

CASE 3608: Application of UNION
OIL for creation of new gas pool
and special pool rules, Eddy Co.

Revert to 320 Oct 1
Revert spacing

Case Number

3608

Application
Transcripts.

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 10, 1974

EXAMINER HEARING

IN THE MATTER OF:

Case No. 3608 being reopened
pursuant to the provisions of
Order No. R-3282, which order e
established temporary rules for
the Carlsbad Permo-Penn Gas Pool,
Eddy County, New Mexico.

CASE 3608

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

Thomas Derryberry, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Sumner Buell, Esq.
MONTGOMERY, FEDERICI, ANDREWS,
HANNAHS & BUELL
350 East Palace Avenue
Santa Fe, New Mexico

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
225 JOHNSON STREET
SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386

MR. NUTTER: Now we will call Case 3608.

MR. DERRYBERRY: Case 3608. In the matter of Case No. 3608 being reopened pursuant to the provisions of Order No. R-3282, which order established temporary rules for the Carlsbad Permo-Penn Gas Pool, Eddy County, New Mexico.

MR. NUTTER: A call for appearances in Case 3608.

MR. BUELL: Mr. Examiner, I am Sumner Buell appearing on behalf of Union Oil Company. I merely have a statement when you are ready for it.

MR. NUTTER: Are there any other appearances in Case 3608? Mr. Buell?

MR. BUELL: Mr. Examiner, Union Oil Company is an operator in this area and they have several leases that are beyond their primary terms and they would like to request that the Commission delay the entry of their order for 60 days so that they may have an opportunity to get a rig and pipe in and drill and hold those leases.

MR. NUTTER: Inasmuch as it appears that no presentation will be made this morning to defend the 640-acre spacing which is in effect for the Carlsbad Permo-Penn Pool, the Examiner will make a recommendation to the Commission that the Pool revert to 320-acre spacing. We will take into consideration your request, Mr. Buell, that the Order

CASE 3608

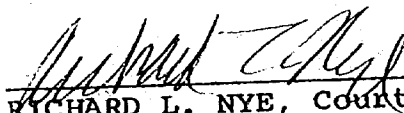
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reverting to 320-acre spacing not be effective for 60 days
after the entry of the Order.

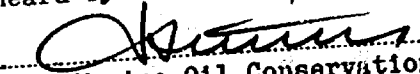
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TEL. (505) 982-0386

STATE OF NEW MEXICO)
) SS.
COUNTY OF SANTA FE)

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


RICHARD L. NYE, Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3608 heard by me on 7/10, 1974.


Examiner
New Mexico Oil Conservation Commission

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
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SANTA FE, NEW MEXICO 87501
TEL. (505) 992-0386



OIL CONSERVATION COMMISSION

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

July 30, 1974

I. R. TRUJILLO
CHAIRMAN
LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

Mr. Sumner Buell
Montgomery, Federici, Andrews, Hannans
& Buell
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: CASE NO. 3608

ORDER NO. R-3282-A

Applicant:

OCC

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
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. 3608
Order No. R-3282-A

IN THE MATTER OF CASE 3608 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-3282, WHICH ORDER
ESTABLISHED TEMPORARY RULES FOR THE
CARLSBAD PERMO-PENN GAS POOL, EDDY
COUNTY, NEW MEXICO, INCLUDING A
PROVISION FOR 640-ACRE SPACING.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 10, 1974,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 30th day of July, 1974, 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 by Order No. R-3282, dated July 27, 1967,
temporary rules were promulgated for the Carlsbad Permo-Penn
Gas Pool, Eddy County, New Mexico, establishing temporary 640-acre
spacing units.

(3) That pursuant to the provisions of Order No. R-3282,
this case was reopened to allow the operators in the subject
pool to appear and show cause why the Carlsbad Permo-Penn Gas
Pool should not be developed on 320-acre spacing units.

(4) That no cause was shown why said pool should not be
developed on 320-acre spacing.

(5) That in order to prevent reduced recovery which might
result from the drilling of too few wells, and to otherwise
prevent waste and protect correlative rights, the temporary
rules promulgated by Order No. R-3282 should be rescinded and
the pool should be governed by the Statewide Rules for gas pools
of Pennsylvanian age or older, effective October 1, 1974.

-2-
Case No. 3608
Order No. R-3282-A

IT IS THEREFORE ORDERED:

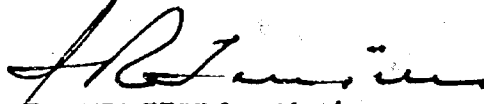
(1) That the Temporary Rules governing the Carlsbad Permo-Penn Gas Pool, Eddy County, New Mexico, promulgated by Order No. R-3282, are hereby rescinded, effective October 1, 1974.

(2) That after October 1, 1974, the Permo-Penn Gas Pool shall be governed by the Statewide Rules for gas pools of Pennsylvanian age or older.


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

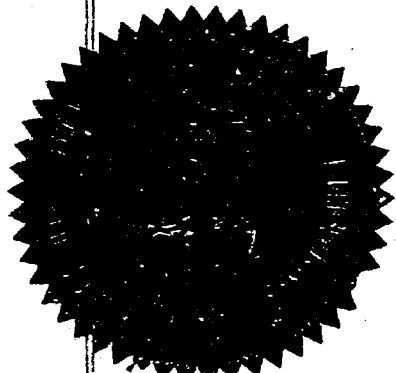
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member


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



S E A L

dr/

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 19, 1974

EXAMINER HEARING

IN THE MATTER OF:

Case No. 3608 being reopened pursuant
to the provisions of Order No. R-3282
which order established temporary
rules for the Carlsbad Permo-Penn Gas
Pool, Eddy County, New Mexico.

Case No.
3608

BEFORE: Richard L. Stamets, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

Thomas Derryberry, Esq.
Legal Counsel for the
Commission
State Land Office Bldg.
Santa Fe, New Mexico

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CASE 3608

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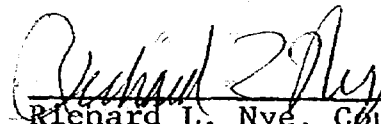
MR. STAMETS; Call the next case, Case 3608.

MR. DERRYBERRY: Case 3608. In the matter of Case No. 3608 being reopened pursuant to the provisions of Order No. R-3282, which order established temporary rules for the Carlsbad Permo-Penn Gas Pool, Eddy County, New Mexico.

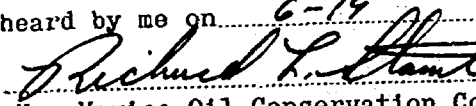
MR. STAMETS: I have a request to continue Case 3608 until the July 10th Hearing and it will be continued.

STATE OF NEW MEXICO)
) SS.
COUNTY OF SANTA FE)

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


Richard L. Nye, Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 3608
heard by me on 6-19, 19 74


Richard L. Nye, Examiner
New Mexico Oil Conservation Commission

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
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TEL. (505) 982-0386

Dockets Nos. 21-74 and 22-74 are tentatively set for hearing on July 24 and August 7. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 10, 1974

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

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

- ALLOWABLE: (1) Consideration of the allowable production of gas from seventeen prorated pools in Lea, Eddy, Roosevelt, and Chaves Counties, New Mexico, for August, 1974;
- (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for August, 1974.

CASE 3608: (Reopened) (Continued from the June 19th Examiner Hearing)

In the matter of Case No. 3608 being reopened pursuant to the provisions of Order No. R-3282, which order established temporary rules for the Carlsbad Permo-Penn Gas Pool, Eddy County, New Mexico, including a provision for 640-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

CASE 5265: Application of David Fasken for an unorthodox location and a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of a well to be drilled to the Morrow formation at a point 1664 feet from the North line and 660 feet from the East line of Section 1, Township 21 South, Range 26 East, Eddy County, New Mexico. Applicant further seeks approval for a 281.3-acre non-standard proration unit for said well comprising all of Lots 1 through 8 of said Section 1.

CASE 5266: Application of David Fasken for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location for a well to be drilled to the Morrow formation at a point 1300 feet from the South and West lines of Section 29, Township 20 South, Range 25 East, Cemetery-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of said Section 29 to be dedicated to the well.

CASE 5267: Application of Mark Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 1, Township 18 South, Range 26 East, Atoka-Pennsylvanian Pool, Eddy County, New Mexico, to be dedicated to a well to be drilled at an orthodox location 990 feet from the South and East lines of said Section 1. Also to be considered will

(Case 5267 continued from Page 1)

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 charge for risk involved in drilling said well.

CASE 5268: Application of Anadarko Production Company, General American Oil Company of Texas and Shenandoah Oil Corporation for four waterflood projects, Eddy County, New Mexico. Applicants, in the above-styled cause, seek authority to institute four cooperative waterflood projects by the injection of water into the Grayburg-San Andres formation in Township 17 South, Range 30 East, Grayburg-Jackson Pool, Eddy County, New Mexico as follows:

Project No. 1: Anadarko's Loco Hills "A" Federal lease by the conversion of four wells in Sections 10 and 15 to water injection;

Project No. 2: Anadarko's Loco Hills "B" Federal lease by the conversion of three wells in Section 9;

Project No. 3: General American Parke "F" lease by the conversion of one well in Section 10;

Project No. 4: Shenandoah's Parke "B" lease by the conversion of two wells in Section 15.

