

CASE 3520: Appli. of SOUTHERN
NATURAL GAS CO. for creation of
new pool and special pool rules.

CASE NO.
3520

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

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. 3520
Order No. R-3184-A

APPLICATION OF SOUTHERN NATURAL GAS
COMPANY FOR SPECIAL RULES, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 7, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 12th day of February, 1968, 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-3184, dated February 1, 1967, temporary Special Rules and Regulations were promulgated for the Northeast Bagley-Wolfcamp Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-3184, this case was reopened to allow the operators in the subject pool to appear and show cause why the Northeast Bagley-Wolfcamp Pool should not be developed on 40-acre spacing units.

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

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CASE No. 3520

Order No. R-3184-A

(5) That the Special Rules and Regulations promulgated by Order No. R-3184 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.

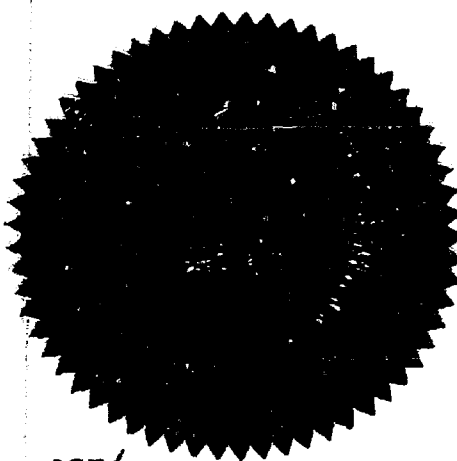
(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-3184 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 Northeast Bagley-Wolfcamp Pool, promulgated by Order No. R-3184, 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

David F. Cargo
DAVID F. CARGO, 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



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

Re: Case No. 3520
Order No. R-3184-A
Applicant:

Hobbs OCC x
Artesia OCC
Aztec OCC
Other

Case 3520

Heard 2-7-68

Rec. 2-7-68

1. Grant So. Natural Gas Co.,
a permanent 80 A. order for
H. Bagley, W.C. oil pool.
Order # R 3184.

This pool is completely developed
on 80's & is "over the hill." Therefore
no further drilling will be done
it seems.

—G. H. H.

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. 3520
Order No. R-3184

APPLICATION OF SOUTHERN NATURAL GAS
COMPANY FOR SPECIAL RULES, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 25, 1967, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 1st day of February, 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 by Order No. R-3182, effective February 1, 1967, the Commission created the Northeast Bagley-Wolfcamp Pool for oil production from the Wolfcamp formation comprising the NW/4 of Section 11, Township 11 South, Range 33 East, NMPM, Lea County, New Mexico. The discovery well for said pool is the Southern Natural Gas Company State C Well No. 1 located in Unit C of said Section 11.

(3) That the applicant, Southern Natural Gas Company, seeks the promulgation of special rules and regulations for the Northeast Bagley-Wolfcamp Pool, including a provision for 80-acre spacing units.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of

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CASE No. 3520

Order No. R-3184

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 Northeast Bagley-Wolfcamp 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 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.

(7) That this case should be reopened at an examiner hearing in February, 1968, at which time the operators in the subject pool should be prepared to appear and show cause why the Northeast Bagley-Wolfcamp Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

That temporary Special Rules and Regulations for the Northeast Bagley-Wolfcamp Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
NORTHEAST BAGLEY-WOLFCAMP POOL

RULE 1. Each well completed or recompleted in the Northeast Bagley-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof, and not nearer to or within the limits of another designated 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.

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CASE No. 3520

Order No. R-3184

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 or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. 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 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.

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 4.00 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 the locations of all wells presently drilling to or completed in the Northeast Bagley-Wolfcamp Pool or in the Wolfcamp

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CASE No. 3520

Order No. R-3184

formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before February 21, 1967.

(2) That each well presently drilling to or completed in the Northeast Bagley-Wolfcamp Pool or in the 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 February, 1968, at which time the operators in the subject pool may appear and show cause why the Northeast Bagley-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.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



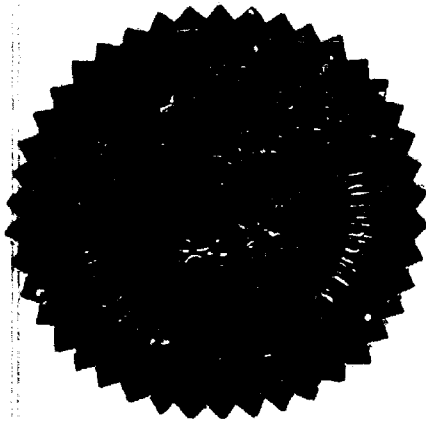
DAVID F. CARGO, Chairman



GUYTON B. HAYS, Member



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



esr/

CLASS OF SERVICE

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WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

R. W. McFALL
PRESIDENT

SYMBOLS

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NL=Night Letter

LT=International Letter Telegram

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NEW MEXICO OIL CONSERVATION COMMISSION=

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Case 3570

1968 FEB 8 AM 10 41

SUBJECT NMOC ORDER R3184 HEARING ON SPACING TO BE
REOPENED THE 2/7/68 NE BAGLEY WOLFCAMP LEA COUNTY NEW
MEXICO. THIS IS TO ADVISE THAT SUNSET INTERNATIONAL
PETROLEUM CORPORATION BELIEVES THAT SPACING SHOULD REMAIN
AT 80 ACRES BECAUSE IT WOULD BE UN-ECONOMICAL TO DRILL
ON 40 ACRES=

ROBERT W ARRENDIELL PROD MGR WEST TEXAS AREA SUNSET
INTL PETROLEUM CORP==

R3184 2/7/68 80 40 APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

Docket No. 4-68

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 7, 1968

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 3719: Application of Amerada Petroleum 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 Siluro-Devonian formation in the interval from 11,010 feet to 11,325 feet in its L. H. Chambers Well No. 1 located in Unit F of Section 11, Township 12 South, Range 33 East, Bagley Field, Lea County, New Mexico.

CASE 3720: Application of Sinclair Oil & Gas Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the interval from 6982 to 7092 feet in its Turner "B" Well No. 73, located in Unit C of Section 29, Township 17 South, Range 31 East, Cedar Lake-Abo Pool, Eddy County, New Mexico.

CASE 3348: (Reopened)

In the matter of Case No. 3348 being reopened pursuant to the provisions of Order No. R-3019-A, which order extended 80-acre spacing units for the South Prairie-San Andres Pool, Roosevelt County, New Mexico, for a period of 14 months. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 3351: In the matter of Case No. 3351 being reopened pursuant to the provisions of Order No. R-3022-A, which order extended 640-acre spacing units for the Dos Hermanos-Morrow Gas Pool, Lea County, New Mexico, for a period of 14 months. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

CASE 3520: (Reopened)

In the matter of Case No. 3520 being reopened pursuant to the provisions of Order No. R-3184, which order established 80-acre spacing units for the Northeast Bagley-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 3721: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit H. E. Barnes and all other interested parties to appear and show cause why the H. E. Barnes Levers State Well No. 1 and the H. E. Barnes Levers State Well No. 2, located in Units G and H, respectively, of Section 32, Township 7 South, Range 26 East, Pecos-San Andres Pool, Chaves County, New Mexico, should not be ordered plugged and abandoned in accordance with a Commission-approved plugging program.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

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

P. O. BOX 2088
SANTA FE

February 1, 1967

Mr. Lewis Cox
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico

Re: Case No. 3520
Order No. R-3184
Applicant:

SOUTHERN NATURAL GAS CO.

DOCKET MAILED

Dear Sir:

Date 1-25-68

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 _____
Aztec OCC _____
Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF SOUTHERN NATURAL GAS COMPANY
FOR THE ESTABLISHMENT OF TEMPORARY RULES AND
REGULATIONS, LEA COUNTY, NEW MEXICO

[Handwritten signature]
CASE No. 3520
Order No.

Applicant, Southern Natural Gas Company submits the following
proposed Special Rules and Regulations for the Northeast Bagley-
Wolfcamp Pool:

SPECIAL RULES AND REGULATIONS
FOR THE
NORTHEAST BAGLEY-WOLFCAMP POOL

RULE 1. Each well completed or recompleted in the Northeast Bagley-Wolfcamp Pool or in the Wolfcamp formation within one mile of the Northeast Bagley-Wolfcamp Pool, and not nearer to or within the limits of another designated Wolfcamp pool, shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the Northeast Bagley-Wolfcamp Pool shall be located on a standard unit which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section. For purposes of these rules, 79 through 81 contiguous surface acres shall be considered a standard unit. 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 80-acre unit.

RULE 3. Each well projected to or completed in the Northeast Bagley-Wolfcamp Pool shall be located within 150 feet of the center of either quarter-quarter section in the 80-acre unit. Any well which was drilling to or completed in the North Bagley-Wolfcamp Pool prior to _____ is granted an exception to the well location requirements of this rule.

RULE 4. For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed in due form, and the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey or when the application is for a non-standard unit comprising a single quarter-quarter section or lot and all operators offsetting the proposed non-standard unit have been notified of the applica-

CASE NO. 3520
Order No.

tion by registered or certified mail, and have given written consent in the form of waivers, or if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Northeast Bagley-Wolfcamp Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 5. A standard proration unit in the Northeast Bagley-Wolfcamp Pool shall be assigned an 80-acre proportional factor of $\frac{1}{40}$ 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 said wells in any proportion.

