

CASE 3246: Application of PAUL
DeCLEVA to amend Order R-2691,
Rules for MESA QUEEN POOL.

CASE No.
3246

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON S. HAYS
MEMBER

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

P. O. BOX 2088
SANTA FE

January 22, 1968

Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: Case No. 3246
Order No. R-2935-B
Applicant:
Paul DeCleve

Dear Sir:

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

Very truly yours,

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

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other Mr. J. W. Mays - Blue Danube Oil Company

Case 3246

Heard 1-10-68

Rec. 1-17-68

1. Grant Shells request for a permanent order for the Mesa-Queen-Comination Pool. Order R-2935 or R-2935-A would be made permanent.

Thistle H.

Order No. R-3179-A, Temporary Rules, Vada-Pennsylvanian Pool, be adopted and made permanent for the above-described area or, in the alternative, that the above-described land be deleted from the Lane-Pennsylvanian and Middle-Lane Pennsylvanian Pools and the Vada-Pennsylvanian Pool be extended to include said lands therein.

CASE 3246: (Reopened)

In the matter of Case No. 3246 being reopened pursuant to the provisions of Order No. R-2935-A, which order extended special pool rules for the Mesa Queen Pool, Lea and Eddy Counties, New Mexico. All interested parties may appear and show cause why the gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons should not be reduced and why the special rules and regulations should not be discontinued.

CASE 3709: Application of Kerr-McGee Corporation for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause seeks the promulgation of special pool rules for the Akah Nez-Devonian Oil Pool, San Juan County, New Mexico, including a provision for 80-acre oil proration units.

CASE 3252 (Reopened)

In the matter of Case No. 3252 being reopened pursuant to the provisions of Order No. R-2917-A, which order extended 640-acre spacing units for the McMillan-Morrow Gas Pool, Eddy County, New Mexico, for a period of 18 months. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 10, 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 3690: (Continued from the November 29, 1967, Examiner Hearing)

Application of Roger C. Hanks, Ltd., for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bar-U Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing units and the establishment of 80-acre allowables for said 160-acre units.

CASE 3707: Application of William B. Barnhill for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of his Keohane Well No. 1 located in Unit N of Section 6, Township 20 South, Range 38 East, Lea County, New Mexico, to produce oil from the Skaggs-Grayburg and undesignated Blinbry pool through parallel strings of tubing.

CASE 3708: Application of RTA Oil Producers for special area rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for that area of Lea County, New Mexico, including the Vada-Pennsylvanian, Lane-Pennsylvanian, and a portion of the Middle Lane-Pennsylvanian Pools, and described as follows:

TOWNSHIP 9 SOUTH, RANGE 33 EAST
Section 36: All

TOWNSHIP 9 SOUTH, RANGE 34 EAST
Sections 15 through 22, and 27 through 33: All

TOWNSHIP 10 SOUTH, RANGE 33 EAST
Sections 1, 2, 3, 10, 11 and 12: All
N/2 Section 13;
N/2 Section 14;
N/2 Section 15;

TOWNSHIP 10 SOUTH, RANGE 34 EAST
Sections 4 through 9: All
N/2 Section 16;
N/2 Section 17;
N/2 Section 18;

Applicant proposes the adoption of 160-acre proration units for the above-described area, or within one mile thereof, for the Bough "C" zone of the Pennsylvanian formation with each proration unit to be assigned an 80-acre proportional factor of 4.77 for allowable purposes.

Applicant proposes that the rules presently contained in Commission



TENNECO OIL COMPANY • P. O. BOX 1031 • 1800 WILCO BUILDING • MIDLAND, TEXAS 79701

January 8, 1968

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

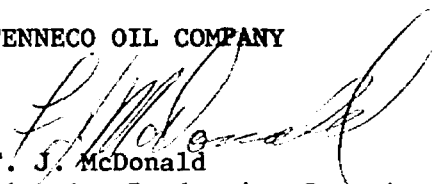
Re: Mesa Queen Field Hearing
January 10, 1968.

Gentlemen:

Tenneco Oil Company as a major operator in the Mesa Queen Field, Lea County, New Mexico has reviewed with Shell Oil Company the present temporary field rules in the Mesa Queen Field. Tenneco concurs with Shell's recommendation that the 5,000 cubic feet per barrel limiting gas-oil ratio for the Mesa Queen Field be made permanent.

Very truly yours,

TENNECO OIL COMPANY


F. J. McDonald
District Production Superintendent

WVP:lr

cc: Shell Oil Company

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. 3246
Order No. R-2935-B

THE MATTER OF CASE NO. 3246 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO. R-
2935, WHICH ORDER ESTABLISHED SPECIAL RULES
FOR THE MESA-QUEEN POOL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 10, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 22nd day of January, 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-2935, dated July 13, 1965, tempo-
rary Special Rules and Regulations were promulgated for the Mesa-
Queen Pool, Lea County, New Mexico.

(3) That by Order No. R-2935-A, dated January 13, 1966,
said temporary Special Rules and Regulations were continued in
full force and effect for an additional two-year period.

(4) That pursuant to the provisions of Order No. R-2935-A,
this case was reopened to allow all interested parties in the
subject pool to appear and show cause why the gas-liquid ratio
limitation of 5,000 cubic feet of gas per barrel of liquid
hydrocarbons should not be reduced and why the special rules
and regulations should not be discontinued.

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CASE No. 3246

Order No. R-2935-B

(5) That the reservoir characteristics of the Mesa-Queen Pool presently available justify the establishment of a gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons until further order of the Commission.

(6) That the evidence establishes that the Mesa-Queen Pool has been and will be efficiently and economically drained and developed under the Special Rules and Regulations promulgated by Orders Nos. R-2935 and R-2935-A.

(7) That the Special Rules and Regulations promulgated by Orders Nos. R-2935 and R-2935-A 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 and gas in the pool.

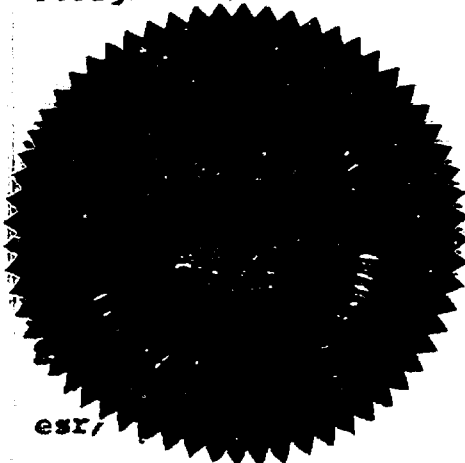
(8) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Orders Nos. R-2935 and R-2935-A 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 Mesa-Queen Pool, promulgated by Orders Nos. R-2935 and R-2935-A, 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, N. Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

W. F. Cargo
DAVID F. CARGO, Chairman

G. B. Hays
GUYTON B. HAYS, Member

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

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. 3246
Order No. R-2935

APPLICATION OF PAUL DeCLEVA
FOR AN AMENDMENT TO ORDER
NO. R-2691, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 12, 1965, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 13th day of July, 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, Paul DeCleva, seeks amendment of Order No. R-2691 to establish special rules and regulations governing the Mesa-Queen Pool in Lea County, New Mexico.

(3) That the applicant seeks the promulgation of rules classifying wells as gas wells or oil wells, establishing spacing units for gas wells and oil wells, and establishing proration rules for gas wells.

(4) That the applicant also seeks the assignment of a retroactive gas allowable to his Tidewater State Well No. 1 located 660 feet from the North line and 660 feet from the

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Order No. R-2935

West line of Section 17, Township 16 South, Range 32 East, NMPM, Lea County, New Mexico, said allowable to be computed under the proposed rules from the effective date of Order No. R-2691.

(5) That the reservoir characteristics of the subject pool indicate that the gas area can be efficiently and economically drained and developed on 160-acre spacing, and that the oil area can be efficiently and economically drained and developed on 40-acre spacing.

(6) That the reservoir characteristics of the subject pool presently available justify the definition of a gas well as a well producing with a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons.

(7) That the reservoir characteristics of the subject pool presently available justify the establishment of a gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons.

(8) That temporary special rules and regulations providing for 160-acre gas well spacing and 40-acre oil well spacing should be promulgated for the subject pool in order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise prevent waste and protect correlative rights.

(9) That the temporary special rules and regulations should provide for the classification of a gas well as a well producing with a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons and should provide for the establishment of a gas-liquid ratio of 5,000 cubic feet of gas per barrel of liquid hydrocarbons in order to afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil or gas, or both, and for this purpose to use his just and equitable share of the reservoir energy.

(10) That the temporary special rules and regulations should establish proration rules for gas wells in order to prevent waste and protect correlative rights.

(11) That this case should be reopened in January, 1966, at which time the operators in the subject pool should be required

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Order No. R-2935

to establish that a gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons will effectively maintain the gas-oil contact in the subject pool, and that the special rules and regulations should be continued in effect.

(12) That the applicant has not established that the assignment of a retroactive allowable to his Tidewater State Well No. 1 would prevent waste or protect correlative rights.

(13) That the applicant's request for the assignment of a retroactive allowable to his Tidewater State Well No. 1 should be denied.

IT IS THEREFORE ORDERED:

That, effective July 1, 1965, Order No. R-2691 is hereby amended to promulgate temporary Special Rules and Regulations for the Mesa-Queen Pool as follows:

**SPECIAL RULES AND REGULATIONS
FOR THE
MESA-QUEEN POOL**

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

RULE 2. (a) Each gas well shall be located on a standard unit containing 160 acres, more or less, consisting of a governmental quarter section.

RULE 2. (b) Each oil well shall be located on a standard unit containing 40 acres, more or less, consisting of a governmental quarter-quarter section.

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

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental quarter section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the quarter section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that ~~all~~ of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well, oil or gas, shall be located no nearer than 330 feet to any quarter-quarter section line.

RULE 5. A well shall be classified as a gas well if it has a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons. A well shall be classified as an oil well if it has a gas-liquid ratio of less than 30,000 cubic feet of gas per barrel of liquid hydrocarbons. The simultaneous dedication of any acreage to an oil well and a gas well is prohibited.

RULE 6. The gas-liquid ratio limitation shall be 5,000 cubic feet of gas per barrel of liquid hydrocarbons.

RULE 7. An oil well which has 40 acres dedicated to it shall be permitted to produce an amount of gas determined by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool. In the event there is more than one oil well on a 40-acre oil proration unit, the operator may produce the allowable assigned to the 40-acre unit from the wells on the unit in any proportion.

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Order No. R-2935

A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 160-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion.

RULE 8. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well, provided however, that in no event shall the test be commenced later than 30 days from the date of first production unless the well is connected to a gas-gathering facility and is producing under a temporary gas allowable assigned in accordance with Rule 11. Any well which is shut in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 9. If the gas-liquid ratio is 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more, the operator shall not produce the well until beneficial use can be made of the gas.

No gas shall be flared or vented from any well classified as an oil well more than 60 days after the well begins to produce or 60 days after the effective date of these rules, whichever is later. Any operator that desires to obtain an exception to the foregoing provisions for a well classified as an oil well shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to grant such an exception if he determines that the granting of it is reasonably necessary. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

RULE 9. Gas-liquid ratio tests shall be taken on all wells during the months of January, April, July, and October of each year. The initial gas-liquid ratio test shall suffice as the first quarterly test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to

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Order No. R-2935

commencement of any such gas-liquid ratio tests, each operator shall file with the Hobbs Office of the Commission a test schedule for its wells, specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 10. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 11. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the Commission's Hobbs Office of Commission Forms C-104 and C-116, properly executed. The District Supervisor of the Commission's Hobbs Office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the number of cubic feet of gas obtained by multiplying the daily top unit allowable for the pool by the limiting gas-liquid ratio for the pool.

RULE 12. Balancing dates shall be 7 o'clock a.m. January the first and 7 o'clock a.m. July the first, and the periods of time bounded by these dates shall be gas proration periods.

RULE 13. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 14. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

RULE 15. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equalling three times its current monthly allowable, it shall be shut in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 16. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 17. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well or reservoir.

RULE 18. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 19. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the oil proration schedule.

RULE 20. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and the

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CASE No. 3246

Order No. R-2935

purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 21. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

RULE 22. Allowables to wells whose classification has changed from oil to gas or from gas to oil as the result of a gas-liquid ratio test shall commence on the first day of the month following the month in which such test was reported, provided that a plat (Form C-102) showing the acreage dedicated to the well and the location of all wells on the dedicated acreage has been filed.

IT IS FURTHER ORDERED:

(1) That all operators shall, prior to August 1, 1965, file with the Commission Form C-102 for each well showing the acreage dedicated to the well.

(2) That all operators shall take new gas-oil ratio tests on all wells and file the results thereof with the Commission on Form C-116 prior to August 1, 1965; that the daily tolerance provision of Commission Rule 502 is hereby waived for the purpose of testing wells at the allowable rate authorized by these rules.

(3) That this case shall be reopened at an examiner hearing in January, 1966, at which time the operators in the subject pool shall show cause why the gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons should not be reduced and why the special rules and regulations promulgated by this order should not be discontinued.

(4) That the applicant's request for assignment of a retro-active gas allowable to his Tidewater State Well No. 1 is hereby denied.

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

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CASE No. 3246

Order No. R-2935

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Jack M. Campbell

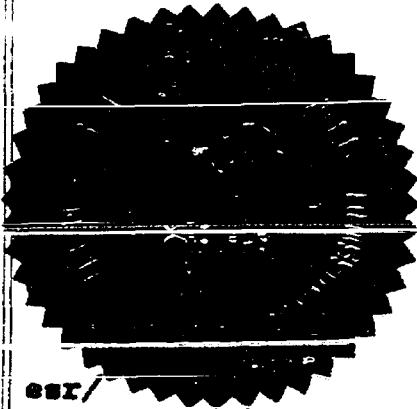
JACK M. CAMPBELL, Chairman

Guston B. Hays

GUSTON B. HAYS, Member

A. L. Porter, Jr.

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



esr/

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. 3246
Order No. R-2935-A

THE MATTER OF CASE NO. 3246 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO. R-
2935, WHICH ORDER ESTABLISHED SPECIAL RULES
FOR THE MESA-QUEEN POOL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
January 5, 1966, at Santa Fe, New Mexico, before Examiner
Daniel S. Nutter.

NOW, on this 13th day of January, 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-2935, dated July 13, 1965, tempo-
rary Special Rules and Regulations were promulgated for the Mesa-
Queen Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-2935,
this case was reopened to allow all operators in the subject pool
to appear and show cause why the Special Rules and Regulations
for the Mesa-Queen Pool should be continued in effect.

(4) That the temporary Special Rules and Regulations for
the Mesa-Queen Pool, promulgated by Order No. R-2935, should be
continued in effect for an additional two-year period in order

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CASE No. 3246

Order No. R-2933-A

to allow the operators in the subject pool sufficient time to gather additional information concerning the reservoir characteristics of the pool.

(5) That this case should be reopened at an examiner hearing in January, 1968, at which time the operators in the subject pool should appear and show cause why the gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons should not be reduced and why the Special Rules and Regulations should not be discontinued.

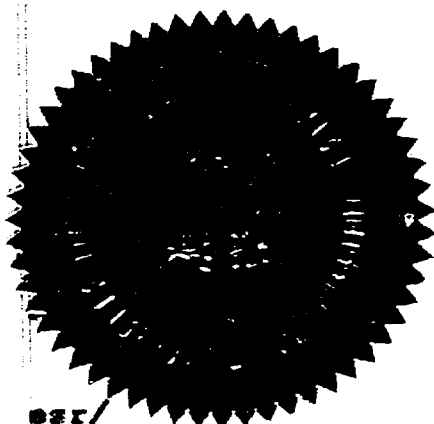
IT IS THEREFORE ORDERED:

(1) That the temporary Special Rules and Regulations for the Mesa-Queen Pool promulgated by Order No. R-2935 are hereby continued in full force and effect for an additional two-year period.

(2) That this case shall be reopened at an examiner hearing in January, 1968, at which time the operators in the subject pool shall appear and show cause why the gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of liquid hydrocarbons should not be reduced and why the Special Rules and Regulations should not be discontinued.

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

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



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Jack M. Campbell
JACK M. CAMPBELL, Chairman

Guyton S. Hays
GUYTON S. HAYS, Member

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

GOVERNOR
JACK M. CAMPBELL
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

January 13, 1966

DOCKET MAILED

Date

12-28-67

Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: Case No. 3246
Order No. R-2935-A
Applicant:

PAUL DECLEVA

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other Mr. Sim Christy

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

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 (10).

LA073 DC162

D MDA081 PD=3 EXTRA MIDLAND TEX 4 309P CST= 1966 JAN 4 PM 2 26

JIM DURRETT=

NEW MEXICO OIL CONSERVATION COMM STATE LAND
OFFICE BLDG SANTA FE NMEX=

THIS CONFIRMS TELEPHONE REQUEST FOR CONTINUATION OF
CASE 3246 FROM JANUARY 5 1966 TO THE NEXT EXAMINERS
HEARING WHICH WE UNDERSTAND WILL BE ABOUT JANUARY
26, 1966=

HINKLE BONDURANT AND CHRISTY FOR THE APPLICANT==

3246 5 1966 26 1966=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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

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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1966 JAN 4 AM 7:30

A L PORTER JR, SECRETARY DIRECTOR

NEW MEXICO OIL CONSERVATION COMMISSION=

STATE LAND OFFICE BLDG SANTA FE NMEX=

DEAR SIR: IN REGARD TO CASE NO 3246 CACTUS DRILLING CO AGREES WITH SHELL OIL CO FOR THE CONTINUATION OF THE SPECIAL 5000-1 G O R RATIO IN THE MESA QUEEN POOL OF LEA COUNTY NEW MEXICO IN OUR OPINION MOST OF THE GAS BEING PRODUCED IS COMING FROM A SAND ABOVE THE OIL SECTION AND COMMUNICATION BEHIND THE PIPE DUE TO THE SAND BEING SO CLOSE TOGETHER IT SEEMS IMPOSSIBLE TO ELIMINATE THIS

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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)

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PROBLEM TO PREVENT WASTE AND PROTECT RIGHTS CACTUS
BELIEVES THAT THE SPECIAL RULES SHOULD BE CONTINUED IN
EFFECT=

GEORGE W BAKER, VICE PRESIDENT, CACTUS DRILLING.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 5, 1966

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

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

CASE 3358: Application of General American Oil Company of Texas for a
waterflood expansion, Eddy County, New Mexico. Applicant, in
the above-styled cause, seeks authority to expand its Burch-
Keely Waterflood Project, authorized by Order No. R-2327 in the
Grayburg-Jackson Pool, by the conversion to water injection,
in stages, of from 10 to 15 wells in Sections 23 and 26, Town-
ship 17 South, Range 29 East, Eddy County, New Mexico.

CASE 3359: Application of Sinclair Oil & Gas Company for a dual completion,
non-standard location, non-standard gas proration unit, and an
exception to Rule 104 C I, Eddy County, New Mexico. Applicant,
in the above-styled cause, seeks approval of the dual completion
(conventional) of its Fren Oil Company Well No. 21 to produce
oil from the Cedar Lake-Abo Pool and to produce gas from an
undesignated Morrow gas pool through parallel strings of tubing.
Applicant further seeks approval of a 200-acre non-standard
gas proration unit for said well comprising the E/2 SW/4, SW/4
SE/4, and E/2 SE/4 of Section 19, Township 17 South, Range 31
East, for said well which is located at an unorthodox gas well
location 560 feet from the South line and 3350 feet from the
East line of said Section 19. Applicant further seeks an
exception to Commission Rule 104 C I for said well which is
located closer than 660 feet to another well producing from
the Abo formation on the same 40-acre tract.

CASE 3360: Application of L. R. French, Jr. for a dual completion, Lea
County, New Mexico. Applicant, in the above-styled cause, seeks
authority to dually complete his Aztec Uncle Well No. 1 located
in Unit C of Section 28, Township 18 South, Range 33 East, Lea
County, New Mexico, to produce oil from the Strawn formation
through the casing-tubing annulus and to produce gas from the
Morrow formation through tubing. In the alternative, applicant
seeks authority to dually complete the well with a single string
of tubing and to commingle the Strawn oil and Morrow gas in the
wellbore by means of a dual-flow choke-assembly.

CASE 3152 (Reopened)

In the matter of Case No. 3152 being reopened pursuant to the
provisions of Order No. R-2821, which order established 80-acre
spacing units for the Osudo-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 3153 (Reopened)

In the matter of Case No. 3153 being reopened pursuant to the
provisions of Order No. R-2822, which order established 80-acre
spacing units for the Osudo-Strawn Pool, Lea County, New Mexico,

January 5, 1966 Examiner Hearing

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 3246 (Reopened)

In the matter of Case No. 3246 being reopened pursuant to the provisions of Order No. R-2935, which order established special rules for the Mesa-Queen Pool, Lea County, New Mexico, for production of oil and gas wells in said pool, including classification of oil wells and gas wells, spacing units for oil wells and gas wells, and the establishment of a gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of oil. All interested parties may appear and show cause why the special rules should be continued in effect.

CASE 2720 (Reopened)

In the matter of Case No. 2720 being reopened pursuant to the provisions of Order No. R-2397-B which continued the original order for an additional year, establishing special rules governing the production of oil and gas wells in the Double-X Delaware Pool, Lea County, New Mexico, including classification of wells as gas wells when the gas-liquid hydrocarbon ratio exceeds 30,000 to one.

CASE 3361: Application of Tidewater Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in its A. B. Coates "C" Well No. 15 located in Unit O of Section 24, Township 25 South, Range 37 East, Justis Field, Lea County, New Mexico, through a perforated interval below 8,000 feet.

CASE 3353: Application of Tesoro Petroleum Corporation to amend Order No. R-2807, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2807, which authorized a waterflood project in the Hospah Unit Area, to permit the production of oil from previously designated water injection wells, to approve unorthodox locations for additional producing wells, and to authorize additional injection wells, all in Section 36, Township 18 North, Range 9 West, McKinley County, New Mexico.

CASE 2945 (Reopened)

In the matter of Case No. 2945 being reopened pursuant to the provisions of Order No. R-2623, which order established 640-acre spacing units for the Antelope Ridge-Devonian 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 160-acre or 320-acre spacing units.

January 5, 1966 Examiner Hearing

CASE 3350 (Continued and readvertised)

Application of International Oil & Gas Corporation for the creation of two new oil pools and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Bone Spring production and a new oil pool for Wolfcamp production in Section 21, Township 18 South, Range 32 East, Lea County, New Mexico, and for the establishment of special rules for each of said pools including provision for 80-acre proration units.

CASE 3362: Application of Carter Foundation Production Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation through five wells located at unorthodox locations in Sections 34 and 35, Township 23 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

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. 2986
Order No. R-2691

APPLICATION OF SHELL OIL COMPANY
TO ESTABLISH A GOR LIMIT, 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 5, 1964, at Santa Fe, New Mexico, before Examiner
Daniel S. Nutter.

NOW, on this 15th day of April, 1964, 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, Shell Oil Company, seeks the estab-
lishment of a special gas-oil ratio limitation of 5,000 cubic feet
of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea
County, New Mexico.

(3) That approval of the subject application will afford to
the owner of each property in the pool the opportunity to produce
his just and equitable share of the oil and gas and for this
purpose to use his just and equitable share of the reservoir
energy.

(4) That approval of the subject application will prevent
waste and protect correlative rights provided the flaring or vent-
ing of gas in the Mesa-Queen Pool is prohibited.

(5) That in order to assure the protection of correlative
rights, the operator of each well in the Mesa-Queen Pool should
file a new gas-oil ratio test with the Commission's Hobbs District
Office on or before May 31, 1964.

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CASE No. 2986
Order No. R-2691

IT IS THEREFORE ORDERED:

(1) That, effective May 1, 1964, the limiting gas-oil ratio in the Mesa-Queen Pool, Lea County, New Mexico, shall be 5,000 cubic feet of gas for each barrel of oil produced; that, effective May 1, 1964, each proration unit in the Mesa-Queen Pool shall produce only that volume of gas equivalent to 5,000 multiplied by top unit oil allowable for the pool.

(2) That the operator of each well in the Mesa-Queen Pool shall file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964, and shall furnish a schedule of test dates to the Commission's Hobbs District Office in order that the tests may be witnessed.

(3) That no gas shall be flared or vented in the Mesa-Queen Pool more than 60 days after a well begins to produce or 60 days after the effective date of this order, whichever is later. Any operator desiring to obtain an exception to this provision shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to approve such an application if he determines that the exception is necessary to prevent waste. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

(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

JACK M. CAMPBELL, Chairman

E. S. WALKER, Member

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

S E A L

esr/

MAIN

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CO

HINKLE, BONDURANT & CHRISTY
ROSWELL, NEW MEXICO

July 26, 1965

Sath, Montgomery, Federico and Andrews
350 East Palace Avenue
Box 2307
Santa Fe, New Mexico

Attention: Mr. Richard S. Morris

Re: NMCCC Case 3246 and 3247
Application of Paul DeCieva
Our No. 65-5-3
Your No. _____

Dear Dick,

Yesterday I had a long telephone conversation with Mr. Flanagan with respect to the captioned, and I advised him of your letter to the Commission dated July 1, 1965.

I have suggested to Mr. Flanagan that he get together with appropriate engineering personnel of Shell Oil Company to see if the matter can be worked out to everyone's satisfaction. Frankly, I do not know of any reason either you or I should be at the meeting since it is primarily an engineering problem, but I will be happy to meet with you at any time on the case. If you would prefer a formal meeting, we will be happy to make our conference room available to you for such purpose.

By carbon copy hereof I am notifying the New Mexico Oil Conservation Commission of the foregoing, and requesting Mr. Flanagan to notify me of the outcome of the proposed meeting.

Best personal regards.

Respectfully,

HINKLE, BONDURANT & CHRISTY

By *[Signature]*

SBC/rml

cc: Mr. Elvis Utz ✓

cc: Mr. Donald A. Flanagan

Case 3246

Heard - 5-12-65

Rec. 6-25-65

1. Grant this application as follows:

(a) Use Double-X Delaware rules
as ~~corrected~~ noted on attached
order R-2387.

