

CASE 3204: Application of UNION  
OIL CO. OF CALIF. for creation of  
a new oil pool and special rules.

CASE NO.

3204

Application,

TRANSCRIPTS,

SMALL Exhibits

ETC.

State of New Mexico  
Oil Conservation Commission



P. O. BOX 2088  
SANTA FE

Re: Case No. 3204  
Order No. R-2872-A  
Applicant:

Other \_\_\_\_\_

Docket No. 4-65

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 10, 1965

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

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

CASE 2942: (Reopened)

In the matter of Case No. 2942 being reopened pursuant to the provisions of Order No. R-2645, which order established temporary 160-acre spacing and fixed well locations for the Simanola-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 2764: (Reopened)

In the matter of Case No. 2764 being reopened pursuant to the provisions of Order No. R-2439, which order established temporary 640-acre spacing units for the West Jal-Strawn Gas Pool, Lea County, New Mexico, for a period of two years. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

CASE 3203: Application of Schermerhorn Oil Corporation for a non-standard location and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre non-standard gas proration unit comprising the N/2 NE/4 of Section 5, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Linam G Well No. 1 at a non-standard location 1025 feet from the North line and 1953 feet from the East line of said Section 5.

CASE 3204: Application of Union Oil Company of California for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Wolfcamp production for their California State No. 1-7 located in Unit D of Section 7, Township 15 South, Range 35 East, Lea County, New Mexico, and the promulgation of special rules for said pool, including a provision for 80-acre spacing.

CASE 3205: Application of Continental Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 4 of the special pool rules for the Baish Wolfcamp and Maljamar-Abo Pools, to permit the location of its Baish "A" Well No. 13 at an unorthodox location for said pools 1780 feet from the North line and 460 feet from the West line of Section 22, Township 17 South, Range 32 East, Lea County, New Mexico.

CASE 3206: Application of Apache Corporation for a pool extension and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the High Plains-Pennsylvanian Pool, Lea County, New Mexico to include its Delaware-Apache Well No. 1 located in the NE/4 of Section 22, Township 14 South, Range 34 East; applicant further seeks the promulgation of temporary special pool rules for said pool including a provision for 160-acre proration units.

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

TELEPHONE 422-4641  
AREA CODE 505

January 19, 1965

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

Dear Mr. Porter:

I transmit herewith the Application of Union Oil Company of California for an Order creating a new oil field. It is requested that this Application be set for the examiner hearing on February 10, 1965.

Very truly yours,

*John F. Russell*  
John F. Russell

JFR:pv

Enclosure

DOCKET MAILED

DATE 2-10-65

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 OIL FIELD FOR THE PRODUCTION OF )  
OIL FROM THE WOLFCAMP FORMATION OF THE )  
MORTON (PERMO PENN) FIELD, SUCH FIELD )  
TO CONSIST OF ALL OF SECTION 7, TOWN- )  
SHIP 15 SOUTH, RANGE 35 EAST, AND ALL )  
OF SECTION 12, TOWNSHIP 15 SOUTH, )  
RANGE 34 EAST, N.M.P.M., LEA COUNTY, )  
NEW MEXICO, AND FOR ESTABLISHING SPECIAL )  
RULES AND REGULATIONS FOR SAID FIELD, )  
INCLUDING 80 ACRE SPACING. )

No. 3204

APPLICATION

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

1. That Applicant potentialed its Union Oil Company of  
California State No. 1-7 discovery well located 660 feet from  
the North line and 660 feet from the West line of Section 7,  
Township 15 South, Range 35 East, on November 1, 1964.

2. Applicant portentialed its Union Oil Company of California  
Gulf-Federal No. 1-12 well located 1,980 feet from the North  
line and 660 feet from the East line of Section 12, Township  
15 South, Range 34 East, on December 29, 1964.

3. That said wells discovered a new common source of  
supply in this area.

4. That in conformity with the practices of the Commission a field should be created, defined and classified including such acreage as appears to cover the newly discovered source of supply located in Section 7, Township 15 South, Range 35 East, and Section 12, Township 15 South, Range 34 East, N.M.P.M., Lea County, New Mexico.

5. That the probable areal extend of the common source of supply is limited, and to prevent waste and to protect correlative rights, proration units of 80 acres should be established.

6. That one well will efficiently and economically drain at least 80 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 oil field as prayed for herein, and to provide for the orderly development of the common source of supply, and to prevent waste, drilling units of 80 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  
John F. Russell  
Its Attorney

P. O. Drawer 640  
Roswell, New Mexico



THE ATLANTIC REFINING COMPANY  
INCORPORATED - 1970  
PETROLEUM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT  
NEW MEXICO DISTRICT

MAILING ADDRESS  
P. O. BOX 1978  
ROSWELL, NEW MEXICO

February 5, 1965

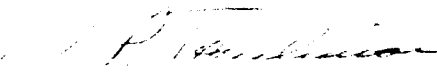
New Mexico Oil Conservation  
Commission  
Post Office Box 2088  
Santa Fe, New Mexico

Re: Case 3204, 80-Acre Spacing,  
Morton Permo-Pennsylvanian  
Pool

Gentlemen:

Union Oil Company of California has made application for temporary 80-acre spacing rules for the Morton Permo-Pennsylvanian pool. We understand their request to be for 80-acre proration units consisting of any two contiguous quarter-quarter sections with wells to be drilled on either of the quarter-quarter sections. As owner of nearby acreage, Atlantic wishes to concur with this application.

Yours very truly,

  
W. P. Tomlinson

WPT:la



**CLASS OF SERVICE**  
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# WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-60)

**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 at point of destination.

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NMEXICO OIL CONSERVATION COMMISSION=  
STATE LAND BLDGNSANTA FE NMEX=

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*Feb. 10  
Ex Henry*

RE CASE NO 3204 MORTON PERMO PENN POOL LEA COHNTY NMEX  
SHELL OIL CO LESSEE OF ADJOINING ACREAGE HEREBY SUPPORTS  
UNION OIL CO OF CALIF APPLICATION FOR TEMPORARY 80 ACRE  
SPACING AND ALLOWABLE WITH FLEXIBLE WELL LOCATIONS IN THE  
MORTON PERMO PENN POOL THE HIGHLY COMMUNICATIVE NATURE OF  
THE PERMO PENN PRODUCTIVE ZONES IN THIS AREA IS WELL  
EVIDENCED BY THE NEARBY EAST SAUNDERS POOL WHICH SHOWS  
EXCELLENT LATERAL COMMUNICATION OVER DISTANCES EQUIVALENT  
TO 160 ACRE SPACING=

T H DWYER DIVISION PRODUCTION MGR SHELL OIL CO=

**CLASS OF SERVICE**  
This is a fast message unless its deferred character is indicated by the proper symbol.

# WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-60)

**SYMBOLS**  
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LA236 DB260

D PNA052 PDWUX PAMHA TEX 8 349P CST=  
NEW MEXICO OIL CONSERVATION COMM=

ATTN PETE PORTER SANTA FE NMEX=

RE CASE NUMBER 3204 UNION OIL COMPANY OF CALIFORNIA  
FOR CREATION OF NEW OIL POOL AND SPECIAL RULES CABOT  
CORPORATION SUPPORTS UNION REQUEST FOR EIGHTY-ACRE  
SPACING WITH FLEXIBLE LOCATIONS AND EIGHTY-ACRE  
ALLOWABLES=

W M SARGENT JR CABOT CORP=

= 3204.

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 2/22/66

CASE 3204

Hearing Date 9 am 2/10/65  
DSN@SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order <sup>re-designating</sup> ~~creating~~ The Morton  
~~Pennsylvanian~~ Pool as the  
Morton Lower Wolfcamp Pool with  
vertical limits the Lower Wolfcamp  
formation from 10,182' to 10,670' ~~as~~ on  
the log of Union Oil Company State  
Well No 1-7 located 660' from the N & W  
lines of Sec 7 - T15S - R35E, Lea Co., N Mex.

Enter temporary pool rules for  
said pool as shown on Ex 13.

Recall the pool for hearing in  
February 1966.

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. 3204  
Order No. R-2872  
NOMENCLATURE

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 10, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 5th day of March, 1965, 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 oil pool for Wolfcamp production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 80-acre spacing.

(3) That the applicant's State Well No. 1-7 located in Unit D of Section 7, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the Morton-Lower Wolfcamp Pool; that the vertical limits of said pool should be the zone encountered in said well between 10,182 and 10,670 feet; and that the horizontal limits of said pool should be the NW/4 of Section 7, Township 15 South, Range 35 East and the NE/4 of Section 12, Township 15 South, Range 34 East, NMPM, Lea County, New Mexico.

-2-

CASE No. 3204

Order No. R-2872

(4) That said separate common source of supply has previously been designated the Morton Permo-Pennsylvanian Pool and redesignated the Morton-Pennsylvanian Pool; that the Morton-Pennsylvanian Pool should be abolished and a new pool created as set out above.

(5) 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 80-acre spacing units should be promulgated for the Morton-Lower Wolfcamp Pool.

(6) 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.

(7) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(8) That this case should be reopened at an examiner hearing in March, 1966, at which time the operators in the subject pool should be prepared to appear and show cause why the Morton-Lower Wolfcamp Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That the Morton-Pennsylvanian Pool in Lea County, New Mexico, is hereby abolished.

(2) That a new pool in Lea County, New Mexico, classified as an oil pool for Lower Wolfcamp production is hereby created and designated the Morton-Lower Wolfcamp Pool, with vertical limits comprising the zone encountered between 10,182 and 10,670 feet in the Union Oil Company of California State Well No. 1-7 located in Unit D of Section 7, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico, and horizontal limits comprising the NW/4 of Section 7, Township 15 South, Range 35 East and the NE/4 of Section 12, Township 15 South, Range 34 East, NMPM, Lea County, New Mexico.

(3) That temporary Special Rules and Regulations for the Morton-Lower Wolfcamp Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS  
FOR THE  
MORTON-LOWER WOLFCAMP POOL**

**RULE 1.** Each well completed or recompleted in the Morton-Lower Wolfcamp Pool or in the Lower Wolfcamp formation within one mile thereof, and not nearer to or within the limits of another designated Lower Wolfcamp 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 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

**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 comprising a governmental quarter-quarter section or lot. All operators offsetting the proposed non-standard unit 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 offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

**RULE 4.** Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

**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 unorthodox 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

-4-

CASE No. 3204

Order No. R-2872

offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That any well presently drilling to or completed in the Morton-Lower Wolfcamp Pool or in the Lower Wolfcamp formation within one mile thereof that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before April 1, 1965.

(2) That each well presently drilling to or completed in the Morton-Lower Wolfcamp Pool or in the Lower Wolfcamp formation within one mile thereof shall receive a 40-acre allowable until a form C-102 dedicating 80 acres to the well has been filed with the Commission.

(3) That this case shall be reopened at an examiner hearing in March, 1966, at which time the operators in the subject pool may appear and show cause why the Morton-Lower Wolfcamp Pool should not be developed on 40-acre spacing units.

