

CASE 4714: Appli. of THUNDERBIRD
FOR AN UNORTHODOX WELL LOCATION
AND AMENDMENT OF ORDER R-1145.

Case Number

4714

Application

Transcripts

Small Exhibits

ETC.

dearnley, meier & mc cormick
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1216 FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87108

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
May 17, 1972

EXAMINER HEARING

IN THE MATTER OF:

The Application of Thunderbird Oil
Corporation for an unorthodox well
location and amendment of Order No.
R-1145, Lea County, New Mexico.

CASE NO. 4714

BEFORE: RICHARD L. STAMETS
Examiner

TRANSCRIPT OF HEARING

1 MR. STAMETS: Case 4714.

2 MR. HATCH: Application of Thunderbird Oil
3 Corporation for an unorthodox well location and amendment of
4 Order No. R-1145, Lea County, New Mexico.

5 MR. KELLAHIN: Jason Kellahin and W. Thomas Kellahin
6 of Kellahin and Fox, Santa Fe, appearing for the Applicant.
7 I have one witness I would like to have sworn.

8 MR. STAMETS: Are there any other appearances?

9 (No response.)

10 * * * * *

11 WILLIAM J. LEMAY,

12 was called as a witness and, after being duly sworn, testified
13 as follows:

14 DIRECT EXAMINATION

15 BY MR. KELLAHIN:

16 Q Would you state your name, please?

17 A William J. LeMay.

18 Q What business are you engaged in, Mr. LeMay?

19 A Consulting geologist in Santa Fe, New Mexico.

20 Q In connection with your work as a consulting geologist,
21 have you testified before the Oil Conservation
22 Commission or one of its Examiners and made your
23 qualifications a matter of record?

24 A Yes, sir, I have.

25 MR. KELLAHIN: Are the witness' qualifications

1 accepted?

2 MR. STAMETS: They are.

3 Q (By Mr. Kellahin) Mr. LeMay, are you familiar with
4 the Application presently before the Commission in
5 Case 4714?

6 A Yes, I am.

7 Q Briefly, what is proposed by the Applicant in this
8 Case?

9 A Briefly, the Applicant requests to drill a producing
10 oil well at an unorthodox location 1315 feet from the
11 west line and 2635 feet from the north line of Section
12 8, Township 13 South, Range 32 East. The well would
13 be drilled in the Queen sand at approximately 3100 feet
14 in order to produce oil from the Queen formation in
15 the Caprock-Queen Field.

16 Also, the Applicant further seeks a procedure
17 whereby additional production and injection wells at
18 orthodox and unorthodox locations may be approved
19 administratively.

20 Q That is a Waterflood Project, is it not?

21 A Correct.

22 Q Have you made a study of the Caprock-Queen Field?

23 A Yes, sir. To summarize, the geology of the Queen
24 reservoir in the north Caprock field is a NE-SW
25 trending sand accumulation which has productive limits

1 of approximately 19 miles in length and 1 to 3 and 1/2
2 miles in width.

3 A gas cap was originally present on the structure
4 on the high side of the field with a well designed
5 oil-water contact on the SE side of the field.

6 Production has attained a depth of approximately
7 3000 feet throughout the field. The Queen sand is a
8 fine to medium gray sand averaging approximately 20
9 feet in thickness throughout the field with an
10 average net pay of about 10 feet.

11 It is anticipated that 13 feet of net sand pay
12 will be found at the subject location.

13 The secondary recovery part of the north Caprock
14 field unit has been operating under Commission Order
15 R-1145. This Order was entered on April 3, 1958 and
16 currently we are operating under the provisions of
17 this Order.

18 The overall performance of this unit has been
19 satisfactory in that in excess of 3,900,000 barrels
20 of water have been produced by the unit since the
21 inception of secondary recovery operations.

22 The individual well performances have ranged
23 from 6500 barrels to 300,000 barrels of water by
24 both primary and secondary recovery means.

25 The unit can roughly be divided into two areas

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1 of production and individual performance.

2 The most successful wells are those with the
3 larger oil recovery and are located in the NW/2
4 of the unit.

5 The wells with lesser oil recovery are located
6 in the S/2 of the unit.

7 Also, injection pressures makes waterflood much
8 higher in the south portion of the unit with smaller
9 injection volumes per well than in the north portion.

10 Q Now, turning to what has been marked Applicant's
11 Exhibit 1, would you discuss that Exhibit?

12 A Yes, Exhibit 1 is a location plat showing the location
13 of the proposed well which is 1315 feet from the west
14 and 2635 feet from the north line of Section 8, Township
15 13 South, Range 32 East.

16 It also shows the outline of the north Caprock-
17 Queen unit.

18 Q That is the area that is under waterflood?

19 A That is correct.

20 Q Turning now to Exhibit Number 2, would you discuss
21 that Exhibit?

22 A Exhibit 2 shows oil recovery on a per-well basis for
23 the wells in the immediate vicinity of the proposed
24 location.

25 MR. STAMETS: Do you have another Exhibit 2, I

1 have two Exhibit 1's.

2 MR. KELLAHIN: Yes.

3 MR. STAMETS: Thank you.

4 A (Continuing) Exhibit 2 shows the oil recovery on a
5 per-well basis for the area in the immediate vicinity
6 of the proposed location. As I have shown earlier
7 in my testimony relating to these figures, they are
8 slightly below average in the south which, again,
9 indicates there is better recovery in the north half
10 of the unit with below average recovery in the south
11 half.

12 Q Now, turning to Exhibit Number 3, would you discuss
13 that Exhibit?

14 A Exhibit 3 shows the calculated area flood patterns of
15 the injection wells in the vicinity of the requested
16 location.

17 These areas were calculated from net sand
18 thickness, porosity, initial water saturation and
19 injected volumes.

20 These broad patterns do not necessarily take into
21 account the possible channeling or gravity drainage
22 in the lower areas. It is obvious from these flood
23 patterns that oil can be trapped in the areas between
24 the producing wells. This oil will be lost unless
25 new wells are drilled between the old producers.