CASE 5269: Application of Union Oil Company of California for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Estacado Unit Area comprising 1280 acres, more or less, of State and fee lands in Township 14 South, Range 35 East, Lea County, New Mexico.

CASE 5270: Application of Texaco Inc. for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 33, Township 24 South, Range 26 East, White City-Pennsylvanian Gas Pool, Eddy County, New Mexico, to be dedicated to applicant's White City Com. Well No. 1 in Unit F of said Section 33.

CASE 5271: Application of Merrion & Bayless for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 13, Township 24 North, Range 6 West, Rio Arriba County, New Mexico, to be dedicated to a well to be drilled at a standard location for said unit in Unit F of said Section 13. 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 charge for risk involved in drilling said well.

CASE 5272: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Consolidated Oil and Gas, Inc., United States Fidelity & Guaranty Company and all other interested parties to appear and show cause why the Consolidated Oil and Gas, Inc., Price Well No. 1 located in Unit N, Section 15, Township 31 North, Range 13 West, San Juan County, New Mexico, should not be recompleted as a single-zone well or be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5273: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Eastern Petroleum Corporation, United States Fidelity and Guaranty Company and all other interested parties to appear and show cause why the following wells should not be abandoned in accordance with a Commission-approved plugging program:

Castillo #1 located in Unit P, Section 35, Township 20 North, Range 7 West, McKinley County, New Mexico;

Chopup #1 located in Unit N, Section 30, Township 19 North, Range 6 West, McKinley County, New Mexico;

Chacra Mesa #1 located in Unit B, Section 14, Township 19 North, Range 7 West, McKinley County, New Mexico;

Blackjack #1 located in Unit P, Section 12, Township 21 North, Range 9 West, San Juan County, New Mexico;

Pornada #1 located in Unit H, Section 27, Township 18 North, Range 7 West, McKinley County, New Mexico.

CASE 4749: (Reopened)

In the matter of Case No. 4749 being reopened pursuant to the provisions of Order No. R-4338-A, which order continued special rules for the Humble City-Strawn Pool, Lea County, New Mexico. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing.

CASE 4946: (Reopened)

In the matter of Case No. 4946 being reopened pursuant to the provisions of Order No. R-4581, which order established temporary rules for the Crosby-Fusselman Associated Pool, Lea County, New Mexico. All interested parties may appear and show cause why said rules should not be rescinded.

CASE 5110: (Continued from January 16, 1974)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the institution of gas prorationing in

(Case 5110 continued from Page 3)

the Washington Ranch-Morrow Gas Pool, Eddy County, New Mexico, to provide for fixing the total allowable natural gas production from said pool to an amount equal to reasonable market demand and to the capacity of the gas transportation facilities. Also to be considered will be the adoption of special rules and regulations for said pool including a provision for allocating the allowable production among the wells in the pool. NOTE: This case will be continued to the first Examiner Hearing in January, 1975.

CASE 5274: Southeastern nomenclature case calling for the creation, abolishment, and extension of certain pools in Lea, Eddy, and Chaves Counties, New Mexico.

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Black River-Wolfcamp Gas Pool. The discovery well is Amoco Production Company Herren Federal Gas Com Well No. 1 located in Unit K of Section 7, Township 24 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 27 EAST, NMPM
Section 7: SW/4

(b) Create a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Cooper-Morrow Gas Pool. The discovery well is the El Paso Natural Gas Company Cooper Federal Well No. 1 located in Unit F of Section 21, Township 24 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM
Section 21: N/2

(c) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Malaga-Morrow Gas Pool. The discovery well is Phillips Petroleum Company Malaga A Well No. 1 located in Unit L of Section 2, Township 24 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 2: W/2

(d) Abolish the Bell Lake-Pennsylvanian Gas Pool in Lea County, New Mexico, described as:

TOWNSHIP 23 SOUTH, RANGE 33 EAST, NMPM
Section 36: SE/4

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 30: All
Section 31: All

(Case 5274 continued from Page 4)

TOWNSHIP 24 SOUTH, RANGE 33 EAST, NMPM
Section 1: NE/4

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 6: NW/4

(e) Create a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production with a provision for 160-acre spacing units and designated as the Bell Lake-Atoka Gas Pool. The discovery well is the Continental Oil Company Bell Lake Unit Well No. 2 located in Unit N of Section 30, Township 23 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 30: SW/4

(f) Create a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the South Bell Lake-Atoka Gas Pool. The discovery well is the Continental Oil Company Bell Lake Unit 1 Well No. 4 located in Unit F of Section 6, Township 24 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 6: W/2

(g) Create a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production with a provision for 160-acre spacing units and designated as the South Bell Lake-Morrow Gas Pool. The discovery well is the Continental Oil Company Bell Lake State 3 Well No. 5 located in Unit G of Section 1, Township 24 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 33 EAST, NMPM
Section 36: SE/4

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 31: SW/4

TOWNSHIP 24 SOUTH, RANGE 33 EAST, NMPM
Section 1: NE/4

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

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
Section 6: NE/4

(i) Extend the Black River-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 12: SW/4

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

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 27: N/2

(k) Extend the Cabin Lake-Strawn Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM
Section 11: W/2 NE/4

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

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 8: All

(m) Extend the North Dagger Draw-Upper Pennsylvanian Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
Section 17: N/2

(n) Extend the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM
Section 13: W/2 SW/4
Section 28: SW/4
Section 29: S/2

(o) Extend the Hat Mesa-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM
Section 10: E/2
Section 11: W/2

(p) Extend the Loco Hills Queen-Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 23: NE/4 NE/4

(q) Extend the Red Lake-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 18: N/2

(r) Extend the Rocky Arroyo-Canyon Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 22 EAST, NMPM
Section 4: S/2
Section 5: S/2

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

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 9: N/2 and SE/4

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

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 36: SW/4 SE/4

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

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 16: SE/4

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

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 11: NW/4

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. R. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
SUMNER G. BUELL
SETH D. MONTGOMERY
FRANK ANDREWS III
OWEN M. LOPEZ

JEFFREY R. BRANNEN
JOHN BENNETT FOUND

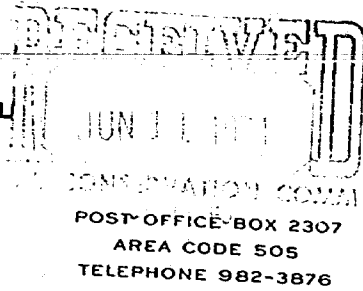
MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & BUELL

ATTORNEYS AND COUNSELORS AT LAW

350 EAST PALACE AVENUE

SANTA FE, NEW MEXICO 87501

June 10, 1974



William F. Carr, Esquire
Legal Counsel-New Mexico
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

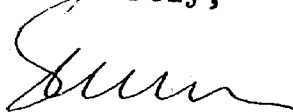
Re: Case No. 3608

Dear Bill:

We would like to request on behalf of Union Oil Company of California that Case Number 3608 be continued from the June 19th to the July 10th Examiner Hearing. The reason for this request is to permit Union to obtain additional well and formation information on the Permo-Penn wells to present at the hearing.

Best regards.

Sincerely,



SGB:st

DOCKET MAILED

Date 6-27-74

Dockets Nos. 19-74 and 20-74 are tentatively set for hearing on July 16 and July 24. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 19, 1974

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:

CASE 5256: Application of Monsanto Company for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to plug back its Arco Federal Well No. 2 located 990 feet from the North line and 2310 feet from the East line of Section 13, Township 21 South, Range 26 East, Burton Flats Field, Eddy County, New Mexico, to a depth of 9314 feet and to set a whipstock and directionally drill said well in such a manner as to bottom it in the Morrow formation within a 50-foot radius of a point 660 feet from the North line and 1980 feet from the East line of said Section 13.

CASE 5257: Application of Mobil Oil Corporation for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal 12 Com Well No. 1 to be drilled to the Morrow formation at a point 1300 feet from the South line and 660 feet from the East line of Section 12, Township 21 South, Range 26 East, Eddy County, New Mexico, the E/2 of said Section 12 to be dedicated to the well.

CASE 5258: Application of Texas Pacific Oil Company for two waterflood projects and downhole commingling or dual completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State "A" Act. 1 Well No. 42 located in Unit A of Section 4, Township 23 South, Range 36 East, Lea County, New Mexico, for the purpose of injecting water into the Upper Seven-Rivers formation of the Jalmat Pool and the Lower Seven-Rivers formation of the Langlie-Mattix Pool for the purpose of secondary recovery. Applicant further seeks approval for the downhole commingling in the wellbore of Jalmat and Langlie-Mattix production in the off-setting wells Nos. 44, 45, and 87, located in Units B, H, and G, respectively, of said Section 4; in the alternative applicant seeks approval for the dual completion of the aforesaid three wells to produce oil from said pools through parallel strings of tubing.