(b) revise or amend R-2681

(c) Use 5000:1 H.R. with provision
in order to call a hearing in
Jan 1966 to show ~~source~~ that
5000:1 is maintaining ~~stable~~
Gas-oil contacts.

(d) Denie any retroactive allowance
for the De Clara - Delaware Lt.
#1, 660/N+U-17-169-326.

(e) begin production ~~July~~ 1. 1965
July.

Thurs Wf

May 12, 1965 Examiner Hearing

CASE 3246: Application of Paul DeCleva for an amendment to Order No. R-2691, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2691, which order prescribes pool rules for the Mesa Queen Pool, Lea County, New Mexico. Applicant, among other things, requests that said rules be amended to include the definition of gas wells and oil wells in said pool, the assignment of 40 acres to oil wells, and the assignment of 160 acres to gas wells.

CASE 3247: Application of Paul DeCleva for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit for his Tidewater State Well No. 1 located in Unit D of Section 17, Township 16 South, Range 32 East, Mesa Queen Pool, Lea County, New Mexico, said unit to comprise the W/2 NW/4, NE/4 NW/4, and NW/4 NE/4 of said Section 17.

CASE 3248: Application of Texaco Inc. for commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard production from Tract 1 of its W. L. Nix Lease comprising the W/2 SE/4 and E/2 SW/4 of Section 17, and from Tract 2 of said lease comprising the W/2 NE/4 and E/2 NW/4 of Section 20, all in Township 22 South, Range 38 East, Lea County, New Mexico, allocating the production to each tract on the basis of periodic well tests. Applicant further seeks administrative procedure to extend the above-described commingled method to other zones that may prove productive from said lease.

Docket No. 13-65

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 12, 1965

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

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

CASE 2691 (Reopened):

In the matter of Case No. 2691 being reopened pursuant to the provisions of Order No. R-2573-A, which order continued 640-acre gas proration units for the Lusk-Morrow Gas Pool, Lea County, New Mexico, for one year. All interested parties may appear and show cause why said pool should not be developed on 160-acre proration units.

CASE 3016 (Reopened):

In the matter of Case No. 3016 being reopened pursuant to the provisions of Order No. R-2697, which order established 80-acre spacing units for the Vacuum-Upper 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 3245: Application of Worldwide Petroleum Corporation for creation of an oil pool and for an amendment to Order No. R-2095, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the Seven Lakes Oil Pool for production of oil from the Menefee formation in Township 18 North, Range 10 West, McKinley County, New Mexico. Applicant further seeks an order amending Order No. R-2095, which authorized a waterflood project in the Seven Lakes area, McKinley County, New Mexico. Applicant seeks the designation of the SW/4 of Section 17, SE/4 of Section 18, N/2 of Section 19, and the NW/4 of Section 20, all in Township 18 North, Range 10 West, to be the waterflood project area. Applicant further seeks authority to inject water in the Seven Lakes Pool through 8 wells drilled at various orthodox and unorthodox locations within said project area, and to drill for water injection purposes and as producers numerous other wells in said project area. Development of the project area would be on a standard 10-acre 5-spot water injection pattern subject to amendment as need may arise upon administrative approval by the Secretary-Director of the Commission.



Mobil Oil Company

A Division of Socony Mobil Oil Company, Inc.

P. O. BOX 1800, HOBBS, NEW MEXICO 88240

April 23, 1965

1965 APR 24 AM 8:10

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

RE: PAUL DeCLEVA APPLICATION
MESA QUEEN POOL
LEA COUNTY, NEW MEXICO

Dear Mr. Porter:

Socony Mobil Oil Company, Inc. is not an operator in the subject pool and therefore has no interest in the DeCleva application for amended field rules.

Yours very truly,

A handwritten signature in cursive script, appearing to read "Glen W. Barb".

Glen W. Barb
Producing Superintendent

JCGordon/jlh

cc:
Paul DeCleva
606 No. Colorado St.
Midland, Texas 79704

SETH, MONTGOMERY, FEDERICI & ANDREWS
Attorneys and Counsellors at Law
P. O. Box 2307
Santa Fe, New Mexico

June 18, 1965

Mr. S. B. Christy IV
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico

Re: Applications of Paul DeCleva
NMOCC Cases 3246 and 3247
Mesa Queen Pool

Dear Sir:

We have your letter of June 17 proposing to submit revised rules in the above-referenced cases. Shell Oil Company will be most willing to review any proposals you may have and try to agree on them without the necessity of further hearing.

Sincerely yours,

Richard J. Morris

RSM:cd

CC - Mr. Bob Johnson
Senior Reservoir Engineer
Shell Oil Company
P. O. Box 1858
Roswell, New Mexico

✓ Mr. Elvis Utz
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

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Y

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. 2720
Order No. R-2397

APPLICATION OF TENNECO OIL COMPANY
FOR SPECIAL RULES AND REGULATIONS
GOVERNING WELLS IN THE DOUBLE-X
DELAWARE POOL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on December 6, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 26th day of December, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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, Tenneco Oil Company, seeks the promulgation of special rules and regulations for the Double-X Delaware Pool, Lea County, New Mexico, including a provision for 40-acre oil proration units, a system for classification of a well as a gas well, and a provision for 160-acre units for wells so classified.

(3) That the ~~evidence presented concerning the~~ reservoir characteristics of the subject pool indicate that the gas area can be efficiently and economically drained and developed on 160-acre proration units, and that the oil area can be efficiently and economically drained and developed on 40-acre proration units.

(4) That the reservoir characteristics ~~of the subject pool~~ ^{presently available} justify the definition of a gas well as a well producing with a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons.

(5) That the gas-liquid ratio limitation for the Double-X Delaware Pool should be 5,000 cubic feet of gas per barrel of liquid hydrocarbons produced, and that an oil well should be permitted to produce an amount of gas determined by multiplying the top unit oil allowable for said pool by the limiting gas-liquid ratio for the pool. That a gas well should be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by 5,000 and by a fraction, the numerator of which would be the number of acres dedicated to the particular gas well and the denominator of which would be 40.

(6) That appropriate provisions should be made for any gas well which has an underproduced or an overproduced status as of the end of a gas proration period.

(7) That the subject application should be granted and temporary rules established for a period of one year during which time further information should be gathered and presented to the Commission at an examiner hearing during the month of January, 1964.

IT IS THEREFORE ORDERED:

(1) That Temporary Special Rules and Regulations for the Double-X Delaware Pool are hereby established as follows, effective January 1, 1963.

July - 11 1965

TEMPORARY SPECIAL RULES AND REGULATIONS
FOR THE

DOUBLE-X DELAWARE POOL

Mesa Green Pool D...am

RULE 1. Each well completed or recompleted in the Delaware formation within the boundary of the Double-X Delaware Pool or within one mile thereof, and not nearer to or within the boundaries of another designated Delaware pool, shall be drilled, spaced, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. (a) Each gas well completed or recompleted in the Double-X Delaware Pool shall be located on a tract consisting of approximately 160 acres which may reasonably be presumed to be productive of gas from said pool, and which shall comprise a single governmental quarter section, being a legal subdivision of the United States Public Lands Survey. For purposes of these rules, a unit consisting of between 158 and 162 contiguous surface acres shall be considered a standard gas unit.

RULE 2. (b) For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2(a) without notice and hearing where an application has been filed in due form, and where 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 where the following facts exist and the following provisions are complied with:

(1) The non-standard unit consists of contiguous quarter-quarter sections or lots.

(2) The non-standard unit consists of not more than 162 acres and lies wholly within a single governmental quarter section.

(3) The entire non-standard unit may reasonably be presumed to be productive of gas from said pool.

(4) The applicant presents written consent in the form of waivers from all offset operators, and from all operators owning interests in the quarter section in which any part of the non-standard unit is situated and which acreage is not included in the non-standard unit.

(5) In lieu of Paragraph 4 of this rule, the applicant may furnish proof of the fact that all or the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if, after a period of 30 days, no such operator has entered an objection to the formation of the non-standard unit.

RULE 2. (c) The District Supervisor shall have authority to approve non-standard gas proration units without notice and hearing and without administrative approval by the Secretary-Director if such unit consists of less than 158 contiguous surface acres and the non-standard unit is necessitated by a variation in the United States Public Lands Survey.

RULE 2. (d) The allowable assigned to any non-standard gas proration unit shall bear the same ratio to a standard allowable in said pool as the acreage in the unit bears to 160 acres.

RULE 3. Each oil well completed or recompleted in the ~~Double-X Delaware~~ Pool shall be located on a unit containing approximately 40 acres, which may reasonably be presumed to be productive of oil from said pool, and which consists of a single governmental quarter-quarter section. For purposes of these rules, a unit consisting of between 39½ and 40½ contiguous surface acres shall be considered a standard unit.

RULE 4. Each well, oil or gas, ~~completed or recompleted in the Double-X Delaware Pool~~ shall be located no nearer than 330 feet to any quarter-quarter section line.

RULE 5. A well ~~in the Double-X Delaware Pool~~ shall be classified as a gas well if it has a gas-liquid ratio of

30,000 or more cubic feet of gas per barrel of liquid hydrocarbons. A well ~~in said pool~~ shall be classified as an oil well if it has a gas-liquid ratio of less than 30,000 cubic feet of gas per barrel of liquid hydrocarbons. The simultaneous dedication of any acreage to ~~both~~ an oil well and a gas well is ~~strictly~~ prohibited.

⁵⁰⁰⁰
RULE 6. The gas-liquid ratio limitation ~~for the Double-X Delaware Pool~~ shall be ~~5000~~ cubic feet of gas per barrel of liquid hydrocarbons produced.

^{an}
RULE 7. ~~Any~~ oil well ~~in the Double-X Delaware Pool~~ which has 40 acres dedicated to it shall be permitted to produce an amount of gas determined by multiplying the top unit oil allowable for ~~the~~ pool by ~~5000~~ the ^{limiting} gas-liquid ratio for the pool. In the event there is more than one oil well on a 40-acre oil proration unit, the operator may produce the allowable assigned to the 40-acre unit from ~~said~~ wells in any proportion.

^{the}
A ~~any~~ gas well ~~in the Double-X Delaware Pool~~ shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by ~~5000~~ and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 160-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from ~~said~~ wells in any proportion.

^{the}
RULE 8. The operator of each newly completed well ~~in the Double-X Delaware Pool~~ shall cause a gas-liquid ratio test to be taken on ~~said~~ well upon recovery of all load oil from the well, provided however, that in no event shall the test be commenced later than 30 days from the date of first production unless the well is connected to a gas-gathering facility and is producing under a temporary gas allowable assigned in accordance with Rule 11. ~~Provided further, that~~ Any well which is shut-in shall be exempted from the ~~aforesaid~~ gas-liquid ratio test requirement so long as it remains shut-in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 9. If the gas-liquid ratio is 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more, the operator shall not produce the well until beneficial use can be made of the gas.

^{these rules}
No gas shall be flared or vented from any well classified as an oil well more than 60 days after the well begins to produce or 60 days after the effective date of ~~this order~~, whichever is later. Any operator that desires to obtain an exception to the foregoing provisions for a well classified as an oil well shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The

-5-

CASE No. 2720

Order No. R-2397

Secretary-Director is hereby authorized to grant such an exception if he determines that the granting of it is reasonably necessary. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

RULE 9. Gas-liquid ratio tests shall be taken on all wells ~~in the Double-X Delaware Pool, and on all wells producing from the Delaware formation within one mile of the boundaries of the Double-X Delaware Pool which are not within another designated Delaware oil pool,~~ during the months of January, April, July, and October of each year. The initial gas-liquid ratio test shall suffice as the first quarterly test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the Hobbs Office of the Commission a test schedule for its wells, specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 10. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 11. Any well completed ~~in the Double-X Delaware Pool~~ after the effective date of this order shall receive an allowable only upon receipt by the Commission's Hobbs Office of Commission Forms C-104, C-110, and C-116, all properly executed. The District Supervisor of the Commission's Hobbs Office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the number of cubic feet of gas obtained by multiplying the daily top unit allowable for the ~~Double-X Delaware Pool~~ *pool by the limiting gas-liquid ratio for the pool.*

RULE 12. *Balancing dates shall be* ~~The dates~~ 7 o'clock a.m. January the first and 7 o'clock a.m. July the first ~~shall be known as balancing dates,~~ and the periods of time bounded by these dates shall be ~~known as~~ *the* gas proration periods, ~~for the Double-X Delaware Pool.~~

RULE 13. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry

such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

✓ RULE 14. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

✓ RULE 15. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut-in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equalling three times its current monthly allowable, it shall be shut-in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 16. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 17. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut-in upon a showing after notice and hearing that complete shut-in of the well would result in material damage to the well ~~or~~ reservoir.

RULE 18. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 19. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on ~~either Form C-111 or Form C-114 (whichever is applicable)~~ with the wells being listed in ~~approximately~~ the same order as they are listed on the oil proration schedule.

CASE No. 2720
Order No. R-2397

RULE 20. Failure to comply with any provision of ~~this~~ ^{these} ~~order or the rules contained herein~~ shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and the purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 21. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

RULE 22. Allowables to wells whose classification has changed from oil to gas or from gas to oil as the result of a gas-liquid ratio test shall commence on the first day of the month following the month in which such test was reported, provided that a plat (Form ~~C-120~~) showing the acreage dedicated to the well and the location of all wells on the dedicated acreage ~~have~~ ^{has} been filed.

has July 15, 1965
(2) That all operators ~~in the Double X Delaware Pool~~ shall, prior to ~~January 15, 1963~~, file with the Commission Form ~~C-120~~, ^{C-102} Well Location and Acreage Dedication Plat, for each well in said pool, showing thereon the acreage being dedicated to ~~said~~ well. Operators shall also take new gas-oil ratio tests on all wells and file the results thereof with the Commission on Commission Form C-116 prior to ~~February 1, 1963~~. For purposes of testing wells at the allowable rate authorized by these rules, the daily tolerance provision of Commission Rule 502 I is hereby waived.

Aug 1, 1965
(3) That this case shall be reopened at an examiner hearing in January, 1966, at which time the applicant and all interested parties shall present information concerning the reservoir characteristics of the subject pool and the effectiveness of the temporary rules and regulations established by this order, *with particular emphasis in regard to the proper GOR necessary*

(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

TOM BOLACK, Chairman

E. S. WALKER, Member

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

S E A L

esr/

*To maintain the
gas-oil content in
the pool.*

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
HINKLE BUILDING
ROSWELL, NEW MEXICO

OF COUNSEL: HIRSH M. DOW
TELEPHONE 622-5510
AREA CODE 505
POST OFFICE BOX 10

June 17, 1965

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

Attention: Mr. Elvis Utz

Re: NMOCC Cases 3246 and 3247
Application of Paul DeCleva
Mesa Queen Pool

Gentlemen:

We are this date in receipt of a copy of a letter dated June 16, 1965 from attorney Richard S. Morris to the Commission with respect to the captioned.

You should have now received from the printer a reservoir study of the Mesa Queen Field involved in the captioned, and the delay in your receipt is occasioned by virtue of printing delays which we trust have not inconvenienced the parties. A copy of the reservoir study has been forwarded to Mr. Morris.

If acceptable to the Commission, our client would revise the proposed rules for the Mesa Queen Pool, modelling them, more or less, with the rules for the Double-X Delaware Pool. It would be hoped that several of the controversies between the interested parties could be resolved if proposed revised rules were submitted. We of course recognize that we do not have an absolute right to now propose additional rules (without hearing, etc.) but we would be most willing to work the matter out with Mr. Morris, whose client we believe was the only adverse party involved at the hearing.

We would appreciate your expression with respect to submittal of proposed revised rules.

Respectfully,

HINKLE, BONDURANT & CHRISTY

By



SBC:jy
cc: Mr. Donald A. Flanagan
cc: Mr. Richard S. Morris

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
RICHARD S. MORRIS
JOHN G. JASPER
SUMNER G. SUELL

SETH, MONTGOMERY, FEDERICI & ANDREWS

ATTORNEYS AND COUNSELORS AT LAW

350 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87501

July 1, 1965

POST OFFICE BOX 2307
AREA CODE 505
TELEPHONE 982-3876

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

Attention: Mr. Elvis Utz

Re: Applications of Paul DeCleva, NMOC Cases 3246 & 3247

Gentlemen:

Shell Oil Company has reviewed the report submitted to the Commission in the above cases by Mr. Flanagan on behalf of the applicant Mr. DeCleva. While we do not agree with everything shown by Mr. Flanagan in this report, we see nothing contained therein to support the applicant's request for retroactive allowables for gas wells.

Since we believe that the applicant has failed to substantiate its request for retroactive allowables, Shell Oil Company sees no reason to request that the cases be reopened, but merely wishes for the Commission to recognize that it continues its opposition to the retroactive allowable portion of Mr. DeCleva's applications.

Very truly yours,

Richard S. Morris

RSM:mfb

cc: Mr. Simeon B. Christy
Attorney at Law
P.O. Box 10
Roswell, New Mexico

Mr. Bob Johnson
Shell Oil Company
P.O. Box 1858
Roswell, New Mexico

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
RICHARD S. MORRIS
JOHN G. JASPER
SUMNER G. BUELL

SETH, MONTGOMERY, FEDERICI & ANDREWS

ATTORNEYS AND COUNSELORS AT LAW
350 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87501

June 16, 1965

POST OFFICE BOX 2307
AREA CODE 505
TELEPHONE 982-3876

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

Attention: Mr. Elvis Utz

Re: Cases 3246 and 3247, Applications Of
Paul DeCleva, Mesa-Queen Pool,
Lea County, New Mexico

Gentlemen:

The above-referenced cases were heard by Examiner Elvis Utz on May 12, 1965, at which time the applicant was allowed until June 1st to submit additional engineering information to the Commission in support of his request for retroactive allowables. By letter of May 28, 1965 the attorneys for the applicant requested an extension of time to June 15th to supply the additional information, and by letter of June 2nd this request was granted by the Commission.

We have checked with the Examiner and he has not received the additional information nor have we received copies of information that were to be submitted to us at the time of transmittal to the Commission. Accordingly, we assume that Mr. DeCleva has abandoned his application, at least insofar as he has requested the assignment of allowables to gas wells on a retroactive basis.

Very truly yours,

RSM:dd

CC - Mr. S. B. Christy IV
Hinkle, Bondurant & Christy
Attorneys at Law
P. O. Box 10
Roswell, New Mexico

Mr. Bob Johnson
Senior Reservoir Engineer
Shell Oil Company
P. O. Box 1858
Roswell, New Mexico

Richard S. Morris

CLASS OF SERVICE

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

WESTERN UNION TELEGRAM

(09).

201 (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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A L PORTER JR, DIRECTOR=

NEW MEXICO OIL CONSERVATION COMMISSION STATE LAND
OFFICE BLDG SANTA FE NMEX=
DEAR SIR, CACTUS DRILLING CO CONCURS WITH SHELL OIL CO'S
STAND ON CASE NUMBERS 3246 AND 3247=
GEORGE W BAKER VICE PRESIDENT CACTUS DRILLING CO=

11 11 11 OT MAY 99

11 11 11

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

PAUL BELLEZA
606 NORTH COLORADO ST.
DALLAS, TEXAS

May 5, 1965

Mr. D. S. Rutter, Chief Engineer
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

1965 MAY 10 10:10

Dear Sir:


The undersigned acknowledges receipt of Paul Belleza's request to amend present Pesa Queen Pool field rules and the request for a non-standard proration unit for his Tidewater State No. 1 well located 660' E1/4 and E1/4 of Section 17, Township 16 South, Range 12 East, Pesa Queen Pool, Lea County, New Mexico.

We concur with the proposed amendments and waive all objections to the granting of a non-standard proration unit for the Paul Belleza Tidewater State No. 1 well.

Yours very truly,

TIDEWATER OIL COMPANY

BY:


PRORATION SUPERVISOR

MESA-QUEEN POOL
(Gas-Oil Ratio and Flaring of Gas Limitations)
Lea County, New Mexico

Order No. R-2691, Adopting a Gas-Oil Ratio Rule for and Authorizing Flaring of Gas in the Mesa-Queen Pool, Lea County, New Mexico, May 1, 1964.

Application of Shell Oil Company to Establish a COR Limit, Lea County, New Mexico.

CASE NO. 2986
Order No. R-2691

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m., on February 5, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of April, 1964, 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, Shell Oil Company, seeks the establishment of a special gas-oil ratio limitation of 5000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

(3) That approval of the subject application will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil and gas and for this purpose to use his just and equitable share of the reservoir energy.

(4) That approval of the subject application will prevent waste and protect correlative rights provided the flaring or venting of gas in the Mesa-Queen Pool is prohibited.

(5) That in order to assure the protection of correlative rights, the operator of each well in the Mesa-Queen Pool should file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964.

IT IS THEREFORE ORDERED:

(1) That, effective May 1, 1964, the limiting gas-oil ratio in the Mesa-Queen Pool, Lea County, New Mexico, shall be 5000 cubic feet of gas for each barrel of oil produced; that, effective May 1, 1964, each proration unit in the Mesa-Queen Pool shall produce only that volume of gas equivalent to 5000 multiplied by top unit oil allowable for the pool.

(2) That the operator of each well in the Mesa-Queen Pool shall file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964, and shall furnish a schedule of test dates to the Commission's Hobbs District Office in order that the tests may be witnessed.

(3) That no gas shall be flared or vented in the Mesa-Queen Pool more than 60 days after a well begins to produce or 60 days after the effective date of this order, whichever is later. Any operator desiring to obtain an exception to this provision shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to approve such an application if he determines that the exception is necessary to prevent waste. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

(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.

TOBAC-PENNSYLVANIAN POOL
Chaves County, New Mexico

Order No. R-2685, Creating and Adopting Temporary Operating Rules for the Tobac-Pennsylvanian Pool, Chaves County, New Mexico, April 1, 1964.

Application of Cabot Corporation for the Creation of a New Oil Pool and for Special Pool Rules, Chaves County, New Mexico.

CASE NO. 3003
Order No. R-2685

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on March 11, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 31st day of March, 1964, 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, Cabot Corporation, seeks the creation of a new oil pool for Pennsylvanian production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 80-acre proration units.

(3) That the Signal State Well No. 1, located in Unit A of Section 29, Township 8 South, Range 33 East, NMPM, Chaves County, New Mexico, has discovered a separate common source of supply which should be designated the Tobac-Pennsylvanian Pool; that the vertical limits of said pool should be the Pennsylvanian formation and the horizontal limits of said pool should be the SE/4 of Section 20, the SW/4 of Section 21, the NW/4 of Section 28, and the NE/4 of Section 29, Township 8 South, Range 33 East, NMPM, Chaves County, New Mexico.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Tobac-Pennsylvanian 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 top of the perforations in the Pennsylvanian formation in the Signal State Well No. 1 is at 9058 feet; that the special rules and regulations should therefore provide for an 80-acre proportional factor of 4.77 for allowable purposes.

(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 April, 1965, at which time the operators in the subject pool should be prepared to appear and show cause why the Tobac-Pennsylvanian Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Chaves County, New Mexico, classified as an oilpool for Pennsylvanian production is hereby created and designated the Tobac-Pennsylvanian Pool, with vertical limits comprising the Pennsylvanian formation and horizontal limits comprising the SE/4 of Section 20, the SW/4 of Section 21, the

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

June 2, 1965

C
O
P
Y

Hinkle, Bondurant & Christy
Attorneys at Law
Hinkle Building
Post Office Box 10
Roswell, New Mexico

Attention: Mr. S. B. Christy IV

Re: Cases 3246 and 3247

Gentlemen:

I have contacted Dick Morris concerning your letter of May 28, 1965. He has no objection to your request to submit the additional engineering information to the Commission on or before June 15, 1965, with the understanding that he will have fifteen days thereafter to file any desired answer or response.

This will be satisfactory to the Examiner and he has approved your request.

Very truly yours,

J. M. DURRETT, Jr.
Attorney

JMD/esr

cc: Mr. Richard S. Morris
Attorney at Law
P. O. Box 2307
Santa Fe, New Mexico

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

LAW OFFICES
HINKLE, BONDURANT & CHRISTY

HINKLE BUILDING
ROSWELL, NEW MEXICO

OF COUNSEL HIRAM M. DOW

TELEPHONE 622-6510
AREA CODE 505
POST OFFICE BOX 10

May 28, 1965.

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

Attention: Mr. Elvis A. Utz, Examiner

Re: NMOCC Cases 3246 and 3247
Application of Paul DeCleva
Mesa Queen Pool

Gentlemen:

At the hearing on the captioned, held in Santa Fe, New Mexico on May 12, 1965, the witness in behalf of the applicant, Mr. Donald Flannigan, was requested to submit to the Commission certain additional engineering information with relation to various matters raised at the hearing.

Mr. Flannigan advises us that he has substantially completed compiling the requested information, but it will be approximately one week to ten days before the matter is in final form for submission.

It would therefore be greatly appreciated if the applicant may have to and including June 15, 1965 in which to submit the relevant data, with the understanding that attorney Richard Morris (attorney for Shell) will have fifteen days thereafter in order to file any desired answer or response.

