

CASE 2108: Application of PAN AMER.
for permission to take interference
tests and transfer allowance.

Case No.

2166

Application, Transcript,
Small Exhibits, Etc.

DRAFT

RSM/esr
January 27

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

128m
1/27
EJF
1/27
2-4-61
ASD
2/1

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2166

Order No. R-1861

you

APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR PERMISSION TO TAKE
INTERFERENCE TESTS AND TRANSFER ALLOW-
ABLES IN THE CHA CHA-GALLUP OIL POOL,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
January 25, 1961, at Santa Fe, New Mexico, before Elvis A. Utz,
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 January, 1961, the Commission,
a quorum being present, having considered the application, the
evidence adduced, and the recommendations of the Examiner, Elvis A.
Utz, 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, Pan American Petroleum Corporation,
seeks permission to take interference tests in the Cha Cha-Gallup
Oil Pool, San Juan County, New Mexico, by shutting in its Navajo
Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21,
Township 29 North, Range 14 West, and transferring the allowable
of said well in ^{approximately} equal parts to the other five wells on its Navajo
"E" Lease.

(3) That the applicant seeks permission to take inter-
ference tests in order to gather reservoir data in the Cha Cha-
Gallup Oil Pool.

(4) That permission should be granted on such terms and
conditions as will insure accurate results of such interference
tests.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21, Township 29 North, Range 14 West, and transferring the allowable of said well in ^{approximately} equal parts to the other five wells on its Navajo "E" Lease. All interference tests involving the transfer of allowables shall be taken in accordance with the following provisions:

(a) The flowing bottom hole pressure of each well offsetting the control well shall be taken within 36 hours after the static bottom hole pressure is taken on the control well.

(b) In the event static bottom hole pressures are taken on the flowing wells, ^{in addition to flowing bottom hole pressures,} the pressures shall be taken at approximately 24, 48 and 72 hours after shut-in in order to obtain comparable build-up points.

⁷⁽²⁾
(2) That all interference tests shall be completed by August 1, 1961, provided, however, that extensions of time in ~~three~~ ^{one}-month increments may be granted administratively by the Secretary-Director of the Commission *for good cause shown.*

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

*That the allowable transfer shall be effective
commencing February 1, 1961.*

WELL TESTS

PAN AMERICAN PETROLEUM CORPORATION
NAVAJO "E" LEASE
CHA CHA GALLUP POOL
SAN JUAN COUNTY, NEW MEXICO

<u>Lease and Well</u>	<u>Date Tested</u>	<u>BOPD</u>
Navajo "E" No. 1	11-19-60	197
Navajo "E" No. 2	1-19-61	206
Navajo "E" No. 3	11-21-60	180
Navajo "E" No. 4	11-28-60	207
Navajo "E" No. 5	1-3-61	205
Navajo "E" No. 6	1-19-61	198

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

Pan Am EXHIBIT NO. 3

CASE NO. 2166

ATWOOD & MALONE

LAWYERS

1961 JAN 18 AM 10:20

JEFF D. ATWOOD (1883-1960)
ROSS L. MALONE
CHARLES F. MALONE
E. KIRK NEWMAN
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER

TELEPHONE MAIN 2-6221
ROSWELL PETROLEUM BUILDING
ROSWELL, NEW MEXICO

January 18, 1961

New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

RE: Case No. 2166 - Application of Pan American
Petroleum Corporation

Gentlemen:

We are resident counsel for Pan American Petroleum Corporation
in the captioned case and as such wish to enter our appearance therein.
It is anticipated that the presentation of the case before the Commission
will be made by either Mr. Guy Buell, an employee of Pan American
Petroleum Corporation and a member of the State Bar of Texas.

Yours very truly,

ATWOOD & MALONE

BY:



EKN:sam

cc: Mr. J. K. Smith
Mr. Guy Buell

DOCKET: EXAMINER HEARING - WEDNESDAY, JANUARY 25, 1961
OIL CONSERVATION COMMISSION - 9 a.m., CONFERENCE ROOM - STATE LAND OFFICE
BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz Examiner, or Oliver E. Payne, attorney, as alternate examiner:

CASE 2159:

Application of Continental Oil Company for three non-standard gas proration units. Applicant, in the above-styled cause, seeks the establishment of the following-described non-standard gas proration units in the Jalmat Gas Pool, Lea County, New Mexico:

A 320-acre non-standard gas proration unit consisting of the W/2 E/2 and E/2 W/2 of Section 19, Township 25 South, Range 37 East, to be dedicated to the Sholes B-19 Well No. 1, located in the center of the SE/4 SW/4 of said Section 19.