1 Q Is it reasonable to presume that a well drilled as
2 proposed by the Applicant in this Case would recover
3 oil that would not otherwise be recovered?

4 A Yes, that is my opinion and it is also the opinion
5 of Lloyd Foster of the Thunderbird Oil Company.

6 It is our opinion that a large amount of oil is
7 present, not only at the requested location, but at
8 other orthodox and unorthodox locations in the south
9 half of the unit.

10 Q That is the reason you have requested administrative
11 procedures for the approval of other wells, both
12 production and injection wells and unorthodox and
13 orthodox locations?

14 A True.

15 Q Do you feel it is necessary that we have this
16 authority?

17 A Yes, sir.

18 Q Exhibits 1, 2 and 3 were not prepared by you; were
19 they?

20 A No, they were not.

21 Q Have you examined the information shown on the Exhibits
22 and, based on your own information, does that correctly
23 reflect the information shown?

24 A Yes, sir. I am in agreement with the Exhibits and with
25 the information presented here.

1 MR. KELLAHIN: At this time I would like to
2 offer in evidence Exhibits 1, 2 and 3.

3 MR. STAMETS: Are there any objections to the
4 admission of these Exhibits?

5 (No response.)

6 MR. STAMETS: They will be admitted into evidence.

7 (Whereupon Applicant's Exhibits 1, 2, and 3
8 were admitted in evidence.)

9 MR. KELLAHIN: That's all I have.

10 MR. STAMETS: Any questions of this witness?

11 (No response.)

12 * * * * *

13 CROSS-EXAMINATION

14 BY MR. STAMETS:

15 Q Mr. LeMay, you have proposed no administrative
16 procedures here for approving these locations?

17 A Yes, we have. That is also in the request.

18 Q But, there is no specific manner in which this will
19 be done, just that it will be administratively?

20 A That's right.

21 Q I presume that these would all be at least 330 feet
22 from the outer boundaries of the unit boundary?

23 A No, sir, I don't think that would be necessarily the
24 case since the Thunderbird Oil Company owns working
25 interests under approximately 3,327 acres in one

1 contiguous block.

2 Q I mean the north Caprock-Queen unit, the unit boundary?

3 A Yes, they would understand that 330 feet would be the
4 minimum that they could either drill an injection
5 well on or a producing well on.

6 MR. STAMETS: Any other questions?

7 (No response.)

8 MR. STAMETS: If not, the witness may be excused.

9 (Witness excused.)

10 MR. STAMETS: Any other appearances in this
11 Case?

12 (No response.)

13 MR. STAMETS: Any statements in this Case?

14 (No response.)

15 MR. STAMETS: The Case will be taken under
16 advisement.

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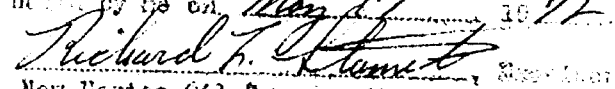
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1 STATE OF NEW MEXICO)
2) ss
3 COUNTY OF BERNALILLO)

4 I, RICHARD E. McCORMICK, a Certified Shorthand Reporter,
5 in and for the County of Bernalillo, State of New Mexico,
6 do hereby certify that the foregoing and attached Transcript
7 of Hearing before the New Mexico Oil Conservation Commission
8 was reported by me; and that the same is a true and correct
9 record of the said proceedings to the best of my knowledge,
10 skill and ability.

11 
12 CERTIFIED SHORTHAND REPORTER

23 I do hereby certify that the foregoing is a
24 true and correct record of the hearing
25 the hearing bearing of Case No. H714
heard by me on May 17, 1977

New Mexico Oil Conservation Commission

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I N D E X

WITNESS:

PAGE

WILLIAM J. LEMAY

Direct Examination by Mr. Kellahin

3

Cross-Examination by Mr. Stamets

9

E X H I B I T S

APPLICANT'S (Thunderbird Oil)

OFFERED

ADMITTED

Exhibit Number 1

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8

Exhibit Number 2

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8

Exhibit Number 3

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9



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

**GOVERNOR
BRUCE KING
CHAIRMAN**

**LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER**

**STATE GEOLOGIST
A. L. PORTER, JR.**

SECRETARY - DIRECTOR

May 31, 1972

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4714
Order No. R-4317
Applicant:

Thunderbird Oil Corporation

Dear Sir:

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

Very truly yours,

A. L. Foster.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artemia 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. 4714
Order No. R-4317

APPLICATION OF THUNDERBIRD OIL
CORPORATION FOR AN UNORTHODOX
WELL LOCATION AND AMENDMENT OF
ORDER NO. R-1145, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 17, 1972,
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 31st day of May, 1972, 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 applicant, Thunderbird Oil Corporation, is the
current operator of the North Caprock-Queen Unit Waterflood
Project, Caprock-Queen Pool, Lea County, New Mexico.

(3) That in order to evaluate the present state of the
reservoir, and to determine future operations of the project,
applicant proposes to drill a producing well at an unorthodox
location 2,635 feet from the North line and 1,315 feet from the
West line of Section 8, Township 13 South, Range 32 East, NMPM,
Lea County, New Mexico.

(4) That the proposed unorthodox location is at a greater
distance from the unit boundary and offset operators than a
standard location.

(5) That the applicant further requests adoption of an
administrative procedure for the approval of additional wells
at orthodox or unorthodox locations, and for a procedure for the
approval of wells for injection without a showing of response
as required by Rule 701 E-5, Commission Rules and Regulations.

-2-

CASE NO. 4714
Order No. R-4317

(6) That approval of the application may result in the recovery of additional oil from the project.