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 (4-00)

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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1967 JAN 24 PM 3 23

D MDA127 PD=MIDLAND TEX 24 402P CST=

NEW MEXICO OIL CONSERVATION COMM=

ATTN DAN NUTTER SANTAFE NMEX=

RE NMOCC CASE #3520 THIS WILL ADVISE YOU SUNSET
INTERNATIONAL PETROLEUM CO CONCURS IN SOUTHERN NATURAL
APPLICATION FOR EIGHTY ACRE SPACING FOR THE NE BAGLEY
WOLFCAMP=

SUNSET INTL PETR.=

1967 JAN 24 PM 3 47

#3520.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

Case 3520

Heard 1-25-67

Rec. 1-25-67

~~Grant Southern Natural Gas Co.~~
~~their request for a new pool to be known~~
~~as the North Bayley - Wolfcamp oil pool~~
~~consisting of W/2 sec. 11-11 S-33 E (this~~
~~may not be necessary if case 3510 heard~~
~~1-15-67 establishes the Pool) Pool established as NW/4!!~~

Establish pool rules based on 50 A.
spacing and. R-2346.

Thos. G. [Signature]

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 25, 1967

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 3516: Application of Texas Pacific Oil Company for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of certain acreage and the establishment of the following non-standard gas proration units in Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico:

A 200-acre non-standard unit comprising the SE/4 of Section 20 and the NW/4 SW/4 of Section 21, dedicated to its State "A" A/c-1 Well No. 2 located 2260 feet from the South line and 330 feet from the West line of said Section 21;

A 160-acre non-standard unit comprising the E/2 SW/4, SW/4 SW/4, and SW/4 SE/4 of Section 21 dedicated to its State "A" A/c-1 Well No. 8 located 660 feet from the South line and 1980 feet from the East line of said Section 21;

A 160-acre non-standard unit comprising the SW/4 of Section 4, dedicated to its State "A" A/c-1 Well No. 18 located 660 feet from the South and West lines of said Section 4;

An 80-acre non-standard unit comprising the S/2 NW/4 of Section 4 dedicated to its State "A" A/c-1 Well No. 15 located 1980 feet from the North and West lines of said Section 4;

A 120-acre non-standard unit comprising the N/2 NW/4 and NW/4 NE/4 of Section 4, dedicated to its State "A" A/c-1 Well No. 23 located 660 feet from the North line and 2310 feet from the East line of said Section 4;

A 160-acre non-standard unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 of Section 9 dedicated to its State "A" A/c-1 Well No. 12 located 660 feet from the South line and 1980 feet from the East line of said Section 9.

CASE 3517: Application of Pan American Petroleum Corporation for a vapor recovery system, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to install, at its central tank battery for the Navajo Tribal P, N, and U Leases in the Tocito-Dome Pennsylvanian "D" Pool, San Juan County, New Mexico, a vapor recovery system including facilities for extracting the liquids from said vapor, with a provision that said liquids would not be chargeable to the oil allowable for said leases.

- CASE 3518: Application of Pan American Petroleum Corporation for an unorthodox location and possible directional drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the Tocito Dome-Pennsylvanian "D" Pool rules as promulgated by Order No. R-2758 to permit the drilling of its Navajo Tribal "N" Well No. 9 at an unorthodox location 600 feet from the North line and 1200 feet from the West line of Section 20, Township 26 North, Range 18 West, Tocito Dome-Pennsylvanian "D" Pool, San Juan County, New Mexico. Applicant further seeks authorization, if the Pennsylvanian "D" producing section is found above the gas-oil contact or below the oil-water contact, to intentionally deviate said well in such direction and to such extent as necessary to obtain a commercial well, provided that said well would not be bottomed any nearer than 100 feet to the outer boundary of the 160 acre proration unit.
- CASE 3519: Application of Robert N. Enfield for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Chaveroo-San Andres Pool underlying the NW/4 NW/4 of Section 11, Township 8 South, Range 33 East, Chaves County, New Mexico.
- CASE 3520: Application of Southern Natural Gas Company for the creation of a new pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for Wolfcamp production for its State "C" Well No. 1 located in Unit C of Section 11, Township 11 South, Range 33 East, Lea County, New Mexico, and for the promulgation of special rules therefor, including a provision for 80-acre proration units.
- CASE 3521: Application of Sinclair Oil & Gas Company for three waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute three waterflood projects in the Grayburg-Jackson Pool by the injection of water into the Grayburg-San Andres formations through two wells on its Russell Lease, eight wells on its Turner "A" lease, and nine wells on its Turner "B" lease in Sections 17, 18, 19 and 20, Township 17 South, Range 31 East, Eddy County, New Mexico.
- CASE 3522: Application of Texaco Inc. for suspension of cancellation of underproduction and extension of deliverability test deadline, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order suspending the scheduled cancellation of the underproduction attributable on July 31, 1966, to its H. J. Loe Federal B Wells Nos. 2 and 3, located in Section 23, Township 29 North, Range 12 West, Basin-Dakota Gas Pool, San Juan County, New Mexico, said underproduction not having been made-up during the 6 months period ending January 31, 1967, due to said wells having been shut-in November 10, 1966,

Docket No. 3-67

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(Case 3522 continued)

upon the transfer of the connecting pipeline from an intra-state status to an interstate status and delay in obtaining FPC approval for the sale of gas from said wells in interstate commerce. Applicant further seeks an extension of time in which to conduct the 1966 deliverability test of the Loe Well No. 3 until after FPC approval for gas sales has been received, and the well restored to production.

SOUTHERN NATURAL GAS COMPANY

EXPLORATION AND PRODUCTION DIVISION

P. O. BOX 1513 - ESPERSON BUILDING

HOUSTON, TEXAS 77001

December 19, 1966

Oil Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter, Chief Engineer

Re: Request for Hearing
Well Spacing
New Discovery Well
Lea County
NEW MEXICO
Our State 1-C

Gentlemen:

Application is hereby made for a hearing before the Oil Conservation Commission to consider special field rules for a new pool discovered by Southern Natural Gas Company-State "C" Well No. 1.

Enclosed are the following:

- 1) Copy of Form C-104 "Request for Allowable" dated November 28, 1966 which indicates:
 - a) well location and lease description
 - b) completion data
 - c) test data
- 2) Land plat of the area around the discovery well showing all wells known to us.
- 3) Copy of Form C-109 "Application for Discovery Allowable" dated November 22, 1966.
- 4) Supplements to Oil Proration Schedules dated November 28, 1966, No. 322 for November 1966, and another dated December 1, 1966, No. 25 for second month (December 1966).

dearnley-meier reporting service, inc.

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

1170 SIMMS BLDG. • P. O. BOX 1792 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

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

January 25, 1967

IN THE MATTER OF:

Application of Southern Natural Gas
for the creation of a new pool and
for special pool rules, Lea County,
New Mexico.

Case 3520

Before: Elvis A. Utz

TRANSCRIPT OF HEARING

dearnley-meier

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

1120 SIMMS BLDG. • P.O. BOX 1052 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101
1205 FIRST NATIONAL BANK EAST • PHONE 256-1291 • ALBUQUERQUE, NEW MEXICO 87108

PAGE 2

MR. UTZ: The hearing will come to order.
Case 3520.

MR. HATCH: Case 3520. Application of Southern Natural Gas Company for the creation of a new pool and for special pool rules, Lea County, New Mexico.

MR. COX: Mr. Examiner, I am Lewis C. Cox, of Hinkle, Bondurant and Christy in Roswell, representing Southern Natural. We have one witness to be sworn, Mr. Harold Heberling.

(Witness sworn.)

MR. UTZ: Are there any other appearances? Proceed.

MR. COX: By way of an opening statement, Mr. Utz, this is a continuation of the hearing that was held before, or an adjunct for the hearing that was held before the full Commission last week; and I am advised as a result of that hearing an order either has been, or will shortly be issued creating the Northeast Bagley Pool, and as a basis of that, this of the application that was filed to be heard at this hearing, I requested that this file be furnished so that you could have the benefit of two or three exhibits that we will be referring to. There were nine exhibits entered in the case previously, according to my notes, and we will proceed on that basis.

HAROLD HEBERLING, called as a witness on behalf of the

Applicant, having first been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. COX:

Q Mr. Heberling, will you state your name?

A Harold Heberling.

Q And what is your occupation and by whom are you employed?

A Chief Engineer, Southern Natural Gas, Exploration and Production Division in Houston, Texas.

Q You are the same Harold Heberling who testified before the full Commission as an expert witness in the hearing last week?

A That's correct.

MR. COX: Are his qualifications acceptable?

MR. UTZ: Yes, they are.

Q (By Mr. Cox) Mr. Heberling, are you familiar with this application of Southern Natural for 80 acre spacing in this new pool?

A Yes, I am.

Q Referring to Exhibit 4, as previously admitted in this case, would you state again what that is, please, sir?

A Well, this is a production versus time curve for the Cabot Corporation's Humble State 1-D Well, for the years

1962 through 1966. This is a Wolfcamp completion in the North Bagley field.

Q And Exhibit 5?

A This is a production versus time curve for the Cabot Corporation's State 1-L Well. This is a Wolfcamp producer in the North Bagley field.

(Whereupon, Applicant's Exhibits 10 and 11 marked for identification)

Q I hand you an instrument marked Applicant's Exhibit 10, and ask you to state what that is?