A 320-acre non-standard gas proration unit consisting of the E/2 and NE/4 NW/4 of Section 1, Township 25 South, Range 36 East, to be dedicated to the Wells B-1 Well No. 1, located in the center of the NE/4 NE/4 of said Section 1.

A 360-acre non-standard gas proration unit consisting of the SE/4, E/2 W/2 and SW/4 SW/4 of Section 29, Township 22 South, Range 36 East, to be dedicated to the Meyer A-29 Well No. 3, located in the center of the SE/4 SW/4 of said Section 29.

CASE 2160:

Application of Continental Oil Company for a quadruple completion. Applicant, in the above-styled cause, seeks an order authorizing the quadruple completion of its North-east Haynes-Apache 9 No. 1 Well, located in the NW/4 SW/4 of Section 9, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of hydrocarbons from the Greenhorn formation through a string of 2 7/8-inch casing, the production of hydrocarbons from the Dakota formation through 2 3/8-inch tubing installed within a string of 4 1/2-inch casing, the production of hydrocarbons from the Mesaverde formation through the 2 3/8 x 4 1/2-inch annulus of the latter casing string, and the production of hydrocarbons from the Gallup formation through 2 3/8-inch tubing installed within a second string of 4 1/2-inch casing, the three strings of casing being cemented in a common well bore.

CASE 2161: Application of Texaco, Inc. for a triple completion. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of the C. H. Weir "B" Well No. 4, located in Unit I, Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Eumont Gas Pool, the production of oil from the Skaggs-Glorieta Pool and the production of oil from the Skaggs-Drinkard Pool through the casing-tubing annulus, through 2 3/8-inch tubing, and through 2 3/8-inch tubing respectively.

CASE 2162: Application of The Atlantic Refining Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the commingled Justis Tubb-Drinkard and Justis-Blinbry production from the following-described leases:

Langlie Federal Lease, N/2 SE/4 of Section 14

Langlie Federal "A" Lease, S/2 NE/4 of Section 14

Langlie Federal "B" Lease, N/2 NE/4 of Section 14

all in Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 2163: Application of Yates Drilling Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the Pennsylvanian formation production from all wells presently completed or hereafter drilled on Federal Lease No. 03283, comprising the W/2 of Section 31, Township 8 South, Range 37 East, Roosevelt County, New Mexico.

CASE 2164: Application of Hudson and Hudson for an exception to Rule 506 (A) of the Commission Rules and Regulations and for permission to transfer allowables. Applicant, in the above-styled cause, seeks an exception to Rule 506 (A) by increasing the limiting gas-oil ratio for the West Tonto Yates Seven Rivers Pool, Lea County, New Mexico, from 2,000 to 6,000 cubic feet of gas per barrel of oil. Applicant further seeks permission to shut-in one well in said pool and transfer its allowable to another well.

CASE 2165:

Application of Pan-American Petroleum Corporation for two unorthodox oil well locations and a non-standard oil proration unit. Applicant, in the above-styled cause, seeks approval of two unorthodox oil well locations in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, said locations to be as follows:

Navajo Tribal "E" Well No. 7, to be located 250 feet from the South line and 800 feet from the West line of Section 16.

Navajo Tribal "G" Well No. 5, to be located 1830 feet from the South line and 885 feet from the East line of Section 18, both in Township 29 North, Range 14 West.

Applicant also seeks an 88.7-acre non-standard oil proration unit in said pool comprising that portion of the SW/4 of Section 16, within the Navajo Reservation lying South of the mid-channel of the San Juan River, Township 29 North, Range 14 West, to be dedicated to said Navajo Tribal "E" Well No. 7.

CASE 2166:

Application of Pan American Petroleum Corporation for permission to take interference tests and transfer allowables. Applicant, in the above-styled cause, seeks permission to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21, Township 29 North, Range 14 West and transferring the allowable of said well in equal parts to the other five wells on the said Navajo "E" Lease.

