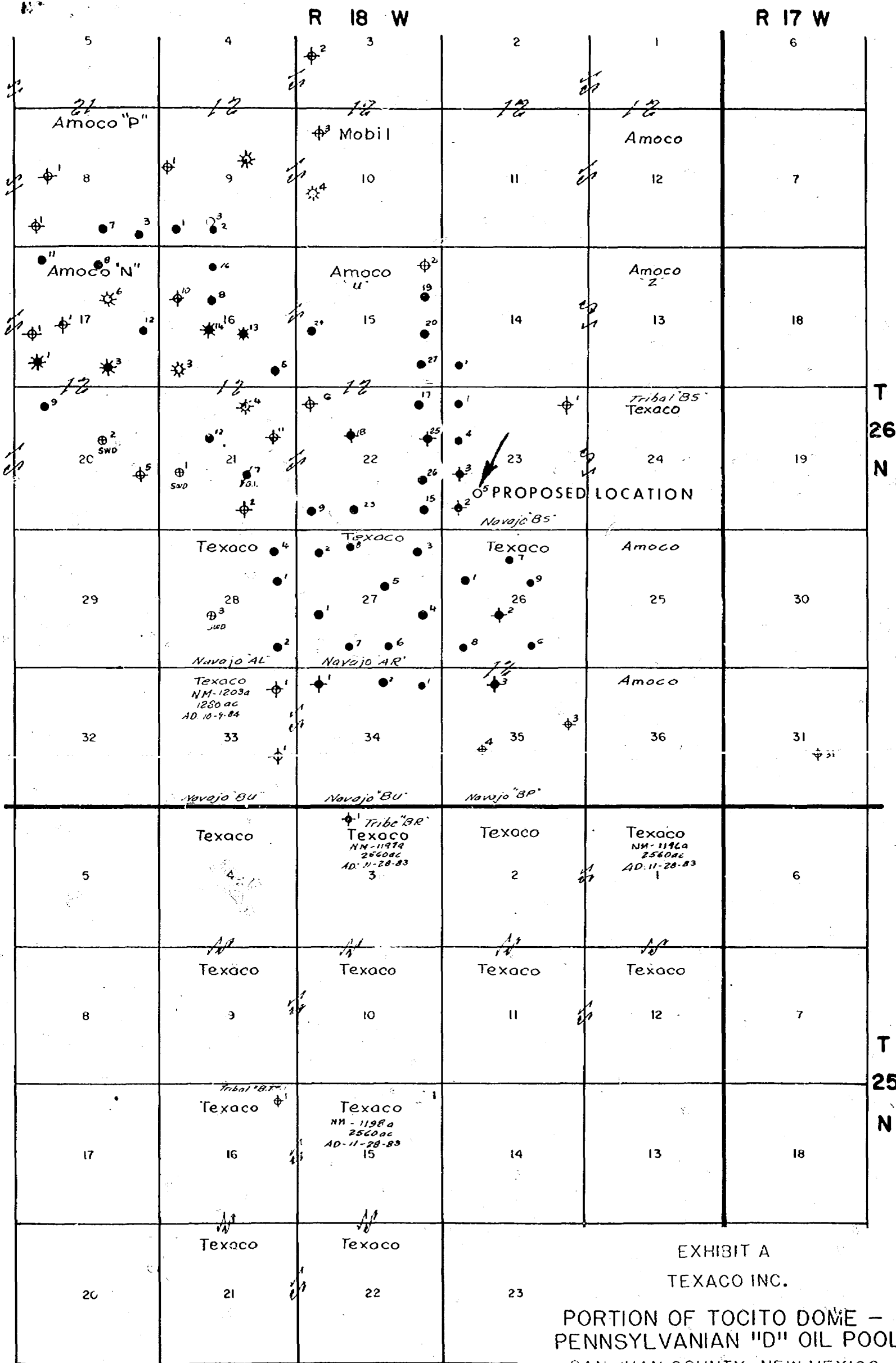
By J. C. [signature]



Sworn to before me and signed in my presence this 7th day of January, 1977.

Robert J. Miller
Notary Public

Commission Expires: May 26, 1980



All Lands - Navajo Tribe
Land Net from Protraction Diagrams

EXHIBIT A
TEXACO INC.
PORTION OF TOCITO DOME -
PENNSYLVANIAN "D" OIL POOL
SAN JUAN COUNTY, NEW MEXICO
OWNERSHIP MAP

ROUGH

dr/

Handwritten initials and signature

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 5845

Order No. R- 5365

APPLICATION OF TEXACO INC.
FOR AN UNORTHODOX LOCATION,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 2, 19 77,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of February, 19 77, 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., seeks
location for ~~of~~ its Navajo Tribe "BS" Well No. 5 to be drilled at a
approval of an unorthodox point location 1340 feet from the South
line and 1300 feet from the West line of Section 23, Township
26 North, Range 18 West, NMPM, to test the
formation, ~~Tocito Dome Penns "D" Pool,~~ *Vanadium*
San Juan County, New Mexico.

(3) That the SW 1/4 of said Section 23 is to be dedicated to the
well.

(4) That a well at said unorthodox location will better enable
applicant to produce the *oil and gas* underlying the proration unit.

(5) That no offset operator objected to the proposed unorthodox
location.

-2-

Case No. _____
Order No. R- _____

(6) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the ^{oil and gas} in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox oil well location for the Texaso Inc ~~applicant's~~ Navajo Tribe "BS" Well No. 5 ~~formation~~ is hereby approved, said well to be located at a point 1340 feet from the South line and 1300 feet from the West line of Section 23, Township 26 North, Range 18 West NMPM, Tocito Dome Penn "D" Pool, San Juan County, New Mexico.

(2) That the SW 1/4 of said Section 23 shall be dedicated to the above-described well.

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

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