A This Exhibit Number 10 is computerized principally out of my estimate of net income to be generated from a Wolfcamp completion in the Northeast Bagley field on an 80-acre spacing development.

Q And I hand you Exhibit 11, and ask you to state what that is?

A Well, this is, this exhibit reflects my estimate of the income to be lost from a Northeast Bagley Wolfcamp completion on 40-acre development.

MR. COX: We offer these Exhibits 10 and 11 in evidence.

MR. UTZ: Are your other exhibits, exhibits from the last hearing?

MR. COX: Yes, sir and they were numbered at the last hearing.

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PAGE 5

MR. UTZ: Yes, sir. They were 4 and 5.

MR. COX: Four and Five, and we will also offer Exhibit 8 from the previous hearing. Exhibit 8 is the calculation of the reservoir permeability from the State C-1 Well.

MR. UTZ: There was also an 8-A, too, wasn't there?

MR. COX: Yes, sir.

MR. UTZ: How about 9, did you mention 9?

MR. COX: No, sir, we are not planning to use Exhibit 9. It was used in the previous hearing in connection with whether or not there was a connection between the pools. Oh, is it a different numbered case? I thought it was still -- I apologize. I was of the impression that they were of the same number. Then the record should show that Exhibits 4 and 5 and 8 in Case Number 3515, we will ask that they be admitted in this case.

MR. HATCH: That was 4, 5, 8 and 8-A?

MR. COX: No. I have one copy of each of them. We could just go ahead and introduce them in this case. I apologize to the Examiner. I was thinking it was the same case number.

MR. UTZ: Do you have one copy of each one of them?

MR. COX: Yes.

MR. UTZ: If you will make those 1, 2, 3, 4 and 5; and these should be renumbered 4 and 5 --

MR. COX: Yes, number 10 would become 4 and number 11, 5.

MR. UTZ: Make a note that all previous Exhibits numbers are now renumbered.

(Whereupon, Exhibits were renumbered as Exhibits 1 through 5 inclusive)

MR. COX: I now ask that Exhibits 1 through 5 inclusive, be received.

MR. UTZ: They will be received into the case.

(Whereupon, Exhibits 1 through 5 inclusive, received in evidence)

Q (By Mr. Cox) Now, Mr. Heberling, would you explain to the Examiner the purpose of submitting these exhibits?

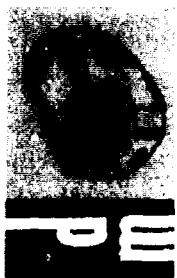
A Yes, the purpose of submitting these exhibits, of course, is to substantiate our reasoning for requesting spacing of 80 acres.

Q All right, would you tell the Examiner what that reason is, please, sir?

A Well, basically, it boils down to the fact that 40-acre development in this Northeast Bagley Wolfcamp Pool does not pay out. In other words, you don't ever recoup your drilling cost, let alone your operating cost and overhead; severance taxes, which must be recognized as a cost, also. They further reflect that 80-acre spacing, if you will look at Exhibit Number 4, on line -- well, first of all, line number 3. I have

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estimated that a well will recover some 96,500 barrels of oil on 80-acre spacing and then, if you will skip down to line 21, my projection shows that it will generate a profit to Southern Natural Gas Company, after investment expenses and income taxes, of around \$4,500.00. I have used a well cost estimate of \$125,000.00 in preparing this economic calculation.

Exhibit Number 5 shows that we would lose some \$37,000.00, before income taxes, on 40-acre development.

Q Have you made a determination as to whether or not one well per 80 acres will efficiently drain the oil from the reservoir in this area?

A I believe Exhibits 1 and 2 demonstrate this. These Exhibits show the production history of two Wolfcamp completions at North Bagley. Both of these wells have been completed in a porosity zone of comparable thickness to those that were encountered in the Northeast Bagley, these two Cabot Wells, the State 1 and State 1-L, have cumulative production of 103,000 barrels and 85,000 barrels respectfully. There are in their later stages depletion in that the reservoir pressures on these two wells are in the figure of 605 to 905 pounds, and the wells are producing less than 30 barrels per day. I believe this is adequate proof that a well will drain in excess of 90 acres. These two cumulative productions would average some 92,000 barrels, to date, per well, and I have used an estimate of

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96,500 barrels, based upon a poor volume calculation and a recovery factor estimate of 20 percent.

Q Does Exhibit 3 further substantiate this opinion?

A I believe it does. We had a build up test run in the Southern Natural Gas Company State C-1 Well, and it showed that the reservoir permeability is very high, and conducive to good recovery.

Q Would it be your opinion, then, that one well per 80-acre tract would efficiently and economically drain the 80 acres, prevent waste, and not impair the correlative rights of others?

A Yes, it is.

MR. COX: I have no further questions.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Heberling, was is it Exhibit 5 that gave your reserve figure?

A Exhibit 4, if you look at line 3, under the total -- well, lines 1 and 3, were estimating we will recover 635 million cubic feet of salable gas and 96,500 barrels of oil.

Q Well, this is the maximum annual production?

A But the total -- let me explain the form a little. The numbers across the top, 1 through 10, mean years. Then, the total is the total of all of those columns and the figures

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PAGE 9

are as per the heading, like gas, M.C.F., 635; oil, barrels, 96,500, and the dollar figures are in thousands of dollars.

Q This is per 80-acre tract?

A Yes. The first three columns --

Q This is not a volumetric calculation, then, is it?

A No, sir, this is economic evaluation, based on the reserve estimate of 96,500 barrels, which was a poor volume calculation under 60 acres. In arriving at that, I used 10 feet of porosity of 11.3 percent and a reservoir factor of 1.3, and a water saturation of 10 percent.

Q Let me get those figures down here. I will just copy them down, if you will restate them. I will copy them down, on Exhibit 5.

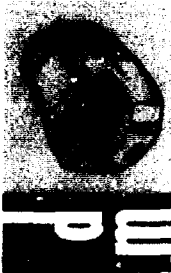
A Porosity, 11.3 percent; water saturation, 10 percent; reservoir volume factor, 1.3. And multiplying this out, you get fairly close to 600 barrels per acre foot in place, and I used a 20 percent recovery factor, which would be a little over 120 barrels per acre foot; and I have applied that factor to 10 feet of porosity over 80 acres, or 800 acre feet, which gives a little over 96,000 barrels.

Columns 4 through -- 1 through 3, show a hundred percent well production, 4 through 6 show Southern Natural production after royalty is purchased. Columns 7 through 11 show the income from the Souther. Natural, net production.

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PAGE 10

Columns 12 through 18 show the operating expenses, severance taxes and well investment. Then, the net income being the revenue to Southern minus Southern's expenses, that showed \$17,500.00 profit, and on this we would have to pay some \$16,000.00 income tax, which leaves us \$4,500.00, without applying any present worth factor to the money. The columns at the bottom are merely tax calculations and present worth calculations.

I have used, you will notice at the top, on line 1, used 1, 2, 3, 4 -- excuse me, for years 1, 2, 3 and 4, I used a declining rate, which I obtained from approximating the rate of the Cabot Well to the south. The Cabot 1-D, for example, during the first full calendar year of production, made around 45,000 barrels of oil. About, during the second calendar year, about 22,000 barrels; the third year about 14,000 barrels and it looks like it's going to make about 7,000 this year. I, more or less, made a composite curve of those wells and applied that decline rate to what I would expect an average Wolfcamp to do. If it has a better capacity, better than this, of course it would improve these economics. It would not substantially improve the 40-acre economics in that I have shown that we could recover that much oil in two years.

Q Does my memory serve me right, that you have just one well completed in this zone?

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PAGE 11

A That's right.

Q Sunset 1 to the South?

A That's correct.

Q It is a marginal well?

A I wouldn't classify it as marginal. I talked with them on January 11 and it was flowing 125 barrels of oil a day, with 100 pounds, and was making 60 barrels of water, per day, which was coming from the channel in behind the casing. Perhaps this could be remedied.

Q What is the 40-acre allowable for?

A 156 barrels a day.

Q It is in the making of its allowable yet?

A No, sir. Possibly can after working over -- or with artificial lift equipment, possibly.

Q Does Southern Natural have any plans for drilling more wells in this pool?

A We have one firm approved budget of a well, but don't have the location approved to the Wolfcamp and we have -- the way our budget is set up, we set up three contingent wells. This was mostly completed acreage development in the area to the Wolfcamp. We have a 160-acre tract and a 120-acre tract and a 101-acre tract.

Q Is it my understanding that you are requesting a temporary order?

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A I shouldn't think so.

Q Or what is your request?

MR. COX: We are requesting special field rules, Mr. Examiner. Certainly, if it is felt by you, that it should be temporary, why --

Q (By Mr. Utz) How soon do you plan on drilling the next well?

A I should think they should commence it within the next month. One thing, of course, we need, is a spacing order and pool rules and more or less have been observing the well we do have.

Q In the event your request is granted, do you think you would have any more information on the reservoir in a year's time?

A I think we would have more information. I don't believe they will wait that long. I think they will develop our property right away.

MR. UTZ: Are there any other questions of the witness? You may be excused.

(Witness excused)

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

MR. COX: We have a set of proposed rules we will submit, Mr. Examiner.

MR. UTZ: All right. Now, these rules are based on

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what other rules?

MR. COX: Basically, the original special field rules for the North Bagley.