CASE 2167:

Application of Chambers & Kennedy for a 200-acre non-standard gas proration unit and for an unorthodox gas well location. Applicant, in the above-styled cause, seeks the establishment of a 200-acre non-standard gas proration unit in the Eumont Gas Pool, Lea County, New Mexico, comprising the NE/4 NE/4, S/2 NE/4, and the N/2 SE/4 of Section 34, Township 19 South, Range 37 East. Said unit is to be dedicated to the Monument State Well No. 1, located on an unorthodox location at a point 1649 feet from the South line and 2197 feet from the East line of said Section 34.

CASE 2168:

Application of Continental Oil Company for permission to shut-in one well and transfer its allowable to other wells. Applicant, in the above-styled cause, seeks permission to shut-in its Wilder Well No. 20, located 1980 feet from the South and East lines of Section 26, Township 26 South, Range 32 East, El Mar-Delaware Pool, Lea County, New Mexico, and transfer its allowable to the following offset wells in said Section 26: Wilder Lease Well Nos. 17, 18, 22 and 25.

CASE 2169:

Application of Gulf Oil Corporation for a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Grayburg and San Andres formations through its J. F. Janda "F" Well No. 17, located in Unit A, Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, with the proposed injection interval from 3999 feet to 5650 feet.

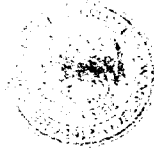
CASE 2170:

Application of Amerada Petroleum Corporation for an amendment of Order R-1750. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1750, which authorized the triple completion of its Wimberly Well No. 13, located in Unit M, Section 24, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, to substitute an undesignated oil pool, probably Paddock, for the Langlie-Mattix which was previously authorized. Applicant also proposes to use three parallel strings of tubing rather than two as provided in Order R-1750.

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER



P. O. BOX 871
SANTA FE

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

February 3, 1961

Atwood & Malone
Box 867
Roswell, New Mexico

Re: Case No. 2166
Order No. N-1881
Applicant:
Pan American

Dear Sir:

Enclosed herewith are ^{one} ~~two~~ copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

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

ir/

Carbon copy of order also sent to:

Hobbs OCC ☒

Artesia OCC ☐

Aztec OCC ☒

Other Mr. Guy Buell

**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. 2166
Order No. R-1861**

**APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR PERMISSION TO TAKE
INTERFERENCE TESTS AND TRANSFER ALLOW-
ABLES IN THE CHA CHA-GALLUP OIL POOL,
SAN JUAN COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 25, 1961, at Santa Fe, New Mexico, before Elvis A. Wtz, 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 2nd day of February, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Wtz, 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, Pan American Petroleum Corporation, seeks permission to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NW/4 SW/4 of Section 21, Township 27 North, Range 14 West, and transferring the allowable of said well in approximately equal parts to the other five wells on its Navajo "E" Lease.

(3) That the applicant seeks permission to take interference tests in order to gather reservoir data in the Cha Cha-Gallup Oil Pool.

(4) That permission should be granted on such terms and conditions as will insure accurate results of such interference tests.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21, Township 29 North, Range 14 West, and transferring the allowable of said well in approximately equal parts to the other five wells on its Navajo "E" Lease. All interference tests involving the transfer of allowables shall be taken in accordance with the following provisions:

(a) The flowing bottom hole pressure of each well offsetting the control well shall be taken within 36 hours after the static bottom hole pressure is taken on the control well.

(b) In the event static bottom hole pressures are taken on the flowing wells, in addition to flowing bottom hole pressures, the pressures shall be taken at approximately 24, 48 and 72 hours after shut-in in order to obtain comparable build-up points.

(2) That the allowable transfer shall be effective commencing February 1, 1961.

(3) That all interference tests shall be completed by August 1, 1961, provided, however, that extensions of time in three-month increments may be granted administratively by the Secretary-Director of the Commission for good cause shown.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

[Signature]

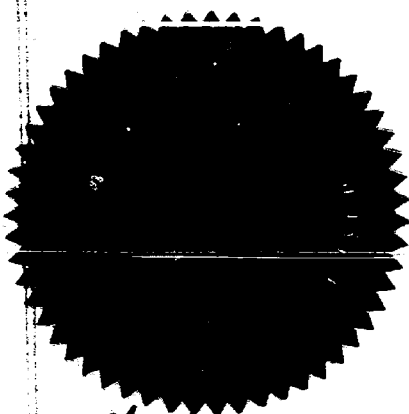
HOWIE L. MICHEN, Chairman

[Signature]

H. S. WALKER, Member

[Signature]

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



ccr/

Case 2166
Heard. 1-25-61

1-26-61

Exped.