CASE 3608: (Reopened)

In the matter of Case No. 3608 being reopened pursuant to the provisions of Order No. R-3282, which order established temporary rules for the Carlsbad Permo-Peñon Gas Pool, Eddy County, New Mexico, including a provision for 640-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

- CASE 5259: Application of Read & Stevens, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location for a well proposed to be drilled 660 feet from the South line and 990 feet from the East line of Section 30, Township 20 South, Range 25 East, Eddy County, New Mexico, in exception to the pool rules for the Indian Basin-Morrow Gas Pool or the Cemetary-Morrow Gas Pool, whichever is applicable.
- CASE 5260: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit R & G Drilling Company and all other interested parties to appear and show cause why Order No. DC-1026, which authorized dual completion in the Blanco-Mesaverde and Basin-Dakota Pools, should not be rescinded and the Hammond Well No. 47 located in Unit K, Section 35, Township 27 North, Range 8 West, San Juan County, New Mexico, be recompleted as a single zone well.
- CASE 5261: Application of Amerada Hess Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through the openhole interval from 11,160 feet to 11,230 feet of its H. C. Posey "A" Well No. 1 located in Unit O of Section 11, Township 12 South, Range 32 East, East Caprock-Devonian Pool, Lea County, New Mexico.
- CASE 5262: Application of Petro-Lewis Corporation for pool contraction, creation, and special pool rules, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Media-Entrada Oil Pool by the deletion of the NW/4 of Section 22, Township 19 North, Range 3 West, Sandoval County, New Mexico, and the creation of a new pool for Entrada production comprising said lands. Applicant further seeks the promulgation of special rules for said pool, including a provision for 160-acre proration units and the establishment of a special depth bracket allowable for said pool of up to 750 barrels per day.
- CASE 5263: Application of Reading & Bates Oil and Gas Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location for a well proposed to be drilled at a point 660 feet from the South and West lines of Section 8, Township 18 South, Range 26 East, Eddy County, New Mexico, the S/2 of said Section 8 to be dedicated to the well.
- CASE 5251: (Continued from the June 5, 1974, Examiner Hearing)
Application of Pierce & Dehlinger for the Amendment of Order No. R-4560, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4560 to provide for an extension of time in which to comply with the schedule set forth in said order for the drilling and completion of the third well covered by said order, to be located in the NE/4 of Section 24, Township 9 South, Range 33 East, Vada-Pennsylvanian Pool, Lea County, New Mexico.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

DOCKET MAILED

July 27, 1967

~~Date 6-7-74~~
For June 19th hearing
Re: Case No. 3608
Order No. R-3282
Applicant:

Mr. John Russell
Attorney at Law
Post Office Drawer 640
Roswell, New Mexico 88201

to → UNION OIL CO. OF CALIF.
mustard

DOCKET MAILED

Dear Sir:

~~Date 6-7-74~~
Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other J. E. Kapteina (Nomenclature)

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 12, 1967

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

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

CASE 3608: Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for Permo-Pennsylvanian gas production from its Forni Well No. 1 located in Unit I of Section 15, Township 22 South, Range 27 East, Eddy County, New Mexico, and for the promulgation of special pool rules therefor, including a provision for 640-acre spacing.

CASE 3609: Application of Texas Pacific Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its J.P. Collier Well No. 4Y located in Unit G of Section 10, Township 11 South, Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Northeast Bagley-Wolfcamp and the North Bagley-Upper Pennsylvanian Pools through parallel strings of tubing.

CASE 3610: Application of Texas Pacific Oil Company for a dual completion, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Bluit State Com. Well No. 1 located in Unit I of Section 32, Township 7 South, Range 37 East, Roosevelt County, New Mexico, in such a manner as to permit the production of gas from the Bluit Wolfcamp and Bluit San Andres Gas Pools through 2-inch tubing and the casing-tubing annulus, respectively.

CASE 3611: Application of Texas Pacific Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Ella Drinkard Well No. 2 located in Unit E of Section 25, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from undesignated McKee and Ellenburger pools through parallel strings of tubing.

CASE 3612: Application of Roger C. Hanks for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well in exception to the South Flying "M" Pennsylvanian Rules at an unorthodox location 660 feet from the South line and 660 feet from the East line of Section 24, Township 9 South, Range 32 East, Lea County, New Mexico.

- CASE 3613: Application of Sunray DX Oil Company for an amendment to Order No. R-1636-A, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the amendment to Order No. R-1636-A, which order established special rules governing the operation of the Sunray Mid-Continent Central Bisti LPG-Gas-Water Injection Project, Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico. Applicant seeks the reclassification of said pressure maintenance project, for the purpose of filing reports, as a waterflood project.
- CASE 3614: Application of Shiprock Corporation for an amendment to Order No. R-1438, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-1438, which order established special rules for the Shiprock-Gallup Oil Pool. Applicant seeks the deletion of that provision of said rules which provides that wells shall not be located closer than 300 feet to the nearest well producing from the same pool. Applicant would further amend said rules to permit the drilling of wells closer than 165 feet to the outer boundary of the quarter-quarter section, but in no event closer than 165 feet to the boundary of acreage owned by an offset operator.
- CASE 3615: Application of Humble Oil & Refining Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Paddock (San Angelo) Unit Area comprising 3758 acres, more or less, of Federal, State and Fee lands in Townships 21 and 22 South, Range 37 East, Lea County, New Mexico.
- CASE 3616: Application of Humble Oil & Refining Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Paddock (San Angelo) Unit Area by the injection of water into the Paddock formation through six wells located in Section 35, Township 21 South, Range 37 East, and Section 2, Township 22 South, Range 37 East, Paddock Pool, Lea County, New Mexico.

LAW OFFICES OF
JOHN F. RUSSELL
SUITE 1010 SECURITY NATIONAL BANK BUILDING
P. O. DRAWER 640
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-4641
AREA CODE 505

June 20, 1967

Mr. A. L. Porter, Jr.
Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 3608

Dear Mr. Porter:

I transmit herewith, in triplicate, an Application of Union Oil Company of California, and request that it be set for hearing before an Examiner on July 12.

Very truly yours,

John F. Russell
John F. Russell

JFR:1
Enclosure

cc: Mr. Jack Black
Union Oil Company of California
619 West Texas
Midland, Texas 79704
(w/encl.)

Mr. Buddy Jordan
Union Oil Company of California
300 Security National Bank Building
Roswell, New Mexico 88201
(w/encl.)

MAIN OFFICE ONE

67 JUN 21 PM 1 18

DOCKET MAILED

Date 6-29-67
R

A. LAND PLAT

B. GEOLOGY

1. WELL LOGS

2. STRUCTURE MAP

C. ENGINEERING

1. DIAGRAMMATIC SKETCH OF WELL COMPLETION

2. RESERVOIR AND FLUID PROPERTIES

3. VOLUMETRIC RESERVE CALCULATIONS

4. ECONOMICS

5. FIELD RULES

MAIN OFFICE J
'67 JUN 21 PM 1 18

BEFORE THE OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)
UNION OIL COMPANY OF CALIFORNIA FOR)
AN ORDER CREATING AND DESIGNATING A)
NEW GAS POOL FOR THE PRODUCTION OF GAS)
FROM THE PERMO-PENN FORMATION, SUCH)
POOL TO CONSIST OF ALL OF SECTION 15,)
TOWNSHIP 22 SOUTH, RANGE 27 EAST,)
N.M.P.M., EDDY COUNTY, NEW MEXICO, AND)
ESTABLISHING SPECIAL RULES AND REGULA-)
TIONS FOR SAID POOL, INCLUDING 640)
ACRE SPACING.)

No. 3608



APPLICATION

COMES NOW Applicant, Union Oil Company of California,
by its attorney, John F. Russell, and states:

1. That Applicant did complete its Forni No. 1
Discovery Well at a location 2,310 feet from the South line and
990 feet from the East line of Section 15, Township 22 South,
Range 27 East, N.M.P.M., Eddy County, New Mexico, on or about
April 6, 1967, and said well potentialed 1,600 MCF of gas per
day from the Permo-Penn Formation.

2. That said well discovered a new, common source of
supply in this area.

3. That in conformity with the practices of the
Commission, a pool should be created, defined and classified,
including such acreage as appears to cover the newly discovered
source of supply located in Section 15, Township 22 South, Range
27 East, N.M.P.M., Eddy County, New Mexico.

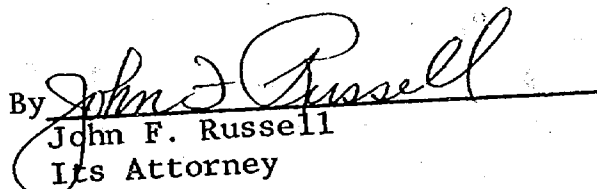
4. That the probable areal extent of the common source of supply is limited, and to prevent waste and to protect correlative rights, proration units of 640 acres should be established.

5. That one well will efficiently and economically drain at least 640 acres of the said common source of supply.

WHEREFORE, Applicant requests the Commission to set this matter down for hearing before one of its examiners, to publish notice as required by law, and, after hearing, issue its order creating and designating a new gas pool as prayed for herein, and to provide for the orderly development of the common source of supply, and to prevent waste, drilling units of 640 acres, well-spacing regulations, and a casing program for said common source of supply.

Respectfully submitted,

UNION OIL COMPANY OF CALIFORNIA

By 
John F. Russell
Its Attorney

P. O. Drawer 640
Roswell, New Mexico 88201

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unless its deferred char-
acter is indicated by the
proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

R. W. McFALL
PRESIDENT

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=International
Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME (37).