MR. UTZ: That's the same as Bagley-Pennsylvania Pool, now?

MR. COX: Well, I can't answer that, but these are the special pool rules for the North Bagley that were in effect for about two or three years, then terminated.

MR. UTZ: Yes.

MR. HATCH: We have a telegram from Sunset International Petroleum, dated January 24, 1967. "The New Mexico Oil Conservation, Case 3520. This will advise you that Sunset International Petroleum Company concurs in Southern Natural's application for 80-acre spacing for the Northeast Bagley Wolfcamp. That's all I have.

MR. UTZ: Are there any other statements? The case will be taken under advisement.



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STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

I, JERRY POTTS, 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 27th day of March, 1967


Notary Public

My commission expires:

July 10, 1970

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing at Case No. 2526, heard by me on 27th day of March, 1967.


Notary Public
New Mexico Oil Conservation Commission

dearnley-meier reporting service inc.

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

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 7, 1968
EXAMINER HEARING

In the matter of Case No. 3520 being)
reopened pursuant to the provisions)
of Order No. R-3184, which order)
established 80-acre spacing units)
for the Northeast Bagley-Wolfcamp)
Pool, Lea County, New Mexico, for a)
period of one year.)
)
)
)
)

Case 3520

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3520.

MR. HATCH: Case 3520. Reopened. In the matter of Case No. 3520 being reopened pursuant to the provisions of Order No. R-3184, which order established 80-acre spacing units for the Northeast Bagley-Wolfcamp Pool, Lea County, New Mexico, for a period of one year.

MR. COX: Lewis Cox of the firm of Hinkle, Bondurant & Christy in Roswell representing Southern Natural Gas Company. I have one witness and five exhibits.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 6 through 10 marked for identification)

MR. UTZ: Are there other appearances?

HAROLD HEBERLING

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

DIRECT EXAMINATION

BY MR. COX:

Q State your name and occupation, please, sir.

A My name is Harold Heberling. I am Chief Engineer in the Exploration Production Division of Southern Natural Gas at Houston, Texas.

Q Is the Northeast Bagley-Wolfcamp Pool within your

area of responsibility, Mr. Heberling?

A Yes, it is.

Q You have previously testified before the Commission in this case, is that correct?

A That's correct.

Q And were qualified at that time?

A Yes.

MR. COX: Are the qualifications of the witness acceptable?

MR. UTZ: Yes, sir.

Q Referring to Exhibits 1 to 5 which were introduced in the previous hearing, Mr. Heberling, has your experience in this pool during the past year indicated any significant change in the projections which were reflected by those exhibits?

A No, it hasn't, not to any significant degree anyway.

Q Based on your experience during the past year in terms of acreage, what is your opinion as to the size of the Northeast Bagley-Wolfcamp Pool?

A It is somewhere between 250 and 300 acres.

Q What was your projection of the size when you testified at this hearing a year ago?

A I had estimated that it was on the order of a couple

of hundred acres.

Q How many producing wells are in the pool as it's now defined?

A There are four producing wells today.

Q And are they reflected on your Exhibit Number 6?

A Yes, they are. I have circled them in red.

Q Would you identify for the record the location of those wells, please, sir?

A The Southern Natural Gas Company State 1-C and 2-C Wells are in the northwest quarter of Section 11, Township 11 South, Range 33 East. The Sunset International State 1 Well is in the southwest quarter of Section 11, Township 11 South, Range 33 East, and the Natural Gas and Oil State Well is in Section 2, it's in the South Half of Section 2.

Q Have there been any dry holes drilled on the limits of the pool?

A Yes, there have. Sunset drilled a dry hole in the south half of Section 11, their Number 2 State Well. Southern Natural drilled a dry hole, State 1-D in the northeast quarter of Section 11 and Southern Realty drilled a dry hole, the Graham State 1-A in the south half of Section 2.

Q Do you have well performance curves for the four completed producing wells?

A Yes, I do.

Q These are identified as your Exhibits 7 through 10?

A That's correct.

Q Would you briefly tell the Examiner what these reflect?

A These are well performance curves for the four completions in the Wolfcamp Pool of Northeast Bagley. I made a monthly plot on these curves of average daily oil production and of gas-oil ratio during each month. You will notice the gas-oil ratios on all of the wells commenced increasing somewhere in August of 1967 and that they have all increased in the same magnitude and that would indicate to me that the bottom hole pressure in the pool has declined substantially, and further, that the wells are most likely in a common reservoir and that there would be good pressure communication within the reservoir. The oil production curves you will note that the average producing rate on all the wells has declined during the past few months. This would indicate to me that the flush production period is over and I would anticipate that these declines would continue for the remaining life of this pool.

Q Were all of these Exhibits prepared by you or under your supervision?

A That's correct.

MR. COX: We offer Exhibits 6 through 10 in evidence.

MR. UTZ: Without objection, Exhibits 6 through 10 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 6 through 10 were offered and admitted in evidence.)

Q (By Mr. Cox) Mr. Heberling, are these wells producing their allowable?

A No, they are not. The production rates on the wells during the last few months, in effect, reflect their capacity to produce.

Q You previously submitted in the hearing, economic projections with regard to return on your investment, profit or loss, based on 40-acre spacing and 80-acre spacing. Has there been any change in those figures of any significance?

A Not significantly. We had estimated that on 40-acre development we would lose somewhere around \$37,000 per well and on 80-acre spacing we would end up with a profit of around \$70,000 per well before Federal Income Tax.

Q In your opinion, would development on 40-acre spacing at this time be economical?

A No, it wouldn't.

Q Will a well on each 80-acre tract in this pool

efficiently and economically drain 80 acres?

A I certainly believe it will.

Q Is it your opinion that any more wells can be efficiently and economically drilled in the reservoir?

A They definitely cannot.

Q Is it your opinion that the reservoir is fully developed?

A Yes, sir.

Q Is it your opinion that the temporary field rules should be made permanent?

A Yes, sir.

MR. COX: We have no further questions.

CROSS EXAMINATION

BY MR. UTZ:

Q Has there been any dry holes drilled to the north of the pool?

A Not to my knowledge, Mr. Utz.

Q What causes you to think that the pool limits have been reached to the north?

A Primarily the --

Q Do you have some subsurface information?

A We have not measured any bottom hole pressures since the last hearing, but as of the date of the last hearing we

had already experienced a substantial decline in bottom hole pressure in our State C-1 Well. I believe it was on the order of 600 pounds and the production curves indicate that the pressure has declined considerably further, as evidenced by the gas-oil ratios increasing and the oil production rates declining.

Q This leads you to believe then that this reduction takes place over the entire pool?

A Yes, sir.

MR. UTZ: Are there other questions of the witness?
He may be excused.

(Witness excused.)

MR. UTZ: Statements?

MR. HATCH: I have a communication here, a telegram from Sunset International Petroleum Corporation favoring retention of the 80-acre spacing.

MR. UTZ: Other statements?. The case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, KAY EMBREE, 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.

Kay Embree

 NOTARY PUBLIC

My Commission Expires:

November 19, 1971

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the hearing of Case No 3520.
 heard by me on *Feb 12* 19 *68*
Thos. G. [Signature], Examiner
 New Mexico Oil Conservation Commission

