

CASE No.

4971

Application,
Transcripts,
Small Exhibits

ETC.



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMJO
MEMBER

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

June 25, 1973

Mr. Owen Lopez
Montgomery, Federici, Andrews,
Hannahs & Morris
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: Case No. 4971
Order No. R-4558
Applicant:
Tesoro Petroleum Corp.

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.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC x

Other State Engineer Office

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. 4971
Order No. R-4558

APPLICATION OF TESORO PETROLEUM
CORPORATION FOR A SECONDARY
RECOVERY PROJECT, MCKINLEY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 23, 1973,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 25th day of June, 1973, 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, Tesoro Petroleum Corporation,
seeks authority to institute a secondary recovery project in
the Hospah Sand Unit Area, South Hospah-Lower Sand Oil Pool,
by the injection of water and/or gas into the Lower Hospah
formation through its Santa Fe RR "A" Well No. 84 to be located
at a non-standard location five feet from the South line and
2,950 feet from the East line of Section 1, Township 17 North,
Range 9 West, NMPM, McKinley County, New Mexico.

(3) That the applicant further seeks the designation of
a project area and the promulgation of special rules for the
project area which would include a provision for the transfer
of allowables within the project area, an administrative
procedure whereby the proposed secondary recovery project
can be expanded including provisions for drilling additional
injection and producing wells at unorthodox locations and
conversion of existing wells to injection.

(4) That initially the project area should comprise only
the following described area:

MCKINLEY COUNTY, NEW MEXICO
TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM
Section 1: S/2 SE/4 and Lot 10

(5) That a pressure maintenance project, designated the Tesoro Lower Hospah Pressure Maintenance Project, comprising the above described area is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That an administrative procedure should be established whereby said project area may be expanded for good cause shown and whereby additional injection and producing wells may be drilled at unorthodox locations and whereby existing wells in the project area may be converted to injection.

(7) That special rules and regulations for the operation of the Tesoro Lower Hospah Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project area in any proportion, provided that no well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the South Hospah-Lower Sand Pool until such time as the well has experienced a substantial response to water injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the South Hospah-Lower Sand Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

(8) That the proposed secondary recovery project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(9) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tesoro Petroleum Corporation, is hereby authorized to institute a secondary recovery project in the Hospah Sand Unit Area, South Hospah-Lower Sand Oil Pool, by the injection of water and/or gas into the Lower Hospah formation through its Santa Fe RR "A" Well No. 84 to be located at a non-standard location five feet from the South line and 2,950 feet from the East line of Section 1, Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That Special Rules and Regulations governing the operation of the Tesoro Lower Hospah Pressure Maintenance Project, McKinley County, New Mexico, are hereby promulgated as follows:

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Order No. R-4558

SPECIAL RULES AND REGULATIONS
FOR THE
TESORO LOWER HOSPAAH PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Tesoro Lower Hospah Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area described as follows:

McKINLEY COUNTY, NEW MEXICO
TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM
Section 1: S/2 SE/4 and Lot 10

RULE 2. The allowables for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3 which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on a 40-acre proration unit shall be top unit allowable for the South Hospah-Lower Sand Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

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Case No. 4971
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RULE 7. The basic allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the pool, whichever is less. Wells capable of producing more than top unit allowable may also receive transfer allowable, provided however, that no producing well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply shall receive an allowable or produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the pool.

RULE 8. Each month the project operator shall submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total project allowable based upon the pool's depth bracket allowable and the market demand percentage in effect. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well on another lease producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 10. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection wells, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection wells which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas or water will be confined to the Lower-Hospah formation.

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(3) A letter stating that all offset operators to the proposed injection wells have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection wells if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

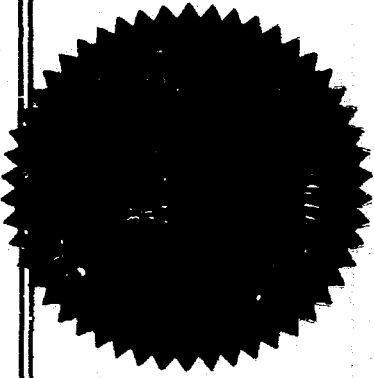
(3) That the subject secondary recovery project is hereby approved and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(5) 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



I. R. Trujillo
I. R. TRUJILLO, Chairman

ALEX J. ARMISTO, Member

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

S E A L

dr/

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 23, 1973

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 Richard L. Stamets, Alternate Examiner:

CASE 4683: (Reopened) (Continued from the April 11, 1973 Examiner Hearing)

In the matter of Case 4683 being reopened pursuant to the provisions of Order No. R-4286, which order established special rules and regulations for the West Tres Papalotes-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre units.

CASE 4946: (Continued from the May 9, 1973 Examiner Hearing)

Application of Union Texas Petroleum for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Crosby-Fusselman Pool, Lea County, New Mexico, including a provision for classification of oil wells and gas wells, 320-acre spacing for all wells, and a limiting gas-oil ratio of 5000 to one.

CASE 4966: (Continued from the May 9, 1973 Examiner Hearing)

Application of Read & Stevens, Inc. for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the N/2 of Section 36, Township 12 South, Range 30 East, Chaves County, New Mexico, to be dedicated to a well to be drilled to the Queen formation in Unit B of said Section 36, in the Southeast Chaves Queen Gas Area. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a 200 percent charge for risk involved in drilling said well.