LA140 NSC458

1967 JUL 11 PM 5 40

NS FWB308 PD 2 EXTRA=FAX FORT WORTH TEX 11 416P CDT=
NEW MEXICO OIL CONSERVATION COMMISSION=
PO BOX 2088 SANTA FE NMEX=

ATTENTION: MR A. L. PORTER=

PAN AMERICAN HAS BEEN ADVISED OF UNION OIL COMPANY
OF CALIFORNIA APPLICATION FOR A NEW GAS POOL AND
SPECIAL POOL RULES INCLUDING A PROVISIONS FOR 640 ACRE
SPACING, FOR FORNI WELL NO. 1, EDDY COUNTY, NEW MEXICO.
THIS WILL BE CASE 3608 ON JULY 12, 1967 DOCKET. PAN
AMERICAN PETROLEUM CORPORATION HAS NO OBJECTION TO THIS
APPLICATION=

D L RAY DIVISION ENGINEER PAN AMERICAN PET CORP=

WU1201(R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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LA042 NSC095

1967 JUL 11 AM 11 27

NS MDA048 PD=MIDLAND TEX 11 1040A CST=
OIL CONSERVATION COMMISSION=
STATE OF NEW MEX SANTA FE NMEX=

MR A L PORTER JR DOCKET NO 20-67 CASE NO 3608
ASHMUN AND HILLIARD CONCUR WITH UNION OIL COMPANY
OF CALIFORNIA IN ITS REQUEST FOR 640 ACRE SPACING FOR
PERMO PENNSYLVANIAN GAS PRODUCTION IN SUBJECT AREA
TRACY P CLARK=

20-67 3608 640=

WU1201(R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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LA068 KB643

(27).

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A L PORTER JR, NEW MEXICO OIL CONSERVATION COMMISSION= 1967 JUL 17 PM=1 18
STATE LAND OFFICE BLDG SANTA FE NMEX=
SKELLY OIL COMPANY AS AN INTERESTED OPERATOR RECOMMENDS
APPROVAL OF APPLICATION OF UNION OIL COMPANY OF
CALIFORNIA, IN CASE NO 3608 FOR ADOPTION OF 640 ACRE
SPACING FOR THE PERMO-PENNSYLVANIA GAS PRODUCTION
FROM ITS FORNI WELL NO. 1, LOCATED IN UNIT 1 OF SECTION
15, TOWNSHIP 22 SOUTH, RANGE 27 EAST, EDDY COUNTY,
NEW MEXICO=
SKELLY OIL CO GEORGE W SELINGER=

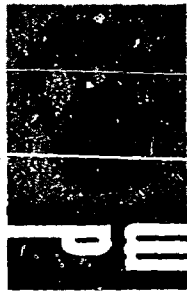
WU1201 (R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 12, 1967

EXAMINER HEARING

IN THE MATTER OF:)

Application of Union Oil Company)
of California for the creation)
of a new gas pool and special pool)
rules, Eddy County, New Mexico.)

Case No. 3608

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOREGISTERHEARING DATE JULY 12, 1967TIME: 9 A.M.

| NAME: | REPRESENTING: | LOCATION: |
|---------------------|--------------------------------|-----------------|
| W. J. Henry | Union Oil & Calif | Roswell |
| S. J. Black | Union Oil of Calif | MIDLAND, TEXAS |
| John D. Russell | " | Roswell |
| P. J. McGeath | U.S.G.S. | Farmington |
| Clarence Harris | Humble | " |
| Marvin Lingley | Humble | Midland |
| Monty Gist | Humble | Midland |
| A. L. Kelley | " | " |
| Donald G. Stevens | Le May & Stevens | Santa Fe, N.M. |
| Harry O'Sullivan Jr | Roger C. Harkins | Santa Fe, N.M. |
| William J. LeMay | LeMay & Stevens | " " |
| Jason Kellahan | Kellahan & Fox | Santa Fe |
| Richard J. Morris | Montgomery, Ficklin & Kellahan | Santa Fe |
| John Hastings | Samray DX | Roswell |
| Ralph L. Simpson | Samray, DX | Roswell |
| Larry Hill | DN & L X | Santa Fe |
| Nina Dudaime | RLB Byram | Austin Santa Fe |

MR. NUTTER: The hearing will come to order, please.
The first case this morning will be Case 3608.

MR. HATCH: Case 3608. Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Eddy County, New Mexico.

MR. RUSSELL: John F. Russell, Roswell, New Mexico, appearing on behalf of the Applicant, and I have two witnesses.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits 1 through 7 were marked for identification.)

WILLIAM J. HENRY

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

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Will you please state your name, by whom you are employed and where?

A My name is William J. Henry and I am employed as area geologist in Roswell, New Mexico for Union Oil of California.

Q Have you previously qualified to testify before this Commission?

A Yes, I have.

Q Are you familiar with the application of Union Oil

Company of California in Case 3608?

A Yes, I am.

Q What does the Applicant seek?

A It seeks a ruling for 640-acre spacing.

Q That's for a presently drilled well?

A Drilled well.

Q In an unnamed new pool, is that correct?

A That is right.

Q In connection with this application have you prepared some exhibits?

A Yes, I have.

Q Referring to what has been marked as Applicant's Exhibit 1, will you identify that?

A It is a land map of the area of a well that we drilled in Section 15 of Township 22 South, Range 27 East, Eddy County, New Mexico.

Q What is the location of that well?

A The location is 2310 from the South and 990 from the East of Section 15. The yellow block of Section 15 is our requested proration unit for this well.

Q And it shows the various leases in the area?

A Union leases.

Q As well as Union's leases on this section, is that right?

dearnley-meier reporting services, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

A Yes, that is correct.

Q All right, I'll refer you to what has been marked as Applicant's Exhibit No. 2 and ask you to identify it.

A Exhibit No. 2 is a structure map of the area in the vicinity where we drilled our No. 1 Forni. It is a structure map on top of the Strawn limestone, which I feel exhibits the structure in this area.

Q Now, in addition to your contours, what else have you shown?

A I have shown all the wells that have been drilled in the vicinity of Union Oil No. 1 Forni, which I'll briefly run through. To the left, down in the left-hand corner is a Sinclair No. 4 Hackberry Hills Unit which was completed as a Canyon producer, and to the north of it is a dry hole drilled by Sinclair.

Q What section? Identify the section.

A No. 4 Hackberry Hills was drilled in Section 22 of 22 South and 26 East. Moving up to the Northwest corner of the map there I refer to the Sinclair No. 1 Federal 279 which was drilled in Section 22 of 21, 26, which is a dry hole. Moving to the north of the Forni well in Township 21 South and 27 East, I refer to the nearest well, which is a Huber No. 1 Humble State which was drilled in Section 23 of 21, 27, which is a dry hole.

Approximately one mile north of it is the Humble No. 1 Cedar Hills which has been recompleted as a Wolfcamp producer and it is located in Section 15 of 21, 27. Over in Section 19 of 21, 28, there is a Pan American No. 2 Big Eddy Unit which was completed as a marginal Strawn producer and that is all of the dry holes or wells drilled in the near vicinity of our No. 1 Forni.

MR. NUTTER: The last well you mentioned is an oil well, right?

A An oil well, right.

Q (By Mr. Russell) Those wells that you have identified as dry holes, were they drilled into the Permo-Penn formation where you are producing from?

A Yes, they have all penetrated at least to the Strawn horizon.

Q And all had no production from the formation from which you are producing?

A That's right. Although Humble No. 1 Cedar Hills is completed from the Wolfcamp it is in a zone higher in the section than our No. 1 Forni.

Q Will you briefly give your opinion as to this new pool from your structure map?

A I feel like Union No. 1 Forni is producing from a stratigraphic trap from porosity and permeability pinchup on a

structural nosing. I have shown the possibility of porosity and permeability pinchout to the north which I do not have, it's not fully controlled with wells but we do have a dry hole to the north which does limit it.

Q In your opinion it is a limited pool insofar as area is concerned?

A Yes. Of course, one well, I don't have the control to say how far down dip it would go or how far up dip, but I think it would cover a fairly large area.

Q The only information you actually have as to this pool would be the information you obtained from drilling the well, is that right?

A That's right, yes, sir.

Q And your opinion or your contour would be subject to change if there were additional wells in this formation from which you could get control?

A That's right, yes, sir.

Q Does Union Oil Company of California anticipate drilling any additional wells in this area?

A Yes, sir. I'm working on a recommendation at the present time that will probably drill a well either in the late or third quarter or early fourth quarter of either Section 3 or 4.

Q That's of this year?

A Of this year.

Q To what depth do you contemplate drilling that?

A This will go at least to 1007 which will penetrate the Strawn, which is our primary objective in the No. 1 Forni.

Q All right, I'll refer you to Applicant's Exhibit No. 3 now and ask you to identify that.

A Exhibit No. 3 is a log section of the producing zone in the No. 1 Forni.

Q Will you identify the logs from left to right on that exhibit?

A The log on the left is a microlog and the log on the right is a gamma ray sonic log.

Q Will you go through that exhibit and explain what it reflects?