Exhibit #1

BEFORE THE COURT

OIL COMPANY

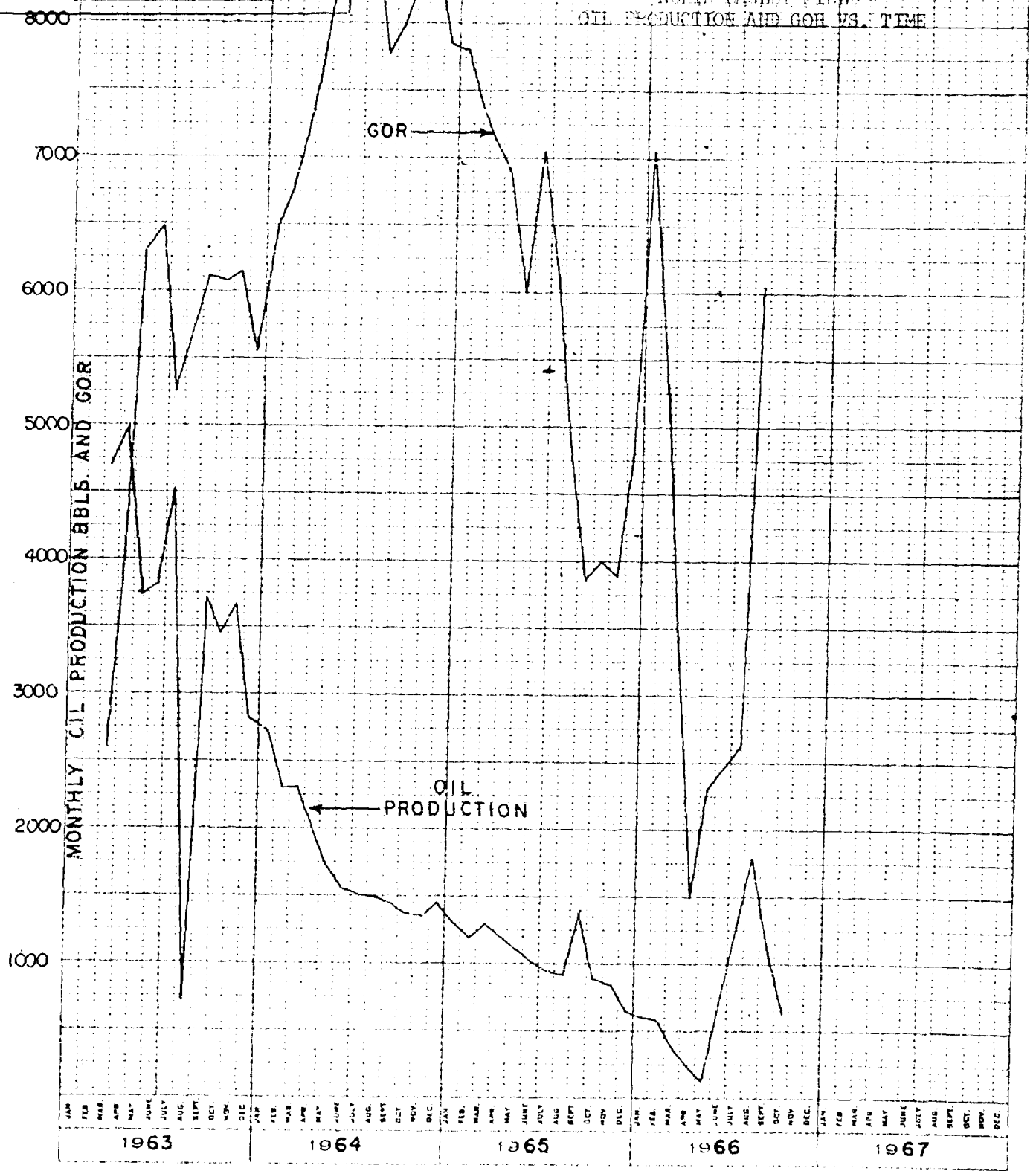
Cyprus EXHIBIT NO. 1

CASE NO. 3520

CARROT CORP. STATE L E-E
NORTH EASTERN FIELD
OIL PRODUCTION AND GOR VS. TIME

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

NO. 340-T33 DIETZEN GRAPH PAPER
5 YEARS BY MONTHS



BEFORE COURT
 OIL CONSERVATION
Upshur EXHIBIT NO. 2
 CASE NO. 350

Exhibit "2"

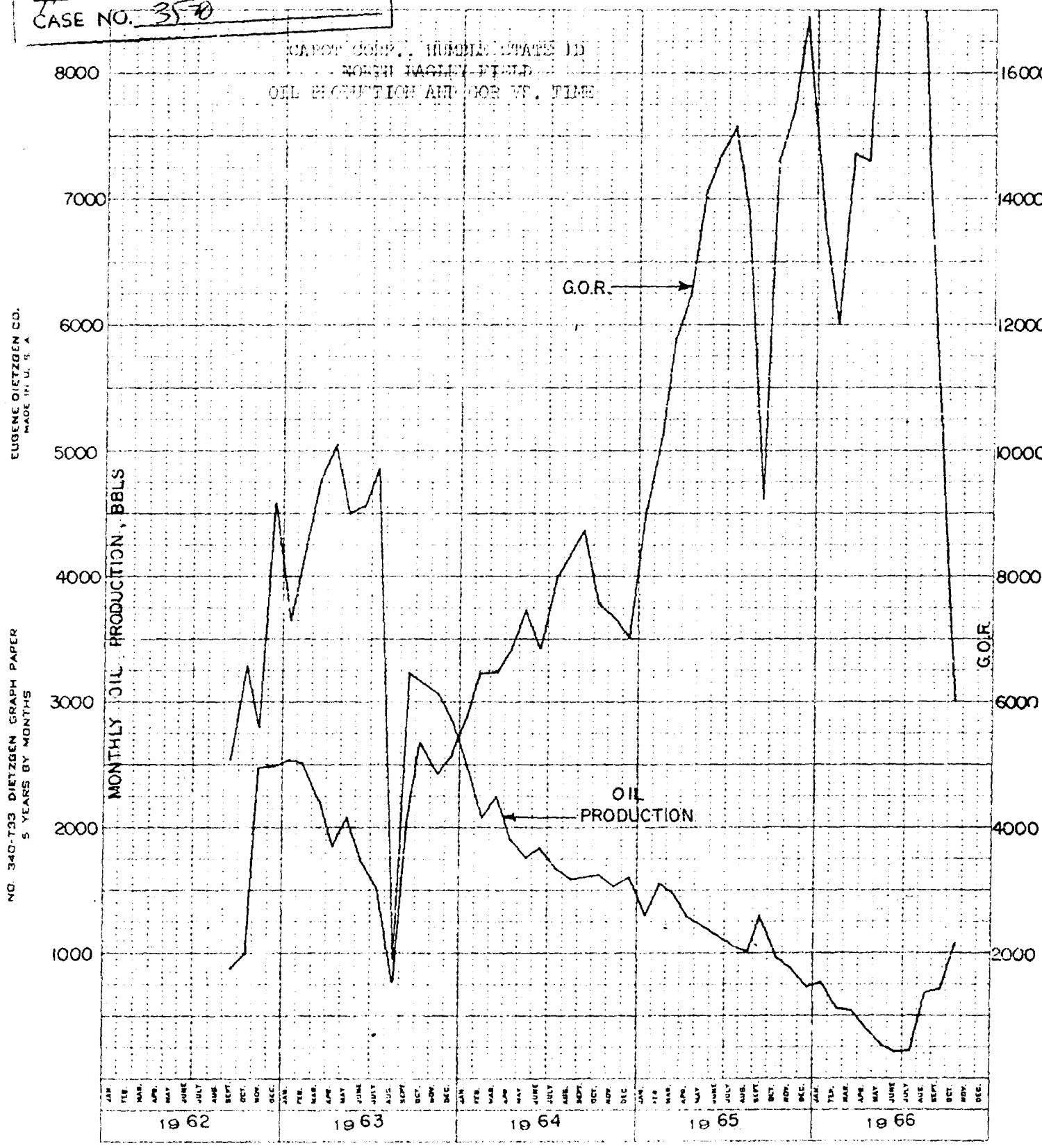


Exhibit # 5

North Bagley - Wolfcamp Lea County, N. M.
Economics of 40 Acre Spacing

	Total	Year 1	Year 2
Total Oil, Thous. Bbls.	48.3	40.0	8.3
Total Gas, MMcf	310.	260.	50.
Net Oil	38.9	32.1	6.7
Net Gas	249.	209.	40.
<u>Revenue, Thous. \$ (After Roy.)</u>			
Oil	116.0	96.0	20.0
Gas	15.1	12.7	2.4
Total Revenue	131.1	108.7	22.4
<u>Operating Expenses, Thous. \$</u>			
Operations & Maintenance	4.6	3.6	1.0
Overhead (A & G)	1.5	1.2	0.3
Oil Sev. Tax	6.2	5.1	1.1
Gas Sev. Tax	0.8	0.7	0.1
Total Oper. Expense	13.1	10.6	2.5
Net Income Before FIT, Thous. \$	118.0	98.1	19.9
Capital Investment, Thous. \$	155.0	155.0	
Cash Generated Before FIT	-37.0	(Loss)	

Pore vol 11.5
H₂O 10.2
R_v 1.3

600 B A of T.
40% Rec.
10' spacing

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Applicant EXHIBIT NO. 5
CASE NO. 3520

SOUTHERN NATURAL GAS COMPANY
STATE C-1
NORTHEAST BAGLEY (WOLFCAMP)