Thanking you for your consideration to the foregoing, we are,

Yours very truly,

HINKLE, BONDURANT & CHRISTY

By 

SBC:jy
cc: Mr. Richard Morris
cc: Mr. Donald Flannigan
cc: The Theiss Drilling Company

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

July 13, 1965

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

Re: Case No. 3246 & 3247
Order No. R-2935 & R-2936
Applicant:

PAUL DECLEVA

Dear Sir:

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

very truly yours,

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

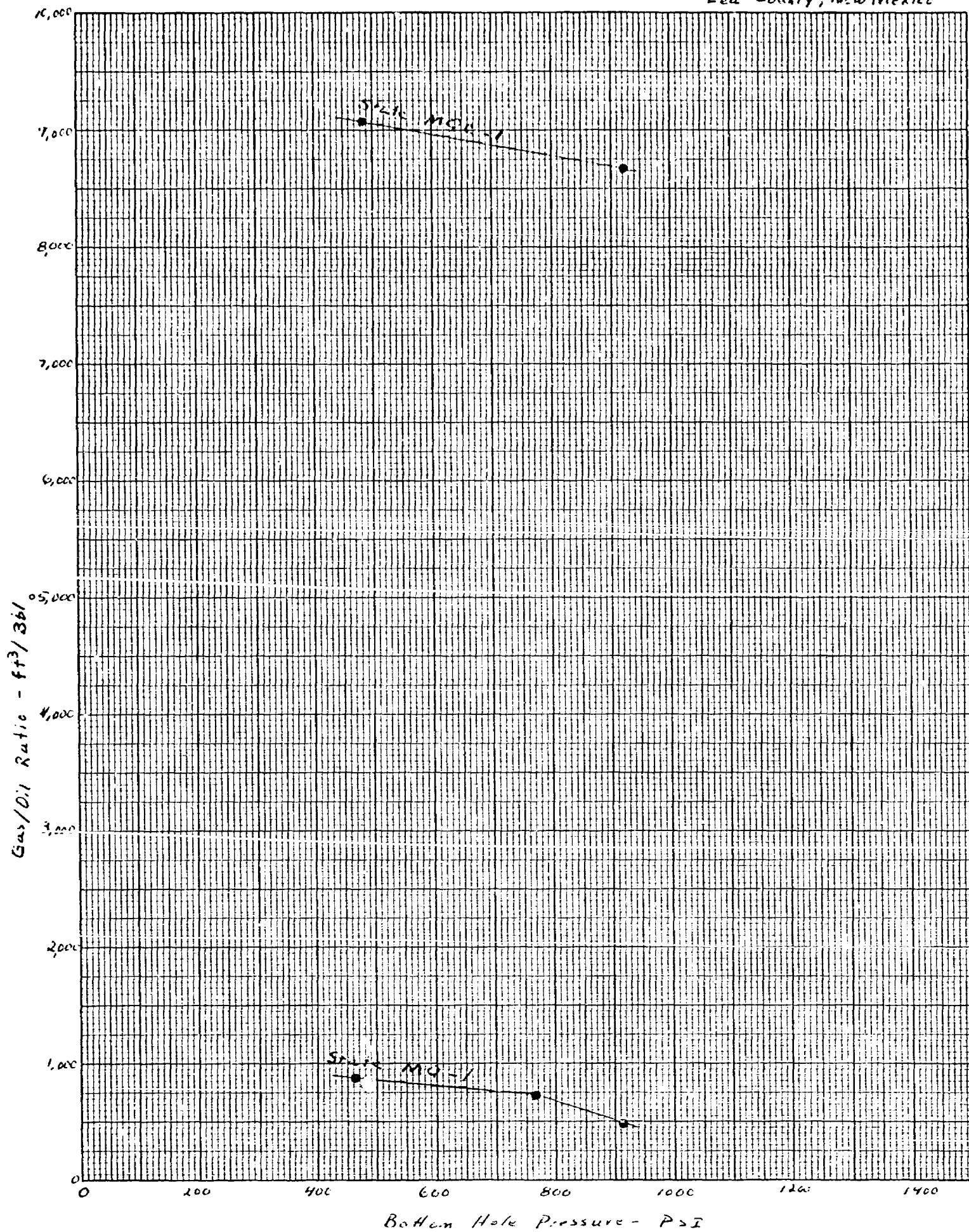
Aztec OCC

OTHER Mr. Richard S. Morris

DOCKET MAILED

Date 7-13-65

MESA QUEEN FIELD
Lea County, New Mexico



PRODUCING GAS/OIL RATIO
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO

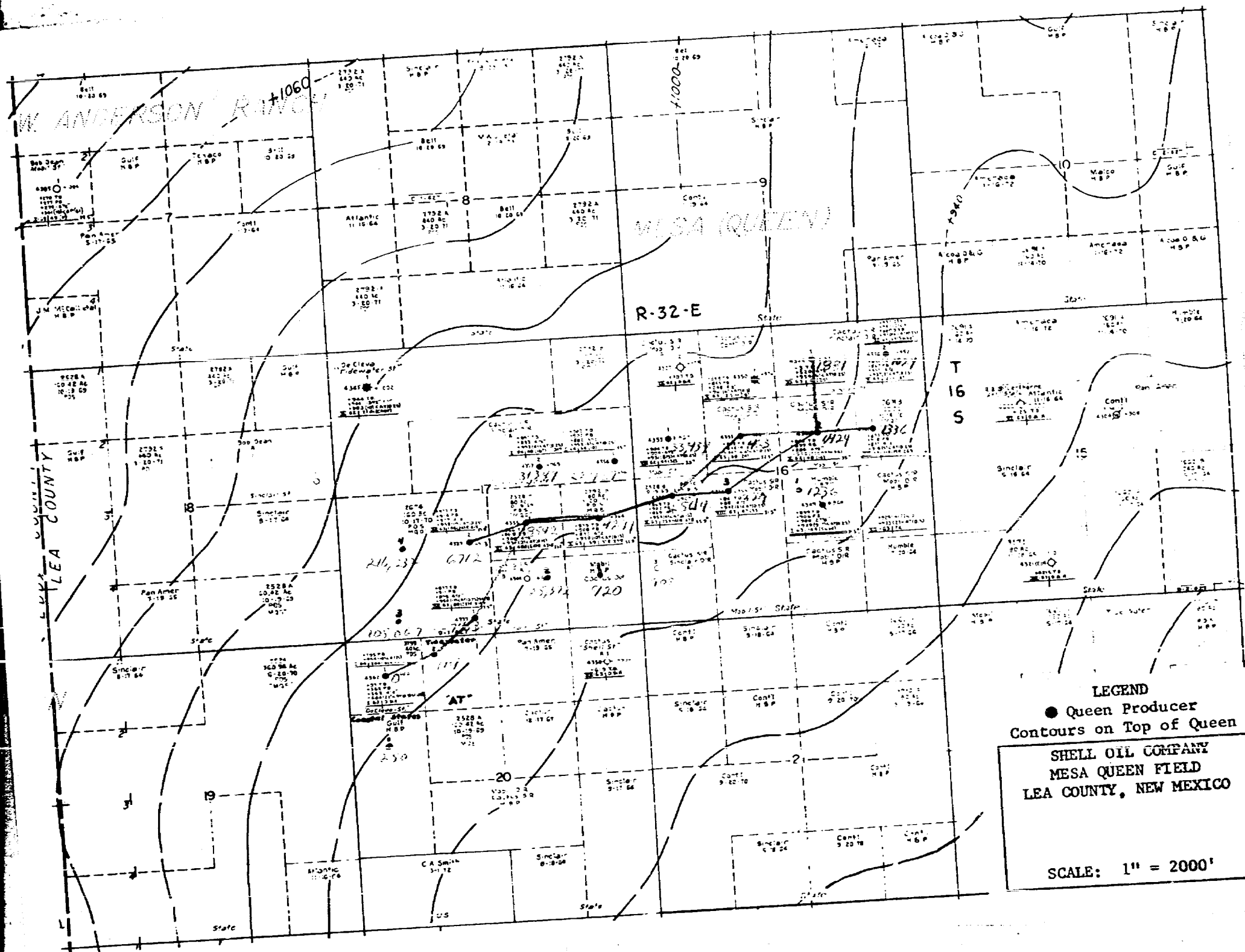
LEASE	WELL NO.	AVERAGE GOR		
		1963	1964	Oct. 1965
Morris Antweil - Humble St.	1		2,656	1,236
Cactus Drilling - Cont. St.	1 2		Gas Well 9,865	25,372
Cont. St. B.	1	8,490	7,130	33,343
Mobil St.	3	5,662	5,061	229
	2	4,087	1,198	1,424
Mobil St. A.	1	10,289	5,998	463
Mobil St. B	1		373	920
Mobil St. C.	1	376	437	1,881
Sinclair St.	2		437	1,024
	1		7,084	22,937
Sinclair St. A.	2		6,862	31,349
	3		1,567	908
				250
Coastal St. Gas Prod. - Mesa Gulf	1			
Robert A. Dean - Mobil St.	1 1		Gas Well Gas Well	
Sinclair St. A				
Paul DeCleva - Tidewater St.	1		Gas Well	
Humble - N. M. St. BT	1	706	Abandoned	
Shell - DeCleva St.	1 1		0 649	0 2,564
State MQ	1	454	794	1,336
State MQA	1	263	796	4,294
State MQB	1	409	8,225	8,542
State MQC	1	6,248	6,666	7,453
State MQD	1	9,159	2,750	6,712
	2		32,715	105,067
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Tidewater - State AT	1		275	114

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

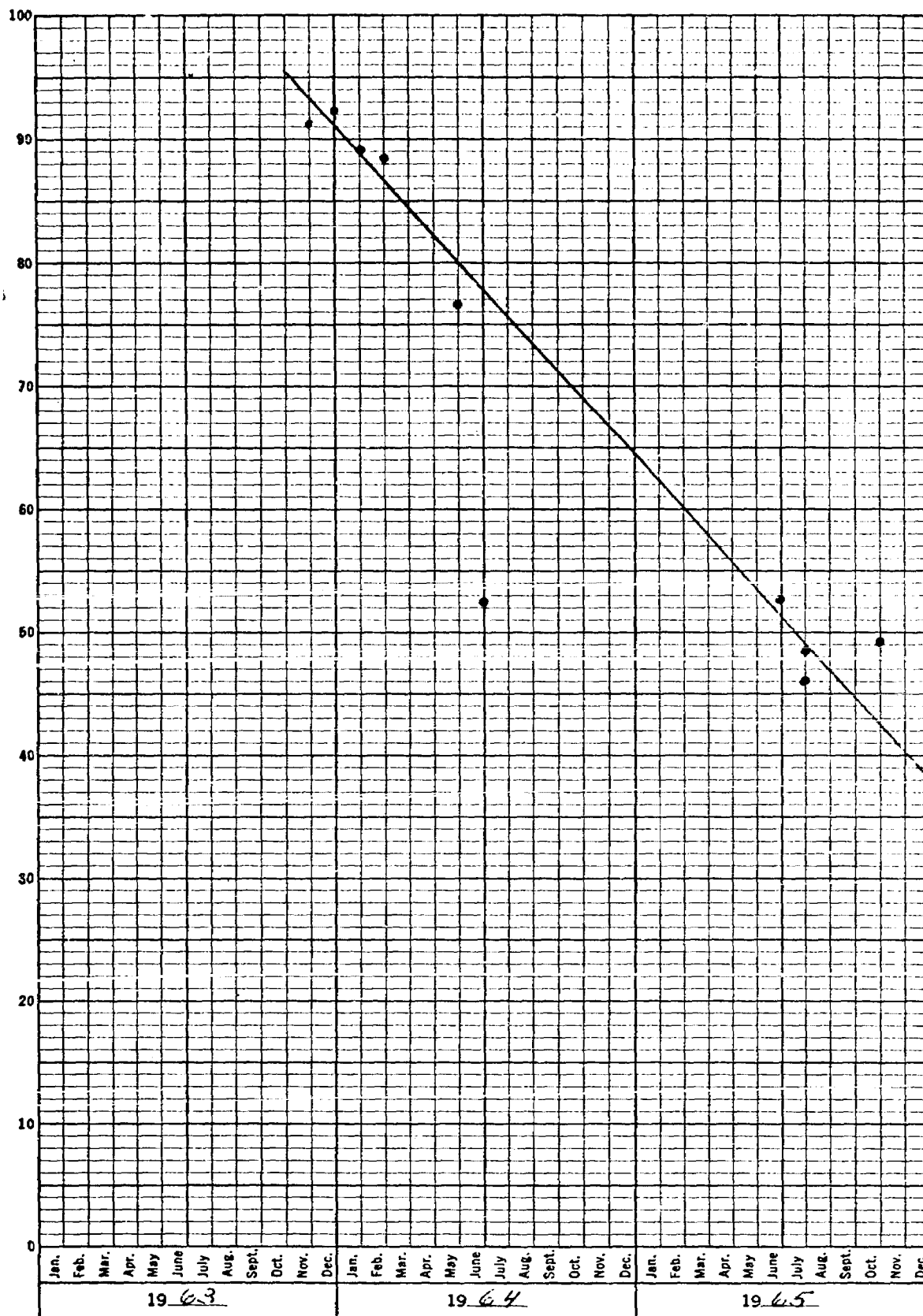
EXHIBIT NO. 3

CASE NO. 3246



MESA QUEEN FIELD
Lea County, New Mexico

Bottom Hole Pressure - PSI K10-1



V

DOROTHY HUNT 340772 1955 / 14 / 3

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BARTLESVILLE OKLA 1598 DLS NO 1145 T 14-14

JAMES R. NUTTALL

SHELL OIL COMPANY

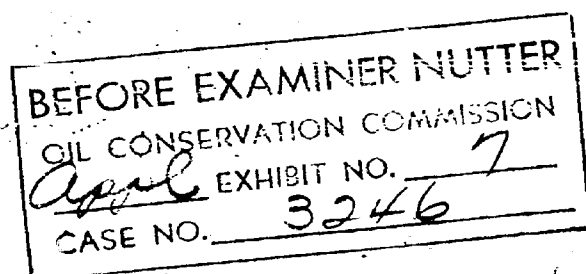
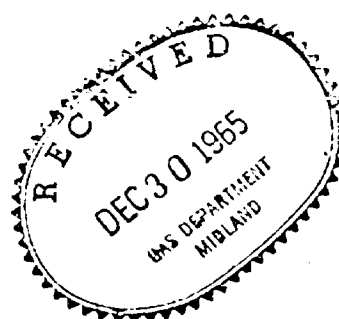
SHELL BUILDING

MIDLAND TEXAS

REPHONE, WE EXPECT TO CONTINUE HANDLING YOUR MEGA QUEEN GAS IN
ACCORDANCE WITH OUR PAST PERFORMANCE UNDER THE TERMS OF OUR
EXISTING CASINO HEAD GAS CONTRACT

FRANK A. COVELL - PHILLIPS PETROLEUM COMPANY

FR



PAUL BECLEVA
601 NORTH OGDEN ST.
EDWARD, TEXAS

0-105
3246

Mr. D. S. Matter, Chief Engineer
New Mexico Oil Conservation Commission
State and Office Building
Santa Fe, New Mexico

Dear Sir:

The undersigned acknowledges receipt of Paul Becleva's request to amend present Mesa Queen Pool field rules and the request for a non-standard proration unit for his Tidewater State No. 1 well located (6-1-10) and ENE of Section 17, Township 16 South, Range 12 East, Lea Queen Pool, Lea County, New Mexico.

We concur with the proposed amendments and waive all objections to the granting of a non-standard proration unit for the Paul Becleva Tidewater State No. 1 well.

Yours very truly,

R. A. DEAN

DOCKET MAILED

Date

4-28-65

BY:

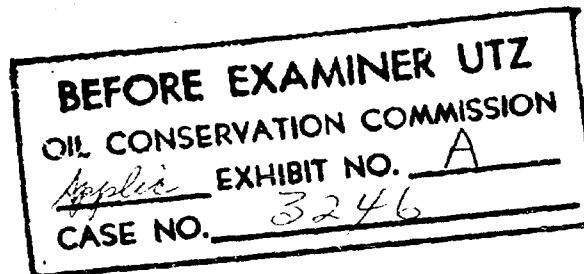
R. A. Dean

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1141

PAUL DeCLEVA
606 North Colorado St.
Midland, Texas

April 8, 1965



Mr. D. S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Dear Sir:

Paul DeCleva would like to schedule a formal hearing, as soon as possible, to amend the present Mesa Queen field rules to provide for the classification of a gas well in an oil reservoir.

Our Tidewater State No. 1 well located in the above pool is shut in due to overproduction because there is no classification for a gas well in an oil reservoir. For this reason Paul DeCleva will request that the field rules be amended and that the following rules be adopted:

1. A rule providing for the classification of a gas well in an oil reservoir.
2. The reservoir characteristics of the subject pool justify the definition of a gas well as a well producing with a gas-liquid ratio of 100,000 or more cubic feet of gas per barrel of liquid hydrocarbons. Any well in said pool shall be classified as an oil well if it has a gas-liquid ratio of less than 100,000 cubic feet of gas per barrel of liquid hydrocarbons. The simultaneous dedication of any acreage to both an oil well and a gas well is strictly prohibited.
3. A gas well should be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by 5,000 and by a fraction, the numerator of which would be the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 160 acre gas proration unit, the operator may produce only the amount of gas assigned to the unit from said wells in any proportion.
4. Each gas well completed or recompleted in the Mesa Queen Pool shall be located on a tract consisting of approximately 160 acres which may reasonably be presumed to be productive of gas from said pool, and which shall comprise a single governmental quarter section, being a legal subdivision of the United States Public Lands Survey. For purposes of these rules, a unit consisting of between 158 and 162 contiguous surface acres shall be considered a standard gas unit.
5. That a formal hearing will not be required for a gas proration unit having unorthodox size or shape tract due to variation in the legal subdivision of

April 8, 1965

the United States Public Land Survey, or where the following facts exist and the following provisions are complied with:

- a. A non-standard unit consisting of contiguous quarter-quarter sections or lots.
- b. A non-standard unit consisting of not more than 162 acres and lying wholly within a single governmental quarter section.
- c. The entire non-standard unit may reasonably be presumed to be productive of gas from said pool.
- d. The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the quarter section in which any part of the non-standard unit is situated and which acreage is not included in the non-standard unit.
- e. In lieu of the above facts, an applicant furnished proof that all of the aforesaid operators were notified by registered or certified mail of his intent to form such a non-standard unit, and after a period of 30 days no objection has been entered.

5(A). That a formal hearing will not be required for a non-standard gas proration unit consisting of less than 158 contiguous surface acres and if the non-standard unit is necessitated by a variation in the United States Public Lands Survey.

5(B). The allowable assigned to any non-standard gas proration unit shall bear the same ratio to a standard allowable in said pool as the acreage in the unit bears to 160 acres.

6. Any well completed in the Mesa Queen Pool after the effective date for the classification of a gas well in an oil reservoir, shall receive an allowable only upon receipt by the Commission's Hobbs office of Commission Forms C-104, C-110 and C-116, all properly executed. Also, a provision permitting the District Supervisor to authorize and assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the number of cubic feet of gas obtained by multiplying the daily top unit allowable for the Mesa Queen Pool by 5,000.
7. The dates 7 o'clock a.m., January the first and 7 o'clock a.m., July the first shall be known as balancing dates, and the periods of time bounded by these dates shall be known as the gas proration periods for the Mesa Queen Pool.
8. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas

Mr. D. S. Nutter

-3-

April 8, 1965

proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

9. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.
10. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well and or reservoir.
11. The allowable for a well whose classification has changed from oil to gas or from gas to oil as the result of a gas-liquid ratio test shall commence on the first day of the month following the month in which such test was reported, provided that a plat showing the acreage dedicated to the well and the location of all wells on the dedicated acreage have been filed.
12. The amended field rules be retroactive from date original field rules were adopted for the oil zone in the Mesa Queen Pool.

In addition to the proposed amendments, Paul DeCleva will request a non-standard proration unit for their Tidewater State No. 1 well located in the Mesa Queen Pool. This well is located 660' FNL and 660' FWL of Section 17, Township 16 South, Range 32 East, Lea County, New Mexico. The lease contains 160 acres which will be assigned to the above well and comprises the W/2 of NW/4, NE/4 of NW/4 and NW/4 of NE/4 of Section 17.

Attached is a structure map contoured on top of the Queen formation showing the water-oil contact, oil-gas contact and the permeability pinchout on the North and South sides of the structure. Also, enclosed is a plat showing the acreage to be assigned the Paul DeCleva Tidewater State No. 1 well.

If additional information is required before a formal hearing can be set, please advise.

Yours very truly,

PAUL DeCLEVA

C. C. Joy

CCJ/dt

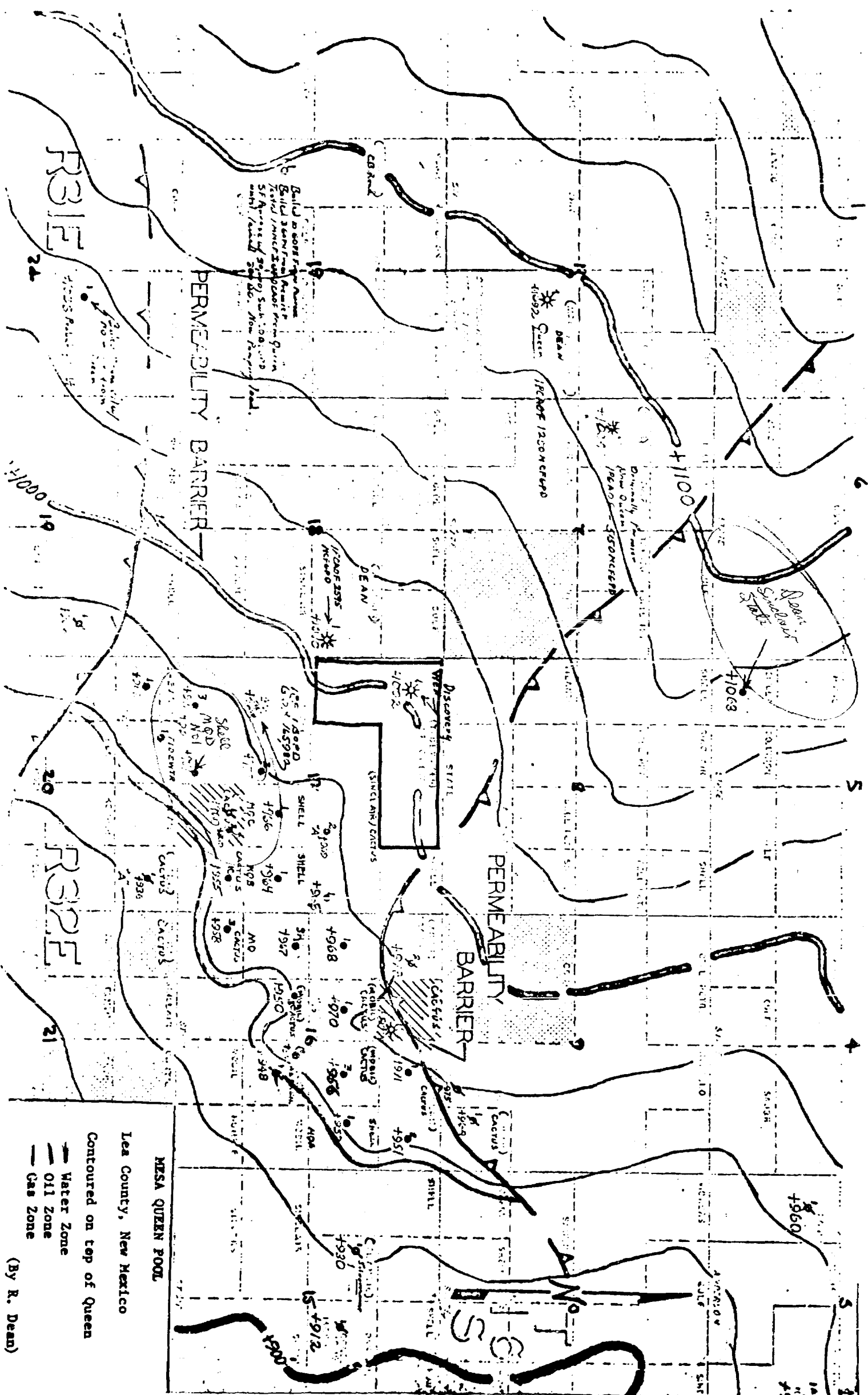
- Attach.