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

-5-

CASE No. 3204

Order No. R-2872

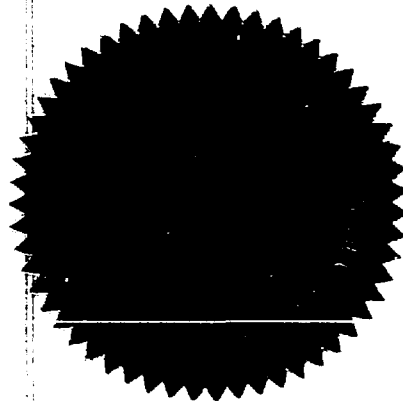
DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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



esr/

State of New Mexico  
Oil Conservation Commission



P. O. BOX 2088  
SANTA FE

Date 2-2-6



Docket No. 7-66

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 9, 1966

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

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

- CASE 3381: Application of Tenneco Oil Company for an exception to Rule 15, Order No. R-2397, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 15, Order No. R-2397, special rules for the Double-X Delaware Pool, for its U. S. Smelting USA Well No. 2, located in Unit E of Section 22, Township 24 South, Range 32 East, Lea County, New Mexico, to permit said well to make up overproduction of gas at a lesser rate than complete shut in, in order that gas may be used from said to gas-lift another well on the same lease.
- CASE 3382: Application of Union Oil Company of California for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the North Hapache Unit Area comprising 4480 acres, more or less, of Federal and State lands in Township 22 South, Range 22 East, Eddy County, New Mexico.
- CASE 3204: (Reopened)  
In the matter of Case No. 3204 being reopened pursuant to the provisions of Order No. R-2872, which order established 80-acre spacing units for the Morton-Lower Wolfcamp Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.
- CASE 3206: (Reopened)  
In the matter of Case No. 3206 being reopened pursuant to the provisions of Order No. R-2874, which order established 160 acre spacing for the High Plains-Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 80-acre or 40-acre spacing units.

Case. 3204

Heard 3-8-66

Rec. 3-8-66

1. Grant a permanent order for R. 2072 in the Mordon Levee-Wolfcamp Pool. 80 A. communication was pretty conclusive and the pool will probably only have 2 or 3 more wells drilled.

Thos. W. J.

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. 3204  
Order No. R-2872-A

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 9, 1966,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 16th day of March, 1966, 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-2872, dated March 5, 1965, temporary  
Special Rules and Regulations were promulgated for the Morton-  
Lower Wolfcamp Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-2872,  
this case was reopened to allow the operators in the subject pool  
to appear and show cause why the Morton-Lower Wolfcamp Pool should  
not be developed on 40-acre spacing units.

(4) That the evidence establishes that one well in the  
Morton-Lower Wolfcamp Pool can efficiently and economically  
drain and develop 80 acres.

-2-

CASE No. 3204

Order No. R-2872-A

(5) That the Special Rules and Regulations promulgated by Order No. R-2872 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

(6) That 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, the Special Rules and Regulations promulgated by Order No. R-2872 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Morton-Lower Wolfcamp Pool promulgated by Order No. R-2872 are hereby continued in full force and effect until further order of the Commission.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*

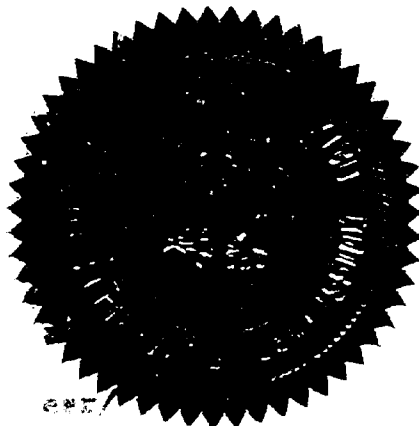
JACK M. CAMPBELL, Chairman

*Guyton B. Hays*

GUYTON B. HAYS, Member

*A. D. Porter, Jr.*

A. D. PORTER, JR., Member & Secretary



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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



PAGE 1

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

March 9, 1966

EXAMINER

HEARING

IN THE MATTER OF:

In the matter of Case No. 3204 being  
reopened pursuant to the provisions of  
Order No. R-2872, which order established  
80-acre spacing units for the Morton-Lower  
Wolfcamp Pool, Lea County, New Mexico, for  
a period of one year.

Case No. 3204

BEFORE:

Elvis A. Utz, Gas Engineer

TRANSCRIPT OF HEARING

MR. DURRETT: In the matter of Case No. 3204 being reopened pursuant to the provisions of Order No. R-2872, which order established 80-acre spacing units for the Morton-Lower Wolfcamp Pool, Lea County, New Mexico, for a period of one year.

MR. RUSSELL: John F. Russell of Roswell appearing on behalf of Union Oil Company. I have two witnesses, Mr. Browning and Mr. Jordan.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits  
1, 2, 3 & 4 marked for  
identification.)

MR. UTZ: Are there other appearances in this case?

\*\*\*

J. B. JORDAN, a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Will you state your name for the Examiner and by whom you are employed?

A J. B. Jordon, I'm employed by the Union Oil Company of California.

Q In what capacity?

A As a Development Geologist.

Q Where are you located?

A Roswell, New Mexico.

Q Have you previously qualified to testify before the Examiner and the Commission?

A Yes, I have.

Q You previously testified in Case 3206 where the Rules were established for this pool, did you not?

A Yes, sir.

Q And submitted exhibits in that case?

A Yes, I did.

Q And you have prepared exhibits in this case which are updating the ones introduced in the original case, is that correct?

A That's correct.

MR. RUSSELL: For the purpose of clarifying the record, I ask that the exhibits in the prior testimony in the case be incorporated.

MR. UTZ: They will be incorporated.

Q (By Mr. Russell) Directing your attention to what has been marked Union's Exhibit 1, what does that portray?

A A structural contour map contoured at 50 foot intervals on top of the Lower Wolfcamp pay zone. This map also shows the line of section of the Exhibit Number 2 and 3.

Q Now, there are some additional wells shown on this exhibit which were not shown on the exhibit originally introduced in this case.

A The additional well is the Huber Number 1 Stoltz Federal in the Northwest of the Southeast of Section 12. This well was completed early this year as a producer from the Lower Wolfcamp, the old McAlester State E-L in the Northwest of the Southwest of Section 7. It was reentered by Alvin Carvin and was completed as a producer.

Q As a result of the information you obtained from those wells and your production history, you have made some changes in your contour line on the original, have you not?

A Yes, I have. This shows the structural configuration as interpreted from the latest well data.

Q In other respects it is the same as the prior exhibit?

A That's correct.

Q I refer you to Union's Exhibit Number 2 and ask you to explain that exhibit?

A Exhibit 2 is a North South cross section across the field. This cross section graphically depicts the structural and stratigraphic attitude of the Wolfcamp Zones across the Morton Field.

Q Is there anything in particular on this exhibit that you would like to point out for the Examiner which may be different from your original testimony?

A This section has a Huber well on it which is the



new well in the field; that is the second from the right.

Q That is the only major difference between the original?

A That is the only major difference. As you will note the well is considerably higher than anything else in the field.

Q I refer you to what has been marked as Union's Exhibit Number 3 and ask you what that exhibit shows?

A Exhibit Number 3 is also a cross section across the Morton Field in the Northwest Southeast direction depicting the structural and stratigraphic attitude of the Wolfcamp beds. As you will note, the second well from the left, the Union Oil Number 1-12 Gulf Federal is common to both sections.

Q This includes one additional well over your original exhibit?

A Yes.

Q Do you have anything further to add in your testimony in regard to Exhibit 3?

A No, sir.

Q Is there anything on any of these three exhibits that you want to amplify on?

A If you will refer to Exhibit 2 you will note that I have divided the Wolfcamp pay zone into two zones. I have done this because of the pattern reefing condition in the second zone which doesn't carry up into zone Number 1. Zone 1 appears to be more of a blanket zone over the area and that is more or



less the basis for the division in the two zones.

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

CROSS-EXAMINATION

BY MR. UTZ:

Q You're not proposing here that we consider these two separate sources of supply, are you?

A I don't believe so. As far as we can tell they do have a common water table. Just exactly how that water got in there with the common oil table in the two zones I don't know; possibly some remote connection between the zones.

MR. UTZ: Were you through?

MR. RUSSELL: One further question.

REDIRECT EXAMINATION

BY MR. RUSSELL:

Q Were Exhibits 1, 2 and 3 prepared by you or under your supervision?

A Yes, sir, they were.

MR. RUSSELL: We offer Exhibits 1, 2 and 3 into evidence.

(Whereupon, Exhibits 1, 2 and 3 offered into evidence.)

MR. UTZ: Exhibits 1, 2 and 3 will be entered into the record of this case.

(Whereupon, Exhibits 1, 2 and 3  
admitted into evidence.)

RE-CROSS-EXAMINATION

BY MR. UTZ:

Q In your previous case did you offer any data, radius  
of range data?

A I believe there was some offered by the other  
witness, I think he would be more qualified.

Q He will cover that requirement?

A Yes, sir.

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

\*\*\*

CHARLES W. BROWNING, 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 in what capacity?

A Charles W. Browning, employed by Union Oil Company  
of California as a District engineer of the West Texas-New  
Mexico District in Midland, Texas, sir.

Q And you have previously qualified to testify before  
the Commission?

A Yes, sir.

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Q In the original hearing of Case 3206 you prepared certain exhibits and gave testimony?

A Yes, sir, I did.

Q I refer you to what has been marked as Union's Exhibit Number 4 which consists of a number of pages, and ask if that is an updating of the evidence of which you introduced at the prior original hearing as well as some of the same records?

A Yes, it is.

Q If you will, go to that Exhibit Number 4 and go through it page by page and indicate whether it was the same as the prior hearing exhibit and if not what the change is?

A All right, sir. On the First Page is the well data which includes the reservoir characteristics as we determined from core and log analysis; they did not change from the previous exhibit. The second exhibit--

Q Second page?

A --Second Page of the exhibit is the same as was presented before and it is simply the pressure recordings to indicate the obvious pressure intervals between the two wells. This is graphically indicated on the Third Page and it would be noted that the pressure as we established on the discovery well at some 4225 pounds, it's pressure versus time draw down, it would be noted that at the point at which the Gulf Federal 1-12 was completed the bottom hole pressure was essentially

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PAGE 9

the same as that that we had noted in the decline of the 1-7. Without producing the 1-12 we continued to run pressure bottoms in it to check the pressure draw down. As we continued to produce with the 1-7 we noted that the Gulf Federal had a pressure of approximately 3490 pounds at a 96 hour shut-in. 72 hours later with the State 1-7 producing there was a 40 pound draw down in the Federal 1-12 which would indicate both wells were opened up, produced together and shut-in, and after 100 hours shut-in 1/24/65, extrapolated to infinity, you will note that the pressures within the two wells are in quite close agreement.

The next page is a page exhibited at the same time showing the indication between the two wells. It's a reservoir pressure versus cumulative production of the State 1-7 with the original bottom hole pressure and pressures as reported versus production.

The third point will be noted as that period of time in which the 1-12 began to produce and the obvious deflection of the pressure as recorded in the 1-7 will be noted.

The next page is a new exhibit. We now presently have some reservoir history of some production pressure work that we've done out there. We noted that we ran two pressure tests, one dated 2/20/65 which was a 76 hour shut-in pressure, and another running 4/3/65 which was a 96 hour shut-in. Both

of those pressures as recorded were extrapolated to infinity. The pressures are noted during that period of time, the cumulative production from the reservoir on 16,013 barrels; the pressure drop was 230 pounds. This gives us 69.5 barrels for PSI draw down assuming an abandoned pressure of 200 pounds.

We find that we have 2483 pounds of reservoir pressure remaining at 69.5, this gives 62,000.

This coupled with the cumulative production gives us an ultimate recovery of 14,260 barrels from these two wells or 107,230 barrels per well. To verify the 106,300 barrels that we had originally estimated by volumetrics, this would indicate that the original work with pressures and volumes are in very close agreement after we reach the final slope of the curve.