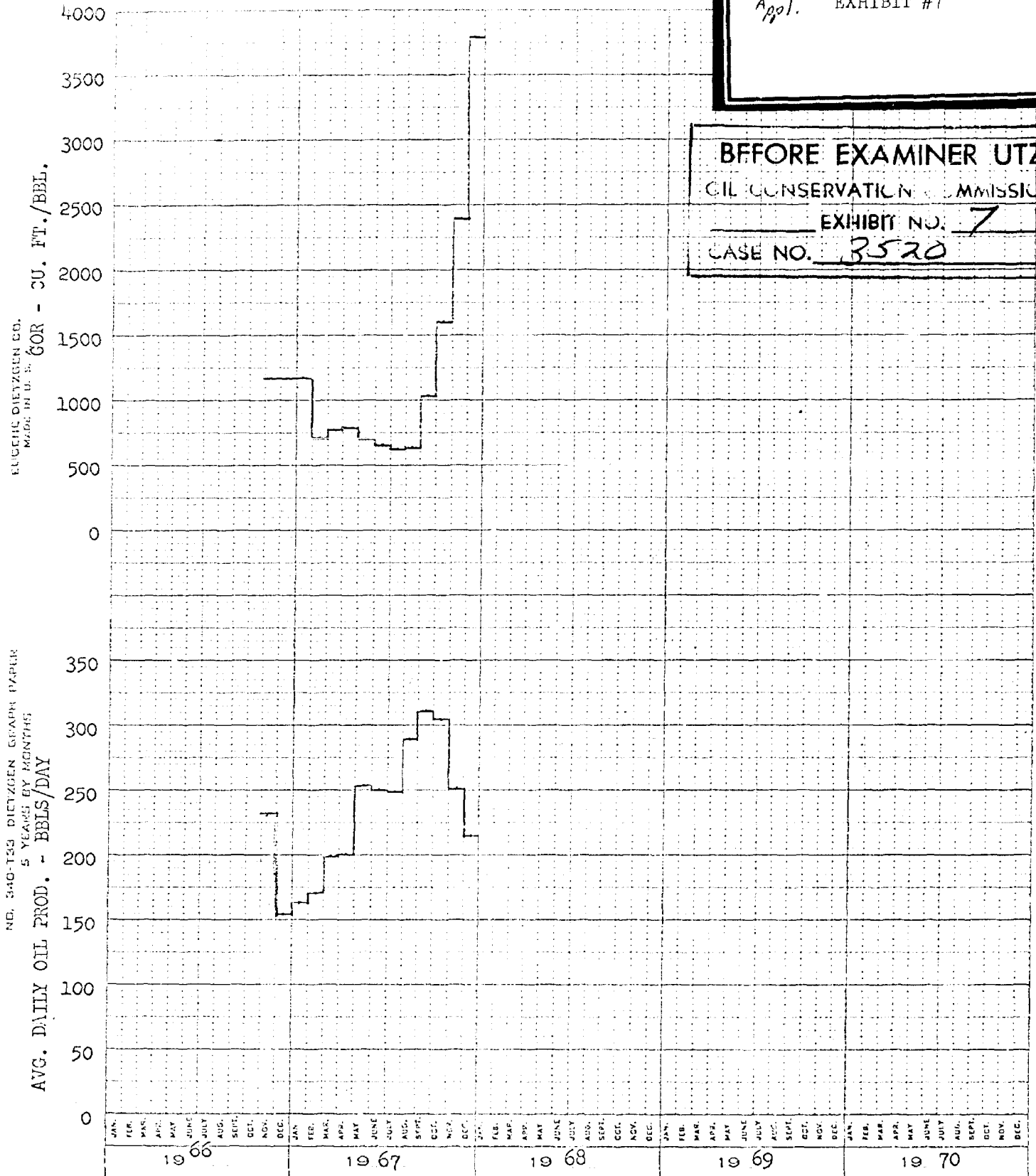
Case 3520

Appl. EXHIBIT #7

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 7

CASE NO. 3520



SOUTHERN NATURAL GAS COMPANY
STATE C-2
NORTHEAST BAGLEY (WOLFCAMP)

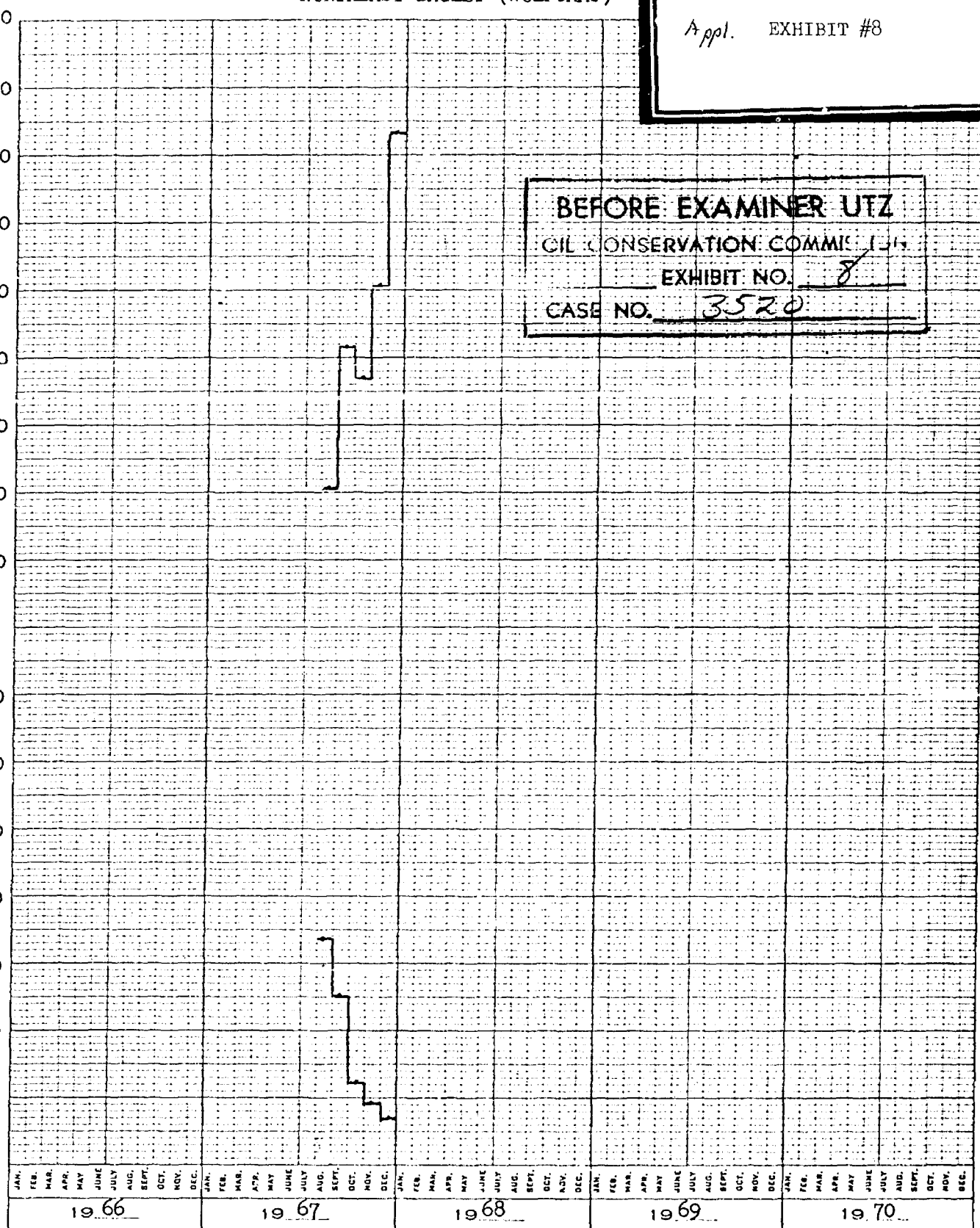
Case 3520

Appl. EXHIBIT #8

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

NO. 340-133 DIETZGEN GRAPH PAPER
5 YEARS BY MONTHS

GOR - CU. FT./BBL.
AVG. DAILY OIL PROD. - BBL/DAY



BEFORE EXAMINER UTZ
OIL CONSERVATION COMM. 11/15
EXHIBIT NO. 8
CASE NO. 3520

NATURAL GAS & OIL
NEW MEXICO STATE 1
NORTHEAST BAGLEY (WOLFCAMP)

Case 3520

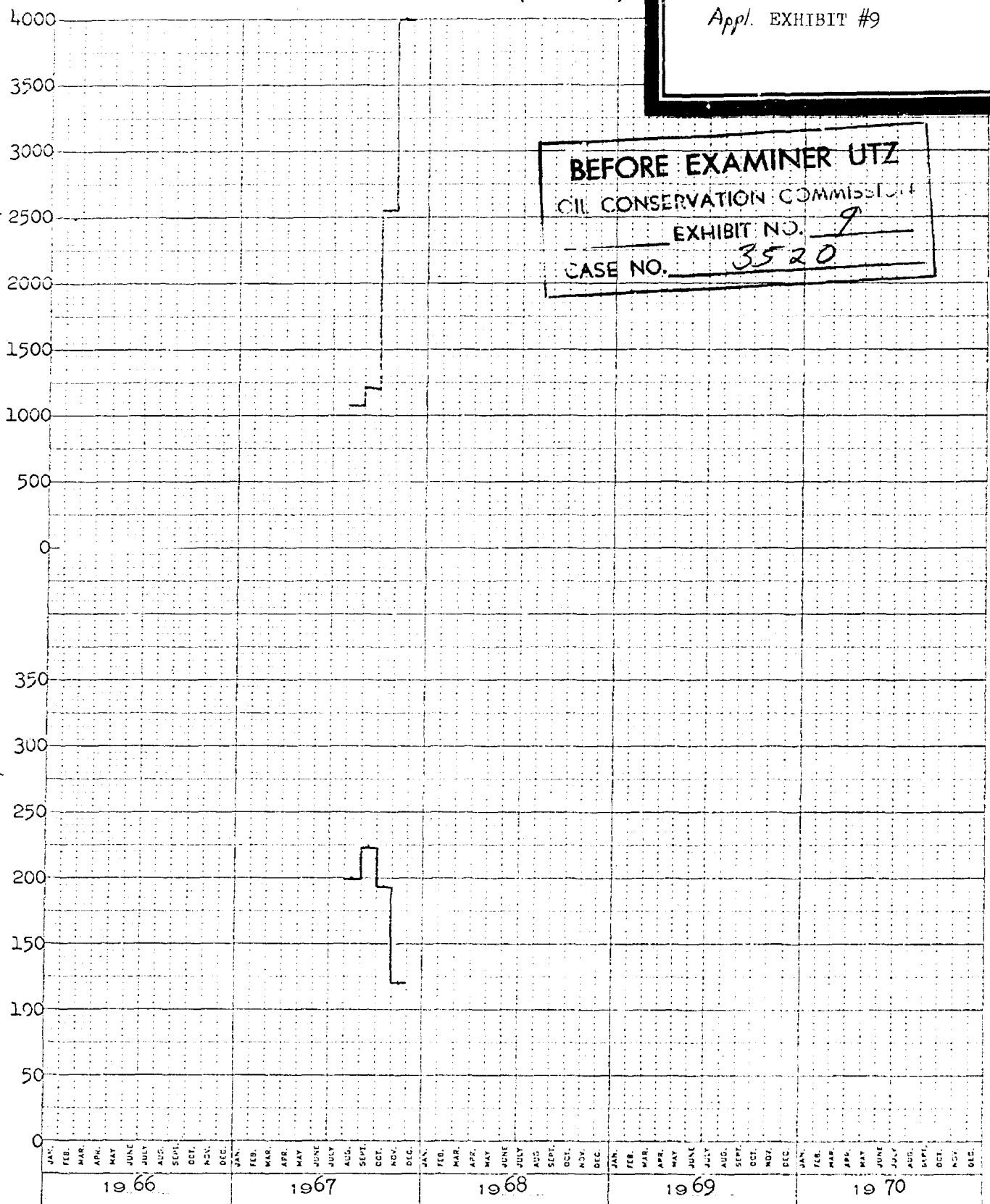
Appl. EXHIBIT #9

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

NO. 340-133 DIETZGEN GRAPH PAPER
5 YEARS BY MONTHS

GOR - CU. FT./REL.