4

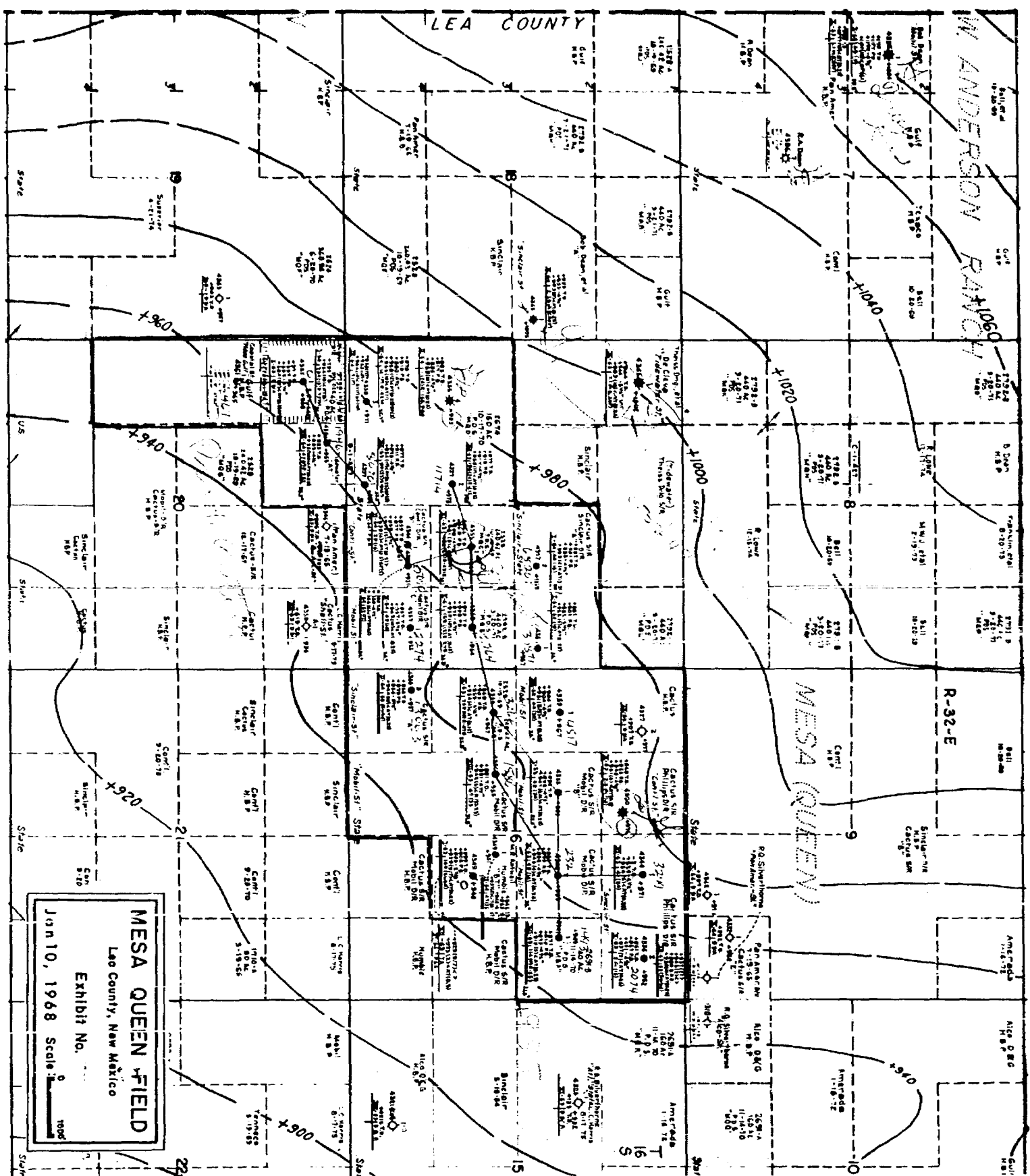
D Paul DeCleva No. 1	C Tidewater State	B	A
E	F	G	H
L	K	J	I
M	N	O	P

Section 17
T-16-S
R-32-E

Lea County, New Mexico



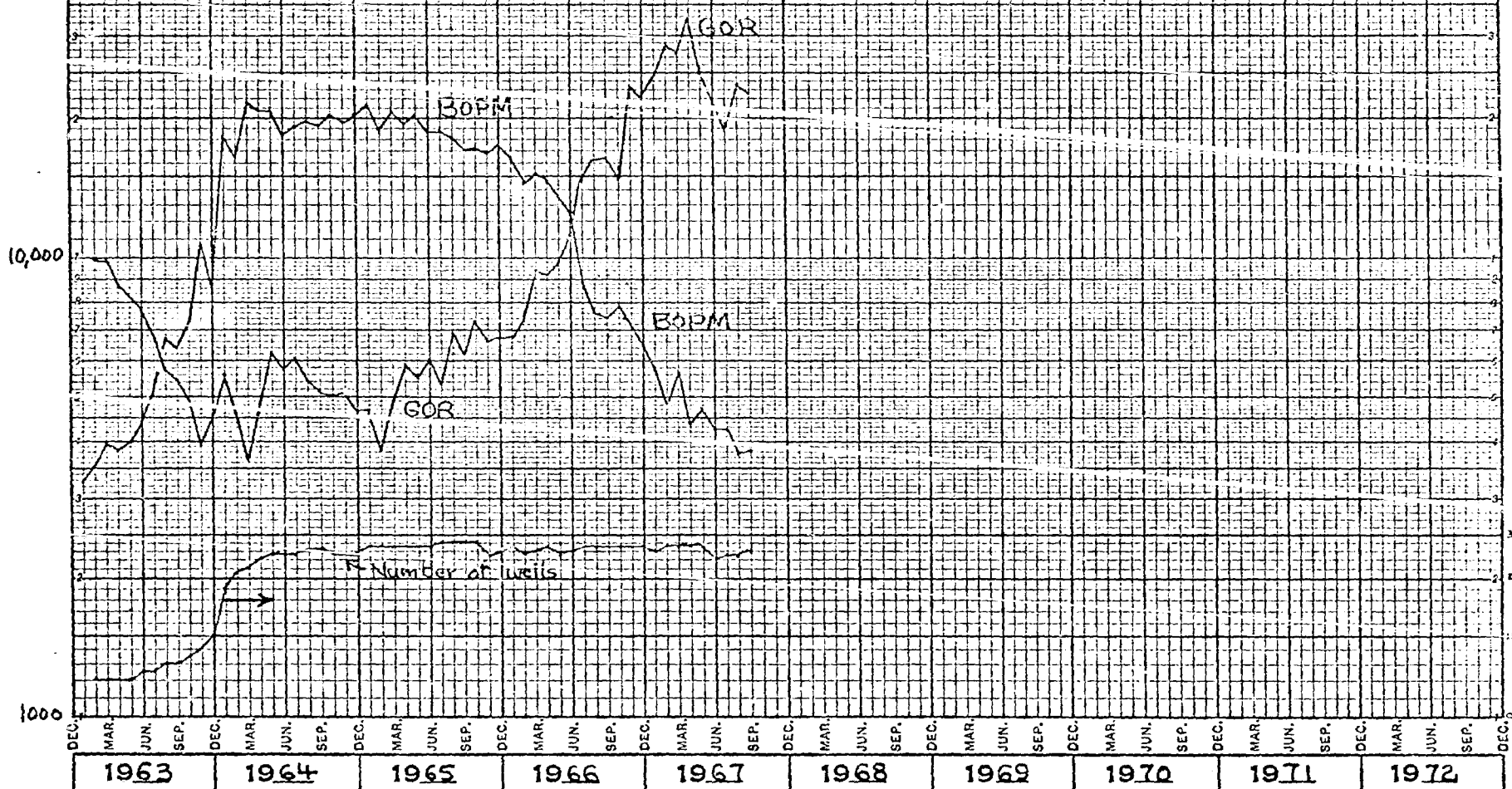
(By R. Dean)



2

100,000

No. Wells



P

MID

6

:BVC221MIDB02:1N01413300104

COPY TO MOZEL GUINER 359FPB 8450

SHELL OIL CO

SHELL BLDG

MIDLAND TEXAS

ATTN MR FOREST ALLEN

WE EXPECT TO CONTINUE HANDLING YOUR MESA QUEEN GAS
IN ACCORDANCE WITH OUR PAST PERFORMANCE UNDER THE EXISTING
CASINGHEAD GAS CONTRACT DATED NOVEMBER 7, 1963, AS AMENDED
PHILLIPS PETROLEUM CO FRANK A COWELL BARTLESVILLE OKLA JAN 4 1968

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Applic EXHIBIT NO. 4-R
CASE NO. 3346

MESA QUEEN
EXHIBIT No. —
JANUARY 10, 1968

PRODUCING GAS/OIL RATIO
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO

<u>LEASE AND WELL</u>	<u>AVERAGE GOR</u>				<u>Thru</u> <u>1967 (Sept)</u>
	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	
Morris Antweil Humble St. 1		2,656	1,236	1,066	0
Costal States Mesa Gulf 1			250	424	467
Getty Oil Company State AT 1		275	114	761	1,946
Shell Oil Company					
State MQ 1	454	649	2,564	3,150	3,262
MQA 1	263	794	1,336	1,225	1,493
MQB 1	409	796	4,294	3,240	2,764
MQC 1	6,248	8,225	8,542	21,000	All Gas
MQD 1	9,159	6,666	7,453	7,800	8,070
2		2,750	6,712	12,110	11,714
4		142,056	216,232	Gas Well	Gas Well
DeCleva St. 1		-0-	-0-	213	
Tenneco					
Cont. St. B-2		9,865	25,372	19,750	
Cont. St. 1		Gas Well			
Mobil St. 1	8,490	7,130	33,343	24,250	4,517
3	5,662	5,061	229	1,765	1,586
Mobil "A" St. 2	4,087	1,198	1,424	3,840	232
"B" St. 1	10,289	5,998	463	4,280	1,402
"C" St. 1		373	920	1,105	2,274
Cactus Sinc. St. 1	376	437	1,881	3,410	3,299
2		437	1,024	1,485	2,074
A-1		7,084	22,937	31,300	30,871
A-2		6,862	31,349	48,750	65,205
A-3		1,567	908	4,480	13,063
Blue Danube Tidewater St. 1			Gas Well		
Robert A. Dean Mobil St. 1			Gas Well		
Pan Am St. 1			Gas Well		
Sinc. St. 1			Gas Well		

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 5-K

CASE NO. 2546

6

PAUL DeCLEVA
606 NORTH COLORADO ST.
MIDLAND, TEXAS

April 15, 1965

Shell Oil Co.
P. O. Box 1858
Roswell, New Mexico

Cactus Drilling Co.
P. O. Box 2068
Hobbs, New Mexico

Mobil Oil Co.
P. O. Box 1800
Hobbs, New Mexico

Tidewater Oil Co.
P. O. Box 1231
Midland, Texas

Sinclair Oil Co.
P. O. Box 1470
Midland, Texas

Gulf Oil Corporation
P. O. Box 1938
Roswell, New Mexico

Mr. R. A. Dean
Room 823 - Midland Tower
Midland, Texas

Gentlemen:

Enclosed is a copy of letter and exhibits sent to the New Mexico Oil Conservation Commission requesting the scheduling of a hearing for the purpose of amending the Mesa Queen Pool field rules. The present field rules contain no provision for the classification of gas well in an oil reservoir. For this reason Paul DeCleva will request the field rules be amended and ask for a non-standard proration unit for his Tidewater State No. 1 well.

Also, enclosed in triplicate is proposed form concurring with proposed amendments and waiving objection to the proposed non-standard proration unit. If you have no objections to these requests, please return one signed copy to the New Mexico Oil Conservation Commission and one copy to this office in the enclosed prepared envelopes.

If additional information concerning the above requests is needed, please feel free to contact me.

Yours very truly,

PAUL DeCLEVA

BY: _____
C. C. Joy
Engineer

CCJ/dt

Encl.

7

PAUL DeGLEVA
606 NORTH COLORADO ST.
MIDLAND, TEXAS

Mr. D. S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Dear Sir:

The undersigned acknowledges receipt of Paul DeGleva's request to amend present Mesa Queen Pool field rules and the request for a non-standard proration unit for his Tidewater State No. 1 well located 660' FNL and FWL of Section 17, Township 16 South, Range 32 East, Mesa Queen Pool, Lea County, New Mexico.

We concur with the proposed amendments and waive all objections to the granting of a non-standard proration unit for the Paul DeGleva Tidewater State No. 1 well.

Yours very truly,

R. A. DEAN

BY:

R. A. Dean



Mobil Oil Company

A Division of Socony Mobil Oil Company, Inc.

P. O. Box 1800 Hobbs, New Mexico 88240

April 23, 1965

Mr. A. L. Porter, Jr., Secretary Director
New Mexico Oil Conservation Commission
P. O. Box 2038
Santa Fe, New Mexico

RE: PAUL DeCLEVA APPLICATION
MESA QUEEN POOL
LEA COUNTY, NEW MEXICO

Dear Mr. Porter:

Socony Mobil Oil Company, Inc. is not an operator in the subject pool and therefore has no interest in the DeCleva application for amended field rules.

Yours very truly,

Original Signed By
G. W. BARB

Glen W. Barb
Producing Superintendent

JCGordon/jlh

cc:

Paul DeCleva
606 No. Colorado St.
Midland, Texas 79704

9

PAUL DeCLEVA
606 NORTH COLORADO ST.
MIDLAND, TEXAS

May 5, 1965

Mr. D. S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

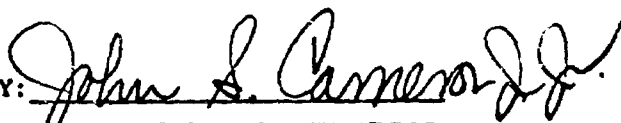
Dear Sir:

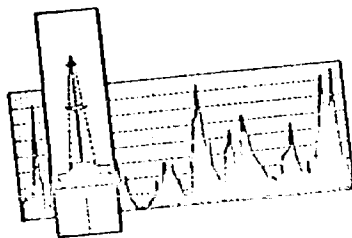
The undersigned acknowledges receipt of Paul DeCleva's request to amend present Mesa Queen Pool field rules and the request for a non-standard proration unit for his Tidewater State No. 1 well located 660' FNL and FWL of Section 17, Township 16 South, Range 32 East, Mesa Queen Pool, Lea County, New Mexico.

We concur with the proposed amendments and waive all objections to the granting of a non-standard proration unit for the Paul DeCleva Tidewater State No. 1 well.

Yours very truly,

TIDEWATER OIL COMPANY

BY: 
PRORATION SUPERVISOR



Darrell W. Smith Co.

PHONE OX 4-2511—MIDLAND, TEXAS
PHONE EX 3-6173—HOBBS, N. MEX.

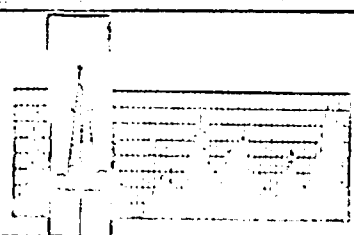
FULL DIAMETER CORE STUDY

Operator Bob Dean Limited Field Undesignated Premier Formation Grayburg (Premier Sand.)
Well No. 1 Sinclair State Location 660' FSL & 660' FWL, Sec. 5, Twp. 16S, R. 32E
Date February 27, 1962 Lab No. 550-11
Depths 4025 - 4110

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		OIL	WATER	
			Core No. 1 4025 - 4066		(41Ft.)			
			Recovered 4025 - 4066		(41Ft.)			
1	4025 - 28	3.0	-	-	-	-	-	Ahy Sh stgrs NS NA
	4028 - 34	6.0	-	-	-	-	-	Vfg red Ss ahyd NS NA
	4034 - 36	2.0	-	-	-	-	-	Vfg red Ss very ahyd sc Dol stgrs N
	4036 - 42	6.0	-	-	-	-	-	Ahy sc Dol stgrs NS NA
	4042 - 43	1.0	-	-	-	-	-	Dol vfx ahyd sdy shy NS NA
	4043 - 48	5.0	-	-	-	-	-	Vfg red Ss ahyd dolo slty shy NS NA
	4048 - 49	1.0	1.3	-	10.0	5.0	59.1	Vfg gray Ss with sc red Ss stgrs ah shy slty
2	4049 - 50	1.0	2.8	-	10.5	11.4	48.0	Vfg gray Ss sl ahyd slty shy
3	4050 - 51	1.0	51.	-	10.6	15.1	50.9	Vfg gray Ss slty sl shy sl ahyd
4	4051 - 52	1.0	8.5	-	10.4	10.0	55.7	Vfg gray Ss slty sl shy
5	4052 - 52.6	0.6	7.1	-	10.4	6.7	53.8	Vfg gray Ss sl ahyd slty sl shy
	4052.6-54	1.4	-	-	-	-	-	Vfg red Ss sl ahyd very shy NS NA
6	4054 - 55	1.0	1.5	-	-	-	-	Vfg gray sl ahyd slty Carb incl
7	4055 - 56	1.0	4.0	-	-	-	-	Vfg gray Ss sl ahyd slty sl shy
8	4056 - 57	1.0	10.	-	6.6	6.1	60.6	Vfg gray Ss sl ahyd slty sl shy
9	4057 - 58	1.0	76.	-	13.0	10.8	56.2	Vfg gray Ss sl ahyd slty sl shy
10	4058 - 59	1.0	11.	-	12.3	13.0	58.5	Vfg gray Ss sl ahyd sl dolo slty
					12.3	11.4	46.8	Vfg gray Ss sl ahyd sl dolo slty sl
					12.7	12.6	44.1	Vfg gray Ss sl ahyd sl dolo slty sl
11	4059 - 60	1.0	16.	-	13.8	8.0	53.8	Vfg gray Ss sl ahyd sl dolo slty G
	4060 - 61.5	1.5	-	-	-	-	-	Vfg red & gray Ss ahyd dolo slty s
	4061.5-62	0.5	-	-	-	-	-	shy NS NA
40								Dol d sc Ahy incl Sh ptgs NS NA

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		OIL	WATER	
	4062 - 64	2.0	-		-	-	-	Sh red dolo sdy NS NA
	4064 - 65	1.0	-		-	-	-	Dol d Sh ptgs NS NA
	4065 - 65.5	0.5	-		-	-	-	Brecciated Dol & Sh NS NA
	4065.5-66	0.5	-		-	-	-	Dol d Sh ptgs RF NS NA
			Core No. 2 4066 - 4110 (44Ft.)					
			Recovered 4066 - 4110 (44Ft.)					
	4066 - 67	1.0	-		-	-	-	Dol d 4" Sh stgr NS NA
	4067 - 68	1.0	-		-	-	-	Sh red dolo 3" Dol stgr NS NA
	4068 - 69	1.0	-		-	-	-	Dol d styo Sh ptgs NS NA
	4069 - 70	1.0	-		-	-	-	Brecciated red & gray Ss w/ Dol NS
	4070 - 71	1.0	-		-	-	-	Vfg gray Ss dolo NS NA
	4071 - 72	1.0	-		-	-	-	Vfg red Ss dolo NS NA
	4072 - 73	1.0	-		-	-	-	Brecciated red & gray Ss shy w/ dol NS NA
	4073 - 75	2.0	-		-	-	-	Dol d styo shy NS NA
	4075 - 76.5	1.5	-		-	-	-	Sh red dolo NS NA
	4076.5-78.5	2.0	-		-	-	-	Dol d styo Sh ptgs NS NA
	4078.5-86.5	8.0	-		-	-	-	Sh red dolo slty sl sdy NS NA
	4086.5-88	1.5	-		-	-	-	Dol d styo Sh ptgs NS NA
	4088 - 90.5	2.5	-		-	-	-	Sh red dolo slty NS NA
	4090.5-91.5	1.0	-		-	-	-	Dol d styo NS NA
	4091.5-92.5	1.0	-		-	-	-	Sh red dolo NS NA
	4092.5-93.3	0.8	-		-	-	-	Dol d Sh ptgs NS NA
	4093.3-94	0.7	-		-	-	-	Brecciated Dol & Sh NS NA
	4094 - 4103.5	9.5	-		-	-	-	Dol d styo Sh ptgs Ahy incls NS NA
	4103.5-07	3.5	-		-	-	-	Sh red dolo slty sdy NS NA
	4107 - 10	3.0	-		-	-	-	Dol d styo Sh ptgs NS NA

14



Darrell W. Smith Co.

OPERATOR BOB DEAN, LIMITED WELL NO. 1 SINCLAIR STATE
FIELD UNDESIGNATED PREIMER COUNTY LEA STATE NEW MEXICO

PERMEABILITY		LITHOLOGY & DEPTH	POROSITY		WATER SATURATIONS		%										
MILLIDARCS			PER CENT EFFECTIVE		75	50	25	0									
					OIL SATURATIONS		%										
1000	500	100	50	10	5	1	0.5	0.1	40	30	20	10	0.0	75	50	25	75

14



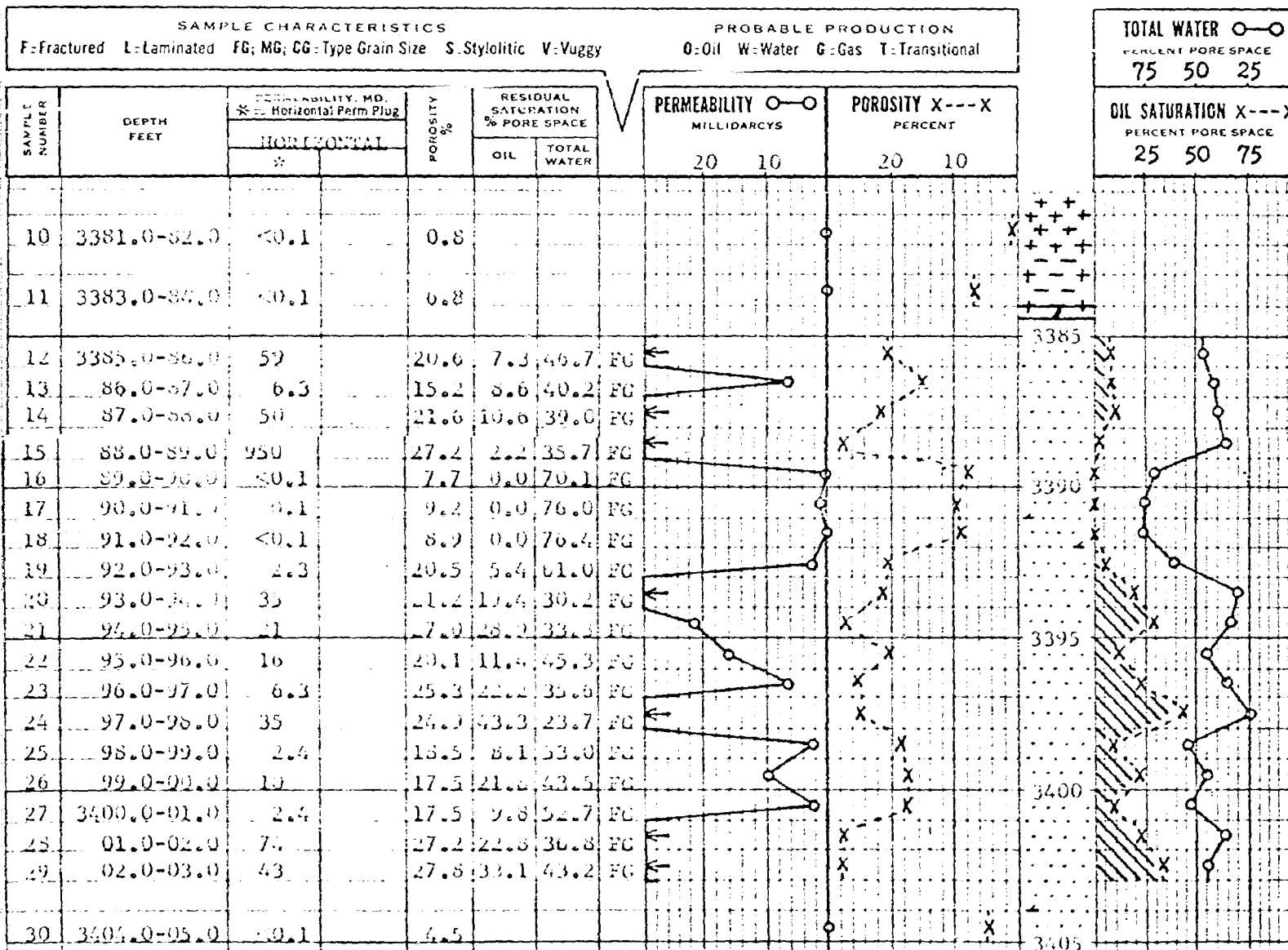
CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY SHELL OIL COMPANY FILE NO. WP-3-2231
 WELL STATE "MCD" NO. 1 DATE 12-12-63 ENGRS. NEFF
 FIELD NEBA QUEEN FORMATION QUEEN ELEV. 4337' DF
 COUNTY LEA STATE NEW MEXICO DRUG. FLD. WATER BASE MWD CORES. DIAMOND 3 1/2"
 LOCATION 330 FS & 2310 FWL SEC 17-T16S-R32E REMARKS SAMPLED AS DIRECTED BY CLIENT

COMPLETION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted). But Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation or profitability of any oil, gas or other mineral well or land in connection with which such report is used or relied upon.



DONALD A. FLANAGAN
CONSULTING PETROLEUM ENGINEER
1101 PRAETORIAN BUILDING
DALLAS, TEXAS 75201
RIVERSIDE 8-5538

RESERVOIR STUDY
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO
JUNE 15, 1965

THE UNIVERSITY OF CHICAGO

DONALD A. FLANAGAN

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THE UNIVERSITY OF CHICAGO

DONALD A. FLANAGAN
CONSULTING PETROLEUM ENGINEER
1101 PRAETORIAN BUILDING
DALLAS, TEXAS 75201
RIVERSIDE 8-5538

RESERVOIR STUDY
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO
JUNE 15, 1965

Introduction

This report was prepared to provide data for a Field Rules Hearing on proposed changes to rules for the Mesa Queen Field. Information in this report was obtained from well logs and core analyses and from New Mexico Conservation Commission records.

Summary and Conclusion

The Mesa Queen Field is located in northwestern Lea County, New Mexico. It is presently classified as an oil field and produces under 40 acre spacing with a permissible 5,000 cubic feet per barrel gas-oil ratio based on the top oil allowable. A geological study indicates that the reservoir trap is a structural monocline dipping to the southeast with limits of permeability to the north and south. The water saturation increases down dip and the gas saturation increases up dip. The main porous and permeable section thickness is relatively constant in all the wells. The volume of the reservoir space occupied by gas is much greater than that occupied by the oil. Because of the absence of bottom hole pressure history, the

DONALD A. FLANAGAN

determination of the relative gas and oil volumes and the determination of the producing mechanism, gas drive, dissolved gas drive or water drive, are uncertain. It is possible that before the field was developed, the several zones of the Queen were separate reservoirs and had different gas-oil and oil-water contacts.

Submitted,

Donald A. Flanagan
Donald A. Flanagan

Signed June 15, 1965

DONALD A. FLANAGAN

Location

The Mesa Queen Field

is located in the northwestern part of Lea County, New Mexico five miles north of Maljamar on State Highway 31. According to the Conservation Commission limits, as shown in yellow on Map 1, the field includes Sections 17 and 18 and parts of Sections 7, 15, 18 and 20 in Township 16 South, Range 32 East.

Field Development and Lease Performance

The discovery well of

the Mesa Queen Field was the Cactus Drilling Company-Mobil State No. 1, completed August 20, 1962. The Paul DeCleva-Tidewater State No. 1 was completed as a dry gas well October 4, 1962. Cactus completed another well, now called their Mobil State A-2, on October 23, 1962, as an oil well. Although the Cactus wells were reported to have had high gas-oil ratios, the DeCleva well was initially placed in an undesignated gas field because of its distance from the Cactus wells and because the DeCleva well produced dry, high nitrogen content gas. As the field was developed, it became evident that the zones occurring in the Cactus wells were corelative with those in the DeCleva well. The DeCleva well was placed in the Mesa Queen Field by the Commission in May 1964.

To date, 30 wells

have been drilled in the field. Of these, there are 4 dry gas wells, 5 oil wells producing with a gas-oil ratio in excess of 10,000 cubic feet per barrel,

DONALD A. FLANAGAN

17 with gas-oil ratios of less than 10,000 cubic feet per barrel, 2 abandoned wells and 2 dry holes. Table 1 is a summary of well completion data.

As of April 1, 1965, the reported cumulative production from the field was 372 thousand barrels of oil and 2 billion 276 million cubic feet of gas. Table 2 is a summary of performance data by leases.

Geology

The Mesa Queen Field produces from the Queen Sandstone at an approximate depth of 3400 feet. The structure is a southeast dipping monocline with limits to the permeability to the north and south. Wells drilled to the southeast produce water. Wells drilled up dip to the northwest produce dry gas. Wells in the main part of the field produce gas, oil and water. There are four porous and permeable zones in the Queen Zone in the field. These zones are shown on the typical log, Figure 1. Table 3 is a summary of the geological data obtained from the logs of all wells in the field. Most of the field wells are completed in zone 2 and 3. In some wells, there is no separation between these two zones. Zone 4 is poorly developed in most of the wells, but is completed in the Shell Oil Co.-State "MQA" No. 1 well.