CASE 4969: Application of Amoco Production Company for a special depth bracket allowable, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of a special depth bracket allowable of 764 barrels of oil per day for the Tocito Dome Pennsylvanian "D" Oil Pool, San Juan County, New Mexico, to replace the current regular depth bracket allowable for said pool of 382 barrels per day.

CASE 4970: Application of Robert G. Cox for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter his Federal "EA" Well No. 1, a crooked hole the surface location of which is 330 feet from the North and West lines of

(Case 4970 continued from page 1)

Section 12, Township 18 South, Range 27 East, Empire-Abo Pool, Eddy County, New Mexico, to set a whipstock at a depth of 4,200 feet and to drill in such a manner as to return the hole to the vertical, and to bottom said well at a depth of 6,200 feet approximately beneath the surface location.

CASE 4971: Application of Tesoro Petroleum Corporation for a secondary recovery project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a secondary recovery project by injection of water and/or gas into the Hospah sand in its Santa Fe RR "A" Well No. 84 to be located five feet from the South line and 2,950 feet from the East line of Section 1, Township 17 North, Range 9 West, South Hospah-Lower Sand Oil Pool, McKinley County, New Mexico.

CASE 4972: Application of Skelly Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Forty-Niner Ridge Unit Area comprising 7,679 acres, more or less, of State, Federal, and Fee lands in Township 23 South, Range 30 East, Eddy County, New Mexico.

CASE 4973: Application of Clayton W. Williams, Jr. for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Badger Unit Area comprising 10,158 acres, more or less, of State and Federal lands in Township 22 South, Range 31 East, Eddy County, New Mexico.

CASE 4974: Application of Atlantic Richfield Company for a non-standard gas proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of a non-standard 160-acre unit comprising the W/2 NE/4 and E/2 NW/4 of Section 12, Township 24 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its Cooper Wells Nos. 1, 2, and 3 located in Units G, F, and B, respectively, of said Section 12.

CASE 4975: Application of Atlantic Richfield Company for a non-standard proration unit, simultaneous dedication, and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a non-standard 320-acre gas proration unit comprising the NW/4, N/2 SW/4, and W/2 NE/4 of Section 11, Township 20 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its W. P. Byrd Wells Nos. 5, a non-standard location 1650 feet from the North line and 330 feet from the West line, and No. 7, located 990 feet from the North line and 1980 feet from the West line of said Section 11.

CASE 4951: (Continued from the April 25, 1973 Examiner Hearing)

Application of Atlantic Richfield Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the N/2 of Section 15, Township 21 South, Range 26 East, Eddy County, New Mexico, to be dedicated to a well to be drilled by the applicant at a standard location to test the Morrow formation. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator and the risk involved in drilling said well.

CASE 4976: Application of The Petroleum Corporation for a dual completion, creation of two gas pools and special rules therefor, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Parkway West Unit Well No. 1 located in Unit C of Section 28, Township 19 South, Range 29 East, Eddy County, New Mexico, to produce gas and associated liquid hydrocarbons from the Strawn and Atoka formations through parallel strings of tubing. Applicant further seeks the designation of a Strawn pool and an Atoka pool for said well and the promulgation of special pool rules for each, including classification of oil wells and gas wells and special gas-oil ratio limitations.

CASE 4977: Application of Michael P. Grace II for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the N/2 of Section 12, Township 22 South, Range 26 East, South Carlsbad Gas Field, Eddy County, New Mexico, to be dedicated to a well to be drilled to the Morrow formation at an unorthodox location 1440 feet from the North line and 1880 feet from the East line of said Section 12. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof as well as actual operating costs and charges for supervision, designation of the applicant as operator of the well, and the establishment of a 200 percent risk factor for the well.

CASE 4978: Application of Adobe Oil Company for a dual completion and non-standard gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Smith Federal Well No. 2 in such a manner as to produce gas from an undesignated Atoka gas pool and from the Rock Tank-Upper Morrow gas pool through parallel strings of tubing. Applicant further seeks approval for the non-standard location of said well for the Atoka formation at a point 660 feet from the South line and 330 feet from the East line of Section 11, Township 23 South, Range 24 East, Rock Tank Gas Field, Eddy County, New Mexico, said location having previously been approved for the Upper Morrow formation by Order No. R-4456.

CASE 4979: Application of Michael P. Grace II for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to set a whip-stock in his Airport Grace Well No. 1, the surface location of which is 1980 feet from the South line and 2164 feet from the West line of Section 36, Township 22 South, Range 26 East, South Carlsbad Gas Field, Eddy County, New Mexico, and to directionally drill said well in such a manner as to bottom the well in the Morrow formation at a point approximately 500 feet Northeast of the surface location.

CASE 4980: Application of Pubco Petroleum Corporation for pool creation, an oil discovery allowable, and surface commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the Humble City-Wolfcamp Pool and the assignment of approximately 47,970 barrels of oil discovery allowable to the discovery well for said pool, applicant's Shipp Well No. 4 located in Unit L of Section 11, Township 17 South, Range 37 East, Lea County, New Mexico. Applicant further seeks authority to commingle production from said pool with production from the Humble City-Strawn Pool underlying applicant's Shipp lease after separately metering the Wolfcamp production.