A I would like to mention the first item is the drillstem test No. 1 which was taken as we were drilling the well from 9625 to 9710. We used a 3,000-foot water blanket and had a fifteen-minute preflow and had the test tool open for three hours. We have gas to the surface during the initial shut-in and during the test it flowed a maximum of 180 MCFGPD on a quarter-inch choke and we recovered a heavy trace of condensate and 280 feet of heavy gas cut mud and for an initial shut-in pressure of 160 minutes of 6250 pounds psi, flowing pressure of 1439 pounds down to 1407 pounds. And a final

shut-in pressure in 240 minutes of 6224 psi with a bottom hole temperature of 159.

Following the running of this drillstem test we encountered gas cut mud problems and hole conditions and we were unable to do any other testing until we got to total depth and ran our casing. This well was drilled down to the Strawn to 10765 and we tested the Strawn through casing and it was non-productive and therefore we plugged back and came back up to our Permo-Penn zone.

I would like to refer to the lowermost perforations which are on our exhibit down in the lower right-hand corner. We perforated two shots per foot at 9946, 9942, 9938, 9934, 9932 and 9928. We acidized these perforations with a thousand gallons, we swabbed our load with a very small amount of gas and we recovered only 60 barrels on a 72-barrel load and these perfs were not squeezed and we moved up the hole to continue our testing of the Permo-Penn zone.

Our second set of perforations began at 9821 with two shots per foot, 9802, 9746, 9744 and 9739. After the shot at 9739 we had a tubing pressure increase at the surface to 1225 pounds. We continued shooting at 9707 and 9695 and our tubing pressure had increased to 1625 pounds. At that point we lost a perforating gun in the hole and we were shut in for 24 hours so we could get equipment to fish this gun out.

During the shut-in time of 24 hours our tubing pressure increased to 4750 pounds psi and we went to 2750 pounds and fished out the gun and continued our perforation. We perforated two shots at 9678 and 9656 with no additional increase in pressure.

Continuing to the production test of these zones, we acidized all perforations with 15,000 gallon treatment. We recovered our load and it flowed and this is a result of the four point test which I will read. Time, 1 hour; choke, 12/64; the flow rate, 530 MCF with a flowing tubing pressure of 1200 pounds. Another hour or 20/64; flow rate, 1355 MCF with 641 pounds; another hour, 34/64ths-inch choke, 1525 MCF with 312 pounds; one other hour on a one-inch choke; 1575 MCF with 202 pounds. We had a hundred forty-four-hour shut-in tubing pressure of 4750 pounds; gas gravity, .72; liquid gravity, 53.9 with a GOR of 34,480 to 1. Our completion data calculated absolute open flow from four point test, 1600 MCF plus 46.4 barrels of condensate.

Q Did you, from your logs, determine what in your opinion was the thickness of the pay in this well?

A Yes, I have. I have estimated or believe that there is approximately ten feet of pay that is producing gas to the well bore in this well from the Permo-Penn zone. Observing from the microlog, I feel like that my permeability in the

well is very low because of the absence of any filter cake across my porous zone.

Q And where is that pay located?

A The main pay that I consider is producing from the perforation at 9738 to 56, 39 to 46, excuse me. The zone there which I have the porosity marked in the right-hand, the sonic porosity marked in the right-hand corner across that zone. There's approximately eight feet there and I have moved up the hole and given another two feet there at 9707 which appears to be a porous zone.

Q Is there anything further on this exhibit or your contour that you would like to bring out at this time?

A No. I would like to point out though that there was no other zones above this zone that were productive in this well.

Q Were Exhibits 1 through 3 prepared by you or under your supervision and direction?

A Yes.

MR. RUSSELL: I would like to offer into evidence Applicant's Exhibits 1 through 3.

MR. NUTTER: Exhibits 1 through 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 3 were offered and admitted in evidence.)

MR. RUSSELL: I have no further questions of this witness.

MR. NUTTER: Are there any questions of the witness?

CROSS EXAMINATION

BY MR. NUTTER:

Q I didn't get your name, sir.

A William J. Henry.

Q Now, Mr. Henry, you estimate you have got ten feet of net pay. Would you give me the interval again that you consider that pay to be? 9707, you said you had about two feet there?

A Yes, sir. About two feet there and starting about, about 9739 to about 47, sir.

Q Is that interval where you have those three sets of perforations?

A Yes, sir, across that zone.

Q So you do have two feet in the Lower Permian and an interval there of about eight feet or so in the Upper Pennsylvanian?

A It's very difficult to put more or say additional porosity out of the Permian section there due to we had no filter cake and also we have some very thin zones there, maybe fracture zones there that we don't see from the log, but, it may be conservative, but I thought we were getting very

realistic in picking this.

Q And that is the point that you got the tubing pressure increase? when it came up to the perforations?

A We started our pressure increase there, yes, sir. I would like to point out this lower zone down from it, that we perforated from 9946 back to 9928, didn't exhibit that there was any commercial production there after treatment, although it is carrying porosity, but very little permeability from the microlog.

Q And those perforations weren't squeezed?

A No.

Q You think the permeability is low enough there that it won't be a thief zone to your reservoir up above?

A I don't think so. Of course, we lack quite a bit of information on this reservoir which we hope to get when we drill a second well.

Q Did you have any drill stem tests down here in this lower interval?

A No, sir, this was the only drill stem test there, from 9625 to 9710 is the only one we run in the hole due to hole conditions.

Q And that drillstem test didn't test the section that you are producing from?

A No. But we had a blowout right at that point when

we get to about 9756, which we lost circulation, and had gas to the surface and so we were not able to do any testing or coring or anything from there on down because we had a very ticklish mud balance.

Q Where did this blowout come from, you think it was from the interval you have perforated now?

A Yes, I believe so, yes.

Q Have you run any reservoir drawdown tests or reservoir limits tests on this well?

A We have an engineer here, Mr. Black will probably testify to that, but I don't believe it will run anything yet. The well is just shut in.

Q It doesn't have a connection then?

A No, not yet. No, sir.

MR. NUTTER: Are there any further questions of Mr. Henry? He may be excused.

(Witness excused.)

SLOAN J. BLACK

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

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Will you please state your name, by whom you are employed, where and in what capacity?

A I'm Sloan J. Black, employed by Union Oil Company of California in Midland, Texas as a petroleum engineer.

Q And you have previously qualified to testify before this Commission, have you not?

A Yes, sir, I have.

Q You are familiar also with Union Oil Company of California's application in this case?

A Yes, sir.

Q Have you prepared some exhibits in connection with this application?

A Yes, sir, I have.

Q I'll refer you to what has been marked as Applicant's Exhibit No. 4 and ask that you identify and explain that exhibit.

A Exhibit No. 4 is titled a "Diagrammatic Sketch" of Union Oil Company of California's No. 1 Forni, a wildcat well, in Section 15, Township 22 South, Range 27 East, Eddy County, New Mexico. It diagrammatically illustrates the well and its present status insofar as casing perforation, completions are concerned. Beginning with the casing program as illustrated on this exhibit, 11-3/4-inch casing was set at 310 feet with 350 sacks of cement; 8-5/8ths-inch casing set at 2,568 feet with 300 sacks. Production string of casing, 5-1/2-inch was set at 10,764 feet with 410 sacks, after the well had been

drilled to a total depth of 10,765 feet. Testing was accomplished and then the well was plugged back to 10,697 feet and the current completion is about that depth. The current completion is through perforations, as testified to previously, and as illustrated on this exhibit, also.

Q Anything further you want to bring out on that exhibit?

A No, sir.

Q All right, then, I'll refer you to what has been marked as Applicant's Exhibit No. 5 and ask you to identify and explain that exhibit.

A The exhibit is titled "Forni No. 1, Eddy County, New Mexico, Permo-Penn Reservoir and Fluid Properties". This lists the physical properties as can be determined for the gas and for the reservoir and gives a reserve calculation by volumetric method based on the parameters that we have tabulated here.

Beginning with A No.1, two gas analyses are listed through Pentane Plus. The first gas analysis listed in a column on the left was gas obtained from drillstem test No. 1. The second analysis tabulated is produced gas that was taken from a separator. The gases are considered to be the same gas. The reduction in the gallon per thousand cubic feet and the slight difference in the mol percent of each of the gas

components is a result of the separation facilities that the well was put through during the production test.

The gas gravity is, from the production test is .737, the BTU content of the gas per SCF is 1,279. The gas is sweet to hydrogen sulfide test. The condensate gravity is 53.9 degrees API, the initial producing gas-oil ratio in MCF per barrel is 34.48, and the calculated compressibility factor for this gas is 1.09. The reservoir properties came from interpretation of the electric logs that were run in the well and indicate that the average porosity in the pay that was picked by myself and Mr. Henry was 7%.

MR. NUTTER: That would be 7% across that eight or ten feet of net pay?

A Yes. The average connate water saturation in that ten foot of pay is 30%. The pay thickness, of course, that I testified to is ten feet. The initial reservoir pressure, 6,281 pounds, and it came from an interpretation of the data obtained on drillstem test No. 1 and is an extrapolation of that data. It corresponds to a normal gradient in this area. Reservoir temperature measured on the drillstem test and on later log runs was 159 degrees Fahrenheit. Permeability capacity from drillstem test No. 1 was 7.9 millidarcy feet. The reserve calculation is a volumetric one. The formula used in that calculation is given. The result is, of the parameters

that are listed below is 4,400 million cubic feet. The gas reserve, then, or the recoverable gas is the result of the original gas in place times the recovery factor, the recovery factor calculation also being listed. The recovery factor in this instance was 80.2% at an abandonment pressure of 1,000 pounds with a final abandonment compressibility factor of .877.