AVG. DAILY OIL PROD. - BBL/DAY



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 9
CASE NO. 3520

SUNSET INTERNATIONAL PET. CORP.
T P STATE 1 L
NORTHEAST BAGLEY (WOLFCAMP)

Case 3520

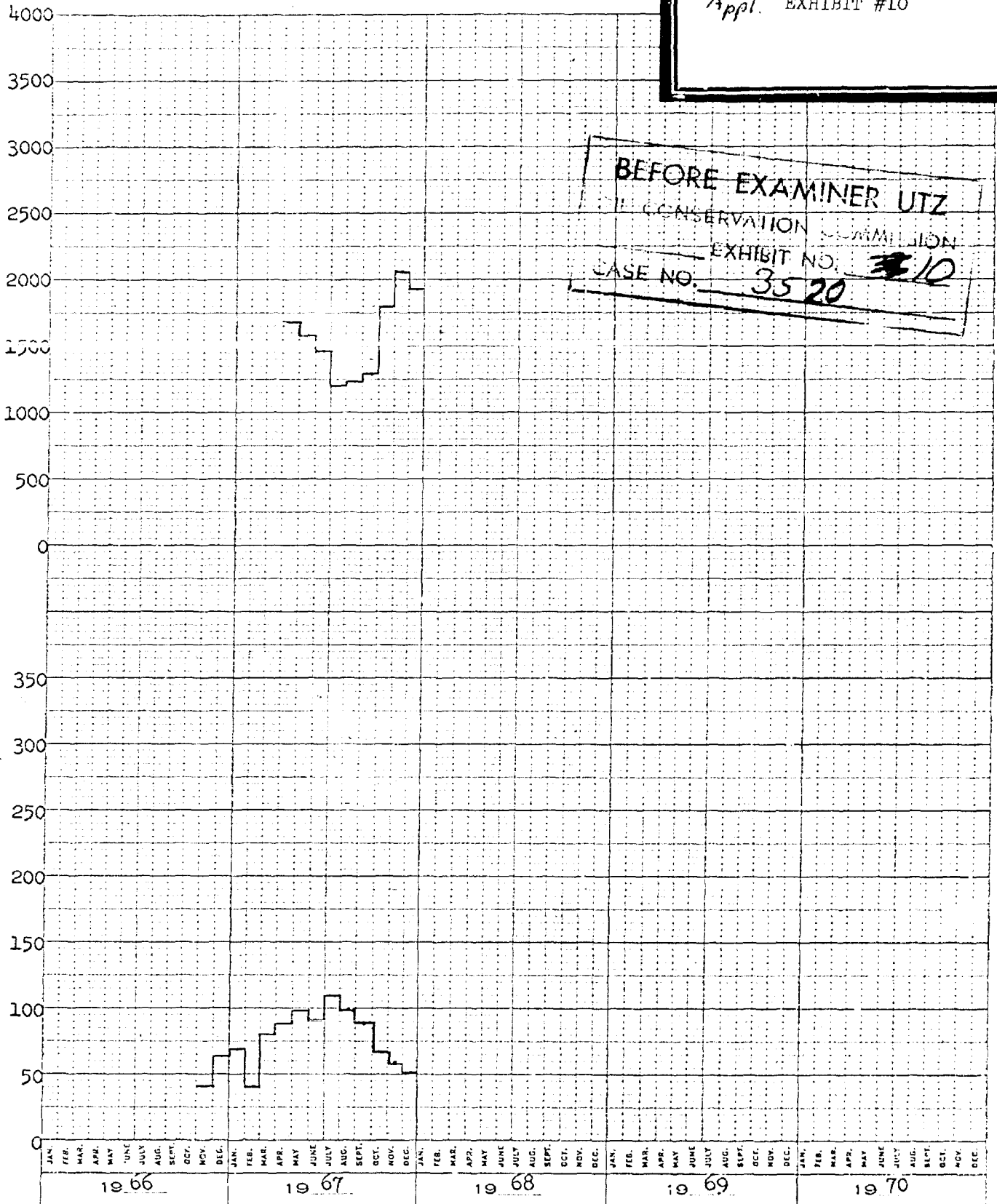
Appl. EXHIBIT #10

EIDENE DIETZEN E.D.
MADE IN U. S. A.

NO. 340-133 DIETZEN GRAPH PAPER
5 YEARS BY MONTHS

AVG. DAILY OIL PROD. - BBL/DAY

COR - CU. FT./BBL.



BEFORE EXAMINER UTZ

CONSERVATION

EXHIBIT NO. 3520

CASE NO. 3520

Exhibit # 11

45 86

North Bagley - Wolfcamp Lea County, N. M.
Economics of 40 Acre Spacing

	<u>Total</u>	<u>Year 1</u>	<u>Year 2</u>
Total Oil, Thous. Bbls.	48.3	40.0	8.3
Total Gas, MMcf	310.	260.	50.
Net Oil	38.9	32.1	6.7
Net Gas	249.	209.	40.
<u>Revenue, Thous. \$ (After Roy.)</u>			
Oil	116.0	96.0	20.0
Gas	15.1	12.7	2.4
Total Revenue	131.1	108.7	22.4
<u>Operating Expenses, Thous. \$</u>			
Operations & Maintenance	4.6	3.6	1.0
Overhead (A & G)	1.5	1.2	0.3
Oil Sev. Tax	6.2	5.1	1.1
Gas Sev. Tax	0.8	0.7	0.1
Total Oper. Expense	13.1	10.6	2.5
<u>Net Income Before FIT, Thous. \$</u>	118.0	98.1	19.9
<u>Capital Investment, Thous. \$</u>	155.0	155.0	
Cash Generated Before FIT	-37.0	(Loss)	

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form O-104
Supersedes Old C-104 and
Effective 1-1-65

DOCKET MAILED

Case 3520

Permian Natural Gas Company

P. O. Box 1513 Houston, Texas 77001

Date 1-12-67

Reason(s) for filing (Check proper box)

Time well

Change in location

Change in ownership

Change in Transporter of:

Oil

Casinghead Gas

Dry Gas

Condensate

Other (Please explain)

If change of ownership give name
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, including Formation	Kind of Lease	Lease No.
State C	1	Wolfcamp	State, Federal or Fee State	O.G. 20
Location				
Unit Letter	C	660	Foot From The North	Line and 1,980
Line of Section	11	Township 11S	Range 33E	NMPM, Lea
County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)					
Pan American Petroleum Company Trucks	P. O. Box 1725 Midland, Texas					
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)					
None						
If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Range	Is gas actually connected?	When
	C	11	11S	33E	No	

If this production is commingled with that from any other lease or pool, give commingling order number: Not Commingled

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Resv.	Diff. Resv.
X	X		X					
Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.					
9-15-66	11-16-66	10,299	9,319					
Elevations (DF, RND, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth					
Gr 4,235.1	Wolfcamp	8,847	8,755					
Perforations	Depth Casing Shoe							
8,848'-58" and 8,868'-75'	10,299'							

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
17-1/2	13" 45# Csg.	360	350
12-1/4	9-5/8" 30# and 40	3850	400
8-3/4	7" 23# - 20#	10299	975
	2-3/8" 4.7# Tubing	8755	

V. TEST DATA AND REQUEST FOR ALLOWABLE
OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
11-14-66	11-15-66	Flow	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
21 Hours	550	0	18/64
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF
847	678	169	002

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MCF	Gravity of Condensate
Producing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

[Signature]

(Signature)

Production Superintendent

(Title)

January 12, 1967

(Date)