The next two pages are examples of the manner in which we have recorded the pressures and the last buildup which was from 3/23/65. I'm sure you will note the record of plotting the pressures versus production,  $T + \Delta T$  over  $\Delta T$ . This is an example of how we arrived at each of the pressures.

It is peculiar that both wells appeared to be stabilized the last six hours of their shut-in time. It is noted that we had a pressure recorded of 2649 for the last six hours on the 1-7, and a record of 2607 in the 1-12. The difference in the

two recorded pressures are probably due to the differences in the bottom, in the hole; the difference in the level at which they were hung and just the inaccuracy of the two instruments. We did still not assume that they were stabilized but did extrapolate them to infinity and took an average for the final two wells.

The last page is an updating for Economics for various spacing schemes using the present history rather than the other history presented before. Our oil value coupled with the gas is \$3.20 a barrel; an average well assuming 87.5 percent; production taxes of 6.29 percent; lifting cost, \$0.11 per barrel; the average well cost is \$142,000.00 per well.

The economy is listed at oil revenue and net revenue after royalties on the 80 acre spacing schemes. Following down through these items you will note the profit and loss, that on the 40 acre scheme we have a net loss of \$7,219 00 which on the 80 acre we have profit of \$127,564.00 or the profit or investment ratio of 0.90/1.

Q And from the studies which you have conducted since the original hearing are you still of the opinion that one well will drain 80 acres?

A Yes.

Q And also to go on to the 40 acre spacing would it result in a loss to the operator and discourage further

development in the pool?

A Yes, sir.

Q Is it your recommendation that present rules with 80 acre spacing be continued?

A Yes, sir.

Q Was Exhibit 4 prepared by you or under your direction?

A Yes, sir.

MR. RUSSELL: We offer Exhibit 4 into evidence.

(Whereupon, Applicant's Exhibit 4 offered into evidence.)

MR. UTZ: Without objection Exhibit 4 will be entered.

(Whereupon, Applicant's Exhibit 4 admitted into evidence.)

MR. RUSSELL: No further questions of this witness.

CROSS-EXAMINATION

BY MR. UTZ:

Q Mr. Browning, in your opinion will there be more wells drilled in this pool?

A Yes, sir, I believe there will as a result of a Huber completion to the south of our 1-12. I think that as a matter of fact Union Oil presently has plans for drilling two wells south of there in hopes of finding the second pay zone on the recent buildup we find in the Huber well.



Q I guess your contention that these wells are adequately drained on 80 acre tracts?

A Yes, sir, I think the first two wells drilled indicated this to be the case. It might be noted that the third well which is the McAlester State "Q"1 which was completed in the same zone one in which the first two wells were completed is in the same reservoir and is also on 80 acre spacing. We did note pressure depletion within this zone and coupled with high water cut that has made this well a limited producer, so I believe this proves adequately and conclusively that we can drain 80 acres or possibly more.

Q Is this a water graft pool?

A I do not know, sir, I believe it's pressure depletion drive.

MR. UTZ: Any other questions.

MR. DURRETT: One question please.

CROSS-EXAMINATION

BY MR. DURRETT:

Q Mr. Browning, you stated that your production history that you have available now verified your original calculation on reserve, is that correct?

A Yes, sir.

Q So your economics are essentially the same as presented in the original hearing?

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PAGE 14

A Essentially so, other than at that time we were trucking our oil at fourteen cents a barrel which effected the income; our lifting cost was higher because we had nothing to go by, there was no gas market for our price of \$3.01, instead the \$3.20 which adds nineteen cents to the oil production, so it presents a little more favorable picture but not a great deal. The very close agreement with volumetric calculation as verified by material balance calculation after we had enough production pressure and history indicates our original conclusions were quite close.

MR. UTZ: Any other questions; witness excused.

Do you have anything further, Mr. Russell?

MR. RUSSELL: Nothing further.

MR. UTZ: Other statements in this case?

MR. DURRETT: I do have a telegram from T. J. McAlester, Huber Corporation, supporting Union's application in this case.

MR. UTZ: Any other statements? The case will be taken under advisement and call Case 3206.

I N D E X

<u>WITNESSES:</u>	<u>PAGE</u>
J. B. JORDAN	
Direct Examination by Mr. Russell	2
Cross-Examination by Mr. Utz	6
Redirect Examination by Mr. Russell	6
Recross-Examination by Mr. Utz	7
CHARLES W. BROWNING	
Direct Examination by Mr. Russell	7
Cross-Examination by Mr. Utz	12
Cross-Examination by Mr. Durrett	13

E X H I B I T S

<u>NUMBER</u>	<u>MARKED FOR IDENTIFICATION</u>	<u>OFFERED</u>	<u>ADMITTED</u>
Applt's. 1	2	6	7
Applt's. 2	2	6	7
Applt's. 3	2	6	7
Applt's. 4	2	12	12

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PAGE 16

STATE OF NEW MEXICO )  
 ) SS  
COUNTY OF BERNALILLO )

I, BOBBY J. DAVIS, 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 6th day of April, 1966.

*Bobby J. Davis*  
NOTARY PUBLIC

My Commission Expires:

March 13, 1969.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the hearing held on April 3204,  
before me on *Mar 1 9*, 1966.  
*Thursli. W.* Chairman  
New Mexico Oil Conservation Commission

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PAGE 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 10, 1965

EXAMINER      HEARING

IN THE MATTER OF:

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

Case No. 3204

BEFORE: DANIEL S. NUTTER, Examiner  
ELVIS A. UTZ, Alternate Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Call next Case, Number 3204.

MR. DURRETT: Application of Union Oil Company of California for the creation of a new oil pool and for special pool rules, Lea County, New Mexico.

MR. RUSSELL: John F. Russell, Roswell, New Mexico, representing the applicant, and I have two witnesses to be sworn.

(Witnesses sworn.)

MR. RUSSELL: Mr. Examiner, at the outset, I'd like to state that the Applicant seeks the creation of a new oil pool and for special pool rules in the Morton Permo-Penn Pool, and on January 26, the Applicant received a letter from the Commission from Mr. Ramey, Supervisor of District One, stating that Union State Number 1-7 in Unit D of Section 7, Township 15 South, Range 35 East, currently listed in the undesignated section of the prorational schedule, appears in the Morton Pennsylvanian Pool in the March schedule, which was according to the provision of the Commission Order No. R-2833, which I believe created the pool in the Northwest Quarter of Section 7 and I feel that the Commission would -- if the Examiner would prefer, as though it hadn't been prorated to put it in there as one of our wells.

MR. UTZ: That's correct Mr. Russell. I made the observation the other day, when I was looking over the

advertisement for the March Hearing, maybe it was the February Hearing, I noticed that there was a case there to redesignate the Morton Permo-Penn Pool and to delete the Permo part from it with respect to the vertical limits to the Pennsylvanian formation. You might keep this in mind in whatever testimony you might have in this regard.

In your opinion, is the pool in the Pennsylvanian or does it go up onto the Permo also?

MR. RUSSELL: I believe we consider it to be in the Permo.

MR. UTZ: So, that would be the Permo-Penn, there?

MR. RUSSELL: Yes. In other words, it shows the transition from the Wolfcamp to the Pennsylvanian and probably you get two companies together and neither one of them would pick the same way as to top.

MR. UTZ: You may want to get ahold of our geologist in Hobbs and discuss this with him because we definitely have scheduled the deletion of it from the list and redesignation as the Morton-Penn Pool.

MR. RUSSELL: I believe we consider it to be the Permo-Penn.

(Whereupon, Applicant's Exhibits 1 through 13 marked for identification.)

J. B. JORDAN, called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RUSSELL:

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

A J. B. Jordan, Roswell, New Mexico. I am employed by the Union Oil Company of California as District Exploration Geologist.

Q Have you previously qualified to testify before the Commission or one of the Examiners?

A No, I haven't.

Q Would you give a brief resume of your educational background and your experience in the field after graduation?

A I'm a graduate of the University of Oklahoma with a Bachelor of Science Degree in Geology. I was employed by the Union Oil Company of California in 1947, have eighteen years as Exploration Geologist in West Texas and New Mexico, and the past three years in my present capacity as Exploration Geologist.

MR. RUSSELL: Are the witness' qualifications accepted?

MR. UTZ: Yes, sir.

Q (By Mr. Russell) Now, you're familiar with the application of Union Oil Company of California in Case No. 3204



are you not?

A Yes, I am.

Q And you have prepared certain exhibits in connection therewith?

A Yes, sir.

Q I'll ask you to refer to what has been marked as Exhibit Number 1 and ask you to explain what that reflects.

A Exhibit Number 1 is a land plat in the vicinity of the Morton-Penn pools, and shows the lease ownership in the area and Union's acreage is colored in yellow.

Q And how many wells has Union completed in this area?

A Union has completed two wells; the State 1-7 in the Northwest, Northwest of Section 7, 15, 35; and the Number 1-12 Gulf Federal in the Southeast of the Northeast of Section 12, 15, 34, and there have been several dry holes drilled in this immediate area which are shown on the land plat.

Q Now, I'll refer you to what has been marked as Applicant's Exhibit 2 and ask you to explain what that reflects.

A Exhibit 2 is a sub-surface contour map contoured in twenty-five foot intervals on top of the Morton pay zone. This map also shows the acreage held by Union in yellow, and shows the line of cross-section, two cross-sections, which will be Exhibits 3 and 4. This map was based on sub-surface correlation by electric logs and indicates a northeast-southwest anticline

with approximately seventy-five foot closure.

Q The outer heavy circle and contour represents what, in your opinion, is the possible limits of this pool?

A The minus 6300 foot contour is probably the outer limit, depending on porosity conditions encountered on the perimeter of this structure.

Q All right. I'll refer you to what has been marked as Exhibit 3, and ask you to explain what that reflects.

A Exhibit 3 is a northwest-southeast structure cross-section across the Morton Permo-Penn Field. This cross-section shows the horizon which is on the structure map as the top of the pay zone. It shows the oil-water contact that we presently defined and also shows the difference in the producing horizon on the Great Western Town, which is in Section 18. It is producing from approximately 9650 as against the green zone in the 1-12 Gulf Federal.

Q Now, will you give the location of the four wells which you have used on this Exhibit?

A I have used four wells, the Carper No. 1 Mary Reed, the dry hole located 330 from the north and 1930 from the west in Section 12, 15, 34. This is a laterolog gamma ray of Union No. 1-12 Gulf Federal located 1930 from the north and 660 from the east in Section 12, 15, 34 completed flowing for a potential of 420 barrels per day. This is a gamma ray induction

electrical log on the McAlester No. 1 State E-L, 1980 from the south and 560 from the west in Section 7, 15, 35. This is a gamma ray electrical log on the Great Western No. 1 Town located 660 from the north and 1980 from the west of Section 18, 15, 35 which is completed flowing 168 barrels plus 17 barrels of water from perforations at 9650-9665.

Q All right. Now, I'll refer you to Exhibit 4 and ask you to explain what that reflects.

A Wxhibit 4 is a two well cross-section, running from the southwest to the northeast, that includes Union No. 1-12 Gulf Federal and Union No. 1-7 State. This cross-section was prepared to show the relationship between the two wells.

Q All right. I'll refer to Exhibit 5 and ask you to identify that.

A Exhibit Number 5 is a core analysis on the State Number 1-7.

Q Exhibit Number 6?

A Exhibit Number 6 is a core analysis on the Union Federal Number 1-12.

Q Exhibit Number 7-A?

A Exhibit Number 7-A is a micro-log on the State Number 1-7.

Q Seven-B?

A Seven-B is a sonic gamma ray log on the State Number

1-7. Seven-C is a dual induction laterolog on State 1-7.