CASE 4981: Southeastern nomenclature case calling for an order for the creation and extension of certain pools in Eddy, Lea, and Chaves Counties, New Mexico:

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Cisco production and designated as the West Atoka-Cisco Gas Pool. The discovery well is the Coquina Oil Corporation Five Mile No. 1 located in Unit H of Section 14, Township 18 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
Section 14: E/2

(b) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Cabin Lake-Morrow Gas Pool. The discovery well is the Phillips Petroleum Company James A Com No. 1 located in Unit O of Section 2, Township 22 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM
Section 2: S/2

(c) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the West Sand Dunes-Morrow Gas Pool. The discovery well is the El Paso Natural Gas Company Mobil Federal No. 1 located in Unit J of Section 29, Township 23 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 29: E/2

(d) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the North Shoe Bar-Wolfcamp Pool. The discovery well is the Pubco Petroleum Corporation Skelly State No. 1 located in Unit I of Section 14, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 14: SE/4

(e) Extend the West Atoka-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 18: S/2

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

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 1: NE/4

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 6: N/2

(g) Extend the East Brunson-McKee Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 24: SW/4

(h) Extend the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
Section 11: E/2

(i) Extend the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 2: Lots 1 through 8
Section 3: Lots 1 through 8

(j) Extend the East Caprock-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 32 EAST, NMPM
Section 10: SE/4

(k) Extend the Catclaw Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 30: All

(l) Extend the Cedar Canyon-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM
Section 10: All

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

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM
Section 35: All

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM
Section 5: NE/4

(n) Extend the East EK-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 21: S/2 SE/4

(o) Extend the Golden Lane-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
Section 5: Lots 1, 2, 7, 8, 9, 10,
15 and 16

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

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 28: N/2

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

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 13: SE/4

(r) Extend the Sand Dunes-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 23: SW/4 SE/4

Examiner Hearing - Wednesday - May 23, 1973
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Docket No. 14-73

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

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
Section 22: SE/4
Section 23: E/2 SW/4

(t) Extend the West Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
Section 29: NW/4

(u) Extend the Twin Lakes-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM
Section 1: SE/4 NW/4 and NE/4 SW/4

CASE 4943: (Continued from the May 9, 1973 Examiner Hearing)

Application of M. W. Staples for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce oil from his Vanderventer Well No. 2 located 1310 feet from the North line and 1330 feet from the East line of Section 20, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Said well was drilled as an injection well at said location pursuant to authority granted by Order No. R-3341.

Case 4971

Head 5-23-73

Rec: 5-24-73

Grant Deane's request for
an NSL and injection
well in the So. Lower Hospital
sand-art pool.

✓ Said well to be located 5' from
So. line + 2850 ft from E. line
sec. 1-17 N-9 W. McCarty

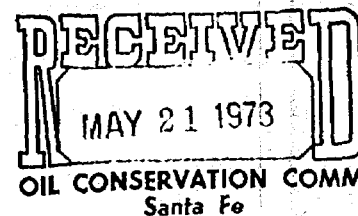
✓ Prod in. East 1/2 R. RA #84

Tenneco Oil
A Tenneco Company

Suite 1200
Lincoln Tower Building
Denver, Colorado 80203
(303) 292-9920



May 18, 1973



State of New Mexico
Oil Conservation Commission
State Land Office Bldg.
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Case No. 4971

Gentlemen:

Tenneco Oil Company has received notification from Tesoro Petroleum Corp. regarding Case No. 4971 and has also been furnished a complete copy of the application.

Tenneco hereby waives any objections to Tesoro's application to initiate a gas-water injection project in Section 1, T17N, R9W, South Hospah-Lower Sand Oil Pool, McKinley County, New Mexico.

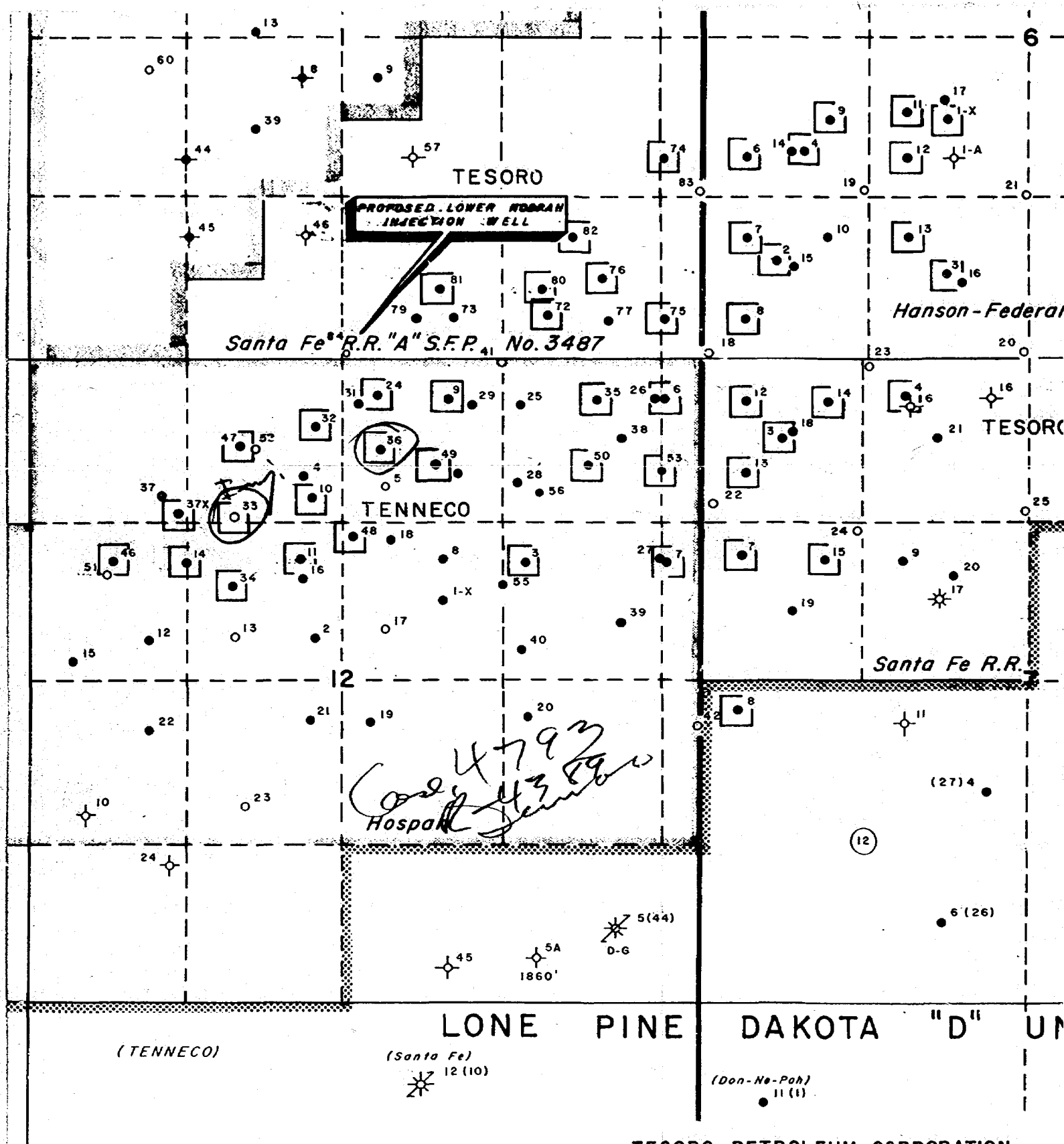
Tenneco also waives any objections to Tesoro's application to drill the Santa Fe RR "A" Well No. 84 to be located five feet from the South line and 2,950 feet from the East line of said Section 1 for the purpose of injecting water and/or gas into the South Hospah-Lower Sand Oil Pool.