The total thickness of porosity in the wells varies from 10 to 21 feet. The fluid saturation varies from high water saturation to high gas saturation. It is possible that zones I,

DONALD A. FLANAGAN

2-3 and 4 are individual reservoirs with different gas-oil and oil-water contacts. Zone 1 is not completed in any well. When encountered in the cable tool drilled DeCleva-Tidewater State No. 1, the well blew out and produced in excess of 7 million cubic feet per day. This well and others with a high gas-oil ratio may be producing from the number 1 zone along with the other zones. The determination of a single gas-oil or oil-water contact is uncertain because of the existence of the different zones, and because of the difference in perforated interval in the different wells.

DONALD A. FLANAGAN

TABLE 1
WELL COMPLETION DATA
MESA QUEEN FIELD
MAY 1965

Operator Lease Well Number	Location	Date Completed	Elevation	Perforated Interval	Total Depth	Initial Potential
Morris R. Antweil Humble State No. 1	J 16 16 32	4-16-64	4350 KB	3412-16	3503	IPF: 47 BOPD, 32 BWPD, 26/64 CH Grav. 34, TP 250, CP 600
Cactus Drilling Co. Continental State No. 1	C 16 16 32	10-21-63	4351 KB	3389-95	3502	IPF: 2,500 MCF PD, 16/64 CH
Continental State B No. 2	O 17 16 32	3-12-64	4354 KB	3404-10	3500	IPF: 52 BOPD, 3 BWPD, 12/64 CH Grav. 34
Mobil State No. 1 No. 3	E 16 16 32	8-20-62	4359 KB	3408-11, 3414-16	3455	IPF: 44 BOPD, 1/2 CH, Grav. 35, TP 250, CP 800
Mobil State A No. 2	K 16 16 32	8-6-63	4354 KB	3412-18	3473	IPF: 47 BOPD, 33/64 CH, Grav. 31.5, TP 90, CP 700
Mobil State B No. 1	G 16 16 32	10-23-62	4342 DF	3402-06		IPF: 48 BOPD, No Wtr, 14/64 CH Grav. 32
Mobil State C No. 1	F 16 16 32	1-4-63	4356 KB	3408-10, 3412-14	3463	IPF: 48 BOPD, 26/64 CH, Grav. 32.5, TP 500, CP 800
Sinclair State No. 1 No. 2	P 17 16 32	2-25-64	4360 KB	3414-24	3500	IPF: 48 BOPD, 16/64 CH, Grav. 34, TP 225, CP 480
Sinclair State A No. 1 No. 2 No. 3	B 16 16 32	6-14-63	4345 KB	3390-96	4347	IPF: 41 BOPD, 24/64 CH, TP 150, CP 550
	A 16 16 32	10-21-63	4336 KB	3399-3401	3485	IPF: 2,000 MCF PD, 16/64 CH
	H 17 16 32	1-3-64	4359 KB	3404-10	3474	IPF: 64 BOPD, 10/64 CH, Grav. 35, TP 425, CP 650
	G 17 16 32	1-10-64	4360 KB	3404-08	3476	IPF: 48 BOPD, 16/64 CH, Grav. 34, TP 400, CP 720
	M 16 16 32	2-3-64	4359 KB	3412-22	3500	IPSWBD: 58 BOPD, 3 BWPD
Robert A. Dean Mobil State No. 1	E 7 16 32	1-30-62	4386 KB			IP: CAOF 2,595 MCFPD
Sinclair State A No. 1	H 18 16 32	2-11-64	4368 KB	3372-80	3430	IP: CAOF 7,000 MCFPD
Paul DeCleva Tidewater State No. 1	D 17 16 32	10-4-62	4365 DF	3382-92	3421	IPSWBD: 144 BOPD, 122 BWPD, Grav. 31.5
Humble Oil & Refining Co. New Mexico State ET No. 1	J 16 16 32	1-31-63	4350 KB	3420-25, 3427-29	3450	IPF: 204 BOPD 18/64 CH, Grav. 36.6, TP 35
Shell Oil Co. DeCleva State No. 1	D 20 16 32	1-23-64	4365 KB	3405-16	4325	

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<u>Operator</u> <u>Lease Well Number</u>	<u>Location</u>	<u>Date Completed</u>	<u>Elevation</u>	<u>Perforated Interval</u>	<u>Total Depth</u>	<u>Initial Potential</u>
<u>Shell Oil Co.</u>						
State MQ No. 1	L 16 16 32	10-15-63	4360 DF	3405-09	3490	IPF: 759 BOPD, 16/64 CH, Grav. 35.9, GOR 478, TP 190
State MQA No. 1	H 16 16 32	12-8-63	4341 DF	3423-28	3470	IPP: 114 BOPD, 13 RWPD, Grav. 21.6, GOR 263
State MQB No. 1	I 17 16 32	10-23-63	4360 DF	3410-20	3485	IPF: 159 BOPD, 13/64 CH, Grav. 35.9, GOR 279, TP 250, CP 850
State MQC No. 1	J 17 16 32	11-1-63	4355 DF	3404-12	3489	IPF: 480 BOPD, 1 Inch CH, Grav. 35, TP 285-300
State MQD No. 1	N 17 16 32	12-16-63	4337 DF	3388-3400	3460	IPF: 80 BOPD, 23/64 CH, Grav. 33.5, GOR 9149, TP 500, CP 500
No. 2	K 17 16 32	12-28-63	4327 DF	3369-80	3450	IPF: 169 BOPD, 24/64 CH, Grav. 35.9, GOR 415, TP 125, CP 350
No. 3	M 17 16 32	3-3-64	4358 DF	3400-12	3480	IPP: 14 BOPD, Grav. 35.7, GOR 4214
No. 4	L 17 16 32	2-18-64	4355 DF	3387-97	3470	IPF: 1 BOPD GOR 165,980 - 1, TP 560, CP 580
<u>Tidewater Oil Co.</u>						
State AT No. 1	C 20 16 32	8-16-64	4359 KB	3406-17	3475	IPF: 43 BOPD, Grav. 33.2
<u>Wells Not Carried on Monthly Statistical Report</u>						
<u>Cactus Drilling Co.</u>						
Continental State B No. 1	O 17 16 32	1-12-64	4345 KB	3405-09	3485	IPF: 20 BOPD, 16/64 CH, TP 110, CP 600
Mobil State No. 2	D 16 16 32	9-9-62	4357 KB		3450	D & A
Shell State A No. 1	A 20 16 32	7-24-63	4356 KB		3731	D & A

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TABLE 2
LEASE PRODUCTION DATA
MESA QUEEN FIELD
MAY 1965

<u>Operator</u> <u>Lease</u>	<u>Lease</u> <u>Production</u> <u>From</u>	<u>Cumulative Production</u> <u>to 4-1-65</u>		<u>Production During</u> <u>March 1965</u>		<u>Producing</u> <u>GOR</u> <u>March 1965</u> <u>CF/Bbl(a)</u>	<u>Number</u> <u>of Wells</u> <u>March 1965</u>	<u>Cumulative</u> <u>Gas Produced</u> <u>MCF/Lease</u> <u>Acre</u>
		<u>Oil</u> <u>Barrels</u>	<u>Gas</u> <u>MCF</u>	<u>Oil</u> <u>Barrels</u>	<u>Gas</u> <u>MCF</u>			
<u>Morris R. Antweil</u> Humble State	4-16-64	2,587	5,879	342	842	696	1F	147
<u>Cactus Drilling Co.</u> Continental State	10-21-63	Gas Well	19,970		233	192	1F	499
Continental State B	3-12-64	5,939	76,099	285	14,141	11,694	1P	1,902
Mobil State	8-20-62	85,528	400,125	2,052	10,655	4,406	2P	5,001
Mobil State A	1-1-65(b)	3,569	1,394	1,209	537	444	1P	35
Mobil State B	1-4-63	28,955	225,612	932	2,278	2,294	1P	5,640
Mobil State C	2-25-64	15,120	6,509	1,231	989	818	1P	163
Sinclair State	6-14-63	41,786	27,243	2,304	2,217	916	2P	341
Sinclair State A	1-3-64	49,004	280,508	3,484	29,282	8,072	3P	2,338
<u>Robert A. Dean</u> Mobil State	1-30-62 (c)	Gas Well	81,677		3,803	2,550	1F	2,042
Sinclair State	2-11-64	Gas Well	68,205		7,034	5,817	1F	853
<u>Paul DeCleva</u> Tidewater State	10-4-62 (d)	Gas Well	609,557		Shut In		1F	3,810
<u>Humble Oil and Refining Co.</u> New Mexico State	1-31-63	3,256	2,284	Abandoned				57
<u>Shell Oil Co.</u> DeCleva State	1-23-64	16,670	Not Reported	1,204			1P	
State MQ	10-15-63	20,915	12,076	1,210	644	533	1F	302
State MQ A	12-8-63	18,379	12,287	1,211	389	322	1P	307

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<u>Operator</u> <u>Lease</u>	Lease Production Began	Cumulative Production To 4-1-65		Production During March 1965		Producing GOR March 1965 MCF/Bbl(a)	Number of Wells March 1965	Cumulative Gas Produced MCF/Lease Acre
		Oil Barrels	Gas MCF	Oil Barrels	Gas MCF			
<u>Shell Oil Co.</u>								
State MQ B	10-23-63	20,214	13,785	1,210	616	509	1F	345
State MQ C	11-1-63	17,038	123,913	1,072	5,999	4,961	1F	3,098
State MQ D	12-16-63	37,212	306,457	1,933	18,270	3,777	3F, 1P	1,915
<u>Tidewater Oil Co.</u>								
State AT No. 1	8-16-64	5,851	2,129	330	284	235	1P	53

- (a) Gas Produced During March/Top Oil Allowable
(b) Well Designation Changed From Mobil State No. 3 1-1-65
(c) Well Originally Completed in Premier Zone
(d) Well Originally Carried as Lea Co. Undesignated

F Flowing P Pumping

DONALD A. FLANAGAN

TABLE 3
GEOLOGICAL DATA
MESA QUEEN FIELD
MAY 1965

Operator Lease Well Number	Elevation	Top of Queen Zone		Thickness of Porosity by Zones					Top of Perforations		Base of Perforations		Zone Completed	Fluid Produced
		Depth	Above Sea Level	1	2	3	4	Total	Depth	Above Sea Level	Depth	Above Sea Level		
<u>Morris R. Antweil</u> Humble State No. 1	4350 KB	3398	952	4	8	0	0	12	3412	938	3416	934	2	Oil, Water
<u>Cactus Drilling Co.</u> Continental State No. 1	4351 KB	3374	977	5	8	0	4	17	3389	962	3395	956	2 & 3	Gas
Continental State B No. 2	4354 KB	3391	963	5	5	2	0	12	3404	950	3410	944	2	Gas, Oil
Mobil State No. 1	4359 KB	3392	967	4	5	3	1	13	3408	951	3416	943	2 & 3	Gas, Oil
No. 3	4354 KB	3399	955	4	5	1	0	10	3412	942	3418	936	2	Oil
Mobil State A No. 2	4342 DF	3385	957	6	8	1	0	15	3402	940	3406	936	2	Oil
Mobil State B No. 1	4356 KB	3387	969	4	8	0	0	12	3408	948	3414	942	2	Oil
Mobil State C No. 1	4360 KB	3402	958	4	6	1	0	11	3414	946	3424	936	2	Oil
Sinclair State No. 1	4345 KB	3374	971	5	8	0	3	16	3390	955	3396	949	2	Oil
No. 2	4336 KB	3385	951	5	10	3	3	21	3399	937	3401	935	2	Gas
Sinclair State No. 1	4359 KB	3389	970	4	7	0	0	11	3404	955	3410	949	2	Oil
No. 2	4360 KB	3388	972	4	8	2	0	14	3404	956	3408	952	2	Oil
No. 3	4359 KB	3398	961	5	8	0	0	13	3412	947	3422	937	2	Oil, Water
<u>Robert A. Dean</u> Mobil State No. 1	4386 KB	3301	1085	4	8	2	0	14						Gas
Sinclair State A No. 1	4368 KB	3355	1013	4	10	0	0	14	3372	996	3380	988	2	Gas
<u>Paul DeCleva</u> Tidewater State No. 1	4365 DF	3363	1002						3382	983	3392	973		Gas
<u>Humble Oil and Refining Co.</u> New Mexico State BT No. 1	4350 KB	3402	948	4	6	1	NDE	11	3420	930	3429	921	2 & 3	Oil, Water
<u>Shell Oil Company</u> DeCleva State No. 1	4365 KB	3394	971	2	5	4	0	11	3408	957	3418	947	2 & 3	Oil

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[illegible]

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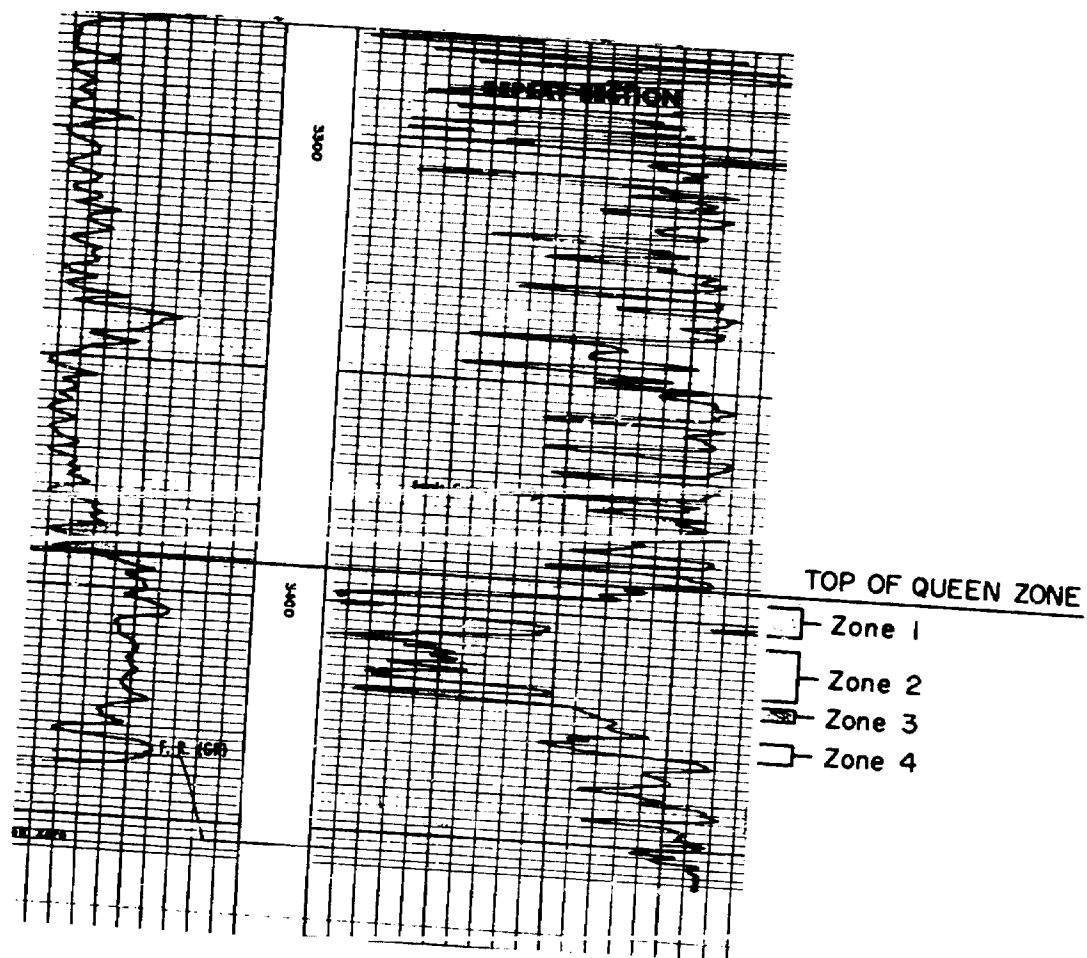


FIGURE 1
TYPICAL SONIC LOG-GAMMA RAY
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO

DONALD A. FLANAGAN

JUNE 1965

DALLAS, TEXAS

deanley-meier reporting service

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

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 10, 1968

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Case Number 3246 being reopened)
pursuant to the provisions of)
Order Number R-2935-A, which)
order extended special pool rules)
for the Mesa Queen Pool, Lea and)
Eddy Counties, New Mexico.)

Case 3246
(Reopened)

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3246.

MR. HATCH: Case 3246. Reopened. In the matter of Case Number 3246 being reopened pursuant to the provisions of Order Number R-2935-A, which order extended special pool rules for the Mesa Queen Pool, Lea and Eddy Counties, New Mexico.

(Whereupon, Applicant's Exhibits
1 through 5 marked for identification.)

MR. MORRIS: I am Dick Morris of Montgomery, Federici, Andrews, Hannahs and Morris, Santa Fe, appearing on behalf of Shell Oil Company. We will have one witness, Mr. B. L. Polster and ask that he be sworn, please.

(Witness sworn.)

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

MR. MAYS: I am J.W. Mays with Blue Danube Oil Company. I may want to make a statement.

MR. UTZ: M-a-y-s?

MR. MAYS: Right.

MR. MORRIS: At the outset, Mr. Examiner, I would like to ask the Commission to take administrative notice of the proceedings in Case Number 2986 which resulted in Order Number R -- I have two cases I want to refer to.

MR. UTZ: Case 2986 did you say?

MR. MORRIS: Yes, I have two cases I want to refer to, resulting in Order Number R-2691 that was entered on April 15, 1964. This was an application of Shell Oil Company to establish a GOR limit in the subject pool and the order established the GOR limitation of five thousand cubic feet of gas per barrel of oil for the pool. No other pool rules were established by that order. Then after that order was entered, Case Number 3246 was called to consider the establishment of special pool rules in the pool. This resulted in Order Number R-2935 which was entered on July 13, 1965 adopting temporary special rules and regulations for the pool and continued the GOR limitation at five thousand to one. Then, in the same case, the matter was reopened and the reopened case resulted in Order Number R-2935-A entered on January 13, 1966 which continued the temporary rules in effect for two year period. Because of this amount of background on this present case, I would ask the Examiner to take administrative notice of the proceedings in Case Number 2986 and the two previous hearings that have been held in Case Number 3246.

MR. UTZ: I will so do.

B. L. POLSTER

called as a witness, having been first duly sworn, was

examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Polster, will you please state your name, where you reside, by whom you are employed and in what capacity?

A B.L. Polster, Midland, Texas, I am employed by Shell Oil Company in the capacity of exploitation engineer.

MR. UTZ: Would you spell your name, please, for the reporter?

MR. POLSTER: P-o-l-s-t-e-r.

Q (By Mr. Morris) Mr. Polster, have you previously testified before the New Mexico Oil Conservation Commission or one of its Examiners?

A No, I haven't.

Q Would you briefly state your education and your experience in the petroleum industry?

A I am a 1954 graduate of the University of Wisconsin with a degree in Mining Engineering. I joined Shell immediately after graduation and have been with them ever since except for a short period for military leave. I have worked in and around Midland for about five years and in North Texas for about five years.

Q Are you familiar with the Mesa Queen Pool and the

special rules and regulations that have been adopted by the Commission in that pool?

A Yes, I am.

MR. MORRIS: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir.

Q (By Mr. Morris) Mr. Polster, to start off with, what is Shell's recommendation in this case?

A Shell Oil Company recommends that the field rules for the Mesa Queen field, as adopted by Order Number 2935 and continued in effect by Order Number 3935-A including the provision for the limiting gas oil ratio of five thousand to one be made permanent.

Q Have you prepared some exhibits to present to the Examiner in support of Shell's position?

A Yes, I have.

Q Referring to what has been marked as Exhibit Number 1, what is that exhibit?

A Exhibit Number 1 is a location plat showing the Lea County portion of the Mesa Queen Pool. The plat shows our interpretation on the structure of the Queen level.

Q And how does this structure map compare with the structure map that has been presented to the Commission in

previous hearings?

A This is the same interpretation that was presented in the previous hearing. There has only been one well drilled since that time. It is a gas well in Section 7 in the northwest part of this plat and it really did not change the interpretation of the previous hearing.

Q You are referring to the well that is in the northeast quarter of the southwest quarter of Section 7?

A Yes, sir.

Q I notice on this exhibit some red and blue lines, what do they represent?

A The blue line is the line of cross section which is covered in Exhibit 2. The cross section runs from Shell State MQD Number 2 on the west to Shell's MQA Number 1 on the east. Referring to Exhibit 2 --

Q All right, go ahead.

A The section shown on Exhibit 2 shows the three Queen Sand Stringers that are productive in the Mesa Queen Pool. The upper Stringer, which is an average thickness of only four feet, is the gas bearing zone in the field. It is separated from the second zone by a thin and permeable stringer which is present in every well in the pool. The second zone is the main producing and is apparently oil bearing to a depth of

plus nine two five feet sub-sea. There is a gas-oil contact updip in zone 2 at approximately plus nine fifty-five feet sub-sea. The third zone produces only in one well, Shell MQA Number 1 and is not considered an important part of the pool.

Q Now, you have these three zones shown on your Exhibit Number 2, your cross section.

A Right.

Q Go ahead.

A The thin zone of impermeable rock that forms the only separation between the gas zone and the oil zone caused a considerable difficulty in effecting a low ratio completion. Well stimulation was necessary to remove damage from drilling and cementing operations and the pressure required to treat the wells was frequently high enough to destroy the cement bond through this impermeable zone thus creating communication with the gas zone. As an example our Shell State MQD Number 2 which is in the northeast quarter of the southwest quarter of Section 17 was a low or normal ratio well originally and Shell State MQC Number 1, one location east had a lower structural position, was a high ratio well originally which has since been reclassified as a gas well. Shell State MQD Number 1, one location further east, is

again a normal ratio well at the same structural position as Shell State MQC Number 1 which is the gas well at present.

Q Now, by way of summary, Mr. Polster, of the problem that has given rise to the need for five thousand to one gas-oil ration in this pool, a problem is that what have you called your first and second zones are so close together that the gas from the first zone is being produced by the wells that are producing oil from the second zone and there is such a small vertical separation that the gas from the gas zone is appearing with your production, is that right?

A That is correct.

Q Is that the essence of it?

A Yes.

Q And this is the same condition that was presented to the Commission in these previous cases that the Examiner has taken administrative notice of?

A Yes, that is correct.

Q Do you believe that condition to continue to exist in this pool?

A Yes, we do.

Q Do you have an exhibit showing the production and GOR history in the pool to the present time?

A Yes, we do. Exhibit Number 3-R, I believe, is

a graphical presentation of the monthly oil production in the gas-oil ratio history of the Lea County portion of the field. The graph shows the rapid decline in oil production over the past two years. The gas-oil ratio increased to a maximum of about thirty-three thousand cubic feet per barrel in April 1967 and appears to be declining now. Also note that the minimum GOR for the field was only slightly less than four thousand cubic feet per barrel. This is considerably higher than the typical solution GOR for the type crude produced at Mesa Queen. We would like to point out that the number of wells has remained relatively constant over the past three, three and a half years.

MR. UTZ: How many wells are in the pool?

THE WITNESS: There are twenty-seven at the present.

Q (By Mr. Morris) Do you have another exhibit that shows the GOR history of the wells that are producing liquids?

A Yes, sir.

Q Excluding the pure gas wells?

A Yes, sir. I believe that this one got marked Exhibit Number 5, it shows the GOR history of the wells producing liquids and we would just like to note that the GOR history has been varied widely throughout the life of the field. Some wells, the ratio has actually declined such as

Tenneco Mobil State Number 3 and Tenneco Mobil State B Number 1. Some wells have had low ratios throughout their life such as Shell De Cleve State Number 1 and Coastal State Mesa Gulf Number 1. There are some wells that have shown a moderate increase in ratios such as Shell MQ-1 and Shell MQA-1 and Tenneco Mobil State C Number 1. There are some wells that have shown a sharp increase in GOR like Shell MQD Number 4, Shell MQC Number 1, Tenneco Cactus Sinclair State A Number 1 and A Number 2.

MR. UTZ: Is that the only well that has gone from oil to gas is your MQD-4?

A No, sir. Shell MQC Number 1 has been reclassified as a gas well and Shell MQD Number 4 was reclassified as a gas well and Tenneco Cactus Sinclair State A Number 2 has been reclassified as a gas well.

MR. UTZ: Was that a recent classification?

A I am not sure, sir. I believe it was in '66 but I am not positive of that.

MR. UTZ: Okay.

Q (By Mr. Morris) What disposition is being made of the gas that is produced from this field?

A Phillips is purchasing all gas produced in the Mesa Queen field.

Q Do you have indication from Phillips that they will continue to purchase the gas?

A Yes, we do. Exhibit Number 4-A is a wire we received from Phillips indicating that they will continue to take gas from the Mesa Queen field at the current rates.

Q This is gas from the gas wells and also the casing head gas from the oil wells, is that correct?

A Their wire just points out the casing head gas but I believe they will take the gas from the gas wells as well.

Q All right. Now, from the information that you have given, Mr. Polster, would you summarize what the problem is in this field and how the special rules meet that problem and what the need is for continuation of these special rules?

A Yes, we would like to call your attention to Exhibit Number 1-R again and the red line drawn on Exhibit 1 which is a line connecting wells of approximately equivalent structural position within the field and we would like to point out the wide variation in the gas-oil ratio for the wells at this equivalent structural position. Starting at the lower left of the graph you can see that the first well had a gas-oil ratio of four sixty-seven. This is the present gas-oil ratio which is an average for the first nine months of 1967.

MR. UTZ: These are producing ratios you are giving?

A Yes, sir. The first well is four sixty-seven cubic feet per barrel. The well immediately north of it has a gas-oil ratio that is too small to measure. We have indicated by zero. The following well is nineteen hundred forty-six cubic feet per barrel. The next well, eight thousand and seventy, five thousand and ninety and we go to Shell's MQC Number 1 which has been reclassified as a gas well which would have an infinite GOR; continuing, twenty-seven sixty-four, thirty-two sixty-two, fourteen zero two, two thirty-two and thirty-two ninety-nine, which is a rather wide range of gas-oil ratios for wells that are approximately in the same structural position.