Q Now, Mr. Jordan, the data on those Exhibits 5 through 7-C are self-explanatory, are they not?

A Yes, they are.

Q Do you have any comments which you want to make at this time as to any of those exhibits?

A No, sir.

Q Now, were Exhibits 1 through 7-C prepared by you or under your direction?

A Yes, sir, they were.

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

MR. UTZ: Are there any questions of this witness?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Jordan, I'd like to ask you the obvious question relating to Exhibit Number 3; why is the McAlester well a dry hole?

A I don't think it is. Right now, at the present time, it's being re-entered to test, so we will find out.

Q It appears --

A It must have tested oil from those zones, it didn't flow but it did test 2,000 feet.

Q And McAlester is re-entering the well?

A They have relinquished the least at the present time.

Q Now, this pool is ringed by dry holes, one in Section 6 and one other in the Northwest of Section 12. Down here in Section 13, we have a dry hole. With these holes drilled before the pool was discovered?

A The one in Section 6 in the Southwest Quarter was drilled after the pool was discovered and the others drilled prior.

Q And evidently it's too low structurally to make a well, as are the others?

A Yes, and on the south end they have poor porosity conditions.

Q So, you have a lithologic change as you go that direction?

A Yes.

MR. UTZ: Are there further questions of Mr. Jordan?  
You may be excused.

(Witness excused.)

CHAPLES W. BROWNING, called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RUSSELL:

Q Mr. Browning, will you please state your name, residence,

and by whom you are employed?

A My name is Charles W. Browning and I live in Midland, Texas and I am employed by the Union Oil Company of California as District Exploitation Engineer.

Q Have you previously qualified to testify before this Commission or one of its Examiners?

A No, sir, I have not.

Q Would you give a brief resume of your educational background and your professional background since graduation?

A I graduated from the University of Texas in 1959 with a Bachelor of Science Degree in Petroleum Engineering. I have been employed by Union Oil Company since that time in New Mexico and West Texas as Drilling Engineer for about three years, and three years in the Engineering Department.

MR. RUSSELL: Are the witness' qualifications accepted?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Russell) Mr. Browning, are you familiar with the Application of Union Oil Company of California in Case Number 3204?

A Yes, sir, I am.

Q And have you prepared certain data in connection with this Application?

A Yes, sir, I have.

MR. RUSSELL: I would like to state that Exhibits 8 through 13 are all one, in one cover, but are separately numbered.

Q (By Mr. Russell) Mr. Browning, I'll refer you to Exhibit Number 8 and ask you to explain what that reflects.

A This is the well and reservoir data. The well data is listed as name and number of each of the two wells that we have completed in the field with dates of completion, total depths penetrated.

I would like to point out that Item Four, top of the Morton Zone, there will be some slight discrepancy between the top of the pay zone and the top of the Morton Zone as depicted by Mr. Jordan and myself; this being as a result of the fact that I called the top of the morton zone the same point that Mr. Jordan called the top of the pay zone, and I call the top of the pay zone the first porosity within the Morton Zone that I feel is contributing to the production of these wells.

Item 6 is the net pay from each of the two wells as picked from sonic logs and Item 7 is the perforated interval within each of the wells.

Q Will you give the perforated interval for each of the wells?

A The perforated interval in the State 1-7 is 10,383-91

feet. The Gulf Federal Number 1-12 is 10,338-49 feet.

Q And what is the net pay in each?

A The net pay in the 1-7 is 22 feet and the 1-12 is 15 feet.

Q Okay, continue.

A I have the initial production listed as 220 barrels with GOR of 1437 on an 18/64 choke with a 950 psi tubing pressure on the State 1-7. On the Gulf Federal 1-12, I have 420 barrels with a GOR of 1524 and the choke size of 16/64 with 1020 psi tubing pressure.

Now, Item 10 is the most recent well test that we have on these wells. As of 1-16-65, the 1-7 produced 170 barrels with a GOR of 1506 on a 12/64 choke with 675 pound tubing pressure. As of 1-20-65, the Gulf Federal 1-12 produced 310 barrels with a 1673 cubic feet per barrel GOR on a 17/64 choke with a tubing pressure of 1025 pounds.

The next item is reservoir data. We have porosity per cent there which is an average figure from the two wells. The twenty-two feet and fifteen feet --

MR. UTZ: Taken from the core analysis?

MR. BROWNING: Taken from the log analysis, sir, which I find to be 8.5 per cent. The net pay is simply an average of the two figures above which is 18.5 feet. I have calculated the permeability in the Well 1-7 by bottom hole pressure build-



up to be 69.1 millidarcies and Well Number 1-12 by bottom hole pressure build-up to be 128 millidarcies. This is in good agreement with the permeability as determined by core analysis from ten feet of core that was recovered in that well which gave 67.5 millidarcies in that portion of the core.

Water saturation has been determined to be 25 per cent. We have from our work in the Wolfcamp reservoirs within this area, estimated a recovery factor of 25 per cent of the oil in place. The formation volume factor is also estimated from our work in that area to be 1.72.

Q (By Mr. Russell) All right. I'll refer you now to Exhibit Number 9 and ask you to explain that Exhibit.

A Exhibit 9 is a bottom hole pressure history of the two wells within the field and they are listed first, State 1-7 with the original bottom hole pressure determined 10-29-64 at 4225 psig and this was from drill stem tests. Subsequent bottom hole pressure tests were run on 11-27-64 and 1-10-65 and on 1-24-65 and are listed as 1, 2, 3. These bottom hole pressure tests in the 1-7 are all extrapolated by the Marmel Method from 72 to 101 hour shut-ins and with a cumulative recovery listed to the right. It will be noted that the change from the original bottom hole pressure to the bottom hole pressure 1 was 237 psi during that period, which would reduce the 3876 barrels and this gives us 16.30 per psi drawdown. The

change in pressure between the bottom hole pressure 1 and 2, which is 413 psi gives us a 15.95 barrels per psi drawdown.

During this period of time, one well was producing in the area and that was the State Number 1-7. Note that declining pressure from 2 to 3 shows 386 pounds drawdown or 4.82 barrels per psi drawdown. I think this is good evidence of the good communication between the two wells, the rapid change in drawdown for the amount of oil produced during that period of time.

The second item is Gulf Federal 1-12 bottom hole pressure tests. The original bottom hole pressure was estimated at 3701 psig from the 1-7 decline curve. That well produced only enough to test it and was shut-in. We took the first bottom hole pressure test on 1-4-65 after the well had been shut-in for ninety-six hours and we have an indicated bottom hole pressure of 3484. With the well still shut-in during the bottom hole pressure tests, after the well had been shut-in 181 hours, you will notice that there was a 40 pound drawdown during this period of time. The 1-7 was producing at that time. There is further evidence of the good communication between the two wells.

Bottom hole pressure number 3 was taken on 1-24-65 and determined to be 3230 psig after a 100 hour shut-in. This was run when both wells 1-7 and 1-12 were shut-in after having

produced together, giving a bottom hole drawdown of 13.72 barrels per psi drawdown from the Gulf Federal 1-12.

Using average figures for the static reservoir pressure on 1-24-65 of 3209 psi and a cumulative withdrawal from the reservoir of 15,871 barrels, it is calculated that 15.67 barrels per psi drawdown have been recovered from both wells.

This is in good agreement with the 15.7 per psi used to estimate the original bottom hole pressure of the Number 1-12 well.

Q Based upon this information, in your opinion if you were granted 80 acre allowables, are both of these wells capable of producing top allowable?

A Yes, sir, I believe they are.

Q All right. We'll go to Exhibit Number 10 and I'll ask you to explain that one.

A Well, Exhibit Number 10 is a graphic presentation of the information presented on the previous exhibits. It's a pressure versus cumulative production graph on the State 1-7. We have the original bottom hole pressure by drill stem tests at 4225 psi with no production. The point that I would like to point out is the rapid change in slope on the curve on the third point depicted on the graph; and this is that point at which the second well in the field, the Gulf Federal 1-12, was placed on production. Essentially, the line is a straight line

up to that point. When the Gulf Federal well was placed on production, a rapid decline resulted, and this is a graphic presentation of the fact that there is good communication between the two wells.

Q All right, refer to Exhibit Number 11 and I'll ask you to explain that.

A This is a representation of the previous data which is a pressure versus time curve on the entire field with both wells exhibited, the time being in days. You will note that the line of the State 1-7 pressure versus time is essentially a straight line. Each of the bottom hole pressures reflected here is extrapolated by the Mormel Method.

The Gulf Federal well has an estimated original bottom hole pressure from this line. The drawdown exhibited in the Gulf Federal well, or drawdowns that were exhibited during this period of time, that was not producing, it was shut-in. However, 1-7 was producing, which evidenced the communication between the wells.

On the 71st, day of the life of the field, both wells were opened to production. They produced to a cumulative production of 15,000 for the field; and then both wells were shut-in for a hundred hours and the pressures that they returned to are noted on this graph.

Q All right. Now, referring to Exhibit 12, I'll ask

you to explain that Exhibit.

A This is economics for various spacing schemes in the Morton-Permo-Penn field that we have determined. From the basic data, we have the oil value of \$3.01 per barrel with a net interest of 87 and 1/2 per cent; production taxes of 6.29 per cent; lifting costs, estimated, 11 cents per barrel; initial well cost of \$142,000.00; and trucking cost by contract at 14 cents per barrel.

We have listed the economics item. Item 1 is the recoverable oil in barrels for forty acre and eighty acre spacing. We find that there will be 53,150 recovered from the forty acre spacing, 106,300 barrels from eighty acre spacing. The oil revenue of Item 2 is \$3.01 per barrel, which gives us \$159,982.00 on the 40 acre spacing and \$319,963.00 on the 80 acre spacing. Item 3 is net revenue after royalty which is .375 times Item 2, or \$139,984.00 for the 40 acre spacing, or \$279,963.00 for the 80 acre spacing. Item 4 is the operating costs, lifting and trucking, which is 25 cents times Item 1, or \$13,288.00 for 40 acre spacing and \$26,575.00 for 80 acre spacing. Item Number 5 is production taxes of .0629 times Item 3, for 40 acre spacing, \$8,805.00, and for 80 acre spacing, \$17,610.00; making a net income which is Item 6, Item 3 minus Item 4 minus Item 5, of \$38,646.00 for 40 acre spacing and \$235,783.00 for 80 acre spacing.

Our investments, Item 7, is \$142,000.00 on each spacing for each well, showing Item 8 to be a net profit or loss which is Item 6 minus Item 7, a loss of \$103,354.00 on 40 acre spacing and a net profit of \$93,783.00 on 80 acre spacing.

Item 9 is the profit to investment ratio, which is Item 8 divided by Item 7. We have a loss on the 40 acre spacing and a 0.66 to 1 profit ratio on the 80 acre spacing.

Q Now, based upon the data shown on your exhibits and your testimony, in your opinion, will one well efficiently and effectively drain 80 acres in this pool?

A Yes, sir, it will.

Q And the establishing of 80 acre spacing and 80 acre allowable, would that prevent the drilling of unnecessary wells which will result in economic loss?

A Yes, sir, it would.

Q All right, I'll refer you to Exhibit Number 13 and ask you to explain what that is.

A Exhibit 13 is the Proposed Temporary Rules and Regulations for the Morton Permo-Penn Field in Lea County, New Mexico. They are standard 80 acre rules in New Mexico.

Q Are there any of these particular rules that you would like to point out?

A No, sir, other than Rule 2 which stipulates that it is a standard 80 acre unit, which is no different from all

other 80 acre proration units in New Mexico.