1. Grant Pahr Am. the authority to
run interference tests on its
Navajo Tribal "E" #3 NW SW 21-29 N-14W
and to transfer the allowable for this
well to ~~other~~ all other wells on this ^{completely in this}
lease in equal parts so that
no well will be producing more
than its share of the #3 allowable.

The interference tests shall
be concluded in six months from
Feb. 1, 1961. Provide administrative
procedure for shortening or length-
ening the period.

The tests shall be conducted as
follows:

1. The BH flowing pressure of
the nearest offset wells to the
control well shall be taken within
36 hrs of the time the BH static
pressure is taken on the control
wells.

2. When the static ^{BH} pressures
are ~~corridor~~ taken on the
flowing wells the ~~pressure~~ ^{prop.}
shall be measured at #24, 48,
and 72 hr. intervals in order
to obtain at least 3 build
up points.

Thos. H. [Signature]

Effective date of transfer shall be
Feb. 1, 1961.

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
September 21, 1961

File: N-482-986.510.1

Subject: Pressure Interference Test
Cha Cha Gallup Pool
San Juan County, New Mexico
Order R-1861

Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

New Mexico Oil Conservation Commission Order R-1861 dated February 2, 1961, as extended by your letter of July 28, 1961, granted authorization for Pan American Petroleum Corporation to conduct a pressure interference test in the Cha Cha Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "E" Well No. 3, located in the NE/4 SW/4 of Section 21, T-29-N, R-14-W, and observing the bottom hole pressure performance during its shut in.

Having obtained the interference test data which was desired, by the authorization of Order R-1861, Pan American plans to discontinue the interference test on October 1, 1961, and return the Navajo Tribal "E" No. 3 well to a producer status.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

T. M. Curtis
T. M. Curtis
District Superintendent

GWE:en

cc: Mr. Emery Arnold
New Mexico Oil Conservation Commission
Aztec, New Mexico

*File in
proper case
file for
this order*

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
December 30, 1960

File: E-964-986.510.1

Subject: Application for Permission
To Conduct Interference Test
Cha Cha Gallup Pool
San Juan County, New Mexico

Mr. A. L. Porter (2)
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

New Mexico Oil Conservation Commission Order R-1800 setting forth special pool rules for the Cha Cha Gallup Oil Pool, San Juan County, New Mexico, provides that the applicant may shut in one of the wells completed in this pool and transfer its allowable to other wells on the same basic lease producing from the pool for the purpose of obtaining interference test data. Pan American Petroleum Corporation hereby makes application for administrative approval for permission to shut-in its Navajo Tribal "E" No. 3, located in the SW/4 of Section 21, T-29-N, R-14-W, transfer its allowable in approximate equal proportions to the remaining five wells on the Navajo "E" lease, and conduct an interference test in this area.

The attached map of the portion of the Cha Cha Gallup Pool shows the location of the Pan American Navajo "E" lease and the location of the six wells on this lease which presently produce from the Cha Cha Gallup Pool. It is Pan American's desire to collect interference test data in this area of the Cha Cha Gallup Pool as additional data to be used in conjunction with the interference data being collected by Benson-Montin-Greer in the southeast portion of this pool.

In addition to obtaining the normal interference test data, the information to be gained will be used in furthering our efforts toward study of secondary recovery in the Cha Cha Gallup Pool. An Engineering Committee has been convened for the purpose of conducting a secondary recovery study, and the data obtained from the test will be a valuable aid in their investigation. It is Pan American's plan to shut in the Navajo Tribal "E" No. 3 as soon as possible after approval to conduct this test is obtained.

A copy of this application is being furnished to El Paso Natural Gas Products Company as the offset operator to this lease.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
Area Superintendent

GWE:en
Attach.

cc: El Paso Natural Gas Products Co.

*File this in
for hearing*

*Administrative
request*

*Booked
1-12-61*

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 25, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum Corporation for permission to take interference tests and transfer allowables. Applicant, in the above-styled cause, seeks permission to take interference tests in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico, by shutting in its Navajo Tribal "G" Well No. 3, located in the NE/4 SW/4 of Section 21, Township 29 North, Range 14 West and transferring the allowable of said well in equal parts to the other five wells on the said Navajo "G" lease.