OIL CONSERVATION COMMISSION

APPROVED _____, 12

BY _____

TITLE _____

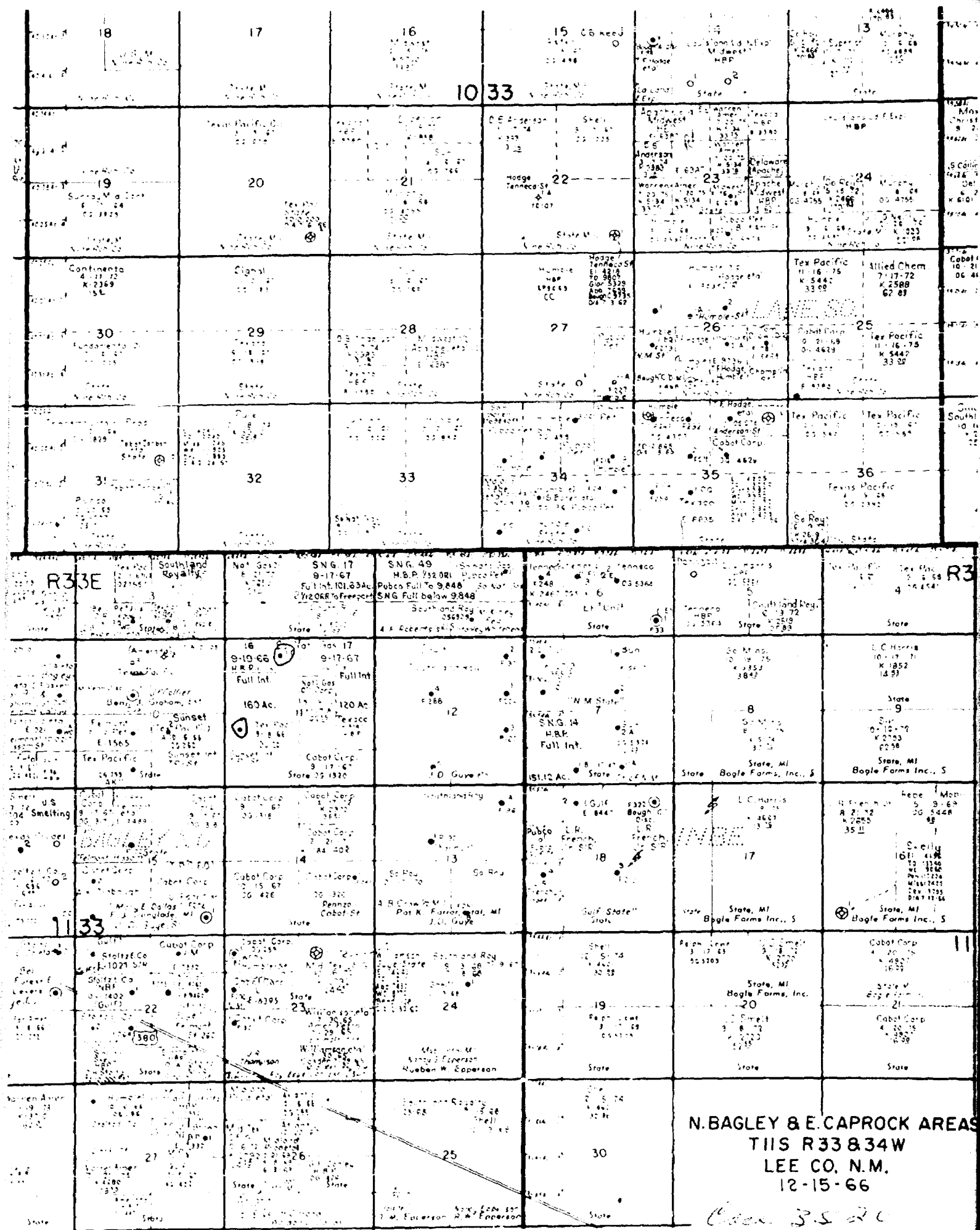
This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with Rule 1104.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for change of owner, well name or number, or transporter or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.



NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATING OF A NEW POOL

Form C-103
 Adopted 2-1-66

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 509.
 If discovery is claimed for more than one zone, separate forms must be filed for each.

Case 3520 **COPY**

Applicant Continental Oil Company		Address P. O. Box 1532 - Houston, Texas 77001	
Well No. 660		Well No. 1	County Tex
Section 9		Twp. 660	
Foot Letter 660		Feet from The North Line and 1980 Feet	
From the West Line of Section 11		To the East 11S	
From the North Line of Section 33E		To the South 33E	
Proposed Pool Name (List in order of preference)			
North Barclay			
Name of Producing Formation Well No.		Date of Filing Form C-103 11-16-66	
8919-53 and 8919-75		11-16-66	
Date of "Discovery" Previously Filed (If Yes, Give Date of Filing)		Date Well was Spudded 9-15-66	
Date of "Discovery" in this Pool?		Date Compl. Ready to Prod. 11-16-66	
Total Length 10299	Plugged Back Depth 9319	Depth Casting Shoe 10299	Elevation (Gr., DF, RKB, RT, etc.) 10299
Oil well potential (Test to be taken only after all load oil has been recovered)			
333 Bbls. Oil Per Day Based On 254 Bbls In 254 Hours; None Bbls Water Per Day Based On 254 Bbls			
In 231 Hours Gas Production During Test 231 Mscf; Gas-Oil Ratio 231 Mscf/Barrel; Flow 12/64			

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas production from this pay or formation only):

Pool Name North Barclay	Name of Producing Formation Middle Penn	Top of Pay 9516	Bottom of Pay 9524	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 4190' West		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool 64'		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name	Top of Pay	Bottom of Pay	Currently Producing?
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool			

None within 2 mile radius that was researched.

In "County Deep" Discovery Allowable Requested for Subject Discovery Well?	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County

In the Subject Well Multiple Completion?	Is Discovery Allowable Requested for other Zone(s)?	If Yes, Name all Such Formations
No	No	

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)

NAME	ADDRESS
Southland Royalty Company	1405 Wilco Building - Midland, Texas
Texas Pacific Oil Company	Box 1067 - 511 W. Ohio - Midland, Texas
Sunset International Petroleum Company	Suite 303 - 201 Well Building - Midland, Texas

Attach evidence that each of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the State Office of the Commission or such intent in writing within ten days after receiving a copy of this application.

Remarks

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be paid from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.

Prepared by Superintendent

November 22, 1966

NEW MEXICO
OIL CONSERVATION COMMISSION
BOX 1980
HOBBS, NEW MEXICO

RECEIVED
DEC - 1 1966
HOUSTON OFFICE

November 1966
No. 322

SUPPLEMENT TO THE OIL PRORATION SCHEDULE

DATE November 28, 1966

PURPOSE: ALLOWABLE ASSIGNMENT FOR A NEW WELL

Effective November 14, 1966, an allowable of 150 barrels of oil per day or a total of 2550 barrels for the month is hereby assigned to the Southern Natural Gas Company, State C, 1-C, 11-11-33, Wolfcamp Wildcat Location, Lea County, Group 5.

JDR/cb

Southern Natural Gas Co.
Western Oil Transportation

OIL CONSERVATION COMMISSION

Joe D. Ramey
SUPERVISOR, DISTRICT NO. 1 *EB*

OPERATOR'S COPY

*Case
35-20*

NEW MEXICO
OIL CONSERVATION COMMISSION
BOX 1980
HOBBS, NEW MEXICO

RECEIVED
DEC - 5 1966
HOUSTON OFFICE

December, 1966

No. 25

SUPPLEMENT TO THE OIL PRORATION SCHEDULE

DATE December 1, 1966

PURPOSE: ALLOWABLE ASSIGNMENT (SECOND MONTH)

Effective December 1, 1966, an allowable of 156 barrels of oil per day or a total of 4836 barrels for the month is hereby assigned to the Southern Natural Gas Company, State "C", 1-C, 11-11-33, Wildcat Location, Lea County Group 5.

JDR/vho
Southern Nat. Gas Co.
Western Oil Transporters

OIL CONSERVATION COMMISSION

Joe J. [Signature]
SUPERVISOR, DISTRICT NO. 1

OPERATOR'S COPY

Case 3520

EXHIBIT 5

Operators and lessees holding leases within one mile of the subject well are listed below and are shown on the attached land plat.

Bell Petroleum Corporation
First Savings Building
Midland, Texas

Cabot Corporation
P. O. Box 4395
Midland, Texas

Mississippi River Fuel Corporation
703 Wilco Building
Midland, Texas

Pubco Corporation
P. O. Box 1419
Albuquerque, New Mexico

Southland Royalty Company
1405 Wilco Building
Midland, Texas

Sunset International Petroleum Company
201 Wall Building
Midland, Texas

Texaco, Inc.
P. O. Box 1270
Midland, Texas

Texas Pacific Oil Company
P. O. Box 4067
Midland, Texas

Union Oil of California,
The Pure Oil Company Division
P. O. Box 671
Midland, Texas

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BEFORE EXAMINED LITE
 OIL CONSERVATION
 Applicant EXHIBIT NO. 3
 CASE NO. 3520

Exhibit #8

CALCULATION OF RESERVOIR PERMEABILITY
 FROM DRILL STEM TEST PRESSURE BUILD UP
 SOUTHERN NATURAL GAS COMPANY
 STATE C-1 WELL
 WOLFCAMP ZONE
 NORTHEAST BAGLEY
 LEA COUNTY, NEW MEXICO

$$k = \frac{(162.5) (Q_{UR_0})}{(mh)}$$

Where:

- k = Reservoir permeability, md.
- Q = Flow rate on drill stem test = 927 bbl/day
- U = Reservoir oil viscosity = .42 cp
- B₀ = Formation volume factor = 1.3
- m = Slope of build up curve = 13 psi/cycle
- h = Avg thickness of formation in the vicinity of the State C-1 = 11.5'

$$k = \frac{(162.5) (.42) (1.3)}{(13) (11.5)}$$

= 550 md

gam/pb
 1-16-67