(7) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

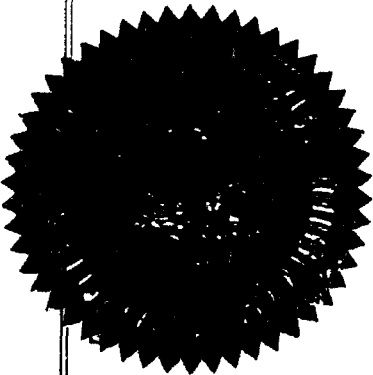
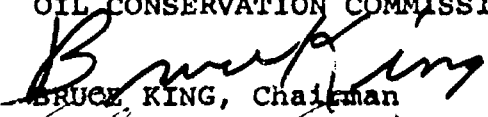
(1) That the applicant, Thunderbird Oil Corporation, is hereby authorized to drill a well for the production of oil from the North Caprock Queen Unit secondary recovery project at an unorthodox location 2,635 feet from the North line and 1,315 feet from the West line of Section 8, Township 13 South, Range 32 East, NMPM, Lea County, New Mexico.

(2) That the Secretary-Director of the Commission is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the North Caprock Queen Unit as may be necessary to drain, develop or complete an efficient production and injection pattern; provided said wells are drilled no closer than 330 feet to the outer boundary of said North Caprock Queen Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary, and provided further, that the application therefor has been filed in accordance with Rule 701-B of the Commission Rules and Regulations, and provided further, that a copy of the application has been sent to all operators owning acreage offsetting the quarter-quarter section upon which the well is to be located, if any there be, and no such operator has objected within 20 days. The Secretary-Director may grant immediate approval of the application upon receipt of written waivers of objection from all such offset operators. The showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval of additional wells as water injection wells.

(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



BRUCE KING, Chairman


ALEX J. ARMILLO, Member


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

dr/

Case 4713 continued from page 1

7. An 80-acre unit comprising Lot 1 and the NE/4 NW/4 of Section 19, Township 17 North, Range 8 West, to be dedicated to Well No. 26;
8. An 80-acre unit comprising the N/2 NW/4 of Section 24, Township 17 North, Range 9 West, to be dedicated to Well No. 28.

Applicant further seeks a procedure whereby other non-standard proration units may be established administratively.

CASE 4714: Application of Thunderbird Oil Corporation for an unorthodox well location and amendment of Order No. R-1145, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 2635 feet from the North line and 1315 feet from the West line of Section 8, Township 13 South, Range 32 East, in the North Caprock-Queen Unit Waterflood Project, Lea County, New Mexico, authorized by Order No. R-1145. Applicant further seeks a procedure whereby additional production and injection wells at orthodox and unorthodox locations may be approved administratively.

CASE 4715: Application of Glen D. Aaron and James C. Whitten for an unorthodox well location, Eddy County, New Mexico. Applicants, in the above-styled cause, seek approval for an unorthodox gas well location for their well to be drilled 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, with the W/2 of said Section 11 to be dedicated to the well.

CASE 4716: Application of Union Oil Company of California for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Owens Well No. 2, having a surface location in Unit I of Section 34, Township 14 South, Range 35 East, Morton-Wolfcamp Pool, Lea County, New Mexico. Applicant proposes to set a whipstock at approximately 7200 feet and to directionally drill to bottom the well in the Wolfcamp formation within 100 feet of a point in Unit H 1730 feet from the North line and 560 feet from the East line of said Section 34. Applicant proposes to dedicate the S/2 NE/4 of Section 34 to the well.

CASE 4717: Application of Sohio Petroleum Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard unit in an undesignated San Andres gas pool comprising the S/2 SE/4 of Section 7 and the W/2 SW/4 of Section 8, Township 21 South, Range 37 East, Lea County, New Mexico, to be dedicated to its well located 660 feet from the South line and 660 feet from the West line of said Section 8.

CASE 4718: Application of E. B. White, Jr. for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Phantom Banks Unit Area comprising 7680 acres, more or less, of federal, state, and fee lands in Township 26 South, Range 31 East, Eddy County, New Mexico.

Docket No. 11-72

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 17, 1972

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

The following cases will be heard before Richard L. Stamets, Examiner,
or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for June, 1972, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico; also presentation of purchaser's nominations for said pools for the six-month period beginning July 1, 1972;
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for June, 1972.

CASE 4712: Application of Texaco Inc. for multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Lockhart (NCT-1) Well No. 3 located in Unit 0 of Section 18, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to produce oil from the Paddock and Blinbry Oil Pools through a single string of tubing and gas from the Tubb Gas Pool through the casing-tubing annulus.

CASE 4713: Application of Tenneco Oil Company for non-standard proration units, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of the following-described non-standard proration units in the Lone Pine-Dakota "D" Oil Pool, McKinley County, New Mexico.

1. An 80-acre unit comprising the SE/4 NE/4 and the NE/4 SE/4 of Section 7, Township 17 North, Range 8 West, to be dedicated to Well No. 2;
2. An 80-acre unit comprising the SW/4 NE/4 and NW/4 SE/4 of Section 7, Township 17 North, Range 8 West, to be dedicated to Well No. 3;
3. A 91.66-acre unit comprising Lots 7 and 8 and SW/4 SE/4 of Section 12, Township 17 North, Range 9 West, to be dedicated to Well No. 5.
4. A 91.59-acre unit comprising Lots 1 and 2 and NW/4 NE/4 of Section 13, Township 17 North, Range 9 West, to be dedicated to Well No. 12;
5. A 91.56-acre unit comprising Lots 3 and 4 and SW/4 NE/4 of Section 13, Township 17 North, Range 9 West, to be dedicated to Well No. 14;
6. An 80-acre unit comprising the SW/4 NW/4 and NW/4 SW/4 of Section 17, Township 17 North, Range 8 West, to be dedicated to Well No. 17;

Case No. 4724 continued from page 3

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the South Empire-Morrow Gas Pool. The discovery well is the Midwest Oil Corporation South Empire Deep Unit No. 1 located in Unit F of Section 6, Township 18 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
SECTION 6: N/2