Yours very truly,

TENNECO OIL COMPANY

A handwritten signature in cursive script, appearing to read "D. D. Myers".
D. D. Myers
District Production Manager

SDC/lj



● PRODUCING WELL - L. HOSPAH ZONE

○ INJECTION WELL - L. HOSPAH ZONE

TESORO PETROLEUM CORPORATION

SOUTH HOSPAH AREA
MC KINLEY COUNTY, NEW MEXICO

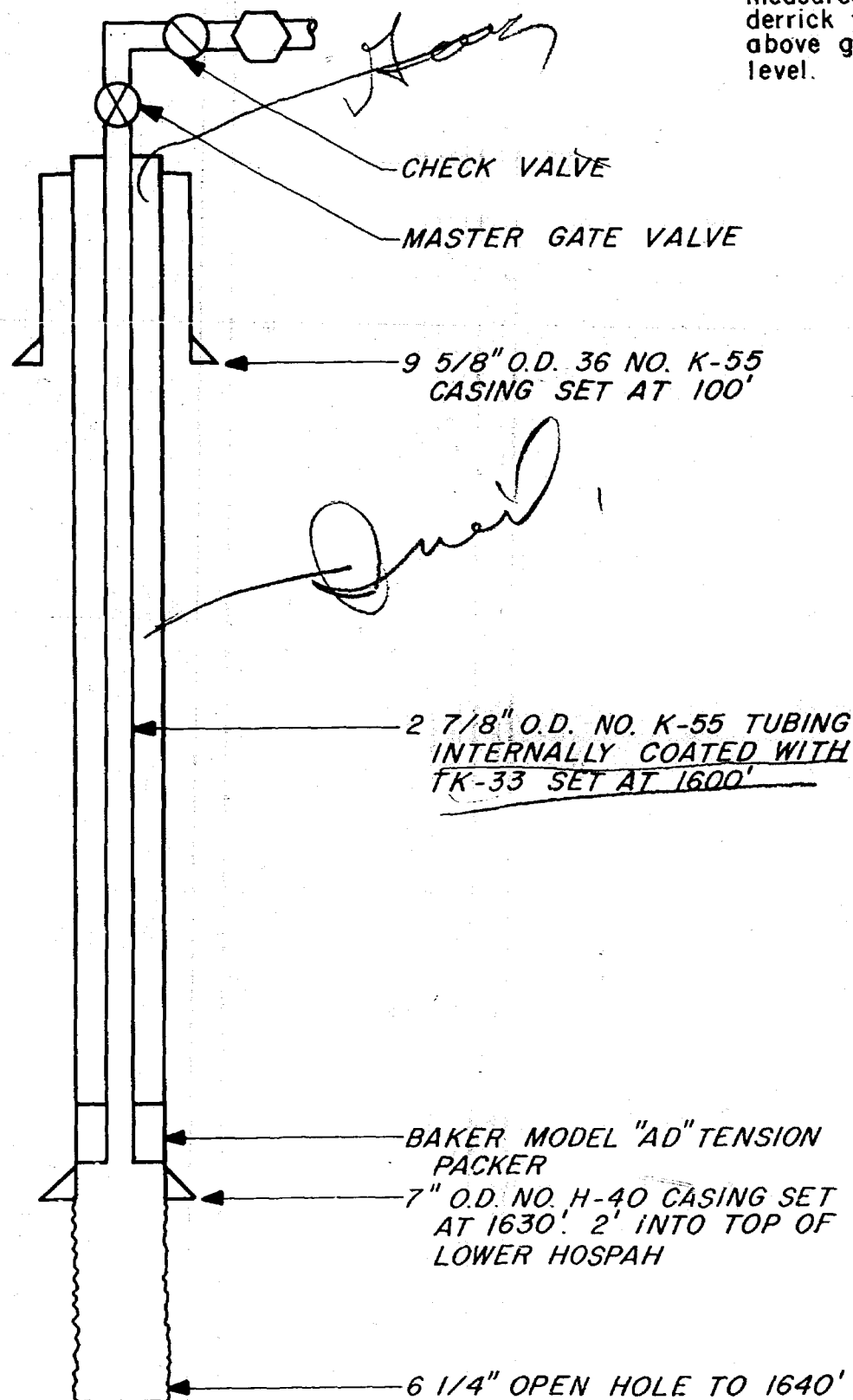
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FEET