Case
2166

BEFORE:

Elvin A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: 2166.

MR. PAYNE: 2166, Application of Pan American Petroleum Corporation for permission to take interference tests and transfer allowables.

MR. BUELL: We have one witness, Mr. Examiner, Mr. Eaton.

MR. PAYNE: Let the record show the witness was sworn in a preceding case.

GEORGE W. EATON, JR.

called as a witness, having been previously duly sworn, testified as follows:

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CM 3-6691

ALBUQUERQUE, NEW MEXICO



DIRECT EXAMINATION

BY MR. BUELL:

Q Would you state your complete name, by whom you are employed, in what capacity, and in what location?

A George W. Eaton, Jr., Senior Petroleum Engineer for Pan American Petroleum Corporation, in Farmington, New Mexico.

Q Your qualifications as a petroleum engineer are in the records of the Commission in prior cases, are they not?

A Yes, sir.

MR. BUELL: Are his qualifications acceptable?

MR. UTZ: Yes, sir.

Q (By Mr. Buell) I direct your attention to what has been marked Pan American's Exhibit No. 1. What does that exhibit reflect?

A Exhibit No. 1 is a location map of that portion of San Juan County showing the location of the Cha Cha-Gallup Oil Pool. The orange line on Exhibit 1 is the NMOC boundaries of the Cha Cha-Gallup Pool as defined by nomenclature orders.

Q What about Sections 15 and 16 to the south there; is there an order out on those two half sections?

A No, sir, there isn't. The south half of Sections 15 and 16 actually isn't covered by a nomenclature order that has been issued, although hearing has been held to include those sections in the pool limits.

Q Have there been any rules adopted for this pool?

A This pool has special pool rules.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q What did they set up in the way of proration units?

A NMOCC Order R-1800 sets forth temporary 80-acre proration units for this pool, and further stipulates that a hearing will be held in October, 1961 to consider the adoption of permanent rules.

Q Did that order also authorize Benson, Montin and Greer to conduct an interference test in this pool?

A Yes, sir, it did.

Q To your knowledge have they initiated that test?

A That test is now underway.

Q Does Exhibit 1 show the area of the field in which that test is being run?

A Yes, sir. Exhibit 1 shows the location of the Benson-Montin-Greer, Section 17, Township 28 North, Range 13 West, and that is identified by the large green circle. The control well is within that large green circle.

Q That test, then, is being run at this time?

A Yes, sir.

Q And would you say that is the southern end of the field, or the southeastern end of the field?

A Yes, sir.

Q Where does Pan American propose to run its interference test?

A The proposed Pan American Test is in Section 21, Township 29, Range 14 West, and is depicted on Exhibit 1 by the large red circle.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q If the Commission approves our request, then we would have an interference test being conducted in the southeastern portion of the field by Benson, Montin and Greer, and by Pan American in the north or northwestern?

A Yes, sir. There would be one test in operation in either end of the field.

Q What do you, as a reservoir engineer, think about the location of these two interference tests?

A I think that these two tests are located, geographically, in such a way that definite conclusions might be reached with regard to the ability of a well, any well in this pool, to drain 80 acres or more.

Q You feel that you, as a reservoir engineer, if you saw data obtained on these two tests which showed interference, you would feel, then, that would be applicable anywhere in the field?

A Yes, sir.

Q Is there any other difference besides geography in these two particular areas?

A Yes, sir. This additional test will provide data in one other aspect that is unrelated to geographic location. You will note from Exhibit 1 that the Benson-Montin-Greer test in Section 17 is being conducted in an area where the property is developed down a density approximating 80 acres. Now, the proposed Pan American test in Section 21 is located in an area which is developed, essentially to a density of 160 acres per well; in other words,



one well per quarter section.

Q Would you expect, as a reservoir engineer, that in the Pan American area, the area that is developed to about 160-acre density, would you expect similar data to be accumulated on that test as you would down in the Benson-Montin-Greer 80-acre area?

A I would expect the data collected would be similar. However, I would also expect that it would take longer to establish the initial evidence of interference, and that the rate of decline on the control or shut in well might be less than in the area where the density of development is greater.