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Strawn production and designated as the Humble City-Strawn Pool. The discovery well is the Harding Oil Company Shipp No. 1 located in Unit K of Section 11, Township 17 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
SECTION 11: SW/4

(c) Create a new pool in Chaves County, New Mexico, classified as an oil pool for Abo production and designated as the Many Gates-Abo Pool. The discovery well is the Jack Phillips Isler Federal No. 1 located in Unit A of Section 31, Township 9 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM
SECTION 31: NE/4

(d) Create a new pool in Roosevelt County, New Mexico, classified as a gas pool for Pennsylvanian production and designated as the Peterson-Pennsylvanian Gas Pool. The discovery well is the Amoco Production Company Peterson "A" Gas Com No. 1 located in Unit B of Section 19, Township 5 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
SECTION 19: All

(e) Abolish Loco Hills-Queen Pool in Eddy County, New Mexico, described as:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM
SECTION 29: SW/4
SECTION 31: SE/4 NE/4 and NE/4 SE/4
SECTION 32: NW/4

- CASE 4719: Application of Gulf Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its G.C. Matthews Well No. 5 located in Unit J of Section 6, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Eunice-Monument and Monument-Paddock Pools through parallel strings of tubing.
- CASE 4720: Application of Rotary Oil & Gas Company for an unorthodox location and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard gas proration unit in the Osudo-Devonian Gas Pool comprising the NE/4 of Section 32 and the NW/4 of Section 33, Township 20 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1980 feet from the East line of said Section 32.
- CASE 4721: Application of C. W. Trainer for a non-standard gas unit, Lea County, New Mexico. Applicant in the above-styled cause, seeks approval of a 316.9-acre non-standard gas spacing unit comprising Lots 1 and 2 and E/2 W/2 of Section 31, Township 24 South, Range 37 East, and Lots 2 and 3 of Section 6, Township 25 South, Range 37 East, undesignated Fusselman and Devonian gas pools, Lea County, New Mexico, to be dedicated to his Sherrell Well No. 1 located 660 feet from the South line and 1590 feet from the West line of said Section 31.
- CASE 4722: Application of C. W. Trainer for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Devonian, Fusselman and Ellenburger formations underlying Lots 1 and 2 and E/2 W/2 of Section 31, Township 24 South, Range 37 East, and Lots 2 and 3 of Section 6, Township 25 South, Range 37 East, Custer Field, Lea County, New Mexico, to form a 316.9-acre non-standard spacing unit for the production of gas from said formations, to be dedicated to his Sherrell Well No. 1 located 660 feet from the South line and 1590 feet from the West line of said Section 31.
- CASE 4723: Application of Black River Corporation for pool abolishment, creation of two new gas pools, and a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the abolishment of the Washington Ranch-Morrow Gas Pool, Eddy County, New Mexico, and the creation of the Washington Ranch-Upper Morrow and Washington Ranch-Lower Morrow Gas Pools for the production of gas from the upper and lower Morrow formations. Applicant further seeks approval of the dual completion (conventional) of its Cities 3 Federal Well No. 1 located in Unit F of Section 3, Township 26 South, Range 24 East, to produce the lower Morrow through tubing and the upper Morrow through the casing-tubing annulus.
- CASE 4724: Southeastern New Mexico nomenclature case calling for an order for the creation, extension, abolishment and contraction of certain pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico.

Case No. 4724 continued - (1)

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

SECTION 2: All
SECTION 3: Lots 1, 2, 3, 4, 5, 6, 7,
8, 9, and 16
SECTION 4: Lots 1, 3, 4, 5, 6, 8, 11,
12, 13, 14, and 15
SECTION 11: E/2 and NW/4
SECTION 12: All
SECTION 13: All
SECTION 14: E/2
SECTION 24: All
SECTION 30: NW/4

- (j) Contract the Bagley-Lower Pennsylvanian Gas Pool in Lea County,
New Mexico, by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM

SECTION 33: SE/4
SECTION 34: W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM

SECTION 3: NE/4

- (k) Contract the Bagley-Upper Pennsylvanian Gas Pool in Lea County,
New Mexico, by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM

SECTION 33: N/2 and SE/4
SECTION 34: W/2 and SE/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM

SECTION 3: SE/4
SECTION 4: N/2
SECTION 5: N/2 and SW/4
SECTION 10: NE/4

- (l) Contract the Bagley-Pennsylvanian Pool in Lea County, New Mexico,
by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM

SECTION 34: N/2 NE/4 and W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM

SECTION 3: S/2 SW/4
SECTION 4: S/2
SECTION 5: S/2

Case No. 4724 continued from page 4

(f) Abolish the Sand Tank-Queen Pool in Eddy County, New Mexico, described as:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
SECTION 7: NE/4 SE/4

(g) Extend the vertical limits of the Loco Hills Grayburg-San Andres Pool in Eddy County, New Mexico, to include the Queen formation and redesignate said pool to Loco Hills Queen Grayburg-San Andres Pool.