It has been shown from geologic data and production performance that there is a gas-sand overlying the oil bearing zone of the Queen formation. It is apparent that due to the narrow separation between the oil and gas zones which is from two to four feet, it has not been possible to isolate the gas zone in all wells and produce only the oil zone. For this reason abnormally high gas-oil ratios occur in wells which are completed entirely within the oil zone. These abnormally high gas-oil ratios are considerably in excess of

the ratios which would be produced from the oil zones with a gas zone not present. Several wells within this field have been fortunate enough to be completed within the oil zone without communication with the gas zone and indeed are producing at low gas-oil ratios. Performance data shown at previous hearings indicate that the bottom hole pressure in individual wells within the field was a function of the total field withdrawals and not related to individual well production. Thus, there is apparently good communication throughout the reservoir. For this reason it is my belief that the five thousand gas-oil ratio is necessary to protect the correlative rights of those operators producing from the oil zone who have not been able to isolate the overlying gas zone. For if oil production from the oil zone is penalized due to gas production from the gas zone those operators not producing gas from the gas zone will withdraw a disproportionate share of the oil from the common reservoir. We would like to note on Exhibit Number 1 the green outline. This is the proposed secondary recovery unit for the Mesa Queen field. Tenneco, who will be the major operator, has just finalized an engineering report and has recently presented it to the operators. If no unforeseen delays are met, the unit should be formed by mid 1968. A change in GOR at this time could

defer unitization efforts by changing current production perimeters. This would cause economic waste since some of the wells are at or near the economic limit. If the GOR is reduced to two thousand to one, the gas wells in the north part of the Mesa Queen Pool will have their allowables reduced to forty per cent of the current rate. This would reduce the margin of profit by lengthening the life and increasing the operating cost of a well.

Q Let me interrupt you there, Mr. Polster. You say the gas wells would have their allowable reduced to forty per cent of the current rate that is because of the provision in the special rules that ties the gas allowable to the oil to the spacing for oil production, is that right?

A This is correct.

Q Now, so far you have mentioned only the gas-oil ratio provision of the order. What position do you take with respect to continuation of the other portions of the special rules?

A Shell would support continuation of other temporary field rules, especially the definition of a gas well, reclassification of wells.

MR. UTZ: Was that a hundred thousand in there?

A Thirty thousand.

Q (By Mr. Morris) You mentioned that Tenneco was the major operator, one of the major operators in the pool and was attempting to put together a unit. Do you have any communication from Tenneco that you would offer to the Commission with respect to this case?

A Yes, I have a letter addressed to the Commission from Tenneco stating that they have conferred with us and have seen what we had planned to present here this morning and agree with our position of making the rules permanent including the five thousand to one gas-oil ratio.

MR. MORRIS: At this time, Mr. Examiner, we would offer Shell's Exhibit 1-R through 5-R into evidence.

MR. UTZ: Without objection Exhibits 1-R through 5-R will be entered into the record of this case.

(Whereupon, Applicant's Exhibits
1-R through 5-R were offered
and admitted in evidence.)

MR. MORRIS: That's all I have on direct examination.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Polster, did you state early in your testimony where you felt the GOR contact was in this pool, gas-oil contact?

A I did, in zone 2. The best engineering estimate

would be at a plus nine fifty-five feet sub-sea. Zone 1 is apparently the gas zone throughout the field. We have no data on any oil contact in it or any water contact, I don't believe.

Q In your opinion, what has caused these three wells since 1963 to become gas wells or go over thirty thousand to one?

A I think we are just seeing communication, a better communication probably with the gas bearing zone overlying the oil production.

Q The real purpose of these rules is to try to keep the gas-oil contact stationary to keep the oil from wetting dry sands. Do you think that this is being accomplished under these rules?

A Yes, I do.

Q Have you made any calculations on a volumetric basis to determine this?

A No, sir, I haven't.

Q How many pure gas wells do we have within the gas area? I count four here.

A There were four that were drilled as gas wells in the Lea County area.

Q The two Dean Wells up in Section 7, they are not

included in the pool?

A Yes, they are.

Q They are in the pool now?

A Yes.

Q And they are gas wells?

A Yes.

Q So that would be six?

A No, there are four wells that were drilled as gas wells and three that have been reclassified as gas wells. The four wells that were drilled as gas wells are the two Robert Dean Wells in Section 7. A third Dean Well in Section 18 and the Blue Danube De Cleve Tidewater State in Section 17, I believe, are the four gas wells in the field.

Q How about the gas well, the Number 4 Well in the southwest quarter of Section 17, is that oil and gas, or what is that?

A That was drilled as an oil well and has been since reclassified as a gas well.

Q It is now a gas well?

A Yes, sir.

Q And the Number 1 Well in Section 16, the northeast of the northwest is that a reclassification also?

A Yes, sir.

Q So at the present time, there is one, two, three,

four, five, six gas wells?

A Seven, sir. There is another Shell MQC Number 1 in the northwest of the southeast of Section 17. It is a reclassified well.

Q That is the Number 2 Well there?

A Number 1. It is in the northwest of the southeast of Section 17.

Q And the Number 2 Well in the northeast of the southwest is still an oil well with what kind of a ratio?

A That is Shell MQD Number 2 and it has eleven thousand seven hundred fourteen GOR as an average for the first nine months of 1967.

Q It is rather difficult to explain just where the gas-oil contact is in this type situation, isn't it?

A Yes, it was.

Q You have an oil well almost directly between two gas wells.

A Because of the communication or the communication we feel exists, it was rather difficult to establish a gas-oil contact in zone 2. As I say, the best engineering estimate was at nine fifty-five originally.

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

You may be excused.

(Witness excused.)

MR. UTZ: Statements?

MR. MORRIS: I have just one thing further, Mr. Examiner, I would like to point out that is, the special rules that are in effect in this pool that were originally adopted as temporary rules by Order Number R-2935 were adopted upon the application of Paul De Cleve and Shell was not the original applicant for the special rules. Shell's participation in the hearings on these special rules has been primarily to preserve the five thousand to one gas-oil ratio. However, as Mr. Polster has stated, Shell is here supporting continuation of the special rules.

MR. UTZ: Other statements? Do you have one Mr. Mays?

MR. MAYS: I represent Blue Danube Oil Company which is successor in title to Paul De Cleve, the interest who initially started or made the original request for these special rules. We operate only one little gas well in the northwest quarter of Section 17, the northwest northwest and I am in a position of pleading humility more than anything else and without the high ratio, I mean the five thousand to one ratio which is Rule 6 under this R-2935 and Rule 7

which permits us to use one hundred sixty acres for gas well where it is strictly a gas well, I believe that would be a combination of maybe Rule 2 and Rule 7. Computing the amount of gas that we are permitted to produce without those in effect, we would be faced with plugging a well that is presently commercial and as you mentioned a while ago, partially in jest, about Phillips gas price, we get about six and a half cents a thousand for that gas well gas in there and it would work severe economic burden on us if these rules were not continued and I would like to request that they be made permanent. I might be out of order by making that request but I would like to respectfully request that.

MR. UTZ: You have one hundred sixty acres dedicated to that well.

MR. MAYS: Yes, sir, it is not a square hundred sixty, I have forgotten.

MR. UTZ: Nonstandard?

MR. MAYS: Nonstandard, yes, but we do have a hundred sixty acres dedicated to it.

MR. UTZ: Do you recall offhand what the acreage dedication is?

MR. MAYS: I can give it to you, you mean the description of the acreage?

MR. UTZ: Yes.

MR. MAYS: We have the west half of the northwest, the northeast of the northwest and the northwest of the northeast of Section 17 and that nonstandard was under -- I will give you that rule number, it is Case Number 3247, 2936, July 13, 1965, permitting that nonstandard.

MR. UTZ: Thank you.

MR. MAYS: Yes, sir.

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

Witness my Hand and Seal this 30th day of January, 1968.

Kay Embree
 Notary Public

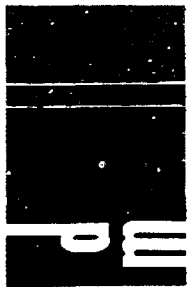
My Commission Expires:
 November 19, 1971

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Bernalillo hearing of Case No. 32,46.
 heard by me on 1-30-68, 1968.
[Signature] Examiner
 New Mexico Oil Conservation Commission

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PAGE 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 5, 1966

EXAMINER HEARING

IN THE MATTER OF:

In the matter of Case No. 3246 being
reopened pursuant to the provisions
of Order No. R-2935, which order
established special rules for the Mesa-
Queen Pool, Lea County, New Mexico.

Case No. 3246

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case 3246.

MR. DURRETT: In the matter of Case No. 3246 being reopened pursuant to the provisions of Order No. R-2935, which order established special rules for the Mesa-Queen Pool, Lea County, New Mexico, for production of oil and gas wells in said pool, including classification of oil wells and gas wells, spacing units for oil wells and gas wells, and the establishment of a gas-liquid ratio limitation of 5,000 cubic feet of gas per barrel of oil.

If the Examiner please, I received a telephone call and a wire from Sim Christy, attorney for the applicant in this case, requesting a continuation to the January 26 Examiner Hearing.

MR. NUTTER: Case 3246 will be continued to January 26, 9:00 A.M., same place.

MR. MORRIS: If the Examiner please, I would like to enter an appearance in this case. I'm Richard Morris of Seth, Montgomery, Federici and Andrews, appearing in this case on behalf of Shell Oil Company. We were not informed that the request for continuation would be made in this case. Shell Oil Company as an owner of substantial interest in this pool is ready to proceed in the matters to be considered in Case 3246. Could I have just a minute to confer with my witness concerning the position we would like to take in this

case.

MR. NUTTER: Of course.

(Whereupon, a discussion was held off the record.)

MR. NUTTER: Are there other appearances to be made in Case 3246 other than Shell?

MR. SHARP: I'm here with Cactus.

MR. NUTTER: Would you state your name?

MR. SHARP: Jim Sharp with Cactus Drilling Company.

MR. NUTTER: You are interested in Case 3246?

MR. SHARP: Yes, sir.

MR. NUTTER: We have a motion made by telegram requesting continuation of this case from January 5 to January 26. Mr. Morris, do you have a statement for the record regarding this request for continuation?

MR. MORRIS: Yes. Shell Oil Company is opposed to the motion for continuation. Shell is present and is prepared to support the five thousand to one gas-oil ratio for which Shell was the original applicant, and is also prepared in general to support the field rules promulgated by Order No. R-2935.

We were unaware that any motion would be made for a continuation of this case and our information was that Paul De Cleva was aware of the hearing and would be present at this hearing today. We had no information that they would not.

Shell is prepared to put on its case at this time. We feel it would be an imposition upon Shell and upon the others that are present, prepared to take a position today, to have the case continued to a later date.

MR. NUTTER: Does Cactus have a position on the request for continuation?

MR. SHARP: Cactus agrees with Shell.

MR. NUTTER: The request for continuation will be overruled at this time. We'll proceed with the hearing of Case 3246, reopened, Mr. Morris.

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

(Witness sworn.)

RICHARD D. SEBA

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

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Seba, would you state your name and where you reside?

A My name is Richard D. Seba, I reside in Midland, Texas.

Q By whom are you employed and in what capacity?

A I am employed by Shell Oil Company as the Division

Reservoir Engineer for the Western Division in Midland.

Q And how long have you been in that capacity with Shell?

A I have been in the present capacity about four months.

Q And before that how were you employed?

A I was a Reservoir Engineer in Midland also.

Q Have you previously testified before the Commission or one of its Examiners and had your qualifications established as a matter of record?

A Yes, I have.

MR. MORRIS: Are the witness's qualifications acceptable?

MR. NUTTER: They are.

Q Mr. Seba, are you familiar with the Mesa-Queen Pool and particularly with the gas-oil ratio problems that have occurred in this pool over the years?

A Yes, I am.

Q Referring to what has been marked as Exhibit No. 1 in this case, would you state what that is and what it shows?

A Exhibit No. 1 is a contour map of the Mesa-Queen field and adjacent area, and on that map are indicated the contours on the top of the Queen formation in that area. The solid spots on the well are the oil wells producing from the Queen formation and the spots with the lines on them

are the wells that have been designated as gas wells in the Queen formation. I would also point out the red line running approximately through the center of the exhibit is the line of cross section which will be presented as Exhibit 2.

Q How many oil wells and how many gas wells are there in this pool?

A There are 22 oil wells, of which Shell operates eight; there are five wells classified as gas wells, of which Shell operates one.

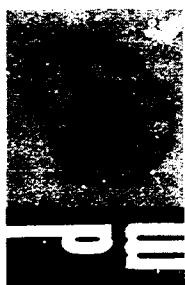
Q Is the gas well up in the extreme northwest corner of the plat designated as a gas well in this pool?

A Yes. The Dean Well in Section 7 is prorated as a gas well in the Mesa-Queen field.

Q You mentioned the line of cross section shown on this Exhibit No. 1. Would you refer now to your Exhibit No. 2 which is that cross section, and point out the features of that?

A I would first like to point out that Exhibit No. 2 is the same Exhibit No. 2 that was presented at our original hearing on February 5th, 1964. There's been no additional drilling in the area and no additional information gained to change the picture that was presented at the original hearing.

Q Excuse me there, Mr. Seba, by that do you mean there has been no additional wells drilled in this pool since



that time?

A No. I mean in the area of the cross section. There have been several additional wells drilled to the south of this cross section but none within the bounds of the cross section.

Q All right.

A I might point out several things in the legend on this. The solid line on the left side of each well is the zone of completion, whereas the solid line on the right side of each well is the cored interval. They look quite similar but they're not to be confused.

Q Would you point out now the basic structural features of this pool as depicted on this cross section?

A Yes. The top of the Queen formation is so noted, which compares with the contour lines shown on Exhibit 1. Zone 1, so labeled and shown in red, is a gas zone; Zones 2 and 3 shown in green are oil zones. Zone No. 2 is the main producing oil zone in the Mesa-Queen field and occurs throughout the field. Zone 3, which is shown on the extreme right side of the cross section, is also an oil-bearing zone but is found only to a limited extent in the field.

There is only a slight eastward dipping shown by this cross section, in fact, most of the points on the cross section are at equivalent stratigraphic points. I would also note

that all completions shown on this cross section are in the oil zone, mainly in Zone 2, with one on the east side in Zone 3.

Q In other words, the black bars that are shown on each of these wells, the one on the right-hand side is the area in which the well was cored, the bar on the left-hand side is the area of perforation?

A That is correct.

Q The wells were at least intended to be completed only in the oil zone?

A That is correct. All the wells were perforated in the oil zone only.

Q Now, how much separation is there between Zones 1 and 2?

A There is as much as five feet in some places and as little as two feet in other places between the red zone or gas zone and Zone 2 marked in green, which is the oil zone.

Q What type of formation lies within that two to five foot interval?

A This is an impermeable shale barrier that occurs between the two sand zones.

Q From the cores that were taken in these wells, Mr. Seba, does that shale, impermeable shale barrier that you just referred to, has that been evidenced in each of these wells?

A Yes, that is evidenced in all the wells in the cores and also on the logs which are presented on the cross section.

Q Refer next to what has been marked Exhibit No. 3 in this case and state what that is and what it is intended to show.

A Exhibit No. 3 is a tabulation of average gas-oil ratios for each well in the field for the years 1963 and 1964 and for October of 1965, which is the most recent data that I had available to me. This exhibit shows the randomness of the gas-oil ratios in the field and also shows some rather peculiar happenings to the gas-oil ratio from the time that the field was discovered until the present time.

I first would like to call your attention to the Cactus Mobil State No. 3 well which in 1963 had an average gas-oil ratio for the year of 5,662, for 1964 had an average gas-oil ratio of 5,061 cubic feet per barrel, and in October 1965 it was down to 229 cubic feet per barrel. I would also call your attention to the Cactus Mobil State B No. 1 which has shown a like performance, dropping from an average in 1963 of 10,289 cubic feet per barrel to 463 cubic feet per barrel in October of 1965, and in my conferring with Cactus Drilling Company they indicate that no work has been done on these wells to cause this decline in gas-oil ratio.

Now to further complicate the picture there are those wells that have gone in exactly the opposite direction. I call your attention to the Shell MQC No. 1 well which went from an average of 6,248 in 1963 to the recent gas-oil ratio of 8,542.

MR. NUTTER: Mr. Seba, are these test ratios or producing ratios?

A These are producing ratios from the monthly and yearly statistical volumes.

MR. NUTTER: I see.

A I would also call your attention to the State MQD No. 3 well which in 1964 averaged 32,715 and in October of this year averaged 105,067. There are also several other wells worth noting. The Tidewater State AT well currently has a gas-oil ratio of 114 cubic feet per barrel. The Shell DeCleva State produces too small an amount of gas to measure. The Coastal State's gas-producing Mosa Gulf well has a low ratio, being 250 cubic feet per barrel.

So I show this exhibit to point out the randomness of the gas-oil ratios, showing that some have gone up during the period of production, some have gone down during this period of production, and some are extremely low at the present time.

Q (By Mr. Morris) Mr. Seba, are these gas-oil ratios, diverse though they be, related to their structural position

in the field?

A No; and I think this can be shown with the next exhibit, Exhibit No. 4, which is a small map of the area and is comparable to the map presented in Exhibit 1 in that it shows the Queen oil wells and the contours, and also shows the line of the cross section of Exhibit 2. You may see from this exhibit that the gas-oil ratios are not necessarily related to structure.

I might take you by the hand through a line of wells that are comparable structurally, and these wells are connected by the green line on your exhibit, starting with the Tidewater, or, no, the Shell DeCleva State Well in Section 20 which shows a zero gas-oil ratio, the Tidewater State AT having a gas-oil ratio of 114; the next offsetting well being the Shell MQD well having a gas-oil ratio of 7,453, and up to the MQC No. 1, which is 8,542; then to the east offset, having a ratio of 4294. The east offset to that having a ratio of 2,564, and the Cactus Mobil B well having a ratio of only 463. East of there the Cactus A 2 well has a ratio of 1,424 and then the well north of there has a ratio of 1,881.

I point out again that these wells are all at comparable structural positions, but yet the ratio ranges from zero to a maximum of 8,542. Therefore, it's my interpretation that

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the gas-oil ratio is not a function of structural position necessarily but is caused by communication with the overlying gas zone.

Q Have you made other studies that would also support that basic conclusion?

A Yes, I have. I would first like to call your attention to Exhibit No. 5, which gives an indication of the performance of the field of the oil zone only. Exhibit No. 5 is a graph of bottom hole pressure versus time since the field was developed. The points making up this exhibit were taken from six Shell wells which were the wells I had the data available on. I would point out that most of the points lie on a very nice, straight line declining with time. There's one point in June of '64 that is out of line. This is the Shell MQD State No. 4 well which is classified as a gas well and it's gas well classification may well explain it's divergence from the rest of the points.

This type of performance is a normal depletion drive performance in that the bottom hole pressure should decline with production from the common reservoir. This exhibit also points out the fact that the production from the reservoir, or rather the performance of the reservoir is a function of the withdrawals from the whole reservoir rather than the withdrawal from any particular well.

In preparing this exhibit I also prepared a graph of bottom hole pressure versus cumulative for individual wells and this showed no trend whatsoever. Therefore, it's my contention that the reservoir is very well connected between wells and that withdrawal from any one well will definitely affect the bottom hole pressure in other wells in the field, and, therefore, the field performance is a function of total withdrawals rather than the withdrawal from any one particular well.

Q Which wells were used in preparing this study?

A The wells used were the Shell MQ State No. 1, the MQC No. 1, and the MQD wells 1, 2, 3 and 4.

MR. NUTTER: Are each of these points an average of those six wells?

A No, each of these points is the pressure measured in any one well at a particular time.

MR. NUTTER: In one well?

A Yes, one well.

MR. NUTTER: Then it can be any of these six different wells?

A Yes. The maximum number of points that we had in any one well was three and the most of them we had only two pressure points.

Q (By Mr. Morris) Referring next to Exhibit No. 6, state what that is and what it shows.

A Exhibit No. 6 is a plot of gas-oil ratio versus bottom hole pressure for two of the wells that were used in

preparing Exhibit No. 5, being the Shell State MQC No. 1 and the Shell State MQ No. 1. There were two points available for the MQC No. 1 and three points available for the MQ No. 1.

The curve at the top of the exhibit is for the State MQC No. 1 and it indicates that at the original, approximately original pressure of 925 pounds that well had a producing gas-oil ratio of 870 or 8,700 cubic feet per barrel, whereas after the pressure had declined to 490 psi the gas-oil ratio was approximately 9,100 cubic feet per barrel, or an increase of 400 cubic feet per barrel.

The Shell State MQ 1 exhibited a producing gas-oil ratio of approximately 495 cubic feet per barrel when the pressure was 915, whereas the most recent one measured at bottom hole pressure of 460 exhibited a gas-oil ratio of approximately 900 cubic feet per barrel, for an increase of 400 cubic feet per barrel.

I would like to point out the fact that these two curves are parallel, indicating a similar performance. It is my opinion that the difference between the two, being some 8,000 cubic feet per barrel, is coming from an extraneous source and not from the oil reservoir that is producing the oil.

Therefore, it would appear that in the absence of this extraneous gas that the Shell State MQC 1 would exhibit a

producing gas-oil ratio similar to that for the MQ 1.

Now, to further support this contention I wish to point out the original treatments for the two wells. The MQ No. 1 was treated with approximately 150,000 barrels of 15% acid on completion. The acid was injected at about one barrel per minute. It required 2400 pounds to break down the formation so that it would take the acid and a soak period of about fifteen minutes was all that was required before the well would take the acid. However, the MQC 1, which is the high gas-oil ratio well which was also treated with 150 gallons of acid, required a pressure of approximately 2800 pounds and required a soak time of about fifty minutes before the formation would take the acid. Therefore, it appears that in forcing the acid into the oil formation we also broke down the cement bond behind the pipe and allowed communication over approximately a four-foot interval between the oil zone and the overlying gas zone.

The original potential for the MQC No. 1 well indicated a gas-oil ratio of approximately 4318 cubic feet per barrel whereas the initial potential for the MQ 1 indicated a gas-oil ratio of only 560, thus indicating that this communication has been present since the well was originally completed in the zone.

Q You mentioned the completion of this well and the

acid treatment as a potential cause of the cement bond breaking down and the gas from the upper zone being produced through the perforations in the oil zone of this well. Could this be eliminated by a workover of the well? Would you have a likelihood of success if the well were worked over?

A It would be my opinion that it would be very probable that if we squeezed off the present perforation and reperforated and acidized and opened the perforations that the same thing might occur the second time. We would not be assured of isolating the gas zone in this well.

Q Would you find the same situation occurring in other wells where the gas-oil ratios in your opinion are due to the extraneous source?

A The wells in this field have indicated that there are some tight portions of the Queen sand in this area. In fact, there have been a couple of dry holes that have been dry merely because there was no porosity present. Therefore, it would appear that in acidizing some of these wells that were in the tighter portion, that in order to force the acid into the formation we would break down our cement job whereas in wells that were drilled in the better portion of the reservoir requiring lower treating pressures, they were probably fortunate and did not break down the cement bond between the oil and the gas zones behind the pipe.

I would also point out that these two wells do appear on this cross section, this being the MQC No. 1 well and this being the MQ No. 1 well, and it appears that the perforations are at almost identical subsea depths, indicating that this difference in gas-oil ratio is not a function of their structural position but does appear to be caused by the method of completion.

Q Is the gas that is being produced from this field being sold?

A Yes. Phillips Petroleum Company is taking the gas from this field. At the original hearing in February of 1964 they submitted, a letter from Phillips was submitted as Exhibit No. 5, stating that Phillips was willing to take from two hundred to two hundred fifty thousand cubic feet per well per day.

I submit as Exhibit No. 7 in this hearing a telegram received from Phillips stating that they expect to continue handling the Mesa Queen gas in accordance with the past performance under the terms of the existing casinghead contract.

MR. MORRIS: At this point, Mr. Examiner, we would request that the record, transcript and exhibits in Case No. 2986, held on February 5, 1964, be incorporated in this case, that being the original hearing on the five thousand to one gas-oil ratio in this pool, by application of Shell Oil

Company.

MR. DURRETT: What's the case number?

MR. MORRIS: 2986.

MR. NUTTER: That is approximately two years ago?

A Yes.

MR. NUTTER: The record and the attendant documents to the record to the Case 2986 will be incorporated in the record of this case.

Q (By Mr. Morris) Mr. Seba, would you comment and summarize your studies up to this point on the need for a gas-oil ratio of five thousand to one and state your opinion as to the effect of the gas-oil ratio and the pool rules in this field on correlative rights and the prevention of waste?

A It has been shown from geologic data and production performance in the Mesa-Queen field over the past three years that there is a gas sand overlying the oil-bearing zone of the Queen formation. It is apparent that due to narrow separation between the oil and gas zone, which is from two to four feet, that it has not been possible to isolate the gas zone in all wells and produce only the oil zone. For this reason abnormally high gas-oil ratios occur in wells which are completed entirely within the oil zone. These abnormally high gas-oil ratios are considerably in excess of the ratios which would be produced from the oil zone with the gas zone

not present. Several wells within this field have been fortunate enough to be completed within the oil zone without communication with the gas zone and indeed they are producing at the low ratios.

Performance data also indicates that bottom hole pressure within individual wells within the field is a function of total field withdrawals and not related to individual well production. Thus there is apparently good communication throughout the reservoir. For this reason it is my belief that the five thousand to one gas-oil ratio is necessary to protect the correlative rights of those operators producing from the oil zone who have not been able to isolate the overlying gas zone. For if all production from the oil zone is penalized due to gas from the gas zone, those operators not producing gas from the gas zone will withdraw a disproportionate share of the oil from the common reservoir.

Such penalties would also cause premature abandonment of some wells or necessitate unnecessary and expensive workovers, both of which would cause waste.

We further support the continuation of the current field rules and especially the determination of gas wells.

Q Your last comment there was directed toward the definition of a gas well as a well producing with a gas-oil ratio of thirty thousand to one or greater?

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A That is correct.

Q In your opinion will the special pool rules as temporarily promulgated by Order No. R-2935 effectively administer the gas and oil wells in this pool?

A It is my opinion that it will, yes.

Q Were Exhibits 1 through 7 prepared by you or under your direction?