Q Would that be true because you are observing interference over a larger area?

A Over a much larger area, yes, sir.

Q Let me direct your attention now to what has been marked Pan American's Exhibit No. 2. What does that exhibit reflect?

A Exhibit No. 2 is a plat of the particular area in which Pan American desires to run its interference test.

Q How have you designated the wells that will play a part in this test?

A The control well or shut in well is colored with the large red circle. The remaining five producing wells on the Navajo "W" lease are denoted by the small green circles.

Q Let me direct your attention now to what has been marked as Pan American's Exhibit No. 3. What does that exhibit reflect?

A ~~Exhibit 3 is a tabulation of the recent tests on the six~~

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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

wells on the Navajo "G" lease.

Q Does Exhibit 3 show that these wells have the capacity and the ability to produce the allowable of the control well?

A Yes, sir, they do.

Q What is the allowable of these wells at this time?

A The allowable of the well on 80-acre spacing, 80-acre proration unit in the Cha Cha Pool is 164 barrels per day.

Q How would you propose to divide that, or allocate it, to the other wells on the lease, the allowable of the shut in well?

A It is our proposal to distribute that shut in well's allowable in approximate equal proportions to the remaining five wells. I say approximate, because under that allocation, four of the wells would receive 197 barrels per day and one 196 barrels per day.

Q The current producing wells on this particular lease have the capacity, as you stated, to produce the allowable of the control well?

A Yes, sir, that is true.

Q That lease is being actively developed, is it not, Mr. Eaton?

A Yes, sir, it is.

Q Would you recommend that as new wells come in that they get an equal portion of the allowable of the control well?

A Yes, sir, that would be my recommendation.

Q So, as other wells were completed, then the 196, 197 that



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

you mentioned would be proportionately reduced?

A Yes, sir.

Q Is there a well drilling or being completed at this time on that lease?

A There is one drilling well on this lease, in the SW/4 NW/4 of Section 22.

Q But even with the producing wells that we now have, none would produce in excess of 197 barrels per day?

A That is true.

Q Do you, as a reservoir engineer, feel that is a wasteful rate for this reservoir?

A No, sir.

Q Would you consider this as a rate-sensitive reservoir?

A In my opinion that is not a rate-sensitive reservoir.

Q Do you feel, if the Commission approves this interference test it will serve conservation as well as protect the correlative rights of interested parties?

A Yes, sir, I do.

Q Do you have anything else you would like to add?

A No, sir, I don't.

MR. BUELL: May I offer at this time Pan American's Exhibits 1 through 3?

MR. UTZ: Without objection Pan American's Exhibits 1 through 3 will be admitted into the record.



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BY MR. UTZ:

Q Mr. Eaton, is it Pan American's intention to develop this lease on 160 acres?

A Initially at that rate, yes, sir.

Q Is that the purpose of this interference test, to show 160-acre drainage?

A No, sir, although if interference is established that would be the result; it would show 160-acre drainage.

Q Would this information also be used to evaluate a secondary recovery program?

A The data that would be obtained would be useful to any group that might study and evaluate the possibility of secondary recovery. The evidence will be conclusive in showing the reservoir is continuous over this big area, and injection of fluid might be expected to affect wells drilled on this density.

Q Would you expect the increased allowable for wells No. 1 and 6 to recover any oil from the El Paso Natural Gas Products Lease in Section 27?

A They are probably recovering all from that lease now.

Q Has El Paso Natural Gas Products Company been notified of this hearing?

A Yes, sir.

REDIRECT EXAMINATION

BY MR. BUELL:

~~Q As a matter of fact, they volunteered a waiver, did they~~



not?

A Yes, sir, they did, and I told them I didn't think one would be necessary.

MR. UTZ: Any other questions of the witness?

BY MR. PAYNE:

Q How long a period of time do you wish to take these interference tests?

A We think we will have positive evidence of interference in a period of three to six months.

Q So you would have no objection to a time limit of six months?

A We would prefer not to set such a time limit because there is always a possibility we won't. We think we will have, certainly, the data, and we want to get started soon enough to take every opportunity to get it by the time of the hearing in October, but we think we will have positive evidence in three to six months.
BY MR. UTZ:

Q In the manner of conducting these tests, how do you propose to evaluate the pressures from your producing wells as well as your shut in well, or control well?