The barrels of condensate that can be expected to be recovered with the 3,530 million cubic foot of gas reserve is 74,000 barrels. This number was obtained by using a correlation developed by Union Oil Company engineer, Mr. A. M. Sam Sergeant, who developed a quick estimate of oil recovery from gas condensate reservoirs. This is available in the literature published in the Oil and Gas Journal, October 24, 1966 issue, pages 122 through 124.

Q (By Mr. Russell) Now, from that reservoir data, have you prepared a, Exhibit No. 6, as to the economics of this well?

A Yes, sir, I have. It's entitled "Economics, Carlsbad Permo-Penn Gas Pool, Eddy County, New Mexico."

Q That is Exhibit No. 6 you are referring to?

A Yes.

Q Will you run through that and explain what it reflects?

A All right. Item 1 on that exhibit is the gas price

in dollars per MCF at .14. I have that footnoted No. 1, to explain at this time that Union Oil Company of California and Southern Union Gas Company are in the process of negotiating a contract. Some of the factors that I have used in my economics are factors that are a part of those negotiations. The first thing is that the Take-or-Pay part of the pending contract, is that the Southern Union will take 50% of the gas that the well will deliver at 600 pounds line pressure, the line being two and a half miles distant from the well.

The well, during the four point test, was capable of 1.355 million per day at a flowing tubing pressure of 641 pounds, which should deliver gas at 600 pounds at the pipeline two and a half miles distant.

Item 2 on the exhibit is the condensate price in dollars per barrel. It's 2.75.

Q Now, that is the net after trucking charges, is that right?

A Yes, sir, it includes the cost of delivery at the pipeline. Item 3 is state and local taxes for both gas and condensate. It includes severance, emergency school, conservation and ad valorem in the amount of 6.16% of the gross value of the products after royalty.

Item No. 4 is the estimated annual operating cost;

it's footnoted as Footnote 2. Its amount is \$3,300.00 per well per year. Footnote 2 says that this amount "includes gas dehydration according to contract". The contract that we're negotiating specifies that we will deliver dry gas to the purchaser.

Item No. 5 is investments; included there is well cost, the pipeline cost for gas delivery and the producing facilities. Each of those is footnoted 3, which says "detail provided", and the second page of this exhibit is an itemized detailed listing of the costs that go to make up the three items which total \$269,950.00 total investment.

Item No. 6 is profit. This calculation has been made on 320-acre spacing and on 640-acre spacing, using the reserves as calculated on the previous exhibit. The 640-acre gas reserve in millions of cubic feet was 3,530. For 320 acres, then, it would be 1,765 million.

These economics were generated on a constant income basis, using a 20-year life, which would result in an average daily rate of .484 million for 640-acre spacing and .242 million for 320-acre spacing.

The next item listed is the oil reserve, the gross gas revenue, the gross oil revenue and the total gas and oil revenue; for 640-acre spacing the total gas and oil revenue is \$697,700.00. For 320-acre spacing the amount is three

thousand, \$348,850.00. Royalty is 12-1/2%. The gross working interest income, then, is listed, state and local taxes is listed for each of the spacing, operating costs for twenty years is listed, total taxes and operating cost is listed, working interest operating income is listed and then the investment as previously detailed.

The working interest net operating profit for 640-acre spacing is \$236,950.00; for 320-acre spacing it's \$49,500.00 loss. This item is footnoted 4 to indicate that these profitabilities are calculated before federal income tax and before company overhead.

Now, three investment yardsticks have been listed for each; for the 640-acre spacing, a payout according to this calculation would be 10.7 years. The profit to investment ratio on 640-acre spacing, less than one to one at .881. The present value profit at 10% for 640-acre spacing would be a thousand, \$105,700.00. The payout for the 320-acre spacing would not occur. The profit to investment ratio would be a negative number and there would be no present value profit to the operator.

Q In your opinion, from the information that you have, will this one well efficiently drain 640 acres?

A Yes, sir, it will.

Q And on the basis of the economics encountered with

this well would you recommend to your management that any additional wells be drilled to test this formation if it was on 320-acre spacing?

A No, sir, I would not.

Q Let's go to Exhibit No. 7. Will you identify that?

A Exhibit No. 7 is entitled "Special Rules and Regulations for the Carlsbad Permo-Penn Gas Pool".

Q And your suggested Rule 2 is for 640 acres, is that correct?

A Yes, it is.

Q Consisting of a governmental section; and Rule 3 provides for non-standard units?

A Yes, sir.

Q And Rule 4, for the location of the well. Now, these are the general rules which are applicable in statewide rules, is that not correct?

A Yes, sir, they are.

Q With the exception probably of the 640-acre spacing. Now under your heading "It Is Further Requested", No. 1, what is that?

A The Union Oil Company Forni No. 1 is located 2,310 feet from the south line and 990 feet from the east line of Section 15, Township 22 South, Range 27 East. This is a standard Pennsylvanian location in that section. However, it

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would not be a field standard location if these rules were adopted, so this is a request that the Forni No. 1 be granted an exception to the rules requested.

Q And then No. 2, what is that?

A No. 2 is the fact that Union would submit a new Form C-102 upon the granting of an exception for the location of the No. 1 well.

Q And also shown, the acreage to be dedicated to it depending on the outcome of this hearing?

A Yes, sir.

Q Then No. 3, you have asked that the Commission retain jurisdiction for such other orders as they may deem necessary?

A Yes.

Q You are aware that the information available at this time is very limited?

A Yes, sir.

Q And you have heard Mr. Henry testify that the Union Oil Company of California contemplates an additional well to the Strawn which would penetrate this formation in Section 3 or 4?

A Yes, sir.

Q Is it your feeling that your application should be interpreted as a request for temporary rules for one year until

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further information is available?

A Yes, sir, it is.

Q Do you have anything further you want to bring out by any of these exhibits that you have prepared?

A No, sir.

Q Were Exhibits 4 through 7 prepared by you or under your supervision and direction?

A By me, yes, sir.

MR. RUSSELL: Mr. Examiner, I move the introduction into evidence of Applicant's Exhibits 4 through 7.

MR. NUTTER: Union's Exhibits 4 through 7 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 4 through 7 were offered and admitted in evidence.)

MR. RUSSELL: I have no further questions of this witness.

MR. NUTTER: Are there any questions of Mr. Black?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Black, do you have any idea when the negotiations between Southern Union and Union will be consummated and the well connected?

A I talked to our division gas contracts man late last week and the contract is currently being negotiated.

Q Does it look favorable, does he know?

A He thinks that it will be consummated. He didn't say when that it might. Of course, we would hope that it would as early as possible so that we could make sales from the well.

Q You would propose to build this pipeline immediately upon the consummation of the contract?

A Yes.

Q And get the well connected as soon as possible?

A Yes, sir.

Q You are asking that pool rules be instituted and that they be made temporary for one year. In the event the Commission should grant the pool rules, it has been the custom often to make these gas pool rules temporary for one year after first connection, so we would have a year of production to study.

A It would be very helpful. I think within a year we could have a very definitive reserve determined. It would be advantageous to have a full year after connection.

Q It would appear this well does have poor permeability, which is based on the pressure drawdowns?

A Yes.

Q And on the low deliverability of the well. However, your reserves are rather substantial.

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A These are volumetric reserves and I think it is my opinion, without having any way to prove that the reserve will be less than I indicated.

Q You would just rely on time to produce these reserves through a poor permeable section?

A Yes, sir.

Q You do have one thing in favor of the 320-acre spacing, Mr. Black. There aren't any federal income taxes listed here.

A I wish we could get around those. There's just not any way.

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

MR. RUSSELL: I have one further question.

REDIRECT EXAMINATION

BY MR. RUSSELL:

Q Mr. Black, you have testified that in your opinion this one well would efficiently drain 640 acres?

A Yes, sir.

Q And have also testified that on the basis of your economics that you could not recommend to management the drilling of an additional well on 320?

A That is true.

Q So in your opinion would the granting of 640-acre spacing prevent waste and protect correlative rights?

A Yes, sir, it would.

MR. RUSSELL: No further questions.

MR. NUTTER: If there are no further questions of Mr. Black, he may be excused.

(Witness excused.)

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

MR. RUSSELL: I have nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3608?

MR. HATCH: I have a telegram from Pan American Corporation offering no objection to the application, and telegrams from Skelly Oil Company and Ashman, Hilliard concurring in the application.

MR. NUTTER: Are those partners in this operation?

MR. RUSSELL: No, they are not.

MR. NUTTER: Just offset interests?

MR. RUSSELL: Yes.

MR. NUTTER: If there is nothing further in Case 3608 we will take that case under advisement.

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

Witness my Hand and Seal this 26th day of July, 1967.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1971.

I do hereby certify that the foregoing is a complete record of the proceedings in the Exandor hearing of Case No. 3408 heard by me on 7/12, 1967.