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
TESORO EXHIBIT NO. 1
CASE NO. 4971
Submitted by Geo. O'Brien
Hearing Date May 23, 1973

14571
/ ON 11
EXAMINER
UTZ

SANTA FE "A" No. 84
LOWER HOSPAH
GAS WATER INJECTION

NOTE: Approx. depths measured from derrick floor 10' above ground level.



P. F. RE EXAMINER UTZ
OIL CONSERVATION COMMISSION

TESORO EXHIBIT NO. 2

CASE NO. 4971

Submitted by Geo. O'Brien

Hearing Date May 23, 1973

Case 4971

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. R. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
RICHARD S. MORRIS
SUMNER G. BUELL
SETH D. MONTGOMERY
FRANK ANDREWS III
OWEN M. LOPEZ
JEFFREY R. BRANNEN
JOHN BENNETT POUND

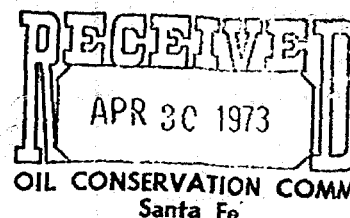
MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & MORRIS

ATTORNEYS AND COUNSELORS AT LAW

350 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87501

POST OFFICE BOX 2307
AREA CODE 505
TELEPHONE 982-3876

April 26, 1973



New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, NM 87501

Gentlemen:

Enclosed is the original and two copies of an Application by Tesoro Petroleum Corporation for approval of a secondary recovery project in the south Hospah lower sand pool, McKinley County, New Mexico. We would appreciate having this Application set for hearing before an examiner at the next hearing to be scheduled.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Richard S. Morris".

RSM:sp
Enc. &
cc:

Mr. George O'Brien, Jr.
Tenneco Oil Company
Attention Mr. Steven Cheesbrough

DOCKET MAILED

Date 5-11-73

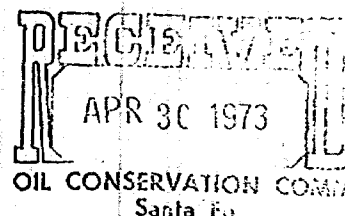
Case 4971

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

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APPLICATION OF TESORO PETROLEUM
CORPORATION FOR APPROVAL OF A
SECONDARY RECOVERY PROJECT, SOUTH
HOSPAH LOWER SAND POOL, MCKINLEY
COUNTY, NEW MEXICO

Case No. _____



APPLICATION

Comes now Tesoro Petroleum Corporation, by its attorneys, and applies to the New Mexico Oil Conservation Commission for approval of a secondary recovery project in the south Hospah lower sand pool, McKinley County, New Mexico, and the support of its application states:

1. Tesoro Petroleum Corporation is the owner and operator of numerous wells completed and producing from the south Hospah lower sand pool in Section 1, Township 17 North, Range 9 West, McKinley County, New Mexico, which wells are offset by the secondary recovery project presently being conducted by Tenneco Oil Company in Section 12 of the same township. Attached to the application is a plat showing the location of the Tesoro and Tenneco wells in this area.

2. Applicant proposes to institute a secondary recovery project in said Section 1 by injecting water and gas or either of those substances into the lower Hospah sand through its well No. 84 which it proposes to drill five feet from the south line and 2,950 feet from the east line of said Section 1. Applicant seeks approval from the Commission to commence this project, to inject water and gas or either of such substances into the lower Hospah sand, and to locate its proposed injection well at the above described location. Applicant further requests that the Commission establish an administrative procedure whereby the

proposed secondary recovery project can be expanded, including provisions for drilling additional injection wells and producing wells at orthodox or unorthodox locations and the conversion of existing wells to injection.

3. Applicant further requests the Commission to establish a project area and special rules and regulations for the project, including provisions permitting the transfer of allowables within the project area.

4. Approval of this application will be in the interest of conservation and will result in greater ultimate recovery of oil, thereby preventing waste. Approval of this application also will protect correlative rights.