(h) Abolish the Terry-Blinebry Pool in Lea County, New Mexico, described as:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
SECTION 32: SE/4
SECTION 33: S/2 and NE/4
SECTION 34: S/2 and NW/4
SECTION 35: S/2
SECTION 36: W/2

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
SECTION 1: Lots 4, 5, 9, 10, 11, 12,
13, 14, 15, 16, and S/2
SECTION 2: All
SECTION 3: Lots 1, 2, 3, 4, 5, 6, 7,
8, 9, and 16
SECTION 4: Lots 1, 3, 4, 5, 6, 8, 11,
12, 13, 14, and 15
SECTION 11: E/2 and NW/4
SECTION 12: All
SECTION 13: All
SECTION 14: E/2
SECTION 24: All

(i) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
SECTION 32: SE/4
SECTION 33: S/2 and NE/4
SECTION 34: S/2 and NW/4
SECTION 35: S/2
SECTION 36: W/2

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
SECTION 25: NE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
SECTION 1: Lots 4, 5, 9, 10, 11, 12,
13, 14, 15, 16, and S/2

Case No. 4724 continued

(u) Extend the Garrett-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
SECTION 28: NE/4

(v) Extend the Jennings-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 32 EAST, NMPM
SECTION 4: NE/4

(w) Extend the Round Tank-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 28 EAST, NMPM
SECTION 24: SE/4

(x) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 27: SE/4

(y) Extend the Townsend-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
SECTION 9: W/2 and SE/4
SECTION 10: S/2
SECTION 15: E/2

(z) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
SECTION 21: SE/4
SECTION 22: SW/4

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
SECTION 19: NE/4

(aa) Extend the Washington Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 24 EAST, NMPM
SECTION 35: W/2

(bb) Extend the Osudo-Devonian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM
SECTION 31: E/2

Case No. 4724 continued

- (m) Extend the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 34: N/2 NE/4 and W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
SECTION 3: S/2 SW/4

- (n) Extend the Allison-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 11: SW/4

- (o) Extend the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
SECTION 11: All

- (p) Extend the Boyd-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
SECTION 9: All

- (q) Extend the Chambers-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM
SECTION 35: SW/4

- (r) Extend the Dollarhide-Devonian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 30: SW/4

- (s) Extend the Dollarhide-Ellenburger Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 31: E/2

- (t) Extend the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 1: NW/4 NE/4
SECTION 12: E/2 NW/4

Case 4725 continued from page 9

(d) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Paradox production, designated as the Cone-Paradox Oil Pool and described as:

TOWNSHIP 31 NORTH, RANGE 18 WEST, NMPM
SECTION 22: SE/4

(e) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Mesaverde production, designated as the Crouch Mesa-Mesaverde Pool and described as:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
SECTION 5: W/2
SECTION 6: N/2

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM
SECTION 31: SW/4

(f) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Cuervo-Mesaverde Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM
SECTION 28: NE/4

(g) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Devils Fork-Mesaverde Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 6 WEST, NMPM
Section 16: SW/4

(h) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, designated as the Dufers Point-Dakota Oil Pool and described as:

TOWNSHIP 25 NORTH, RANGE 8 WEST, NMPM
Section 17: E/2
Section 19: N/2 & SW/4
Section 20: N/2

(i) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, designated as the Escrito-Dakota Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM
Section 1: W/2
Section 2: N/2
Section 12: W/2

TOWNSHIP 25 NORTH, RANGE 8 WEST, NMPM
Section 35: SW/4

CASE 4725: Northwest New Mexico nomenclature case calling for an order for the creation, extension and contraction of certain pools in San Juan and Rio Arriba Counties, New Mexico.

(a) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Farmington production, designated as the Alamo-Farmington Oil Pool and described as:

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
SECTION 4: S/2
SECTION 9: NE/4
SECTION 10: W/2
SECTION 15: NW/4 & SW/4 NE/4

(b) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Amarillo-Gallup Oil Pool and described as:

TOWNSHIP 28 NORTH, RANGE 13 WEST, NMPM
SECTION 33: SE/4 SE/4
SECTION 34: SW/4 & SE/4 NW/4

(c) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the Blanco-Fruitland Pool and described as:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM
SECTION 2: W/2
SECTION 3: N/2
SECTION 4: NE/4
SECTION 11: NW/4

TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM
SECTION 29: S/2
SECTION 30: S/2

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
SECTION 8: N/2 & SE/4
SECTION 9: S/2
SECTION 16: E/2
SECTION 21: E/2
SECTION 25: S/2
SECTION 26: S/2
SECTION 27: S/2
SECTION 28: E/2
SECTION 33: N/2 & SE/4
SECTION 34: All
SECTION 35: W/2

Case No. 4725 continued from page 11

(o) Create a new pool in San Juan and Rio Arriba Counties, New Mexico, classified as a gas pool for Chacra production, designated as the Largo-Chacra Pool and described as:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM
SECTION 19: S/2

TOWNSHIP 27 NORTH, RANGE 8 WEST, NMPM
SECTION 23: S/2
SECTION 24: S/2
SECTION 26: W/2
SECTION 35: NW/4

(p) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Gallup production, designated as the Lindrith-Gallup Pool and described as:

TOWNSHIP 24 NORTH, RANGE 2 WEST, NMPM
SECTION 20: All
SECTION 21: All
SECTION 28: All
SECTION 29: All

(q) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Meadows-Gallup Oil Pool and described as:

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM
SECTION 33: S/2 & SW/4 NW/4
SECTION 34: SW/4

(r) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Nenahnezad-Mesaverde Oil Pool and described as:

TOWNSHIP 29 NORTH, RANGE 15 WEST, NMPM
SECTION 10: SW/4

(s) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Dakota production, designated as the Ojito-Dakota Oil Pool and described as:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
SECTION 17: SW/4
SECTION 18: SE/4
SECTION 19: NE/4

(t) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the North Pinon-Gallup Pool and described as:

TOWNSHIP 29 NORTH, RANGE 12 WEST, NMPM
SECTION 28: SW/4

Case 4725 continued from page 10

(j) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Gallup production, designated as the Flora Vista-Gallup Pool and described as:

TOWNSHIP 30 NORTH, RANGE 12 WEST, NMPM
SECTION 2: SW/4
SECTION 3: N/2 & SE/4
SECTION 4: N/2

(k) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Mesaverde production, designated as the Gonzales-Mesa-Mesaverde Pool and described as:

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
SECTION 5: W/2
SECTION 6: All
SECTION 7: NE/4
SECTION 8: All

(l) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Chacra production, designated as the Harris Mesa-Chacra Pool and described as:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
SECTION 26: SW/4
SECTION 27: S/2
SECTION 28: S/2
SECTION 29: E/2