A Yes, they were.

MR. MORRIS: At this time, Mr. Examiner, we offer exhibits, Shell's Exhibits 1 through 7.

MR. NUTTER: Shell's Exhibits 1 through 7 will be admitted in evidence.

(Whereupon, Shell's Exhibits 1 through 7 were offered and admitted in evidence.)

MR. MORRIS: That's all I have of this witness at this time.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Seba, you stated that there were five gas wells in the pool. You also mentioned the one in the extreme upper left-hand corner of the exhibit was a gas well being in Section 7?

A Yes, sir.

Q There are two gas wells shown there?

A One of those is a dry hole. The open circle indicates that it is not currently producing. The one I'm referring to is the Bob Dean Mobil State No. 1 well.

Q In Lot 2 there?

A Yes.

Q Now --

A Actually the proration schedule only shows four but we have recently been advised by the Commission that Well No. 4 in the MQD lease will be classified as a gas well since it has a ratio of approximately 216,000 cubic feet per barrel.

Q It formerly was considered to be an oil well?

A Yes.

Q In your opinion are these five gas wells producing predominantly from the Zone 1 which you have depicted with red coloring on Exhibit 2?

A I have no evidence to this effect one way or the other. They are all up structure wells so that they may be producing from both zones.

Q Do you believe that the green zone, which is Zone 2, is gas-productive and solely gas-productive as you move up structure?

A It may produce at very high ratios, but I have no evidence to support the contention one way or the other, other

than the fact that all the wells that are producing at very high ratios, in other words in excess of thirty thousand, are up structure wells.

Q But you feel that these wells which are up structure which do produce with high GOR's are in communication with the other wells, some of them which are lower on the structure and which have low GOR's?

A Yes. We are asking for continuation of the five thousand gas-oil ratio to protect the correlative rights and prevent waste in the oil zone and the fact that we did have some up structure wells producing at higher ratios does not affect this request.

Q Now in the letter that was submitted in the original hearing on this matter, the letter from Phillips Petroleum Company agreeing to take a specific amount of gas, they stated that they would take something like two hundred fifty thousand?

A Two hundred to two hundred fifty.

Q Per day. Then the new telegram that they sent which was offered as Exhibit No. 7 in this case stated they're willing to take in accordance with the past performance. Are they capable and are they actually taking all of the gas that's produced and offered to them?

A To my knowledge, yes. The five thousand ratio

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for a 40-acre well would amount to only 190,000 cubic feet per day. So it would only be the wells that have more than 40 acres allocated to them that would be producing in excess of the rate that they agreed to take.

Q And under the terms of the existing Order No. 2935 they would get, these gas wells to which 160 acres are dedicated would get the 190,000 multiplied by 160 over 40?

A Yes. Now my study of the field indicates that there is only one well at the present time that has 160 acres allocated to it and the majority of the wells in the field would not have excess acreage that could be allocated to them.

MR. MORRIS: You are referring to the gas wells?

A The gas wells, or if they would go to gas, most of them are drilled on 40-acre spacing and have no excess acreage that could be attributed to them.

Q Do you know what the actual takes from any of the gas wells are running?

A Yes, sir. The Cactus Drilling Continental State No. 1, which is classified as a gas well, produced only 97,000 cubic feet in the month of October. The Robert A. Dean Mobil State No. 1 produced 11,387,000 cubic feet in October, as did the Robert A. Dean Sinclair State A No. 1. Both of these were approximately the top allowable gas. The Paul De Cleve Tidewater State No. 1 well produced 7,912,000 cubic

feet in the month of October. It is my understanding that he's working off some back overproduction which is the reason he's not producing the total amount of gas that he would be able to produce under the current field rules.

Q Now you had several wells on your Exhibit No. 3, Mr. Seba, which had demonstrated a marked decrease in gas-oil ratio from '63 to October of '65. The first one that you mentioned was the Mobil State 3 belonging to Cactus?

A Yes, sir.

Q Which has gone down from 5600 to 229. Now where is that well, please?

A I believe that is the one located in Section 16 close to the center of the section. You said the Mobil State 3, is that right?

Q I believe that's the one on your exhibit.

A That's the one that also appears on the cross section.

Q That well isn't offset by a gas well, is it?

A No, sir. The nearest gas well is the Cactus Continental State No. 1 in the north part of that section.

Q Now, the Cactus Mobil State B 1 has gone from 10,000 to 463, would that be the well which would be in the southeast of the northwest?

A Yes, sir.

Q In Section 16?

A Yes, sir. Both of those two wells together. It is offset by the gas well.

Q What's the location of the Mobil State A No. 2 which has gone from 4,000 to 1400?

A Mobil State A, it's in 16 right east of the Mobil B 1, just northeast of the section number.

MR. MORRIS: It's on the cross section.

Q In your opinion, Mr. Seba, is there any significance in the fact that two of these three wells which have demonstrated decreasing GOR's are offset by a gas well and is there a possibility that withdrawals from the gas section has caused the oil to move up structure in these wells, thus reducing the gas-oil ratio?

A It would seem more plausible that that gas well is in communication with the gas zone and maybe has depleted the gas zone in that area.

Q Well, these wells evidently were in communication with the gas zone themselves, having originally high GOR's?

A I would assume that that is probably it, and that this gas well, may have depleted the one that is classified as a gas well may have better communication to the gas sand than these other wells.

Q This gas well you stated previously only produced

97,000 cubic feet in October I believe?

A That's right.

Q Has it decreased in gas productivity?

A I don't have that data at hand to know whether it has or not. It would appear with that low production rate in October that this might have happened. Cactus has indicated that no work has been done on these wells to cause this. Also I would find it rather hard to conceive that the oil would move back up into a gas cap since there is no bottom driving mechanism. The only driving mechanism in this reservoir appears to be solution gas drive, therefore, in the absence of a bottom water or anything like that it would be inconceivable that the oil would resaturate the gas cap.

Q Has Shell at any time attempted to recomplete any of its wells to shut off the communication between the gas sand and the oil sand?

A Not to my knowledge. We have had extreme difficulty with cement bonding in a number of fields and have had difficulty in repairing cement bonding problems.

Q And it's been necessary to acidize all of the wells for initial completion?

A Yes.

Q And you feel that in some cases you broke down whatever cement bond you did have at the time that acid was

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forced in?

A Yes. I think in these wells we washed some rather large cavities so that the cement layer outside the casing was rather thick in spots.

MR. NUTTER: Are there any other questions of Mr. Seba? He may be excused.

(Witness excused.)

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

MR. MORRIS: That's all.

MR. NUTTER: Does anyone have anything they wish to offer in this case?

MR. DURRETT: I might state for the record that the Commission has received a telegram from Mr. George W. Baker, Vice President of Cactus Drilling, stating that he believes that the special rules should be continued in effect.

MR. NUTTER: Thank you. Is there anything further in Case No. 3246? The case will be taken under advisement.

I N D E X

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

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

Witness my Hand and Seal this 12th day of January, 1966.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

I do hereby certify that the foregoing is
a true and correct copy of the proceedings in
Case No. 3246
dated 1/5, 1966.

Ada Dearnley, Notary
New Mexico Oil Conservation Commission

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PAGE 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 12, 1965

EXAMINER HEARING

IN THE MATTER OF:

Application of Paul DeCleva for an
amendment to Order No. R-2691, Lea County,
New Mexico. Applicant in the above-styled
cause seeks an amendment to Order No.
R-2691, which order prescribes pool rules
for the Mesa Queen Pool, Lea County, New
Mexico.

Application of Paul DeCleva for a
non-standard gas proration unit, Lea County,
New Mexico.

Case No. 3246
3247

BEFORE: ELVIS A. UTZ

TRANSCRIPT OF HEARING

MR. EXAMINER: Will the hearing come to order.

Case No. 3246.

MR. DURRETT: Application of Paul DeCleva for an amendment to Order No. R-2691, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2691, which order prescribes pool rules for the Mesa Queen Pool, Lea County, New Mexico.

MR. CHRISTY: Mr. Examiner, Sim Christy of Hinkle, Bondurant and Christy for the applicant Paul DeCleva. Mr. Examiner, the next case, 3247, involves the same areas and wells and I believe the examiner's time can be saved by combining the two cases for testimony purposes.

MR. EXAMINER: Cases 3246 and 3247 will be consolidated for the purposes of testimony. Separate orders will be written.

MR. CHRISTY: Very well. We have one witness, Mr. Examiner. Will you stand and be sworn.

(Witnesses sworn.)

MR. UTZ: Are there other appearances?

MR. MORRIS: I am Dick Morris of Seth, Montgomery, Federice and Andrews appearing for Shell Oil Company.

MR. UTZ: Are there others? You may continue.

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

DIRECT EXAMINATION

BY MR. CHRISTY:

Q Would you please state your name, address and occupation and by whom you are employed and in what capacity?

A Yes. My name is Donald Flanagan. My address is 1101 Praetorian Building, Dallas, Texas. I am employed by Mr. DeCleva and I am a Petroleum Engineer.

Q Mr. Flanagan, you have not testified before this regulatory body before?

A No, sir. I have not.

Q What schools of higher learning did you attend; and what degrees, if any, did you receive?

A I attended Texas A & M and received a Bachelor of Science degree in Petroleum Engineering and I attended Texas A & M Graduate School for two years, working on a Master of Science degree in Petroleum Engineering.

Q How long have you been practicing as a Petroleum Engineer?

A Approximately six years.

Q Are you familiar with the area involved in Cases 3246 and 3247 and the wells and the general history of the field?

A Yes, I am.

CONVENTIONS

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Q Are you familiar with what is sought by the cases?

A Yes, sir. I am.

MR. CHRISTY: Does the Examiner have any questions concerning the qualification of the witness?

MR. EXAMINER: None, and he is qualified.

Q (By Mr. Christy) Now, Mr. Flanagan, I refer you to Applicant's Exhibit No. 1 in both cases which is a identical exhibit, I might say, for the record, and let's start at Page One. I believe Page One is a letter to the Commission from Mr. DeCleva dated April 8, 1965, setting forth the requested amendment to the rules sought in Case 3246?

A Yes, sir. That is right.

Q All right, now let's take the rules up that are sought by the application in 3246.

A Would you like to start with what rules exist at the present time?

Q Yes, we will start with what is in existence at the present time. I will ask the Commission to take Case 2986, Order R-2691 dated April 15, 1964. Those are the present rules for the Mesa Queen Pool on which this property here in question is situated. Now, would you tell us briefly what the present rules are just in summary?

A Yes, sir. The present rules, as I understand them,

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are written more or less for an oil field or an oil pool and gives the spacing as forty acres and they have a gas-oil ratio provision of 5,000 cubic feet to one barrel of oil and the allowable of the maximum, as I understand them, is based on 5,000 cubic feet per barrel times -- The formula is 5,000 cubic feet per barrel times the allowable or top allowable as assigned by the Commission as the maximum gas to be produced from the field. Then there are other provisions, but we are mainly concerned with the allowable.

Q All right, now, in what way do you seek to amend those rules?

A Well, we would like to amend the rules to take care of the case of a gas well which does not produce any liquids and we might just go over this briefly and in that way, I believe it would help me to point out what changes we would like to make. We would like to, first of all, define what a gas well is and that would be that a well have a gas liquid ratio in excess of 100,000 cubic feet per barrel. That's the first thing we would like to do and then we would like to -- that's in Paragraph 2, and then in Paragraph 3, on Paragraph 3 and 4, I guess it is what we are trying to do there is to realize that if the Commission recognizes a forty acre unit or that an oil reservoir would drain a forty acre unit, then we feel that a gas well would drain a 160-acre unit,

and, therefore, to prevent the drilling of three additional wells, we would like to, in this provision, allow for the production from a 160-acre unit the same production that we would get if we have four wells instead of one.

Q In other words, you are saying with the normal unit, 160-acre gas proration unit?

A Yes, sir. If we went ahead and drilled the three additional wells, the allowable that we are asking would be the same as we were asking for one well. In other words, we are not asking for additional gas, we are just asking to take it out of one well instead of four.

Q All right. And I believe No. 5 and partially 4, takes care of unorthodox proration units that are not a normal quarter subdivision of a governmental section?

A Right. These merely define what a normal or standard unit would be and then takes up the cases of normal standard units and then --

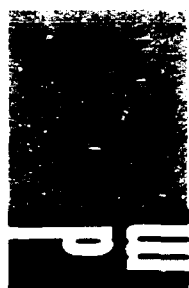
Q You have permitted here administrative approval after notice, have you not?

A Yes, sir. Then starting in Paragraph 7 and continuing then through the 7 through 12, we take up a balancing period which is more or less standard for gas allowables. The only thing that I think that might be controversial from this standpoint is in Paragraph 12, we ask that the amended field

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rules be retroactive from the date of the original field rules that were adopted for the oil shown in the Mesa Queen Pools. Now we have been shut in for some time. I have the record as to when we were shut in. We have been shut in because we were operating under rules for undesignated pools and when we came in on the rules, then we were overproduced and we have been trying to make up for that overproduction. We feel that it would be fair since the rest of the field received their field rules, if we could go back and pick up the gas that we have lost at a nominal rate, of course.

Q All right. Now that is what you seek in changes in the pool rules basically it's to define a gas well versus an oil well to permit the gas wells to be developed on standard one hundred sixty as is usually to permit unorthodox proration units with approval, either by hearing or administratively and to make up underproduction and overproduction as is standardly done in the gas area. Now, as you say, 12 is slightly different. In Case 3247 I believe you are here seeking a non-standard proration unit to the same effect as if these rules were in effect. Correct?

A Yes.

Q What's what you are seeking in the second one?

A Yes.

Q Referring to Page 4 of your exhibit, would tell

us briefly what that depicts?

A Page Four shows Section 17, Township 16, South Range 32 East in Lea County and it shows the acreage that Mr. DeCleva has under lease and shows the position of the No. 1 well.

Q This is the non standard proration unit you are seeking in Case 3247 that is outlined in green at Page Four?

A Yes, sir. It is.

Q Now, before we go any further, you marked the wells shown in the northwest northwest of Section 17. Could you tell us briefly when the well was drilled, where it was completed and any production it's had on it?

A Yes, sir. The well was completed in the latter part of 1962. The reason I say that is because we had some problem in completion of this well, but we first received runs in January of 1963, I mean we first received money for the production. This was for November and December of 1962. We produced the well then under the undesignated category up until April of 1964, all through 1963 up till April of 1964. Then we were placed in the Mesa Queen Pool and the well was subsequently shut in in September of 1964 and has been shut in since that time.

Q Now, what is the depth on the well?

A Well, I might --

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Q What is your TD and your producing interval?

A We might make a copy of the log of the well and exhibit.

Q Your applicant's exhibit 2 in Case 3247 is a log of the well, depicted at Page Four of exhibit one?

A Yes, it is.

Q Would you answer my question about what the depth of the well is?

A Yes. The depth of the well is 3,426 feet.

Q What is the producing interval?

A The producing interval is the Queen formation and this exists at approximately 3,370 feet in this particular well.

Q What has been the accumulus production of the well and what is its rate of production?

A I do not have the accumulative production of this well.

Q What's its rate of production.

A The well originally produced at approximately a million cubic feet per day and then because of changing to the Mesa Queen designation and so forth in the month of August of '64 we produced fifteen million or approximately half a million a day.

Q Now is that drop off in production occasioned by the capability of the well or because of being placed in the

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pool and thereby penalized as to the amounts that could be produced?

A No, this is an allowable.

Q Probable?

A Probable.

Q What, in your opinion, is the well capable of producing?

A It's certainly capable of producing in excess of a million a day and the initial rates were estimated to be approximately seven million a day.

Q Under your proposed rules, what would be the average daily production of the well if these rules were adopted by the Commission. Would it be more or less than the million?

A It would be less. It's three quarters of a million a day, approximately, or twenty two million a month under the present allowables assigned to the oil well.

Q You made the statement I believe initially that your problem concerns a gas well rather than an oil well producing gas. This is a dry gas well, is it not?

A Yes, sir. I was present at the time that this well was drilled and it was our feeling that this well was in a separate gas reservoir, and then when some of these other wells were drilled and they did produce oil, we felt that they

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were in a separate reservoir the develop subsequently and looking at that this map leads me to believe, although not conclusively, but it leads me to believe anyway that this is all one reservoir and rather than being, really rather than being an oil reservoir with a gas cap, it seems to me that it's a gas reservoir with an oil rim.

Q That brings us to Page 5 of your Exhibit One in both of these cases which, as you have mentioned, is a plat of the area. I believe you have shown the water shown in blue, the oil shown in red or orange and the gas shown in yellow?

A Yes, sir.

Q Would you locate the DeCleva well for us that we have just testified about?

A Yes, sir. It's on your Exhibit on the northwest northwest quarter section of that area. That is colored in the green boundary.

Q All right. We'll come back to this. Incidentally, how did you determine what is blue, orange and yellow on this exhibit? What was your method of doing this?

A Well, it's done by the production from the wells and the wells are included. The oil zone for instance includes those wells it was a certain subsea depth that produces oil, then the water zone is that area including the wells that produce water and the gas is that area including those wells up

structure which produce gas.

Q Based upon your study of the wells in this area, do you believe this map is accurate as to color chart, or reasonably accurate?

A Yes, sir. I think it is.

Q Now, under your proposed rules, I believe you provide in an unorthodox proration unit for notice to offset operators of the application, and I refer you to Page Six of your Exhibit One and I ask you if that is a copy of the letter sent to the offset operators in connection with this hearing in Case 32477?

A Yes, sir. It is.

Q Did you receive responses to that letter and, if so, by whom?

A Yes, sir. These responses are attached.

Q They are pages what in the Exhibit?

A Page 7 is the response from Mr. Dean, Page 8 is the response from the Tidewater Oil Company.

MR. CHRISTY: For the record, here are the originals of those responses.

Q Are the responses favorable or unfavorable?

A Well, they're favorable.

Q Incidentally, was this well cored?

A No, it was drilled with cable tools and was not

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cored.

Q Now, back on Page 5, being your map, I notice a well, an arrow pointing to a well known as the Dean Sinclair State Well, it would be in the Southwest, Southwest of Section 5, 16 South, 32 East?

A Yes, sir.

Q Now that well was cored, was it not?

A Yes, it was, and a copy of that core analysis is Page 10, 11, 12 and 13 of Exhibit 1.

Q Now what was the purpose of showing the core analysis in this hearing?

A Well, it simply shows that the Queen in this well, the Queen formation in this well is, has a fairly good permeability, being on, shown on Page 11 as fifty-one milladarcies, eight milladarcies, ten milladarcies, seventy-six milladarcies, eleven milladarcies, and so forth, and the porosities are ten to thirteen per cent. We show this or give this as an exhibit in an effort to show that the well will drain or has the reservoir characteristics to drain 160 acres from a gas well.

Q I see. Now, you don't show the Sinclair State, though, as being in the same reservoir?

A No.

Q Is it a comparable well as far as porosities or permeabilities are concerned?

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A Well, in addition to this well, we have listed the Shell Oil Company MQD Number One core analysis.

Q For the record, that's located in the Southeast Southwest of Section 17, 16 South, 32 East, and is marked on Page 5 of your Exhibit One?

A Yes, that's right and now this is the Queen formation and has similar characteristics as far as permeability and porosity are concerned.

Q Again, it would indicate, since you have no direct information, it would indicate that the DeCleva well has sufficient permeability and porosity to drain the non-standard proration unit requested?

A Yes, sir. These are certainly not conclusive but they do indicate just a core analysis is not a conclusive proof that it will drain; but it does indicate that it has proper characteristics.

Q In your opinion, will the DeCleva Well effectively and efficiently drain the non-standard proration unit sought in Case 32477?

A Yes, sir, it will.

Q I assume it would be your testimony that the gas underlies the full 160, as reflected on your Page 5?

A Yes, I believe that it does.

Q Now, sir, from an economic standpoint, do you feel

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it would commit waste, including economic waste, to develop the gas portion of the Mesa Queen Pool on forty-acre spacing? Would that create waste?

A Yes, sir. As I say, we had some trouble in completing this well and so I don't say that our costs for this well are necessarily representative of possibly another well, but our costs on this particular well were in excess of forty thousand dollars; and based on the present allowable, I don't believe that we could pay this well or three additional wells, pay them out at all on that basis. I do feel that we will be able to pay the well out and prevent economic waste if we are allowed to produce this well on the allowable that we have asked for.

Q Now this is State acreage?

A Yes, sir, it is.

Q It's all one lease?

A Yes, sir, I understand it is. Now I'd better go back and say I am not sure.

Q Now will you furnish to the Commission the cumulative producing history on this well, the cumulative production? Will you furnish that to the Commission, please?

A I don't have it with me.

Q I say, will you furnish it?

A But I will furnish it, yes.

Q Is there anything I failed to ask you that you feel the Examiner should be advised of in either Case 3246 or 3247?

A No, I don't think so.

MR. CHRISTY: That's all from this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Flanagan, do you feel that this pool has been pretty well defined?

A Yes, sir, I think it has. Every well that you drill, of course, will give you more information, but I think that within reason, it has been.

Q How many wells are there in the gas cap?

A Seven, as I count them on this map, sir, and I believe this is up-to-date. There's one over in that little area to the east in Section 16.

Q Well, let's see. There's one in Section 7, is that correct?

A Yes, sir. One in Section 7, one in Section 12, one in Section 13.

Q Just a minute, Section 12, where is that on here?

MR. CHRISTY: That's 12.

Q (By Mr. Utz) All right, sir. After 12 --

A Mr. Examiner, I believe that this well, No. 1, in

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Section 13 has been completed as a gas well, but I am not positive of that.

Q That doesn't show very well on this map here. Will you give me the location?

A Yes, sir. It's in the Southwest Quarter -- in the Northwest Quarter of the Southwest Quarter of Section 13.

MR. CHRISTY: That's the one shown in the map as a drilling well?

MR. UTZ: Yes.

A There's one in Section 18 just to the east, excuse me, and then one in Section 17 just southeast of that well in 18; one due north of that in 17. Well, that's our well, and then one in Section 16.

Q (By Mr. Utz) Now that's the one that I was missing. Were all the other wells in the gas cap producing?

A I don't know, sir. I don't know. I believe that Mr. Dean's wells are producing but I'm not sure. I know that Mr. Dean is interested in this hearing.

Q Now, you do, I gather, consider this a gas cap situation connection with an oil reservoir?

A Yes, from the study of this map, I believe that it's an associated gas-oil field.

Q From the conservation standpoint, particularly, as related to the oil, the objective should be here to maintain

a stable gas-oil contact, would that be a correct statement?

A Yes, sir, I think that's right.

Q Do you have any information that would show that your formula that you are requesting in these rules here, 5,000 to one, times the normal unit allowable would accomplish this?

A No, sir. In truth, I think that 5,000 is an arbitrary number. I think that in examining this the point that I was trying to make with a gas field with an oil rim rather than an oil reservoir with a gas cap, is that the large volume of gas and the expansability of the gas, that 5,000 is not too large a number; and I think that we will reduce the reservoir pressure more by taking a barrel of oil out of the ground than we will by taking 5,000 cubic feet of gas out of the ground just because of the areal extent of the gas in relation to the areal extent of the oil.

This is my own feeling as a petroleum engineer, but gas, along with oil, is a valuable commodity and it takes reservoir energy to produce the gas; and I am as much concerned about the oil producers in this field taking reservoir energy as I am about the gas producers taking reservoir energy.

The original field rules were set up to give the oil producers a chance to remove the oil on forty acres as being a safe producing or spacing to prevent any waste. It was also

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at that time arbitrarily we set up 5,000 cubic feet, and I think that the 5,000 cubic feet is probably as good a number as the forty acres for the oil and as far as dissipating the reservoir energy.

Q Now, of course, when we talked about equal withdrawal, then we have to talk about withdrawal on an acre per acre basis, isn't that correct, assuming that reserves in each are volumetrically the same, which, in this type of formula, you must consider that that's true, else you would have some deviations from it, right?

A Yes, sir.

Q Now, is it your contention that on an acre per acre basis, that one barrel of oil will displace 5,000 cubic feet of gas? In other words, what is the relationship on the surface acre basis of oil to gas?

A Well, sir, I don't really know how to answer that. I'm not trying to dodge the answer because I really don't know the answer to that question. I think what we're trying to do here together, both the gas producers and the oil producers, is to produce this reservoir in order to get the maximum amount of hydrocarbons out of the ground without waste within an economic cost. I think that what we are talking about there is how much gas we leave in the ground and how much oil we leave in the ground and how well we sweep the area

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and whether by producing the gas cap we are running the risk of trapping some of the oil in the gas cap or whether by producing the oil we're liable to leave some of the gas in the gas cap. I think that in this particular case with the areas as shown on the map, that it really is probably more involved than just the acre by acre basis, and I think that we are talking about reservoir energy here, too; and it is my feeling that the 5,000 to one is not an excessive amount from the standpoint of reservoir energy and maximum recovery.

Q Have you made a volumetric analysis of the ~~B.S.~~ area and the oil area to determine in your mind whether the 5,000 is too little or too much?

A No, sir. The Queen does grade into a different thickness in different wells and has some different characteristics, but, by and large, in quite a few of these wells, the sand thickness and characteristics is the same, so I have not approached it on the basis of a volumetric analysis, but rather on just an areal extent; and I think here that just -- I don't know how accurate this map is from the development but just its -- the gas area is some three or four times, three times, say, the areal extent of the oil reservoir as shown on this map.

Q In your previous statement, just before the answer to this last question, you stated that the interest of the

operators was to recover the most hydrocarbons out of the reservoir, both oil and gas. Now, actually to accomplish that, what you are saying is, well, of course, one of the things too you are trying to accomplish is to protect correlative rights also. Is that correct?

A Yes, sir.

Q So, in order to accomplish that, what you are really interested in and what you are, I believe, telling me the operators are interested in, is everyone producing their share of the oil or gas, that's under their tracts, thereby leaving the gas-oil contact as stationery as it's possible to do so?

A Yes, and also producing their fair share of the reservoir energy.

Q And in so doing, well, that would accomplish the use of the fair share of the reservoir energy, too, would it not?

A Yes, sir.

Q In a gas cap situation like this, in order to obtain the most hydrocarbons out of the reservoir, the way to do that would be to shut in all the gas wells and produce the oil first, isn't that correct?