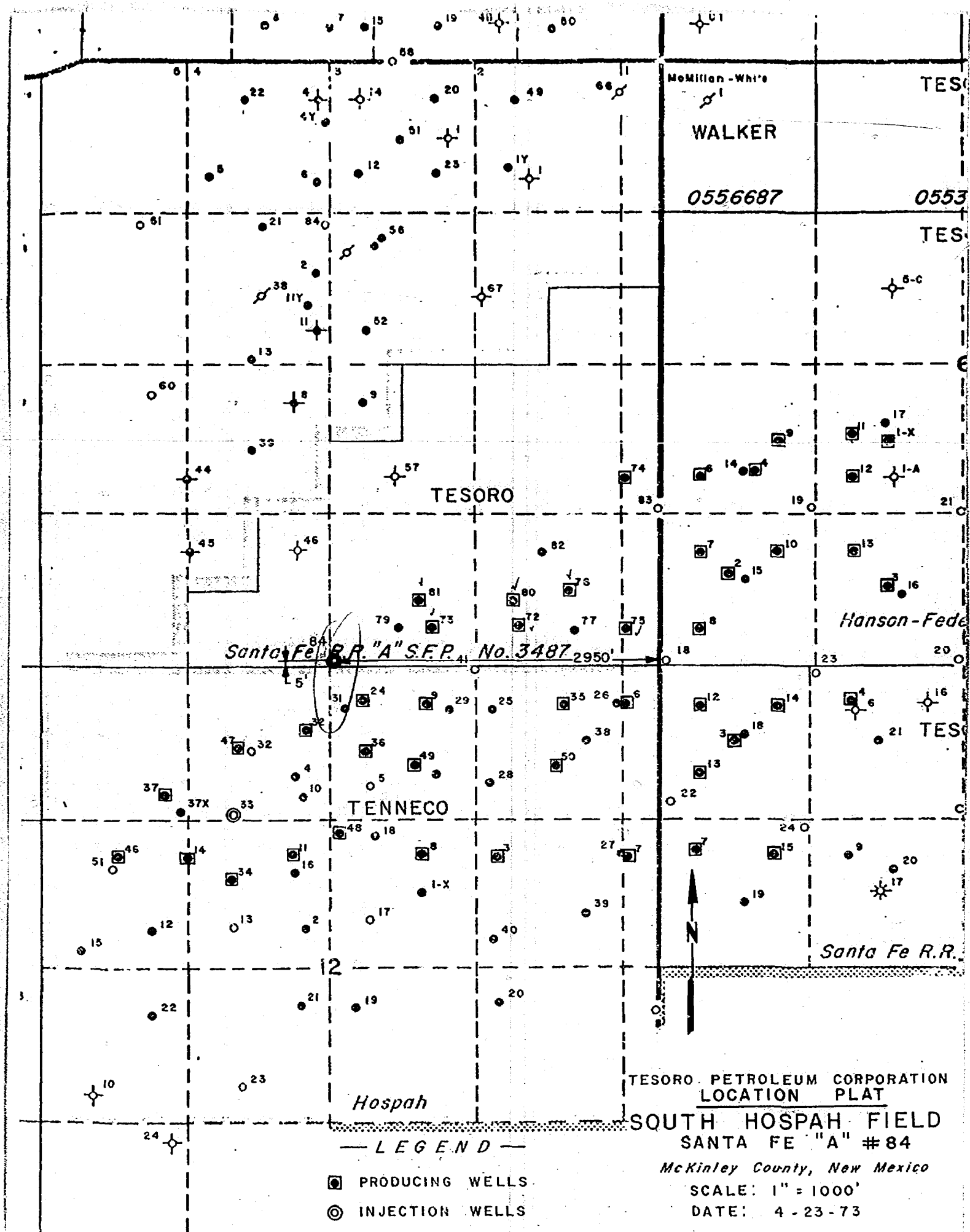
WHEREFORE, the Applicant requests that this application be set for hearing before the Commission or one of its examiners and that the Commission enter its order approving the application.

MONTGOMERY, FEDERICI, ANDREWS,
HANNAHS & MORRIS

By

Lillian J. Morris

P.O. Box 2307
Santa Fe, New Mexico 87501
Attorneys for Tesoro Petroleum
Corporation



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:

APPLICATION OF TESORO PETROLEUM
CORPORATION FOR A SECONDARY
RECOVERY PROJECT, MCKINLEY COUNTY,
NEW MEXICO.

CASE NO. 4971

Order No. R-4558

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 23, 1973
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this June day of June, 1973, 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, Tesoro Petroleum Corporation, seeks
authority to institute a secondary recovery project in the Hospah
Sand Unit Area, South Hospah-Lower Sand Oil Pool, by the injection
of water and/or gas into the ^{LOWER} HOSPAN ~~SAND~~ ^{FORMATION} ~~formation~~
through its Santa Fe RR "A" Well No. 84 to be located at a non-
standard location five feet from the South line and 2,950 feet
from the East line of Section 1, Township 17 North, Range 9 West,
NMPM, McKinley County, New Mexico.

(3) insert (7)

(3) That the applicant further seeks the designation of a project area and the promulgation of special rules for the project area which would include a provision for the transfer of allowables within the project area, an administrative approval for procedure whereby the proposed secondary recovery project can be expanded including provisions for the drilling additional injection ~~wells~~ and producing wells at unorthodox locations and conversion of existing wells to injection.

(4) That initially the project area should comprise only the following described area:

McKINLEY COUNTY, NEW MEXICO

TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM

Section 1: S/2 SE/4 and lot 10

(5) That a pressure maintenance project, designated the ~~Tenneco~~ ^{Tesoro} Lower Hospah Pressure Maintenance Project, comprising the above described area is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That an administrative procedure should be established whereby said project area may be expanded for good cause shown and whereby additional ~~wells~~ in the project area may be converted to ~~water~~ injection. *injection, and producing wells may be drilled at unorthodox locations and*

(7) That special rules and regulations for the operation of the ~~Tenneco~~ ^{Tesoro} Lower Hospah Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project area in any proportion, provided that no well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the South Hospah-Lower Sand Pool until such time as the well has experienced a substantial response to water injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the South Hospah-Lower Sand Pool. Production of such well at a higher rate should be authorized only after notice and hearing. *whereby existing wells*