(m) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, designated as the Huerfano-Pictured Cliffs Pool and described as:

TOWNSHIP 25 NORTH, RANGE 10 WEST, NMPM
SECTION 1: NE/4

TOWNSHIP 26 NORTH, RANGE 9 WEST, NMPM
SECTION 19: S/2

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM
SECTION 24: SE/4
SECTION 25: E/2
SECTION 36: E/2

(n) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Jewett Valley-Gallup Oil Pool and described as:

TOWNSHIP 29 NORTH, RANGE 16 WEST, NMPM
SECTION 3: W/2 & SE/4

Case No. 4725 continued from page 12

(u) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the Pump Mesa-Fruitland Pool and described as:

TOWNSHIP 32 NORTH, RANGE 8 WEST, NMPM
SECTION 32: SW/4

(v) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, designated as the Twin Mounds-Pictured Cliffs Pool and described as:

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM
SECTION 31: SE/4
SECTION 32: S/2
SECTION 33: S/2

(w) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Dakota production, designated as the Wild Horse-Dakota Oil Pool and described as:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 26: NW/4 NW/4
SECTION 27: N/2 & NW/4 SW/4

(x) Contract the Gavilan-Pictured Cliffs Pool boundary in Rio Arriba County, New Mexico, by the deletion of the following described area:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
SECTION 23: SE/4

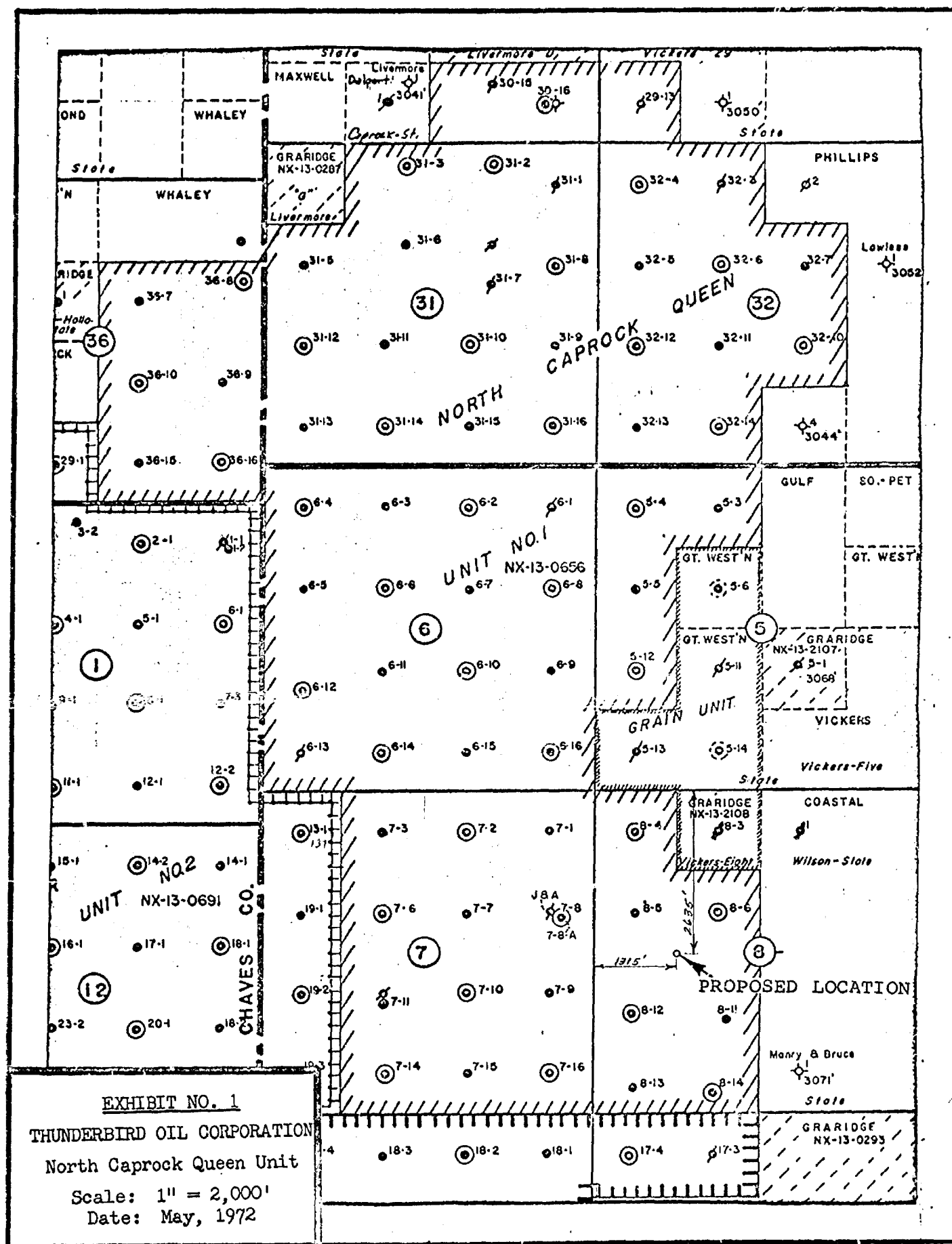
(y) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Pictured Cliffs production, designated as the Sleeper-Pictured Cliffs Oil Pool and described as:

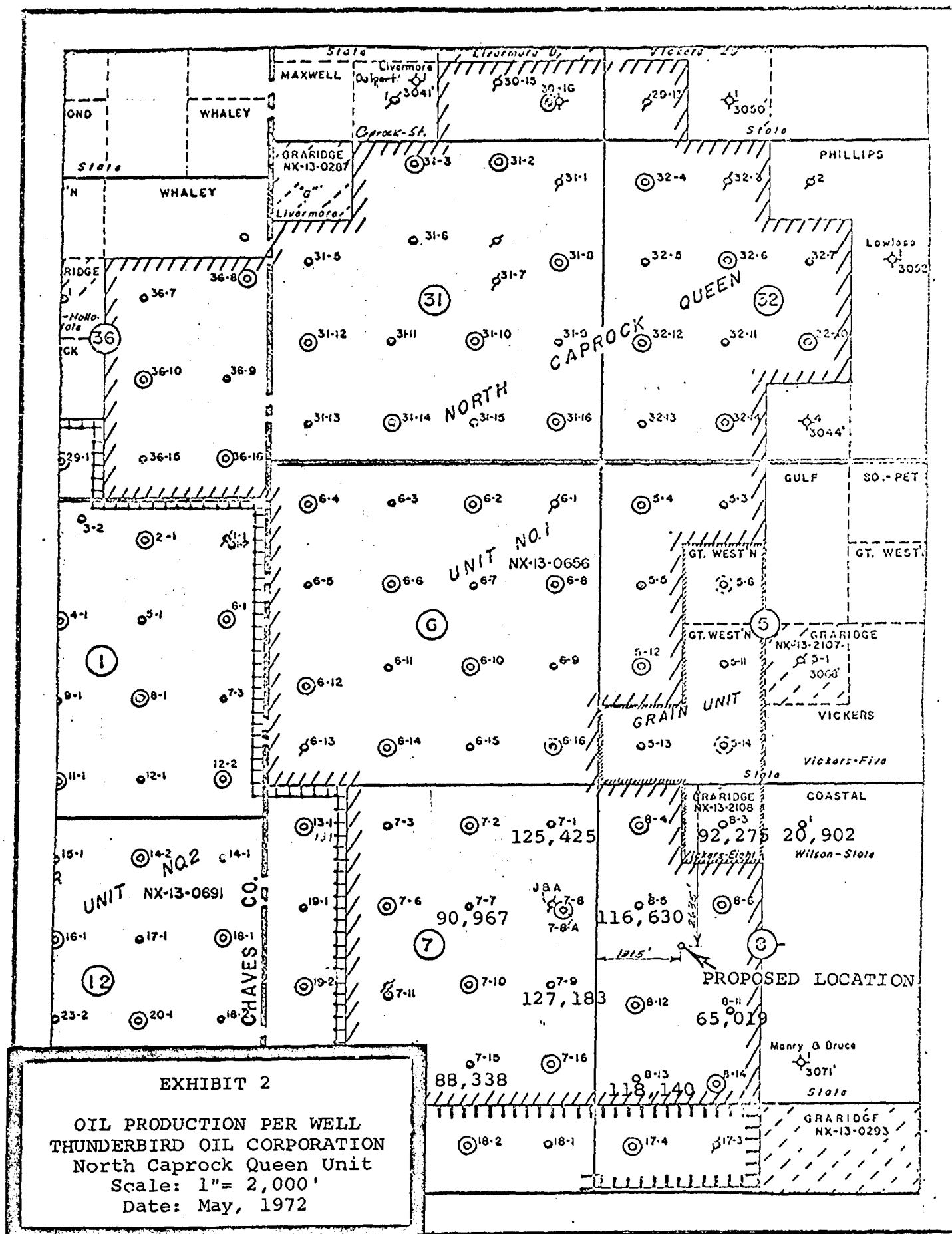
TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
SECTION 23: S/2
SECTION 26: NE/4

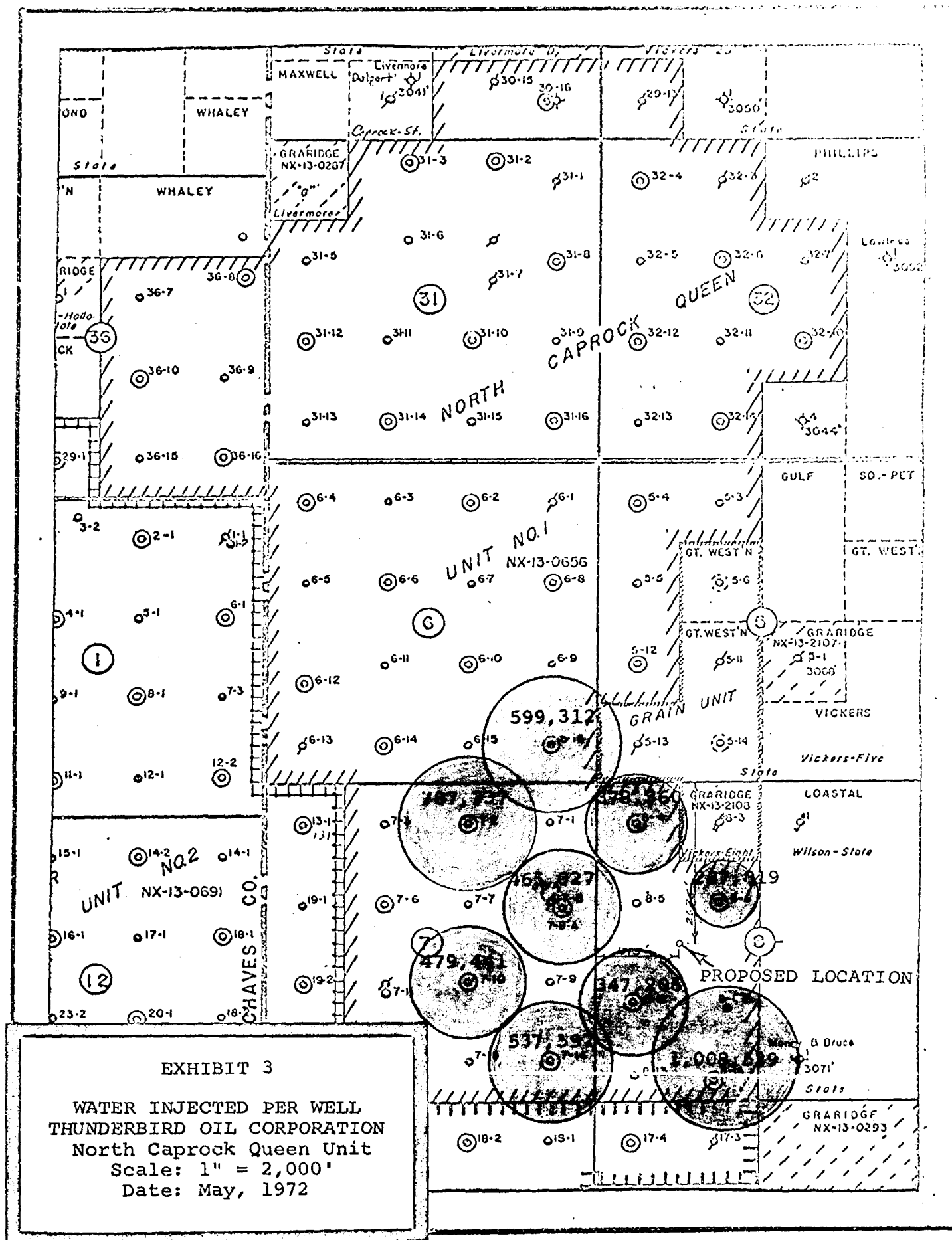
(z) Extend the Tapacito-Gallup Associated Pool boundary in Rio Arriba County, New Mexico, to include therein:

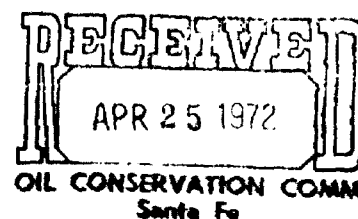
TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 19: S/2
SECTION 20: SW/4
SECTION 29: NW/4

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
SECTION 24: S/2









BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF THUNDERBIRD OIL CORPORATION
FOR APPROVAL OF AN UNORTHODOX
WELL LOCATION, NORTH CAPROCK UNIT
WATERFLOOD PROJECT, CHAVES AND LEA
COUNTIES, NEW MEXICO

Case 4714

A P P L I C A T I O N

Comes now Thunderbird Oil Corporation and applies to the Oil Conservation Commission of New Mexico for approval of an unorthodox well location in the North Caprock-Queen Unit waterflood project, located in Chaves and Lea counties, New Mexico, and in support thereof would show the Commission:

1. The North Caprock-Queen Unit waterflood project has heretofore been approved by Commission Order No. R-1145, entered April 3, 1958, and is currently operating under the provisions of said order.
2. In order to evaluate the present state of the reservoir, and to determine future operations of the project, applicant as present operator of the secondary recovery project, proposes to drill a well at a location 2635 feet from the North line and 1315 feet from the West line of Section 8, Township 13 South, Range 32 East, N.M.P.M.
3. The proposed location is an inside location, and no off-set operator will be affected.
4. To facilitate further operation of the unit, applicant further requests an administrative procedure for the approval of additional wells at orthodox or unorthodox locations, and for a procedure for the approval of conversion of wells from

producing to injection, whether they have shown a response to the waterflood project or not.

WHEREFORE applicant prays that this application be set for hearing before the Commission or the Commission's duly appointed examiner, and that after notice and hearing as required by law the Commission enter its order granting the relief requested.

Respectfully submitted,

THUNDERBIRD OIL CORPORATION

By Jason W. Kellahin
Kellahin & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

DRAFT

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. 4714

Order No. R-4317

APPLICATION OF THUNDERBIRD OIL
CORPORATION FOR AN UNORTHODOX WELL
LOCATION AND AMENDMENT OF ORDER
NO. R-1145, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 17, 1972, 1972,
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 17th day of May, 1972, 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 applicant, Thunderbird Oil Corporation, is the
current operator of the North Caprock-Queen Unit Waterflood
Caprock-Queen Pool, Lea County, New Mexico.
~~Project, heretofore approved by Commission Order No. R-1145,~~
~~entered April 3, 1958.~~

(3) That in order to evaluate the present state of the
reservoir, and to determine future operations of the project,
applicant proposes to drill a ^{producing} well at an unorthodox location
2,635 feet from the North line and 1,315 feet from the West line
of Section 8, Township 13 South, Range 32 East, NMPM, Lea
County, New Mexico.

(4) That the proposed unorthodox location is at a greater distance from the unit boundary and offset operators than a standard location.

(5) That the applicant further requests adoption of an administrative procedure for the approval of additional wells at orthodox or unorthodox locations, and for a procedure for the approval of wells for injection without a showing of response as required by Rule 701 E-5, Commission Rules and Regulations.

(6) That approval of the application may result in the recovery of additional oil from the project.

(7) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Thunderbird Oil Corporation, is hereby authorized to drill a well for the production of oil from the North Caprock Queen Unit secondary recovery project at an unorthodox location 2,635 feet from the North line and 1,315 feet from the West line of Section 8, Township 13 South, Range 32 East, NMPM, Lea County, New Mexico.

(2) That the Secretary-Director of the Commission is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the North Caprock Queen Unit as may be necessary to drain, develop or complete an efficient production and injection pattern; provided said wells are drilled no closer than 330 feet to the outer boundary of said North Caprock Queen Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary, and provided further, that the application therefor has been filed in accordance with Rule 701-B of the Commission Rules and Regulations, and provided further, that a copy of the application has been sent to all operators owning acreage offsetting the quarter-quarter section upon which the well is to be located, if any there be, and no such operator has objected within 20 days. The Secretary-Director may grant immediate approval of the application upon receipt of written waivers of objection from all such offset operators. The showing of well response as

-3-
CASE NO. 4714
Order No. R-

required by Rule 701 E-5 shall not be necessary before obtaining administrative approval of additional wells as water injection wells.

(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 herein-
above designated.

CASE 4715: Application of GLEN D.
AARON AND JAMES C. WHITTEN FOR AN
UNORTHODOX WELL LOCATION.