Q Which would be the North Half, South Half, East Half, or West Half?

A Yes, sir.

Q And what is your comment concerning Rule Four?

A Rules 4 simply states that "Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot". This too, is standard in New Mexico and we haven't changed that.

Q Were Exhibits 8 through 13 prepared by you or under your direction?

A Yes, sir, they were.

MR. RUSSELL: I would like to offer into evidence at this time, Applicant's Exhibits 1 through 13.

(Whereupon, Applicant's Exhibits 1 through 13 were offered into evidence.)

MR. UTZ: Union Exhibits 1 through 13 will be admitted into evidence.

(Whereupon, Applicant's Exhibits 1 through 13 were admitted into evidence.)

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

MR. UTZ: Does anyone have any questions of Mr. Browning?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Browning, these pressures that you gave, I presume on the Number 1-7 with the exception of the first pressure, they were all extrapolated. What are the actual pressure measurements?

A Sir, I'd have to get the actual pressure measurements here, which I did bring along.

Q Now, pressure number 1 from the drill stem test was a measured pressure?

A Yes, sir. Now, that pressure number 1 was determined by the same method in the Gulf Federal and it too, is an extrapolated pressure.

Q Number 1 is?

A Yes, sir.

Q What was the measured pressure?

A The final measured pressure on the final shut-in was about 3495 pounds, sir.

Q And would you read the other pressures that you have?

A On 1-7, which would be 1-10-65, this is bottom hole pressure test number 2 on the 1-7, we have a recorded pressure of 3454 pounds. On 1-24-65 which would be bottom hole pressure number 3, we have a bottom hole pressure recorded of 3151. The bottom hole pressure recorded on 1-27-65 on the 1-7 was 3919,



and I believe that's all of the recorded bottom hole pressures on the 1-7.

Now, on the Gulf Federal 1-12, the first one is an estimated bottom hole pressure, the second one is a bottom hole pressure and the third one, the last one, which is bottom hole pressure number 3, we have a recorded bottom hole pressure of 3172.

Q 3172?

A Yes, sir.

Q And all other pressures are actual measured pressures?

A That's correct, sir.

Q Now, to estimate the original bottom hole pressure on your 1-12, you used 15.7 --

A Psi.

Q -- barrels per inch. How did you arrive at that 15.7?

A By plotting the drawdown between the bottom hole pressures that we had determined; and prior to completion, let's see, we had run the original bottom hole pressure and the first bottom hole pressure. We determined the 3701 after running the second bottom hole pressure, which gave us a good trend on the first well and then estimated the 3701 as an original from that time.

Q Well, the 15.7 was actually less barrels per psi drawdown than you experienced on the well?

A Well, that was occasioned by a difference in actual production as opposed to supposed production, which the actual production as it came in to me at a later date indicated that the production that I had used was in error to begin with.

Q And you account for the sharp break in the barrels per psi drawdown in the Number 1-7 between pressure number 2 and pressure number 3 as solely the fault of the second well coming in?

A Yes, sir, and production.

Q Now, does Union have a third well contemplated?

A At this time, we are waiting to see how the McAlester well turns out.

Q So, you don't have any definite location?

A We have no definite location at this time.

Q Now, the volume factor that you used, 1.72, is that measured or calculated?

A That is an estimated or calculated bottom hole pressure.

MR. UTZ: Are there further questions of Mr. Browning?  
You may be excused.

(Witness excused.)

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

MR. RUSSELL: No.

MR. DURRETT: For the record, we have telegrams from Shell Oil Company and Atlantic supporting Union Oil Company's

**dearnley-meier reporting service, inc.**

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

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PAGE 23

Application. We have a telegram from Cabot Corporation supporting the Application.

MR. UTZ: Does anyone have anything further in this case?

We will take the case under advisement.

\* \* \*

I N D E X

WITNESS	PAGE
J. B. JORDAN	
Direct Examination by Mr. Russell	4
Cross Examination by Mr. Utz	8
CHARLES W. BROWNING	
Direct Examination by Mr. Russell	9
Cross Examination by Mr. Utz	20

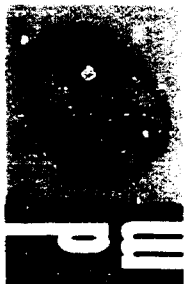
E X H I B I T S

<u>EXHIBIT</u>	<u>MARKED</u>	<u>OFFERED</u>	<u>ADMITTED</u>
Applicant's 1 through 13	3	19	19

dearnley-meier reporting service inc.

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

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STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, a Notary Public, do hereby certify and swear that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by JOHN ORFANIDES, Court Reporter, and that the same is a true and correct record of the said proceedings.

*John Orfanides*  
*Ada Dearnley*  
NOTARY PUBLIC

My Commission Expires:  
June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3204, heard by me on May 10, 1965.  
*Wm. A. [Signature]*, Examiner  
New Mexico Oil Conservation Commission

FIELD RULES HEARING  
MORTON LOWER WOLFCAMP FIELD  
LEA COUNTY, NEW MEXICO

CASE NO. 3204

March 9, 1966

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
WYBY EXHIBIT NO. 4  
CASE NO. 3204

EXHIBIT NO. \_\_\_\_\_

CASE NO. 3204

## MORTON PERMO-PENN POOL

WELL DATA

1. Well Name & Number	State #1-7	Gulf Federal #1-12
2. Completion Date	11-1-64	12-30-64
3. Total Depth	10,700'	10,703'
4. Top of Morton Zone	10,294' (-6227)	10,306' (-6233)
5. Top of Pay	10,312' (-6245)	10,320' (-6247)
6. Net Pay	22' (Sonic Log)	15' (Sonic Log)
7. Perforated Interval	10,383-91'	10,338-49'
8. Treatment	2500 gals. Reg. Acid	750 gals. MR-2 Acid
9. Initial Potential		
a. Oil Production	220 bbls	420 bbls
b. Gas-Oil Ratio	1437 cuft/bbl	1524 cuft/bbl
c. Choke Size	18/64"	16/64"
d. Tubing Pressure	950 psi	1020 psi
e. Water Cut	0	0
10. Current Production Tests	1-16-65	1-20-65
a. Oil Production	170 bbls	310 bbls
b. Gas-Oil Ratio	1506 cuft/bbl	1673 cuft/bbl
c. Choke Size	12/64"	17/64"
d. Tubing Pressure	675 psi	1025 psi
e. Water Cut	0	0

RESERVOIR DATA

Porosity $\phi$ - % (Avg. Fig.)	8.5%
Net Pay - ft. (Avg.)	18.5
Permeability K - md.	Well No. 1-7 by BHP build up 69.1 md. Well No. 1-12 by BHP build up 128.0 md. Well No. 1-12 from 10' of core recovered 67.5 md.
Water Saturation $S_w$ - %	25.0%
Recovery Factor (est.)	25.0%
Formation Volume Factor (est.)	1.72

EXHIBIT NO. \_\_\_\_\_

CASE NO. 3204

BOTTOM HOLE PRESSURE DATA  
MORTON PERMO-PENN POOL  
LEA COUNTY, NEW MEXICO

<u>STATE #1-7</u>	<u>DATE</u>	<u>PRESSURE</u>	
Original BHP <sub>0</sub>	10-29-64	4225 psig	From DST
BHP <sub>1</sub>	11-27-64	3988 psig	( 72-hr. SI) w/cum. prod. of 3,876 bbls
BHP <sub>2</sub>	1-10-65	3575 psig	( 72-hr. SI) w/cum. prod. of 10,464 bbls
BHP <sub>3</sub>	1-24-65	3188 psig	(101-hr. SI) w/cum. prod. of 12,322 bbls

$$\Delta P_1 = BHP_0 - BHP_1 = 237 \text{ psi} = 16.30 \text{ bbls/psi drawdown}$$

$$\Delta P_2 = BHP_1 - BHP_2 = 413 \text{ psi} = 15.95 \text{ bbls/psi drawdown}$$

$$\Delta P_3 = BHP_2 - BHP_3 = 386 \text{ psi} = 4.82 \text{ bbls/psi drawdown}^*$$

\*During this latter flow period well #1-12 was also producing.

<u>GULF FEDERAL #1-12</u>	<u>DATE</u>	<u>PRESSURE</u>	
Original BHP <sub>0</sub>	12-30-64	3701 psig	Estimated from #1-7 decline curve
BHP <sub>1</sub>	1- 4-65	3484 psig	( 96-hr. SI) w/cum. prod. of 607 bbls
BHP <sub>2</sub>	1- 7-65	3444 psig	(181-hr. SI) w/cum. prod. of 607 bbls
BHP <sub>3</sub>	1-24-65	3230 psig	(100-hr. SI) w/cum. prod. of 3549 bbls

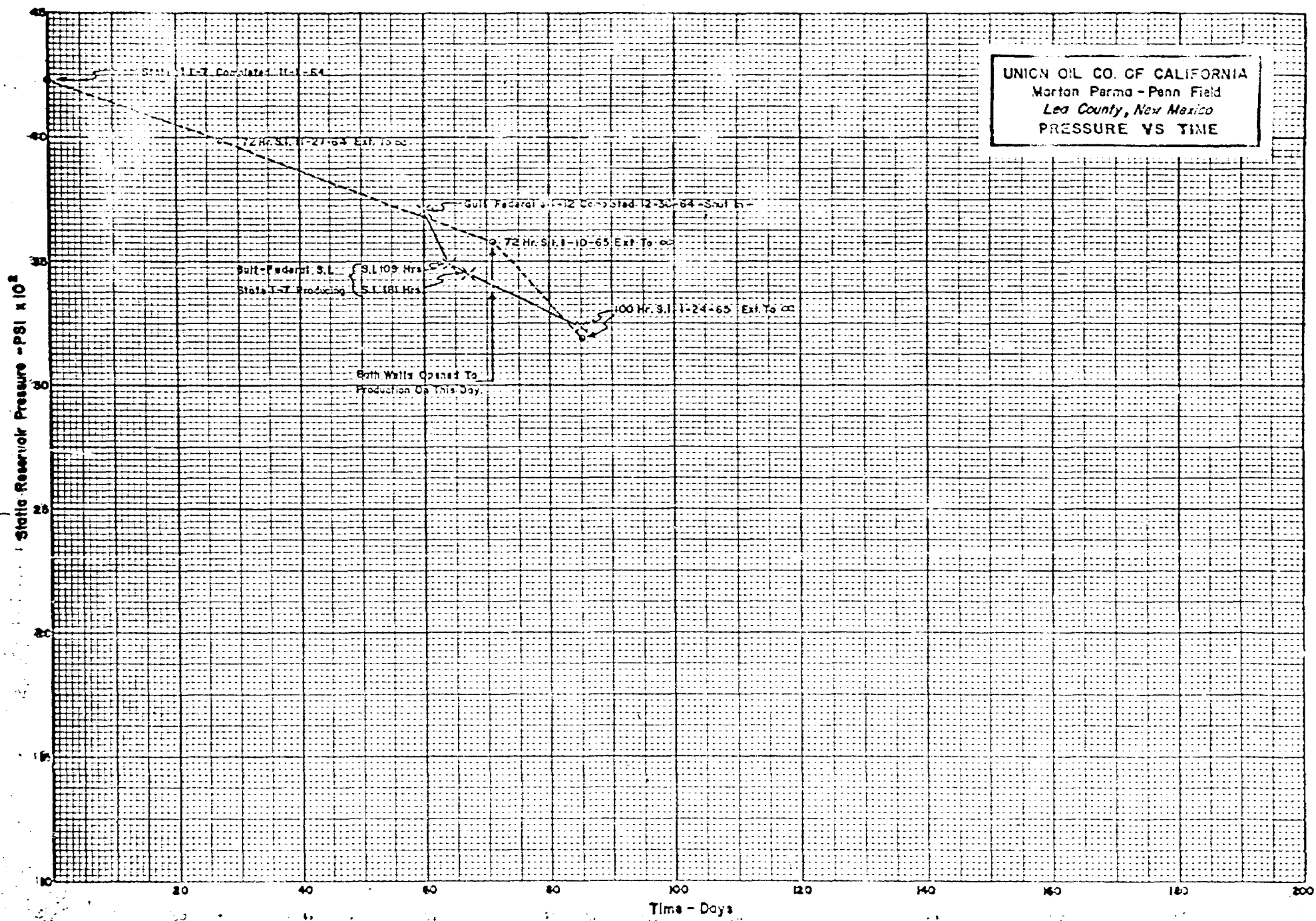
$$\Delta P_1 = BHP_2 - BHP_3 = 214 \text{ psi} = 13.72 \text{ bbls/psi drawdown}$$

Using average figures for the static reservoir pressure on 1-24-65 of 3209 psi and a cumulative withdrawal from the reservoir of 15,871 bbls, it is calculated that 15.67 bbl/psi drop have been recovered from both wells. This is in good agreement with the 15.7 bbl/psi used to estimate the original BHP of the #1-12 well.