W. W. W. Examiner
New Mexico Oil Conservation Commission

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. 3608
Order No. R-3282
NOMENCLATURE

APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR THE CREATION OF
A NEW GAS POOL AND SPECIAL POOL
RULES, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 12, 1967,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 27th day of July, 1967, 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, Union Oil Company of California,
seeks the creation of a new gas pool for Permo-Pennsylvanian
production and the promulgation of special rules and regulations
governing said pool, including a provision for 640-acre spacing
units.

(3) That the Union Oil Company of California Forni Well
No. 1, located in Unit I of Section 15, Township 22 South, Range
27 East, NMPM, Eddy County, New Mexico, has discovered a separate
common source of supply which should be designated the Carlsbad
Permo-Pennsylvanian Gas Pool; that the vertical limits of said
pool should be the Lower Wolfcamp-Upper Pennsylvanian formation
as found in the interval from 9578 feet to 9900 feet on the log.

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CASE No. 3608

Order No. R-3282

of the aforesaid Forni Well No. 1; and that the horizontal limits of said pool should be all of Section 15, Township 22 South, Range 27 East, NMPM, Eddy County, New Mexico.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the Carlsbad Permo-Pennsylvanian Gas Pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That the special rules and regulations should be established for a temporary period to expire one year from the date that a pipeline connection is first obtained for a well in the pool; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the Carlsbad Permo-Pennsylvanian Gas Pool, at which time the operators in the subject pool should appear and show cause why the Carlsbad Permo-Pennsylvanian Gas Pool should not be developed on 320-acre spacing units.

(8) That the first operator to obtain a pipeline connection for a well in the Carlsbad Permo-Pennsylvanian Gas Pool should notify the Commission in writing of such fact, whereupon the Commission should notify the operator of the time for reopening this case.

IT IS THEREFORE ORDERED:

(1) That a new pool in Eddy County, New Mexico, classified as a gas pool for Permo-Pennsylvanian production, is hereby created and designated the Carlsbad Permo-Pennsylvanian Gas Pool, with vertical limits comprising the Lower Wolfcamp-Upper Pennsylvanian formation as found in the interval from 9578 feet to 9900 feet on the log of Union Oil Company of California Forni Well No. 1.

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CASE No. 3608
Order No. R-3282

and horizontal limits comprising all of Section 15, Township 22 South, Range 27 East, NMPM, Eddy County, New Mexico.

(2) That temporary Special Rules and Regulations for the Carlsbad Permo-Pennsylvanian Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
CARLSBAD PERMO-PENNSYLVANIAN GAS POOL

RULE 1. Each well completed or recompleted in the Carlsbad Permo-Pennsylvanian Gas Pool or in the Lower Wolfcamp-Upper Pennsylvanian formation within one mile thereof, and not nearer to or within the limits of another designated Permo-Pennsylvanian gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with.

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

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CASE No. 3608

Order No. R-3282

- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Carlsbad Permo-Pennsylvanian Gas Pool or in the Lower Wolfcamp-Upper Pennsylvanian formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Artesia District Office of the Commission in writing of the name and location of the well on or before August 15, 1967.

(2) That any operator desiring to dedicate acreage pursuant to Rule 2 to a well presently drilling to or completed in the Carlsbad Permo-Pennsylvanian Gas Pool shall file a new Form C-102 with the Commission on or before August 15, 1967.

(3) That this case shall be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained

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CASE No. 3608
Order No. R-3282

for a well in the Carlsbad Permo-Pennsylvanian Gas Pool, at which time the operators in the subject pool may appear and show cause why the Carlsbad Permo-Pennsylvanian Gas Pool should not be developed on 320-acre spacing units.

(4) That the first operator to obtain a pipeline connection for a well in the Carlsbad Permo-Pennsylvanian Gas Pool shall notify the Commission in writing of such fact, whereupon the Commission shall notify the operator of the time for reopening this case.

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

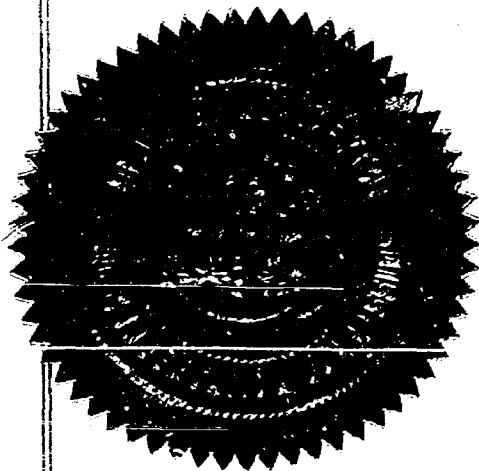
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman

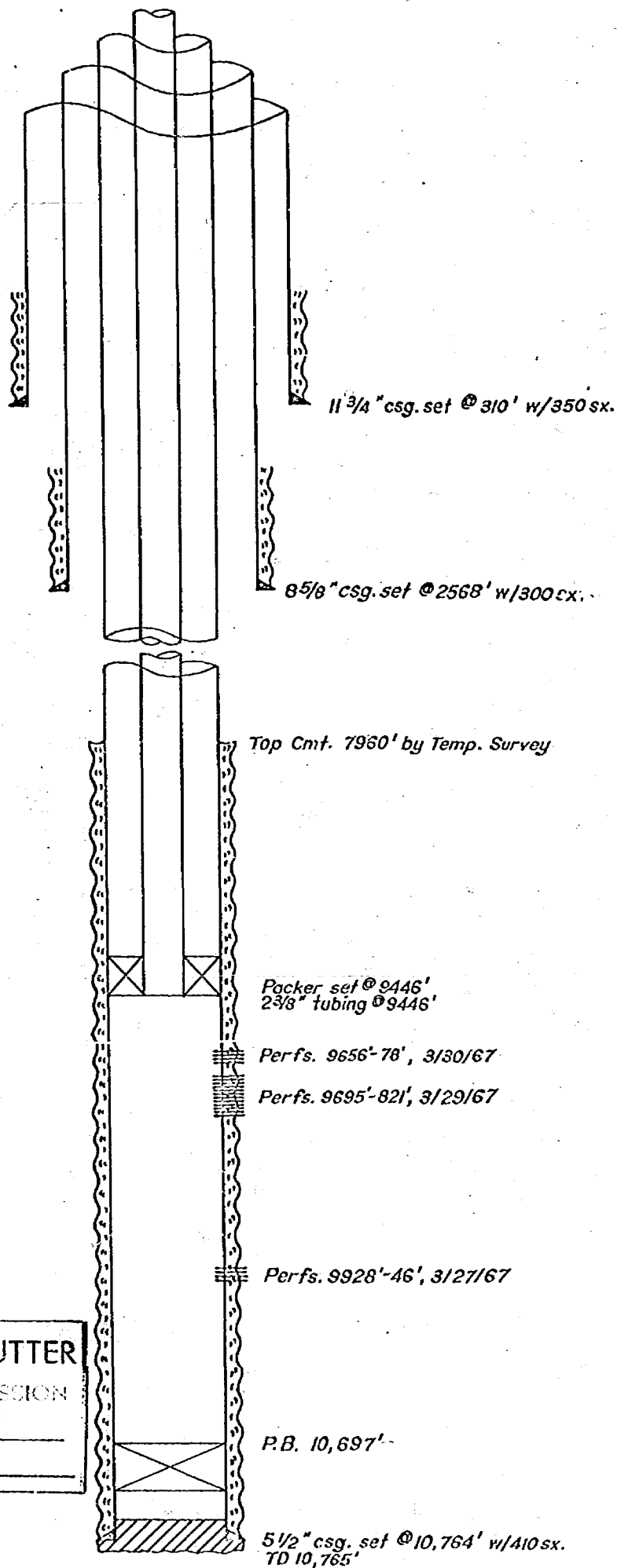

GUYTON B. HAYS, Member


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



esr/

DIAGRAMMATIC SKETCH
UNION OIL COMPANY OF CALIFORNIA, #1 FORNI (WILDCAT)
SECTION 15-T22S-R27E, EDDY COUNTY, NEW MEX.