-2-

Case No. 4971

Order No. R-

§(8)

That the proposed secondary recovery project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

§(9)

That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tesoro Petroleum Corporation, is hereby authorized to institute a secondary recovery project in the Hospah Sand Unit Area, South Hospah, Lower Sand Oil Pool, by the injection of water and/or gas into the ^{LOWER} ~~Hospah Sand~~ ^{FORMATION} ~~its~~ ~~formation~~ through the Santa Fe RR "A" Well No. 84 to be located at a non-standard location five feet from the South line and 2,950 feet from the East line of Section 1, Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That Special Rules and Regulations governing the operation of the ~~Tesoro~~ Lower Hospah Pressure Maintenance Project, McKinley County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
~~Tesoro~~ TENNECO LOWER HOSPAP PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the ~~Tesoro~~ Lower Hospah Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area described as follows:

McKINLEY COUNTY, NEW MEXICO
TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM
Section ~~12~~: ~~N 1/4 and W 1/2 NE 1/4~~
1: *5 1/2 sec and lot 10*

RULE 2. The allowables for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3 which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on a 40-acre proration unit shall be top unit allowable for the South Hospah-Lower Sand Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The basic allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the pool, whichever is less. Wells capable of producing more than top unit allowable may also

CASE NO. 4793
Order No. R-4388

receive transfer allowable, provided however, that no producing well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply shall receive an allowable or produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the pool.

Each month

RULE 8. ~~Every four months~~ the project operator shall submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total project allowable based upon the pool's depth bracket allowable and the market demand percentage in effect. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next ~~two~~ succeeding months in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well on another lease producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 10. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection wells, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection wells which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas or water will be confined to the Lower-Hospah formation.

(3) A letter stating that all offset operators to the proposed injection wells have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection wells if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

(3) That the subject secondary recovery project is hereby approved and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(5) 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.

I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

A.L. PORTER, Jr., MEMBER & Secr.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE ROOM, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

May 23, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Tesoro
Petroleum Corporation for a
secondary recovery project,
McKinley County, New Mexico.

Case No. 4971

BEFORE: Elvis A. Utz,
Examiner.

TRANSCRIPT OF HEARING

1 MR. UTZ: Case 4971.

2 MR. CARR: Case 4971: Application of Tesoro
3 Petroleum Corporation for a secondary recovery project,
4 McKinley County, New Mexico.

5 MR. LOPEZ: Mr. Examiner, I am Owen Lopez, with
6 Montgomery, Federici, Andrews, Hannahs and Morris, Santa Fe,
7 New Mexico, appearing on behalf of the Applicant. I have
8 one witness to be sworn.

9 * * * *
10 GEORGE A. O'BRIEN,

11 was called as a witness, and after being duly sworn according
12 to law, testified as follows:

13 DIRECT EXAMINATION

14 BY MR. LOPEZ:

15 Q Would you please state your name and for whom you work?

16 A My name is George A. O'Brien, and I am employed by
17 Tesoro Petroleum Corporation in San Antonio, Texas.

18 Q Have you previously testified before the Commission?

19 A No, I have not.

20 Q Would you please tell the Examiner your educational
21 background?

22 A I have a bachelor of science degree in petroleum
23 engineering from the University of Texas, which I
24 received in 1971, December, 1971. I have been employed
25 since that time by Tesoro in the capacity of reservoir

1 engineer.

2 Q Do your duties include the supervision of the South
3 Hospah Lower Sand Pool in McKinley County, New Mexico?

4 A Yes.

5 Q Are you familiar with the application of Tesoro
6 Petroleum Corporation in Case 4971?

7 A Yes, I am.

8 MR. LOPEZ: Mr. Examiner, are the witness'
9 qualifications acceptable?

10 MR. UTZ: Yes, they are.

11 Q (By Mr. Lopez) Please turn to Exhibit Number One, and
12 would you please identify this exhibit, Mr. O'Brien?

13 A Exhibit One is simply a location plat showing the wells
14 that are producing in the Lower Hospah Zone. They
15 are all enclosed by the squares on the plat. The
16 plat also shows the proposed location of the Santa Fe
17 Railroad "A" Well No. 84 in Section 1. This is the
18 well we propose to drill and inject water and/or gas
19 into the Lower Hospah Sand.

20 Q Are there any other operators in this field other than
21 Tesoro?

22 A No.

23 Q Has Tesoro previously sought an application for
24 converting a producing well for injection?

25 A Yes, in Case 4793 before the Commission, and this

1 application was granted in Order Number R-4389. They
2 are currently injecting gas and water into Well No.
3 33, which is located in the Northeast Quarter of the
4 Northwest Quarter of Section 12. They also have
5 authority to inject gas and/or water into Well No. 36,
6 which is located in the Northwest Quarter of the
7 Northeast Quarter of Section 12.

8 They are not currently injecting into this well
9 pending the result of this application today.

10 Q Have you consulted with representatives of Tenneco,
11 and have they given their approval to this application
12 on behalf of Tesoro?

13 A Yes, I have. Tenneco submitted a letter to the
14 Commission on May 18th, 1973, waiving any objection
15 to our application, and showing their support.

16 Q Will Tenneco be the operator of this secondary recovery
17 project?

18 A Yes. We propose to have Tesoro drill the well and
19 complete it, and Tenneco will then operate it, due
20 to the fact they already have the existing facilities
21 to handle this project.