A Yes, sir, but then that would not give a fair share of the reservoir energy, though, underlying the tracts.

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This is a problem we quite often have is the people that own the gas acreage have the oil, and quite often we let the gas people produce the oil people's reserves for them. I mean we can if we go on the basis of shutting in all the gas wells, we can allow an unfair use of a person's energy to produce somebody else's reserves.

Q In other words, the only way to produce this field in the manner I just described would be to unitize the whole area, would that be correct? Then everybody would receive their fair share of the reservoir energy.

A I would say certainly that unitization is a very pleasing thing in all fields of this type.

Q But in lieu of that, then, what you have to have here in order to accomplish what you say you want to accomplish, is a volumetric relationship between the oil area and the gas area and to deplete each area as evenly as possible and decreasing the pressures in each area as evenly as possible. Now, the sum and substance of my whole line of questioning is, in your opinion, do you think that we have enough information on this pool to say that 5,000 is the way to do that?

A Well, I'm an engineer, sir, and I don't ever think we have enough information to do a good job on anything, but I do feel like that if we have enough information to set the spacing at forty acres for oil, that we have enough infor-

mation to go ahead with the original rule on the 5,000 to one basis. Again, I would like to state that we're not trying to change the original rule from the standpoint of the ratio of 5,000 to one which the field is now operating on. We are simply trying to make the allowable for 160 acres come through one well.

Q Yes, sir, I understand that, but at the same time, the whole case has been reopened, has it not, for new pool rules?

A Well, these are just really amendments to the others. I guess that's right. Yes, sir.

Q Do you think that there is enough information available in this pool that once could make a reasonably accurate volumetric study in order to obtain in a volumetric equivalent, I guess you'd call it a volumetric equivalent gas-oil ratio to substantiate your 5,000 figure; or rather, instead of your 5,000 figure, it would be somebody else's 5,000 figure which has already been set?

A Well, I think there are enough wells and there's enough information that we can certainly make a try at it. How accurate it would be is just like other reserve determinations, but I think we do, I think that, in relation to other reservoirs that I have seen, that we do have considerable amount of information. Yes, sir.

Q Now, these rules that you have submitted here look very familiar, and I was wondering what order you lifted those out of?

A Well, let me describe a little more on this. Mr. Joy was our engineer in our Midland office and he started the proceedings on this and he wrote to Mr. Nutter and has corresponded with him on several occasions concerning what we should do here and describing our position and what we might like to do. Then, as I understand it, these rules were then suggested to him as being rules that you would normally have for this kind of a situation and also taking off on the rules that had been already established for the field, with an idea that it was overlooked or we just did not discuss what would happen in this particular pool if you had a well that was just producing gas; and just trying to make an amendment to the rules already established that would provide for these wells that were producing just gas; so I don't know exactly what rules they were lifted from, but I do know that Mr. Joy worked with Mr. Nutter and took his suggestions as to what we should ask for here. I also think they're similar to the Texas 6-B type.

Q Well, I noted that these rules were almost word for word, at least the rules that are printed here in your Exhibit A are almost word for word from the Angel Peak-Dakota

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rules in Northwest New Mexico; and to some extent almost identical to the Devil's Fork-Gallup rules in Northwest New Mexico. I also noted that some of the rules were absent from your suggestions there. One rule in particular insofar as periodic gas-oil ratios are concerned in order to determine whether a well has changed from a gas to oil or oil to gas. Nowhere in these rules do I see a rule stating that this test should be taken periodically. What is your recommendation?

A Well, I think we should have one. I am wondering if the original rules do have it?

MR. CHRISTY: No.

A They do not. I think that's a good rule to have.

Q (By Mr. Utz) Now, do you know what is happening to the casinghead gas from the oil wells?

A No, sir, I do not.

Q In order to protect your correlative rights in an associated reservoir, is it your opinion that the casinghead gas should be flared? In other words, do you think these rules should contain a no-flare order for the oil wells?

A Well, from the standpoint of our correlative rights, I would say it should not be in excess of the 5,000 rule. That would put us on the same basis. My feeling as an engineer, I don't think we should flare any gas.

MR. CHRISTY: I don't believe the applicant

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would have any objection to continuing the rule with respect to no-flare as contained in R-2691.

Q (By Mr. Utz) Now, in effect, what you are asking for here in this rule change is a proration procedure for the gas cap of an oil pool, is that correct, where you have proration periods and balancing periods?

A Yes, sir. That's right.

Q This retroactive rule here is something that the Commission has not done heretofore to my knowledge in beginning proration in any pool. In that regard, I am wondering a little more about how your well produced prior to the time that it was included in the present pool. You say your well was shut in as of that date, after it had been completed in late '62. Now, was the production, the production history from late '62 until the time it was included in the Mesa Queen Pool computed and the well shut in on the basis of overproduction for that period, or just how was that handled?

A During 1963, we produced -- here are the approximate rates, 32 million, 28 million -- these are monthly productions -- 30, 31, 32, 30, 31, 28, 31, 31, 32; and in 1964, we produced 28, 25, 24, and then it was -- and 24 million; and then it was put in the Mesa Queen. We produced 25, 23, 20, and I think at that time it became evident to us that our allowable had been changed.

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I am saying it became evident to us, I don't know, I don't know whether we were notified or whether the purchaser notified us or just how. I was not in on that part of it and I just do not know.

Q You don't know whether the Commission ordered the well shut in or whether the Commission determined what your overage status was, or any of those details?

A I do know now that the Commission knows what our overage status is and we are trying to make up for our over-production, yes, sir.

Q On what basis was that overage status computed?

A It was computed on the basis of these rules.

Q From the beginning date of these rules on the forty-acre basis?

A I don't know. I will have to find that out.

Q These are things which I feel that we should know in order to determine whether you are entitled to a retroactive consideration or not.

A Yes, sir. That's right.

Q Can you advise us as to what the situation is in this regard?

A Yes, sir, I will. I can't right now, but I will.

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

MR. MORRIS: Mr. Examiner, you covered most of the ground that I intended to cover, so I shall be brief.

BY MR. MORRIS:

Q First, let me say, Mr. Flanagan, that Shell Oil Company has no opposition to your non-standard proration unit nor do we have any objection to most of the rules that you have proposed here. Shell was the applicant in the case wherein the 5,000 to one gas-oil ratio was established, and we would certainly favor the continuation of that gas-oil ratio and we have no objection to its use in your formula.

As you anticipated, however, we do find some controversy with your Paragraph No. 12 of Exhibit One concerning your retroactive rules. Your Tidewater State Well No. 1 was the discovery well in this field, was it not?

A It's listed as a discovery well, but I don't believe it's a discovery well of the Mesa Queen Pool because it was merely placed in an undesignated status before the Mesa Queen Pool was set up as a pool.

Q Yes, I purposely used the word "field" rather than "pool", meaning it was the discovery in this general area. Was it in producing gas prior to the production of oil from the oil wells in this area, or do you know, Mr. Flanagan?

A Well, let me say that I don't know for sure. When I was there and we completed the well, I remember that

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Cactus -- it seemed to me that Cactus already had an oil well and that they were drilling at the same time on additional wells in that area; and because our gas well was so dry, I was pretty well convinced that we were in a separate field, so I think, on that basis, that there were oil wells already drilled.

Q For how long a time did you produce this well as a gas well before it was placed under the restrictions applicable to Mesa Queen Pool?

A Eighteen months.

Q You were producing at approximately a million a day during that period of time?

A Yes, sir.

Q Were the other gas wells in the gas area being produced at similar rates during that period of time, or do you know?

A Well, of course, we didn't have the development of all the gas wells that we have now, and I don't know the answer to those that were produced. In answer to your question before, I would like to say that this million a day is about, is approximately a ratio of 6,500 to 1, rather than 5,000 to 1, based on approximately thirty-eight barrels per day average.

Q Who is your purchaser of gas from this well?

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A Phillips.

Q Have you ever sustained a curtailment of production due to Phillips' inability or unwillingness to take gas from this area?

A Well, there is some problem with the BTU content on this gas, and I think that they have during this period, on occasion, restricted us.

Q The gas has a very high nitrogen content, does it not?

A Yes, it does contains nitrogen.

Q Would you consider the quality of the gas inferior to the usual gas quality for gas pools in this area?

A I'm glad you brought up in this area because there are a lot of nitrogen producing gas fields in this area, and probably we have a better quality; but in answer to your question, over-all in the State of New Mexico, we are probably inferior to better New Mexico fields.

Q Should your proposal for retroactive allowables receive consideration from this Commission, do you have any problems yet to work out with your purchaser for the takes of that gas?

A I am sure we would and on your question about this retroactive Paragraph 12, we certainly feel like since we have been shut in since the rules were established by the

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Conservation Commission for the oil producers and they have been producing their wells, and since we have been shut in for overproduction, we're not really, it's our feeling that we are not really asking to get the better of anyone. We are just trying to get back to where we were when the rules were set up and we were not included in the rules. What I'm saying is that we think it's fair that we be given some kind of a consideration on the period of shut-in; but Rule 12 is -- certainly we don't want Rule 12 to keep us from having a good set of rules here, which you have already agreed -- which you think is a good set of rules.

Q With some additions and corrections, Mr. Flanagan. As you interpret the rules that you propose here, would they, in effect, give you six months' back allowable for this well which could be made up during the next six months in addition to the regular allowable?

A I don't believe that it was our intent to get an extra six months' allowable. If it had been, I don't believe we would have asked for Paragraph 12, because really, what we are trying to do is to help ourselves during this shut-in period. Like Shell and other people, we have been trying to operate this lease without producing gas, and it has brought on an economic problem. I don't think it was our intention that we would get an additional six months' allowable in addition to

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being allowed to make up for our lack of production since the field rules were put in. No, I don't think that's our -- Do you read that that we would get that?

Q Well, Mr. Flanagan, you are just phrasing it a different way, I think, than I am. You are saying you just want to make up for production that you have lost since the field rules started, and I am saying that your rules would have the effect of accomplishing that partially by giving you an allowable for the previous six month prorationing period.

A We put those in because we feel that because you can't store the gas and to take care of over and underproduction, and we did not put those in to make up for back allowable. That was not our intent.

Q If I understand you, in your proposal you seek to have an allowable assigned to these wells for, say, the next proration period, and in addition to that, you want to be allowed to make up the gas that would have been assigned to this well since the Mesa Queen gas-oil ratio rules were first established, is that correct?

A Yes, sir.

Q Is that what you are seeking?

A Yes, sir.

Q All right.

A Now, what we feel like is that at the time the

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time the rules were written for the oil producers, we really should have had our changes in there, should have been part of the rules for the entire field.

Q Now, you just got to my next point, Mr. Flanagan. I would agree with you that perhaps they should have been placed in there at that time if they were to have been considered by this Commission. Now, when the Commission first included this well in the Mesa Queen Pool, that was when, in August of 1964?

A Yes, sir.

Q At that time your company made no application to the Commission for consideration of additional allowables or special treatment for gas wells in this pool, did they?

A I'd have to get the file and see when Mr. Joy first started corresponding with Mr. Nutter to see how we can bring this about.

Q All right.

A I know as soon as it became evident to us that we no longer had an allowable for our gas well of any consequence, we started to try to do something about it.

Q Mr. Flanagan, from the plat that you introduced into evidence, does it appear to you, and from your knowledge of the pool, does it appear to you that additional gas wells will be drilled in the gas area?

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A I would think that they would unless there is some acreage problem; and I would say this, that under our proposed change, the drilling of a gas well in this area is still not going to be an economic bonanza and I think that the operators in this area would probably take a look at that and I don't think that we would have a problem of a gas well being drilled on every 160 acres.

Q Does it appear possible for additional gas well development to occur in the area close to the oil area of this pool?

A Well, I think --

Q In other words, what I am getting at, Mr. Flanagan, there's still one hundred sixty acres undrilled in Southeast Quarter of Section 18 and the area in the -- there's still additional area in Section 17 that's not dedicated to a gas well, is that correct?

A I think that there are probably additional locations for gas wells.

Q You are not suggesting that any wells drilled there be given retroactive allowables are you, Mr. Flanagan?

A No. I don't particularly think that would be fair. I am not asking -- I am not asking this as preferential treatment.

Q Would you agree, Mr. Flanagan, that if the gas

from the gas area is produced at a faster rate or in greater volumes volumetrically than the oil is produced from the oil zone, that waste could occur in this area?

A Yes, sir, I think that's a possibility. In addition, I think it's a possibility that if the oil is produced faster than the gas, the oil can still be pumped but the gas can't and we might lose some gas.

Q Without a volumetric study, it would be hard to say which, if either of these, would be most likely to occur, is that correct?

A Yes, sir. That's probably right.

Q Mr. Flanagan, are you familiar with the rules that have been adopted by Order No. R-2397 in the Double-X Delaware Pool of Lea County?

A No, sir. I am not.

MR. MORRIS: I would ask the Commission at this time to take administrative notice of the order that I have just referred to for the Double-X Pool in that the rules for that pool are substantially similar to the rules that have been proposed by the applicant in this case, with one or two what we feel to be noticeable omissions which I would like to point out to the Commission. At this time, I would offer a copy of that order.

MR. UTZ: What was the number in that order?

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MR. CHRISTY: Case 2720, 2397.

Q (By Mr. Morris) The thing that occurs to me with respect to that order just referred to, Mr. Flanagan, is that your Rules 7 and 8 contained in your Exhibit No. 1 are either substantially identical to Rules 12 and 13 of Double-X rules, and then your Rules 9 and 10 are substantially similar to Rules 16 and 17 of the Double-X rules, but Rules 14 and 15 of the Double-X Pool have been omitted from your proposal; and Shell Oil Company intends to propose to the Commission that if your rules are adopted that two additional rules be appended, being Rules 14 and 15 of the Double-X order.

I think both you and the Examiner have those rules in front of you, so that I need not read them into the record, but I will ask you if you would have any objection, from your point of view, to those rules being included?

A Well, I haven't had a chance to really study this. Could you kind of fill me in on what the intent of these two rules are?

Q Well, I think these are customary rules in gas prorationing concerning balance periods and carrying of under and overproduction forward into the next succeeding balancing periods; and whereas you have provided for the situation where under-produced wells, how under-production shall be treated in an ensuing balancing period, you have not provided for over-

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production shall be treated in an ensuing balancing period, which Rule 15 of the Double-X rule accomplishes; and we certainly think that this should be provided for in any order along these lines.

A Well, in 14, as I understand it, if you have overproduction, you simply apply that to the under-production that you have had is that right?

Q That's right, and I would suspect that that would be favorable, or at least not controversial to the gas operators' standpoint.

A I think that's fine, Mr. Examiner, that Rule 14. Now 15, let's see, now proration period here, is that a six month period?

Q Yes, that's provided by the rules that you have proposed. That's to be a six month period.

MR. UTZ: Mr. Flanagan, would you have objection to the inclusion in your rules of any normal gas proration balancing rules?

A No.

MR. UTZ: Which is common to all prorated pools?

A No, Mr. Examiner.

MR. UTZ: Does that take care of your situation?

MR. MORRIS: Fine.

A Specifically, 14 and 15 look to me to be good rules

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and fair and equitable, and that's what we're trying to do.

Q I'm actually suggesting, Mr. Flanagan, they may have been intentionally omitted from your proposal and we want to supply a full set of rules if we're going to have any --

A We appreciate your studying these things and helping us out because that's what we are out for.

Q We still don't like your Rule 12 much.

MR. MORRIS: That's all the questions I have of this witness. I would like to make a statement at the conclusion of the case.

BY MR. UTZ:

Q Mr. Flanagan, I note that your rules don't contain a spacing rule that states how far from a quarter and quarter quarter section line the well shall be drilled. Is it your intention to use State-wide 104 Rule for that?

A Yes, sir. It is.

Q What is the nitrogen content of this gas?

A I do not know sir.

Q But you do know it's substantial?

A Yes, sir, I do; I do know that it's --

MR. It's over fifty per cent, fifty

to seventy.

A Fifty to seventy. I know we have some reports in the office, and I would be glad to furnish the Commission

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with the reports that we have.

Q I think it might be well to have it in the record. In regard to this retroactive thing, it might be well to clear up to a point. First let me say that what you are actually applying for is retroactive to May 1, 1964?

A Yes.

Q In accordance with the old rules?

A Yes, sir.

Q Now, the proration periods that you are requesting run from January 1 to July 1, and July 1 to December 31st, the first half and the last half of the calendar year. Now, you realize that if your well had an underproduced status at the end of June or the first of July, 1964, that that would have been cancelled had it not been overproduced in the last six months of that year? Are you asking for a non-cancellation of that type of gas or are you asking for the usual balancing rules to be in effect?

A Well, what we would really be cancelling is the -- I believe your question, sir, if we just, if we forgot all about that Rule 12 and we just took off with the balancing period, then we would have up until June to balance out the last half of '64 and so what we would be losing would be from May and June, is that right, sir?

Q Well, that would depend on what you produced in

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May and June. If this particular thing goes retroactive, then you have three periods in consideration, of course. One period beginning half way in the period, or May 1st to the first half of '64; the next period, the last half of '64 and the first period of '65. Now, you would have two statuses that you would have had to overproduce to avoid cancellation, one July 1, 1964, and one January 1 of '65. Now the statuses as of the end of those periods had you not overproduced them in a subsequent period, they would have been cancelled. In asking for retroactive rules in this proration procedure, then that point would have to be clarified because you might not gain anything if the cancellation rules were in effect.

MR. CHRISTY: That is in effect what we are asking for, is an exception to the cancellation rule in addition to permitting us to retroactively produce over a reasonable period.

A Well, now, wait a minute now.

MR. CHRISTY: There wouldn't be any proration. You wouldn't have an allowable.

A If starting -- may I ask this question, sir? If starting in June or if for the last half of '64, under our proposed rules, we had been underproduced, then we would still have the first six months in '65 to make up this underproduction on the balancing period.

Q (By Mr. Utz) No, sir. You would have had the

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last half of '64 to make up that underproduction because the status would be struck at the first of July and you were underproduced five million, let's say to quote figures: if you had underproduction in July of '64 of five million and you did overproduce five million by months during the last half of '64, then your five million would have been cancelled.

A Yes, but then during the period of the last half of '64, we would still have the first six months of '65 to make up for that, is that right?

Q Yes.

A So what, in effect, we are losing if we knock out twelve altogether, is that up until, or the first half of '64 over or under, that can't be balanced.

Q It would depend on whether you want non-cancellation for '64. What you actually, if you want non-cancellation, what you are asking for here is back allowables up to May 1st, that's what it amounts to.

A Well, what I am saying, sir, is with Shell and it seems to be quite a point of contention with the Commission, this Rule 12, everything else seems to be all right, or at least not as controversial as Rule 12. So then what I'm asking now, or what I am saying is that if we do away with Rule 12 and just put in the balancing period, then we will have up until we will have during the first six months of 1965 the ability

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to make up for the last half of '64. If we don't have Rule 12, then all we will be losing is May and June balancing, isn't that the way? Is that what you mean, sir?

Q Well, it depends on what you're shut in for now, which I am not aware of. I really don't know. Are you shut in on a forty acre basis, as I understand?

A Yes, sir.

Q For excessive GOR production, 5,000 to 1?

A Yes, sir.

Q Times 38 or 39, whatever the allowables were?

A Yes, sir.

Q That status, I believe, would have to be taken into consideration whenever, regardless of when these rules go into effect. In other words, your 160-acre rules would not go into effect until the 1st of June, the 1st of July.

A Oh, I see what you mean.

Q So you begin the period with whatever overproduction, I would say, on a 40-acre basis that you have. Wouldn't that be true, Counsel?

MR. DURRETT: You lost me about twenty minutes ago.

MR. CHRISTY: I think that's the point. We are going to lose the last half of '64. We just can't make it.

A Unless we can make these rules retroactive to when the other rules were established and not put in Rule 12.

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MR. MORRIS: Let me get my two cents in here, too. As I understand it, if Rule 12 be eliminated from the proposal, then there are no allowables to be made up because no allowables would have accrued, no gas allowables would have accrued to this well on 160 acres. The only allowables that have accrued would be the allowables, that is, prior to the date any order is entered in this case, would be the allowables that would accrue to this well as an oil well on a forty acre tract.

MR. UTZ: That's exactly the status that I'm speaking of now. If we don't consider that overproduction for which he's shut in for now on the basis of a gas well in an oil pool, then, in essence, what we would be doing would be forgiving him for overproduction as an oil well. I don't know whether that's a legal question or not, but I would think that something would have to be done about that status.

MR. CHRISTY: What we are asking is not for you to forgive us for that, but let us go back to August and 160, and subtract that off the overproduction, strike that off, and let us produce it as an exception to the normal six months' make-up allowable for the period of the last half of '65.

MR. UTZ: Retroactive allowable on spacing is all that it amounts to.

MR. CHRISTY: Right, make it up in six months. If we don't make it up in six months, we lose it.

MR. UTZ: I brought this up because the way we write this order, we will have to know whether you want non-cancellation or just retroactive allowables.

A Well, sir, we are really just trying to be fair about this.

Q (By Mr. Utz) So are we.

A Yes, sir. I know it and I appreciate your letting me talk to you about it.

MR. UTZ: Perhaps we can leave it this way and give you a little more time to think. If it's your contention that you should leave Rule 12 in your application, then I would request that you send us your production data and the GOR producing ratio from the first production of the well up to May 1st, 1964, and the same data from May 1st to the present time.

MR. MORRIS: Mr. Examiner, may I request that anything sent by the applicant to the Commission, that a copy be sent to me, Richard Morris, P.O. Box 2307, Santa Fe, and that I be given leave to apply to the Commission for a reopening of this hearing if that data raises any questions about which further cross examination of this witness should be accomplished.

MR. CHRISTY: We would have no objection to that and be happy to furnish Mr. Morris a letter. We ask that a time limit be placed on Mr. Morris to make the objection.

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MR. UTZ: How long will it take for you to give this information?

A There is only one problem here again in being fair about this thing. There is only one problem we're going to run into, and that is that we don't, in good conservation practice, we don't want to have to produce too much gas all at one time, so it's fine to delay, and we want to get what we have to have, but we have six months' period here to balance out. We certainly would like to produce this over this six months' period if we can, and we have already used up some of that.

MR. CHRISTY: How long is it going to take to get the information, is the question.

A Well, it will take about a week to get it all assembled and in the mail.

MR. CHRISTY: Would it be fair that you make your objections two weeks after the receipt of the objection?

MR. MORRIS: That would be fine -- why

MR. CHRISTY: We have no objection to that.

MR. UTZ: Why don't we set a date of May 1st?

A Then we are out of the balancing period.

MR. MORRIS: Mr. Examiner, I need to have a certain length of time after I receive the information.

MR. UTZ: Oh, I see.

MR. CHRISTY: We can't guarantee he'll have it within that time.

MR. UTZ: Set your date as June 1 to give us the information and give Mr. Morris until June 15th to answer. No order will be written on the case until after June 15th.

A Mr. Examiner, may I ask Mr. Morris, at this time, if there is anything else that he would like to discuss that we might --

MR. CHRISTY: Let's take it up after the hearing.

A All right.

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

MR. CHRISTY: If there are no other questions, we would like to offer into evidence Applicant's Exhibit One and the log being Applicant's Exhibit Two.

(Whereupon, Applicant's Exhibits One and Two were offered for identification.)

MR. UTZ: Without objection those exhibits will be entered into the record in this case.

MR. MORRIS: No objection.

(Whereupon, Applicant's Exhibits One and Two were marked for identification.)

MR. UTZ: Since there is no rule in Order 2691 for an unorthodox location, you're actually asking for this unorthodox location as an exception to the general Rule 104.

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A That is correct.

MR. UTZ: The witness may be excused.

(Witness excused).

MR. UTZ: Any statements in this case?

MR. MORRIS: Yes, Mr. Examiner, just to summarize Shell's position on this case very briefly, as I stated previously, we have no objection to the non-standard unit proposed by the applicant in Case 3247. As to the special rules requested in Case 3246, we have no objections to any of them except Number 12 and as to Number 12, we have very serious objections. The Commission, as far as I know, has never established retroactive allowables in this type of situation, at least. It would be a precedent and I think a dangerous precedent for the Commission to do it in this case. I think it's been clearly shown by the questions asked by the Examiner and the general discussion here in the hearing, that it would be most difficult of the administration and that the exact effect of retroactive rules upon all the possible variations that might occur in the production of this well, of these gas wells, would be most difficult to even foresee at this time.

I think the only way that gas proration rules can be effectively administered is to take the situation as you find it and go forward from that point and that's what should be done in this case. We have no objection to that being done in

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this case.

We would point up perhaps a technicality here that while Shell Oil Company certainly had notice, it was little, that retroactive allowables were going to be requested in this hearing, there is nothing in the call of the docket that would indicate that. Had there been we certainly feel that there would have been other appearances made here today to object to the granting of retroactive allowables because as this Commission has recently in the Indian Basin Case become very aware, there is a very widespread feeling on this subject -- some pro and some con. Due to the lack of notice in this case, we feel that retroactive allowables should not be, and perhaps, cannot be, considered by the Commission. The only other point I would like to make is that the Commission adopts, whatever rules the Commission adopts, we would suggest that Rules 14 and 15 of the Double-X Delaware rules be incorporated in order to have a full set of balancing provisions in the rules.

MR. UTZ: Any other statements?

MR. DURRETT: I would like to state for the record that the Commission has received a letter from Tidewater stating that they concur with the proposed amendment and waive objection to the granting of the non-standard unit; and we have received a telegram from Cactus Drilling Company stating that they concur with Shell Oil Company's stand in these cases.

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MR. UTZ: Mr. Flanagan, do you know whether the oil wells in the gas cap have been producing or not?

MR. FLANAGAN: No, sir. I cannot give you that information.

MR. UTZ: If they have been producing, then they would have to be considered in this retroactive decision also, would they not?

MR. FLANAGAN: Yes, sir, they would.

MR. UTZ: Any other questions? Any other statements? The case will be taken under advisement.

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WITNESS

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

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

WITNESS my Hand and Seal this 4th day of June, 1965.

Ada Dearnley
ADA DEARNLEY

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. 3246, heard by me on May 12, 1965.
Thomas D. [Signature]
New Mexico Oil Conservation Commission

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