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Open EXHIBIT NO. 4
CASE NO. 3608

FORNI NO. 1
EDDY COUNTY, NEW MEXICO
PERMO-PENN RESERVOIR AND FLUID PROPERTIES

A. GAS & OIL PROPERTIES

| | DST #1 | | PRODUCED | |
|--|--------|------|----------|------|
| | Mol-% | GPM | Mol-% | GPM |
| 1. ANALYSIS | | | | |
| Carbon Dioxide, CO ₂ | 0.18 | - | 0.26 | - |
| Nitrogen, N ₂ | 0.62 | - | 0.49 | - |
| Methane, C ₁ | 77.52 | - | 79.95 | - |
| Ethane, C ₂ | 9.60 | - | 10.70 | - |
| Propane, C ₃ | 3.87 | 1.06 | 4.12 | 1.13 |
| Iso butane, i C ₄ | 1.01 | 0.33 | 0.73 | 0.24 |
| N-butane, n C ₄ | 2.84 | 0.89 | 1.50 | 0.47 |
| Pentane Plus, C ₅ ⁺ | 4.36 | 1.68 | 2.25 | 0.87 |
| TOTAL | 100.00 | 3.96 | 100.00 | 2.71 |
| 2. GAS GRAVITY | 0.797 | | 0.737 | |
| 3. BTU per SCF | 1,375 | | 1,279 | |
| 4. HYDROGEN SULFIDE | Sweet | | Sweet | |
| 5. CONDENSATE GRAVITY, °API | -- | | 53.9 | |
| 6. INITIAL PRODUCING GAS-OIL RATIO, MCF per BBL | | | 34.48 | |
| 7. COMPRESSIBILITY FACTOR, Zi | | | 1.09 | |

B. RESERVOIR PROPERTIES

| | |
|---|-----------|
| 1. Average Porosity, Ø, % | 7.0 |
| 2. Average Conate Water, S _w , % | 30.0 |
| 3. Pay Thickness, Feet | 10.0 |
| 4. Initial Reservoir Pressure, psia | 6,281 DST |
| 5. Reservoir Temperature, °F | 159 |
| 6. Permeability - Capacity, md - ft | 7.9 |

RESERVE CALCULATION

A. ORIGINAL GAS-IN-PLACE

$$\text{OGIP, MMCF} = \frac{43,560 \times A \times h \times \phi \times (1-S_w) \times T_{sc} \times P_i}{P_{sc} \times T_r \times Z_i \times 10^6}$$

= 4,400 million cubic feet

43,560 feet square per acre a constant
A is 640 acres
h is 10 feet
Ø is 7%
S_w is 30%
P_{sc} is 15.025 psia
T_r is 159°F + 460 or 619° R
Z_i is 1.09, dimensionless
T_{sc} is 60° F + 360 or 520° R
P_i is 6281 psia

B. GAS AND CONDENSATE RESERVE

$$\text{Gas Reserve, MMCF} = \text{OGIP} \times \text{Recovery Factor}$$

= 3,530 million cubic feet

$$\text{Recovery Factor, \%} = \frac{P_i/Z_i - P_a/Z_a}{P_i/Z_i} \times 100$$

= 80.2 @ 1000 psia

Pa is 1000 psia
Za is 0.877, dimensionless
Condensate Reserve*, Barrels = 74,000

*Quick Estimate of Oil Recovery from Gas-Condensate Reservoirs, A. M. (Sam)
Sarem, Union Oil Company of California, The Oil and Gas Journal, October 24,
1966, pp 122-124

MIDLAND DISTRICT ENGINEERING
6-29-67 SJB:rb

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appn EXHIBIT NO. 5
CASE NO. 3608

ECONOMICS
CARLSBAD PERMO-PENN GAS POOL
EDDY COUNTY, NEW MEXICO

| | | |
|--|---------------------|-----------------------------------|
| I. <u>GAS PRICE</u> ⁽¹⁾ , \$ per MCF | | 0.14000 |
| II. <u>CONDENSATE PRICE</u> , \$ per Barrel | | 2.75 |
| III. <u>STATE AND LOCAL TAXES, GAS AND CONDENSATE</u> | | |
| | \$ per Mcf | \$ per Bbl |
| A. Severance | 0.00350 | 0.06875 |
| B. Emergency School | 0.00280 | 0.05500 |
| C. Conservation | 0.00020 | 0.00385 |
| D. Ad Valorem | 0.00213 | 0.04180 |
| TOTAL | 0.00863 | 0.16940 |
| | | % of Gross Value After Royalty |
| | | 2.50000 |
| | | 2.00000 |
| | | 0.14000 |
| | | 1.52000 |
| | | 6.16000 |
| IV. <u>ESTIMATED ANNUAL OPERATING COST</u> , ⁽²⁾ \$ per well per year | 3,300 | |
| V. <u>INVESTMENTS</u> | | |
| A. Well Cost ⁽³⁾ , \$ | | 235,000 |
| B. Pipe Line ⁽³⁾ , \$ | | 25,400 |
| C. Producing Facilities ⁽³⁾ , \$ | | 9,550 |
| | | 269,950 ✓ |
| VI. <u>PROFIT</u> | | |
| | 640-Acre Spacing | 320-Acre Spacing |
| Gas Reserve, MMCF | 3,530 | 1,765 |
| Average 20 year rate, MMCFD | 0.484 | 0.242 |
| Oil Reserve, Barrels | 74,000 | 37,000 |
| Gross Gas Revenue, \$ | 494,200 | 247,100 |
| Gross Oil Revenue, \$ | 203,500 | 101,750 |
| Total Gas and Oil Revenue, \$ | 697,700 | 348,850 |
| Royalty at 12.5%, \$ | 87,200 | 43,600 |
| Gross W.I. Income, \$ | 610,500 | 305,250 |
| State and Local Taxes @ 6.16% | 37,600 | 18,800 |
| Operating Cost for 20 years, \$ | 66,000 | 66,000 |
| Total Taxes & Operating Cost, \$ | 103,600 | 84,800 |
| W.I. Operating Income, \$ | 506,900 | 220,450 |
| Investments, \$ | 269,950 | 269,950 |
| W.I. Net Operating Profit ⁽⁴⁾ , \$ | 236,950 | (49,500) |
| Investment Yardsticks: | | |
| Payout, Years | 10.7 | None |
| Profit to Investment Ratio | 0.88:1.00 | Negative |
| Present Value Profit at 10%, \$ | 105,700 | None |

- (1) Southern Union Gas Co., Dallas, Texas, Take-or-Pay of 50% of deliverability at 600 psi line pressure 2-1/2 miles distant from the well. Well capable of 1.355 MMCFD at a FTP of 641 psig.
- (2) Includes gas dehydration according to contract.
- (3) Detail provided.
- (4) Profit before federal income tax and overhead.

FORNI NO. 1
 EDDY COUNTY, NEW MEXICO
10,000 FOOT PERMO-PENN WELL COST

| | |
|---|------------|
| Footage and Daywork | \$ 80,235 |
| Mud, Brine, Chemical & Diesel | 48,000 |
| Cement & Cementing Service | 6,800 |
| Logging and Perforating | 6,200 |
| Treatment (Frac & Acid) | 10,000 |
| Trucking | 1,000 |
| Rental Equipment | 6,000 |
| Bits and Reamers | 250 |
| Miscellaneous Outside Services | 6,000 |
| Road Location and Clean-up | 2,000 |
| Supervision | 7,200 |
| Pulling Unit Service | 2,500 |
| TOTAL INTANGIBLES | \$ 176,185 |
| Casing, Float Equipment, and Centralizers | 41,250 |
| Tubing Unit | 9,500 |
| Subs, Packers, Hangers, etc. | 1,000 |
| Casing Heads and Xmas Tree | 6,100 |
| Production Equipment | 1,000 |
| TOTAL TANGIBLES | \$ 58,850 |
| TOTAL DRILLING COST | \$ 235,035 |

PRODUCING FACILITIES

EQUIPMENT

| | |
|---|----------|
| Glycol dehydrator complete with intergal 3-phase separator, reconsentrator, pump, and control valves. | \$ 4,500 |
| Stock Tank - 500 Bbl. welded steel (used) | 1,200 |
| T.B. Pipe, fittings & valves | 1,550 |
| 150 feet flow line 3" | 450 |

CONTRACT LABOR

| | |
|------------------------|-------|
| Contract gang (4 days) | 1,000 |
| Welding (2 days) | 200 |
| Testing | 300 |

COMPANY SUPERVISION

| | |
|-------|----------|
| TOTAL | \$ 400 |
| | \$ 9,550 |

PIPE LINE INVESTMENT

MATERIALS COST

| | |
|---|-----------|
| 13,200 feet, 3-in. Sch 40 Std 7.58 lb per ft., Gr. B, Smls at \$0.98 per ft. | \$ 12,936 |
| Valves and fittings (Block and Relief) | 1,000 |
| Transportation | 200 |

CONTRACT INSTALLATION

| | |
|---|-------|
| Fabrication and laying at \$0.45 per ft. | 5,940 |
| Road crossing, bored @ \$5.00 per ft. and 100 ft. | 500 |
| Survey, 2 days at \$150 per day | 300 |

RIGHT OF WAY, \$5.00 per rod - 800 rods

| | |
|--|-----------|
| <u>SUPERVISION</u> , 5 days at \$100 per day | 500 |
| TOTAL | \$ 25,376 |

10/1/54
10/1/54
10/1/54

SPECIAL RULES AND REGULATIONS
FOR THE
CARLSBAD PERMO-PENN GAS POOL

RULE 1. Each well completed or recompleted in the Carlsbad Permo-Penn Gas Pool or in the Permo Penn formation within one mile thereof, and not nearer to or within the limits of another designated Permo-Penn gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations herein-after set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The applicant presents written consent in the form of waivers from all offset operators to the non-standard unit.

(c) In lieu of paragraph (b) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.

IT IS FURTHER REQUESTED:

(1) That the Forni No. 1, located 2310 feet from the South line and 990 feet from the East line of Section 15, Township 22, South, Range 27 East, NMPN, Lea County, New Mexico, is hereby granted an exception to the well location requirements contained herein.

(2) That the operator of the aforesaid Forni No. 1 shall file a new Form C-102 outlining thereon the acreage dedicated to said well within 10 days after receipt of this order.

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

| | |
|-----------------------------|----------------------|
| BEFORE EXAMINER NUTTER | |
| OIL CONSERVATION COMMISSION | |
| <i>Apf</i> | EXHIBIT NO. <u>7</u> |
| CASE NO. | <u>3608</u> |