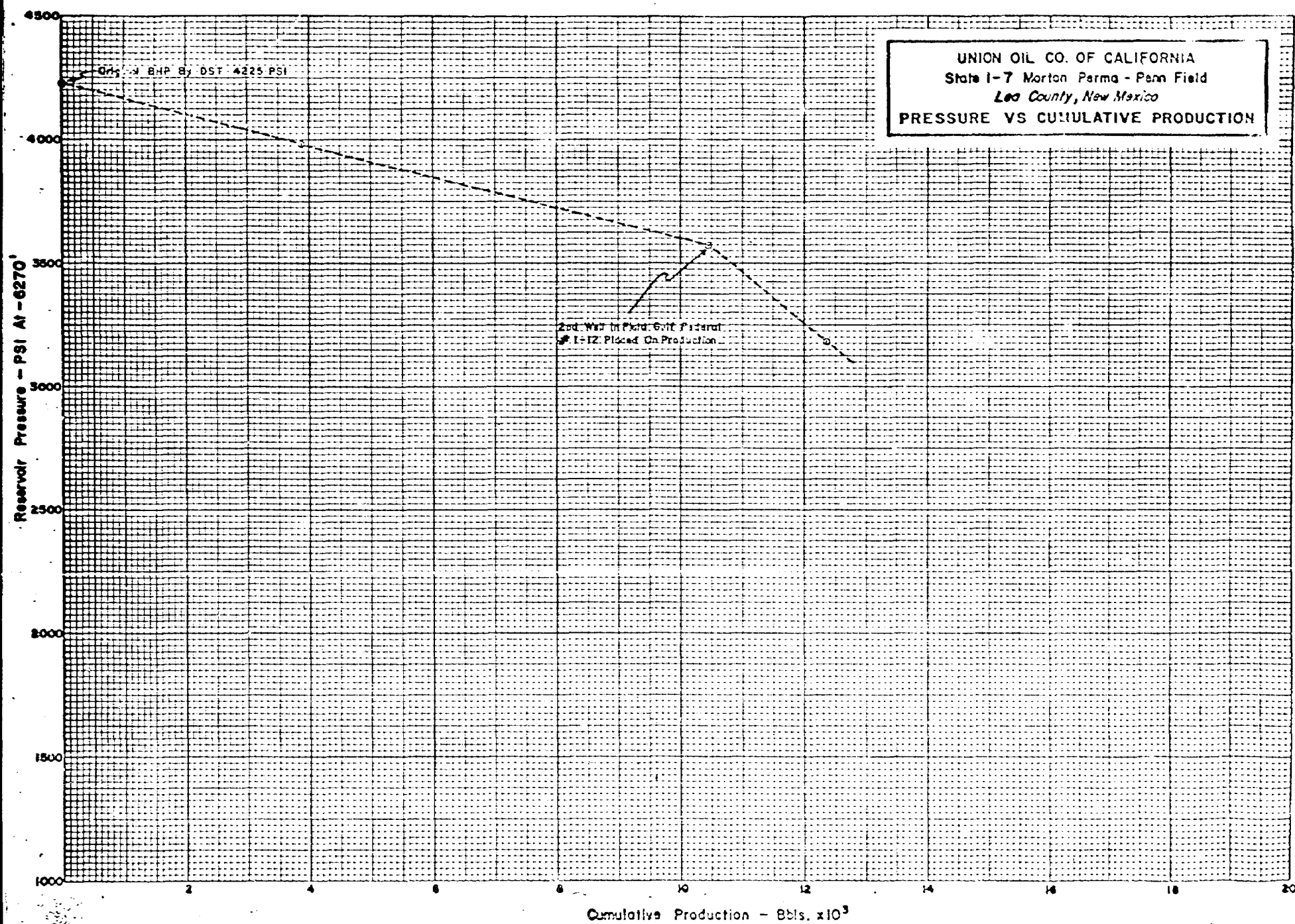
NO. 340R-20 DIETZGEN GRAPH PAPER  
20 X 20 PER INCH

EUDENE DIETZGEN CO.  
MADE IN U. S. A.



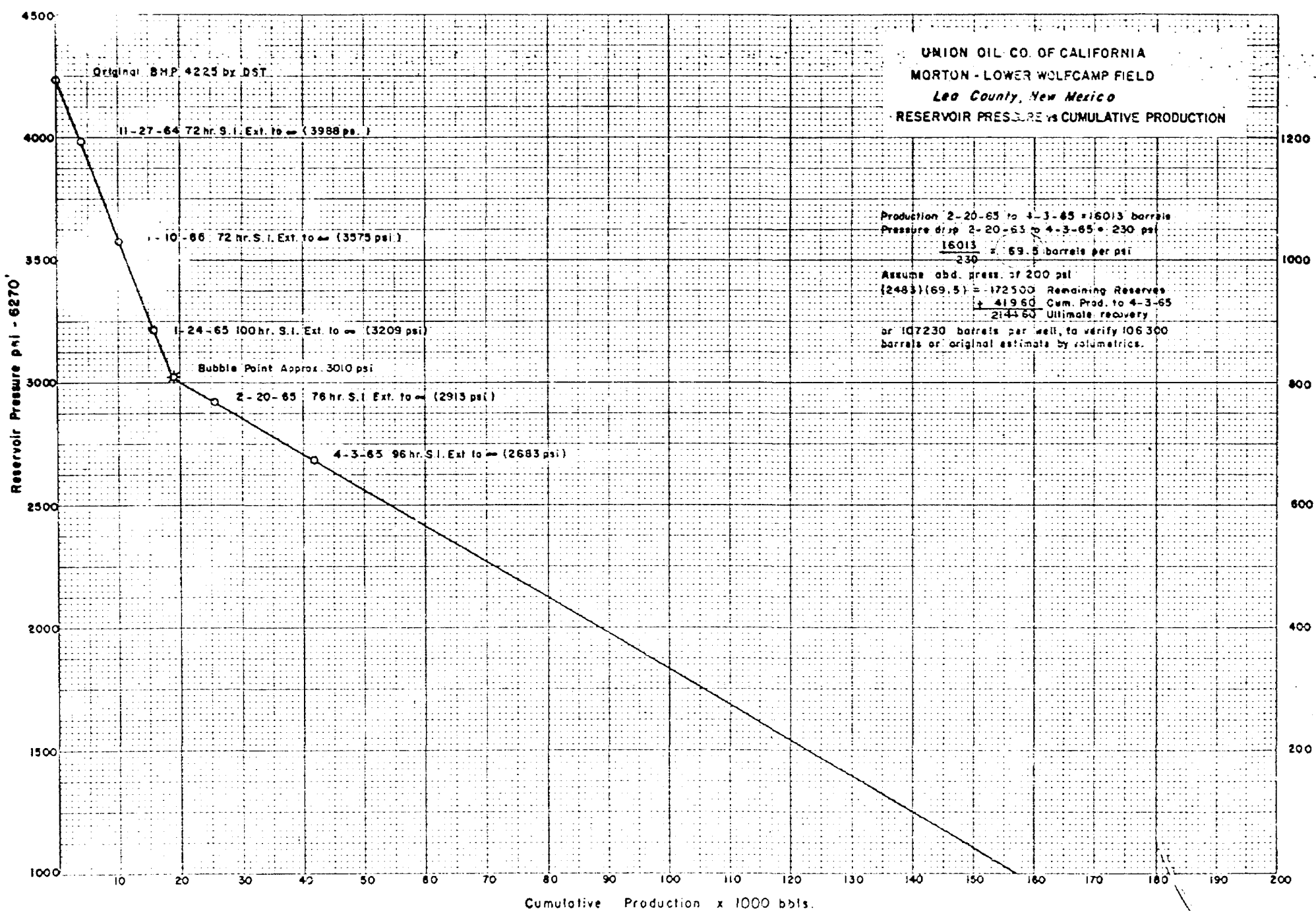
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EUGENE DIETZGEN CO.  
MADE IN U. S. A.



NO. 340R-20 DIETZGEN GRAPH PAPER  
20 X 20 PER INCH

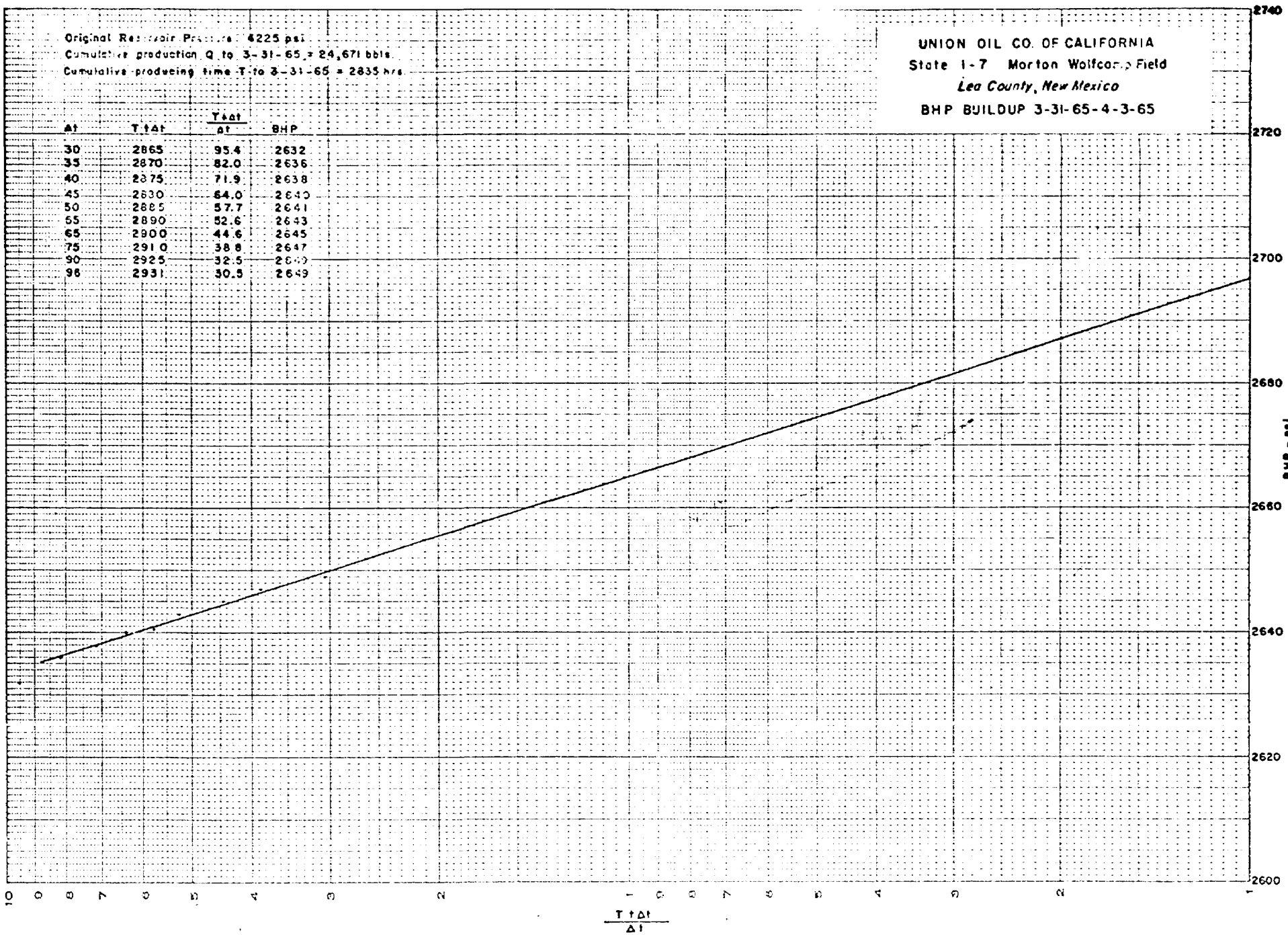
EUGENE DIETZGEN CO.  
MADE IN U. S. A.