A Pressures will be obtained on the control well at regular intervals. Periodic tests will be taken on the producing wells as conditions permit, pressure tests.

Q Will you take bottomhole pressures?

A Yes, sir.

~~Q On the flowing wells as well as the shut in well?~~

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A I don't want to leave the impression we are going to take flowing bottomhole pressures, but static bottomhole pressure on the producing wells.

Q You don't intend to take flowing bottomhole pressures on the producing wells?

A No, sir.

Q If you don't do that how will you evaluate the pressure drop between the wells?

A We will observe it, simply observe the pressure in the shut in well, bottomhole pressure of the shut in well.

Q Show a certain decline?

A Yes, sir.

Q But you still won't know what the pressure drop is over the radius you are testing unless you took the flowing bottomhole pressures?

A We will know this: That the reservoir is being depleted at a rate that can be defined by the decline in pressure on the shut in well. Naturally, the pressure will be declining at a more rapid rate in the area where withdrawals are occurring, around the producing wells. The rate that we will observe in the shut in well will be the minimum rate of decline that occurs in this whole Section 21,

BY MR. PAYNE:

Q Were all of these wells, shut in and the proposed wells you would transfer the allowable to drilled within a relatively



short period of time; they are all about the same age, aren't they?

A Yes, sir.

BY MR. UTZ:

Q Mr. Eaton, will that show the efficiency of drainage on 80 or 160, whatever the radius happens to be from your nearest well to this control well?

A When compared with pure volume estimates of oil in place, the decline in pressure on the shut in well should be an excellent tool to determine the efficiency with which the acreage in the vicinity of the shut in well was being depleted.

Q Even though there may be a two or three hundred pound difference between the well bore of each well?

A Yes, sir, because you see, the flow and bottomhole pressure characteristic is a rather unstable thing unless the well is conditioned enough that there is no fluctuation in producing rate and, therefore, bottomhole pressure characteristics. In other words, when you shut that producing well in the static pressure in that well should approximate the pressure that is obtained on the control well.

MR. UTZ: Any other questions?

REDIRECT EXAMINATION

BY MR. BUELL:

Q Mr. Eaton, to your knowledge, is Benson, Montin and Greer obtaining pressure data on producing wells or are they simply observing their control well like we propose to do?

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A To the best of my knowledge they are only taking pressures on their shut in well, although they take, as we plan to do, periodic bottomhole pressures on their producing wells under static conditions. I don't believe they are taking flowing bottomhole pressures.

BY MR. UTZ:

Q On your producing wells, how long do you intend to shut them in for bottomhole pressures?

A Seventy-two hours.

Q Do you think that will obtain stabilization?

A We think that it will either be stabilized at that point or will have a sufficient degree of a build-up curve established that it can be extrapolated to represent stable conditions. We are confident that we can get a stabilized bottomhole pressure after seventy-two hours, either by extrapolation or actually having had it recorded.

MR. UTZ: Any other questions? Witness may be excused. Other statements in this case?

MR. BUELL: I would like to make this request, if I may, Mr. Examiner. If it is possible we would like to have temporary authority to initiate this test pending formal action on the hearing. We are facing this Commission-called hearing in October to prove up permanent rulings for the pool, and we would like to initiate the test just as soon as we possibly could.

MR. PAYNE: Mr. Buell, we will expedite the order, but all



the Examiner does is recommend to the Commission, either an approval or denial, and all orders are actually Commission orders.

MR. BUELL: I was hoping there might be some kind of temporary authority the Commission could grant pending formal action on the hearing here today. I just wanted to make that request, if that procedure was open to us.

MR. UTZ: I don't believe there will be anything we can do to prevent you from shutting in this well, but I doubt if we can give you permission to transfer allowables.

MR. PAYNE: Inasmuch as there is no emergency in the ordinary sense of the term.

MR. BUELL: It wouldn't classify as an emergency.

MR. PAYNE: We will certainly expedite the order.

MR. BUELL: Thank you very much. That is all we have,

Mr. Examiner.

MR. UTZ: The case will be taken under advisement.

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, JUNE PAIGE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 1st day of February, 1961.

June Paige
Notary Public - Court Reporter

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 2166,
heard by me on Jan. 25, 1961.

Elmer H. W. Examiner
New Mexico Oil Conservation Commission

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