22 Q Please turn to Exhibit Number Two, and identify that.

23 A Exhibit Two is the proposed cross section of the
24 injection well showing the way in which we propose
25 to complete it. It will be drilled into the top of

1 the Lower Hospah Zone, whereupon a seven-inch casing
2 will be set inside this casing after drilling out
3 into the Lower Hospah using a compression rig. We
4 will then set two and seven-eighths inch plastic-coated
5 pipe, and it will be set in tension on a packer.

6 The surface hook-up on the well will be such
7 that we will be able to determine any leakage in the
8 pipe, and we will be able to control the injection of
9 the gas and water.

10 Q Now, turning your attention to Exhibits Three, Four
11 and Five, would you please explain what these are?

12 A Exhibits Three, Four and Five were submitted in
13 Tenneco's application for a secondary recovery project.

14 Exhibit Three is a net pay isopack map on the
15 Lower Hospah formation showing the extent of the
16 Lower Hospah Pool on Tenneco's and Tesoro's leases.

17 Exhibit Four is the cross section A A Prime as
18 shown on Exhibit Three. It shows the Lower Hospah
19 Zone showing the top of the Lower Hospah and the oil-
20 water contact. It also shows the approximate subsurface
21 depth of the Lower Hospah Zone.

22 Exhibit Five is a north-south cross section from
23 Tenneco's leases onto Tesoro's leases, again showing
24 the Lower Hospah Zone. You will note that most of
25 the wells did not penetrate the Lower Hospah. These

1 wells were the most recent wells drilled in the
2 field, and they were drilled only into the top of
3 the zone in order to hinder water production from the
4 zone.

5 Q Do I understand correctly that your purpose in producing
6 Exhibits Three, Four and Five is to show your
7 concurrence with Tenneco in their previous case whereby
8 the Commission granted an order allowing their secondary
9 recovery project in this pool?

10 A That's correct, we do concur with their interpretations
11 as previously set forth.

12 Q Essentially then, am I correct in assuming that you
13 are asking the Commission to extend the special rules
14 and regulations for Tenneco's Lower Hospah pressure
15 maintenance project to include your lease area? And
16 also to grant you the ability to get administrative
17 approval if need be in the future to convert or drill
18 new wells as necessary to continue the secondary
19 recovery project?

20 A That's correct. What we are trying to establish by
21 this expansion is to maintain a three-well pilot
22 program so that we can adequately evaluate the merits
23 of this water injection program into the Lower Hospah.

24 The current one-well pilot which is now operating
25 in Tenneco's Well No. 33 has not developed sufficiently

dearnley, meier & associates
209 SIMMS BLDG., P.O. BOX 1092, PHONE 243-6891, ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST, ALBUQUERQUE, NEW MEXICO 87108

1 to provide adequate engineering knowledge of the
2 reservoir.

3 Q Is it your opinion, if your application is granted in
4 this case, that it will prevent waste and protect
5 correlative rights?

6 A Yes. That is the reason for the location of the well
7 to be five feet from the lease line in order to
8 prevent any drainage across lease lines from Tesoro's
9 lease to Tenneco's lease, or vice versa, and also to
10 obtain maximum production from that corner of the
11 reservoir.

12 Q Were Exhibits One and Two prepared by you or under
13 your supervision?

14 A Yes.

15 Q Were Exhibits Three, Four and Five prepared by
16 representatives of Tenneco, and introduced in their
17 previous case?

18 A Yes.

19 MR. LOPEZ: At this time, I would like to introduce
20 Exhibits One through Five.

21 MR. UTZ: Without objection, Exhibits One through
22 Five will be entered into the record of this case.

23 (Whereupon Applicant's Exhibits One through Five
24 were entered in evidence.)

25 MR. LOPEZ: I have no further questions.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. O'Brien, with regard to your Exhibit Number Two, do you intend to put in-earth equipment in this injection well?

A Yes.

Q With a gauge at the surface?

A Yes.

Q To check for leaks?

A Yes.

MR. UTZ: Are there any other questions of the witness?

(No response)

MR. UTZ: If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in the case?

(No response)

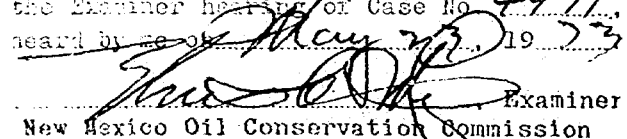
MR. UTZ: Let the record note Tenneco's letter of May 18th, which waives objection to this location. The case will be taken under advisement.

* * * *

1 STATE OF NEW MEXICO)
2 COUNTY OF BERNALILLO) SS

3
4 I, RICHARD E. McCORMICK, a Certified Shorthand
5 Reporter, in and for the County of Bernalillo, State of
6 New Mexico, do hereby certify that the foregoing and attached
7 Transcript of Hearing before the New Mexico Oil Conservation
8 Commission was reported by me; and that the same is a true
9 and correct record of the said proceedings to the best of
10 my knowledge, skill and ability.

11 
12 CERTIFIED SHORTHAND REPORTER
13
14
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17
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21

22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the Examiner hearing of Case No. 4971,
25 heard by me on May 27, 1973.

Examiner
New Mexico Oil Conservation Commission

I N D E XWITNESSPAGE

GEORGE A. O'BRIEN

Direct Examination by Mr. Lopez

3

Cross Examination by Mr. Utz

9

E X H I B I T SEXHIBITADMITTEDOFFERED

Applicant's #1 Location plat

8

4

Applicant's #2 Cross section

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5

Applicant's #3 Isopack map

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6

Applicant's #4 Cross section

8

6

Applicant's #5 Cross section

8

6