Original Reservoir Pressure: 6225 psi  
 Cumulative production Q to 3-31-65 = 24,671 bbls  
 Cumulative producing time T to 3-31-65 = 2835 hrs

UNION OIL CO. OF CALIFORNIA  
 State 1-7 Morton Wolfcamp Field  
 Lea County, New Mexico  
 BHP BUILDUP 3-31-65-4-3-65

At	T, hr	Y, hr	BHP
30	2865	95.4	2632
35	2870	82.0	2636
40	2875	71.9	2638
45	2880	64.0	2640
50	2885	57.7	2641
55	2890	52.6	2643
65	2900	44.6	2645
75	2910	38.8	2647
90	2925	32.5	2649
98	2931	30.5	2649



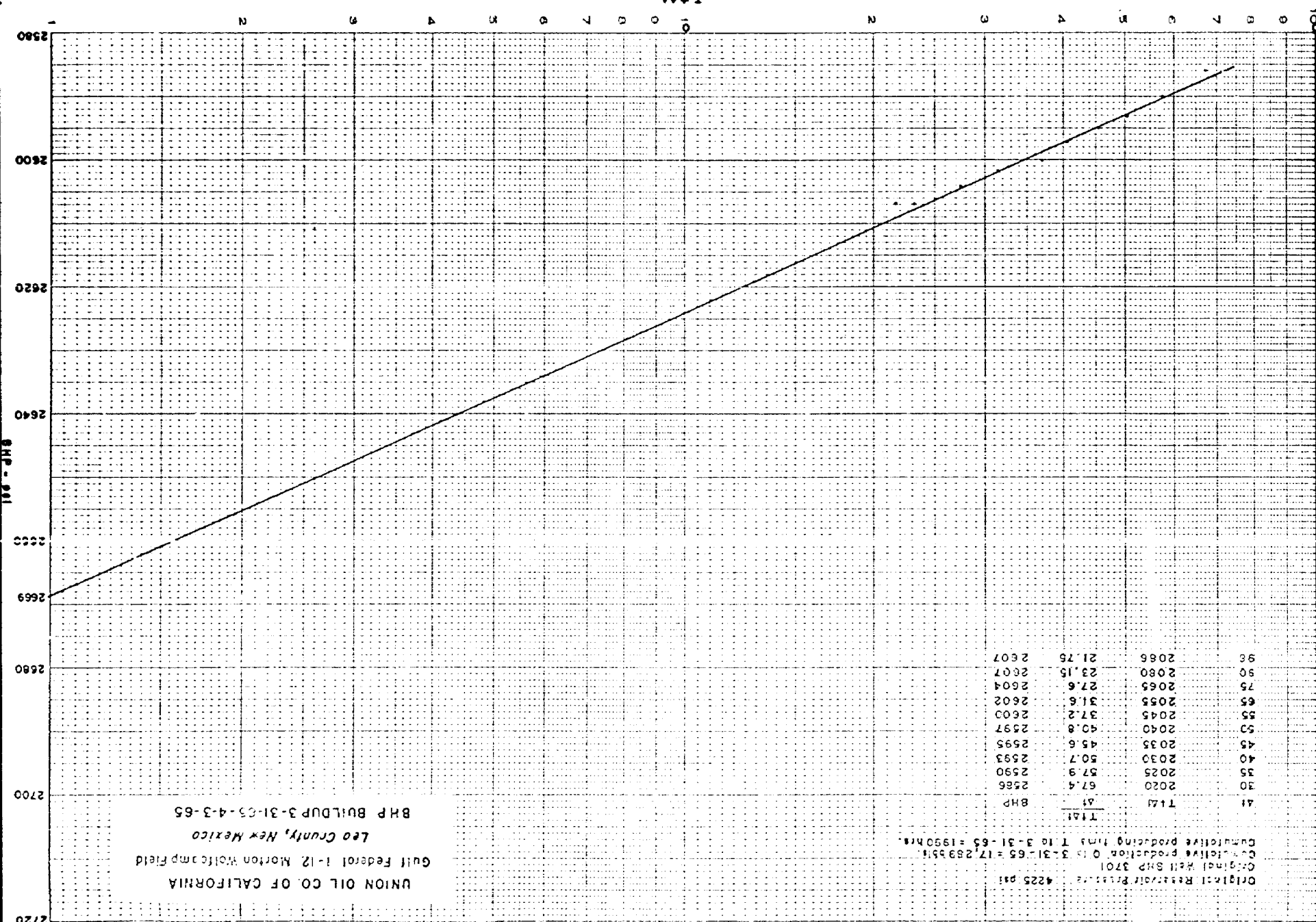
EUGENE DIEZGEN CO.  
 MADE IN U.S.A.

NO. 348R-1220 DIEZGEN GRAPH PAPER  
 SEMI-LOGARITHMIC  
 2 CYCLES X 20 DIVISIONS PER INCH

NO. 340R-L220 DIETZGEN GRAPH PAPER  
SEMI-LOGARITHMIC  
2 CYCLES X 20 DIVISIONS PER INCH

EUGENE DIETZGEN CO.  
MADE IN U. S. A.

$\frac{1}{1+\Delta t}$



Original Reservoir Pressure 4225 psi  
Cumulative production 0 to 3-31-65 = 17,289,351  
Cumulative production from 1 to 3-31-65 = 19,504,118

UNION OIL CO. OF CALIFORNIA  
Gulf Federal 1-12, Morton Wolfcamp Field  
Leo County, New Mexico  
BHP BUILDUP 3-31-65-4-3-65

ECONOMICS FOR VARIOUS SPACING SCHEMES  
MORTON LOWER WOLFCAMP FIELD  
LEA COUNTY, NEW MEXICO

BASIC DATA

1. Oil Value	\$ 3.20/bbl
2. Net Interest	87.5%
3. Production Taxes	6.29%
4. Lifting Cost	\$ 0.11/bbl
5. Well Cost	\$ 142,000

<u>ECONOMICS</u> <u>Item</u>	<u>WELL SPACING</u>	
	<u>40 Acre</u>	<u>80 Acre</u>
1. Recoverable Oil - bbls	53,615	107,230
2. Oil Revenue - \$3.20/bbl	\$ 171,568	\$ 343,136
3. Net Revenue after Royalty - $0.075 \times (2)$	\$ 150,122	\$ 300,244
4. Operating Cost - Lifting ( $0.11 \times (1)$ )	\$ 5,898	\$ 11,795
5. Production Taxes - $.0629 \times (3)$	\$ 9,443	\$ 13,885
6. Net Income - $(3)-(4)-(5)$	\$ 134,781	\$ 269,564
7. Investment	\$ 142,000	\$ 142,000
8. Profit (loss) - $(6)-(7)$	\$ (7,219)	\$ 127,564
9. Profit to Investment Ratio - $(8)+-(7)$	Loss	0.90/1

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

# WESTERN UNION TELEGRAM

SYMBOLS

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

1201 (4-60)

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

LA027 DA14MAR

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D MDA029 DL PD=MIDLAND TEX 8<sup>54</sup>1001A CST=

NEW MEXICO OIL CONSERVATION COMM=

1966 MAR 8 AM 9 27

PHONE 8272533 STATE LAND OFFICE BLDG SANTAFE NMEX=

RE MORTON LOWER WOLFCAMP LEA COUNTY NEW MEXICO.

GENTLEMEN: THIS IS TO ADVISE THAT THE J M HUBER CORP.

AS AN OPERATOR IN THE FIELD IS IN SUPPORT AND AGREEMENT

WITH UNION OIL OF CALIFORNIA'S APPLICATION FOR PERMANENT

80 ACRE SPACING FOR THE ABOVE CAPTIONED FIELD TO BE

HEARD MARCH 9 1966.=

FLOYD L MEADE DIST. PROD. SUPT.==

80 9 1966.=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

PROPOSED TEMPORARY RULES AND REGULATIONS  
FOR THE  
MORTON PERMO-PENN POOL  
LEA COUNTY, NEW MEXICO  
WITH EXHIBITS



EXHIBIT NO. \_\_\_\_\_

CASE NO. 3204

## MORTON PERMO-PENN POOL

WELL DATA

1. Well Name & Number	State #1-7	Gulf Federal #1-12
2. Completion Date	11-1-64	12-30-64
3. Total Depth	10,700'	10,703'
4. Top of Morton Zone	10,294' (-6227)	10,306' (-6233)
5. Top of Pay	10,312' (-6245)	10,320' (-6247)
6. Net Pay	22' (Sonic Log)	15' (Sonic Log)
7. Perforated Interval	10,383-91'	10,338-49'
8. Treatment	2500 gals. Reg. Acid	750 gals. MR-2 Acid
9. Initial Potential		
a. Oil Production	220 bbls	420 bbls
b. Gas-Oil Ratio	1437 cuft/bbl	1524 cuft/bbl
c. Choke Size	18/64"	16/64"
d. Tubing Pressure	950 psi	1020 psi
e. Water Cut	0	0
10. Current Production Tests	1-16-65	1-20-65
a. Oil Production	170 bbls	310 bbls
b. Gas-Oil Ratio	1506 cuft/bbl	1673 cuft/bbl
c. Choke Size	12/64"	17/64"
d. Tubing Pressure	675 psi	1025 psi
e. Water Cut	0	0

RESERVOIR DATA

Porosity $\phi$ - % (Avg. Fig.)	8.5%
Net Pay - ft. (Avg.)	18.5
Permeability K - md.	Well No. 1-7 by BHP build up 69.1 md. Well No. 1-12 by BHP build up 128.0 md. Well No. 1-12 from 10' of core recovered 67.5 md.
Water Saturation Sw - %	25.0%
Recovery Factor (est.)	25.0%
Formation Volume Factor (est.)	1.72

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
APPN EXHIBIT NO. 8  
CASE NO. 3204

EXHIBIT NO. \_\_\_\_\_

CASE NO. 3204

BOTTOM HOLE PRESSURE DATA  
MORTON PERMO-PENN POOL  
LEA COUNTY, NEW MEXICO

STATE #1-7	DATE	PRESSURE	
Original BHP <sub>0</sub>	10-29-64	4225 psig	From DST
BHP <sub>1</sub>	11-27-64	3988 psig	( 72-hr. SI) w/cum. prod. of 3,876 bbls
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$$\Delta P_3 = BHP_2 - BHP_3 = 386 \text{ psi} = 4.92 \text{ bbls/psi drawdown*}$$

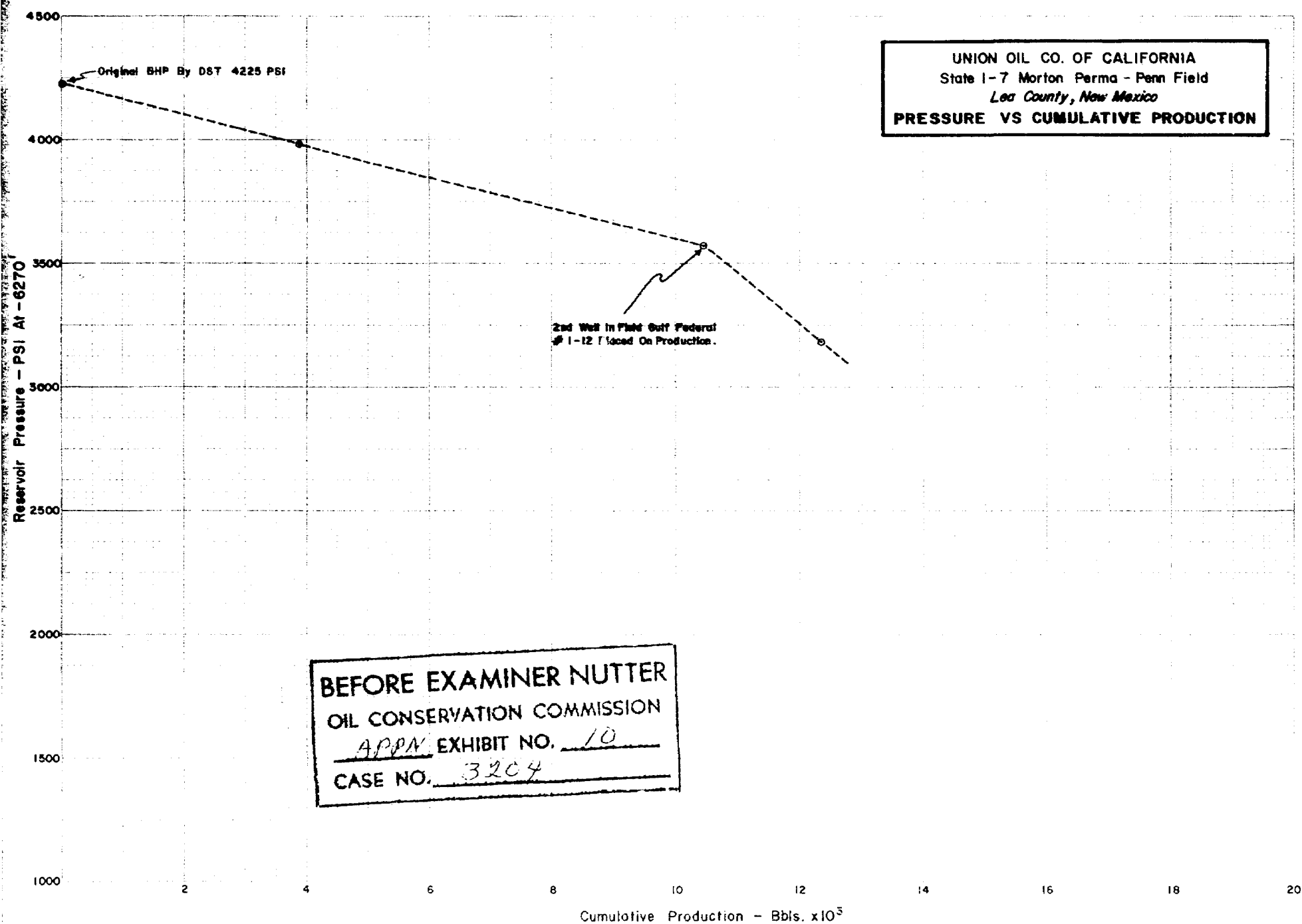
\*During this latter flow period well #1-12 was also producing.

GULF FEDERAL #1-12	DATE	PRESSURE	
Original BHP <sub>0</sub>	12-30-64	3701 psig	Estimated from #1-7 decline curve
BHP <sub>1</sub>	1- 4-65	3484 psig	( 96-hr. SI) w/cum. prod. of 607 bbls
BHP <sub>2</sub>	1- 7-65	3444 psig	(181-hr. SI) w/cum. prod. of 607 bbls
BHP <sub>3</sub>	1-24-65	3230 psig	(100-hr. SI) w/cum. prod. of 3549 bbls

$$\Delta P_1 = BHP_2 - BHP_3 = 214 \text{ psi} = 13.72 \text{ bbls/psi drawdown}$$

Using average figures for the static reservoir pressure on 1-24-65 of 3209 psi and a cumulative withdrawal from the reservoir of 15,871 bbls, it is calculated that 15.67 bbl/psi drop have been recovered from both wells. This is in good agreement with the 15.7 bbl/psi used to estimate the original BHP of the #1-12 well.

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
APPN EXHIBIT NO. 9  
CASE NO. 3204



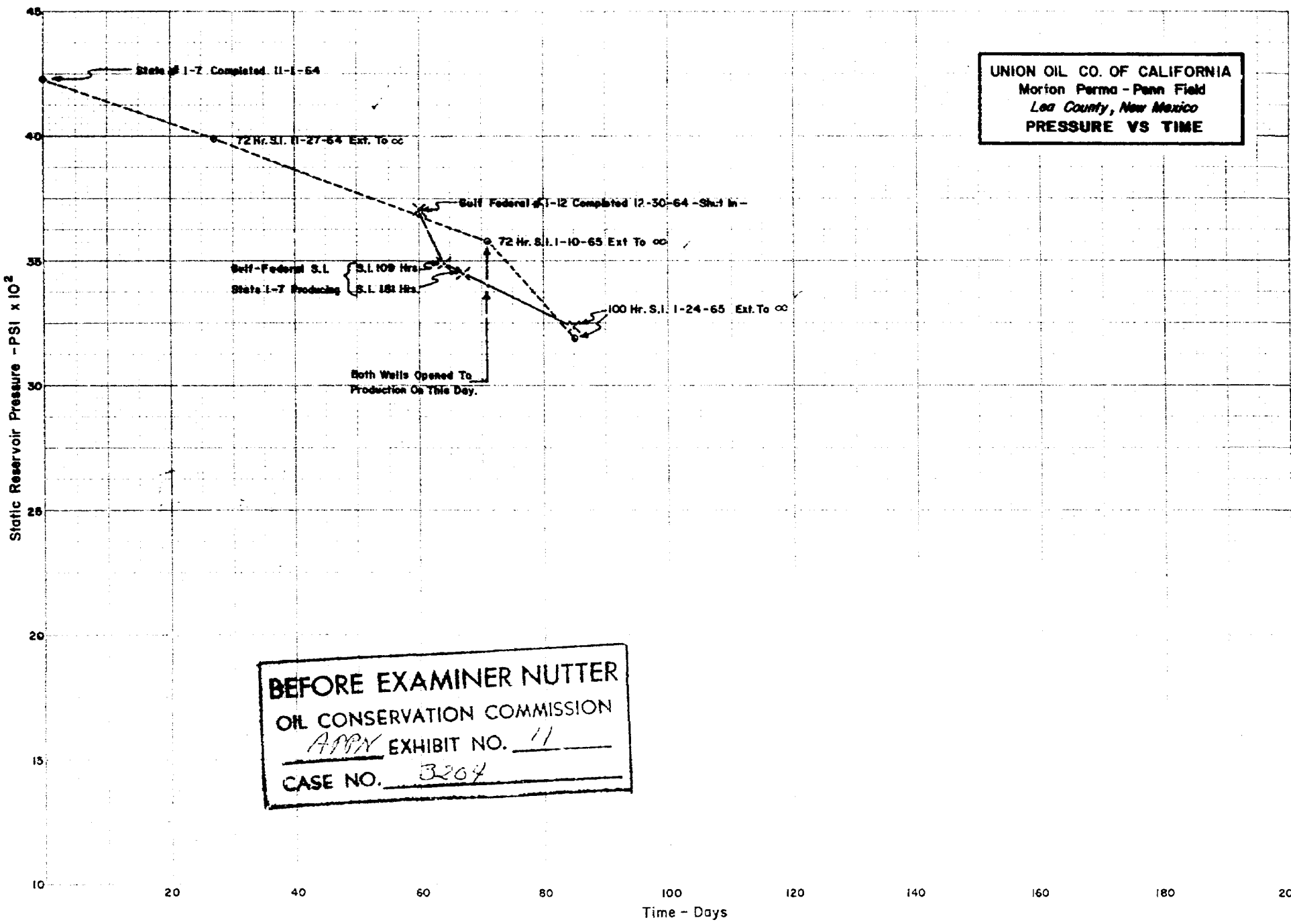


EXHIBIT NO. \_\_\_\_\_

CASE NO. 3204

ECONOMICS FOR VARIOUS SPACING SCHEMES  
MORTON PERMO-PENN POOL  
LEA COUNTY, NEW MEXICO

BASIC DATA

1. Oil Value	\$ 3.01/bbl
2. Net Interest	87.5%
3. Production Taxes	6.29%
4. Lifting Cost (est.)	\$ 0.11/bbl
5. Well Cost	\$142,000
6. Trucking Cost	\$ 0.14/bbl

<u>ECONOMICS</u> <u>Item</u>	<u>WELL SPACING</u>	
	<u>40 Acre</u>	<u>80 Acre</u>
1. Recoverable Oil - bbls	53,150	106,300
2. Oil Revenue - \$3.01/bbl	\$ 159,982	\$ 319,963
3. Net Revenue after Royalty - $0.875 \times (2)$	\$ 139,984	\$ 279,968
4. Operating Cost - Lifting & Trucking ( $0.25 \times (1)$ )	\$ 13,283	\$ 26,575
5. Production Taxes - $.0629 \times (3)$	\$ 8,805	\$ 17,610
6. Net Income - $(3)-(4)-(5)$	\$ 38,646	\$ 235,783
7. Investment	\$ 142,000	\$ 142,000
8. Profit (loss) - $(6)-(7)$	(\$ 103,354)	\$ 93,783
9. Profit to Investment Ratio - $(8) \div (7)$	Loss	0.66:1

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
APPN EXHIBIT NO. 12  
CASE NO. 3204

PROPOSED TEMPORARY RULES AND REGULATIONS  
FOR THE  
MORTON PERMO-PENN POOL  
LEA COUNTY, NEW MEXICO

*Lower Wolfcamp*

RULE 1. Each well completed or recompleted in the Morton ~~Permo-Penn~~ Pool or in the Lower Wolfcamp formation within one mile thereof, and not nearer to or within the limits of another designated Lower Wolfcamp 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 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

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 comprising a governmental quarter-quarter section or lot. All operators offsetting the proposed non-standard unit 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 offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

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 unorthodox 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 offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
<i>APPN</i> EXHIBIT NO. <i>13</i>
CASE NO. <i>3204</i>