

CASE 2107: Application of PAN AMER.
for permission to commingle from 2
wells on W. H. Fort "A" lease.

Case No.

2107

Application, Transcript,
Small Exhibits, Etc.

STATE OF NEW MEXICO
1960 SEP 21 AM 10:30

PAN AMERICAN PETROLEUM CORPORATION

Case 2107

P. O. Box 268
Lubbock, Texas
September 19, 1960

File: WJS-5808-986.510.1 x 400

Subject: Application for Exception to
Statewide Rule No. 303-A
Denton (Devonian) and
Denton (Wolfcamp) Fields
Lea County, New Mexico

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

*set for
hearing*

Dear Sir:

Pan American Petroleum Corporation hereby respectfully requests that you schedule for an early docket a hearing to consider its application for an exception to statewide rule No. 303-A to permit commingling without prior metering of production from the Denton (Devonian) and Denton (Wolfcamp) reservoirs of Lea County, New Mexico, on Pan American's W. H. Fort "A" Lease. Well No. 1 is presently producing approximately 17 BOPD from the Devonian reservoir. Well No. 2, a Devonian completion, is presently shut-in since its producing rate has declined to a point where the well is no longer economical to operate. Pan American proposes to recomplete Well No. 2 in the Wolfcamp reservoir and utilize the same tank battery and hydraulic lift system to produce both wells.

Yours very truly,

A. J. Inderrieden
A. J. Inderrieden
District Engineer

E/2 25 14 37

WJS:js

*Cashed
mailed
10-5-60
[Signature]*

Memo

From

D. S. Nutter
Chief Engineer

To OK my Provision
that applicant shall
notify the S.F. office
of the Commission in
the event that the
recompletion of #2
well in the Wolfcamp
results in a top allowable
well, at which time
the case may be
reopened

DOCKET: EXAMINER HEARING, WEDNESDAY, OCTOBER 19, 1960

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe, NM

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, Attorney, as Alternate Examiner:

- CASE 2099: Application of Continental Oil Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the installation of an automatic custody transfer system to handle the Eunice Pool production from all wells presently completed or hereafter drilled on the Meyer B-4 Lease consisting of the E/2 and the E/2 W/2 of Section 4, Township 21 South, Range 36 East, Lea County, New Mexico.
- CASE 2100: Application of Continental Oil Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the installation of an automatic custody transfer system to handle the Maljamar Paddock Pool production from all wells presently completed or hereafter drilled on the William Mitchell "A" Lease consisting of the N/2 of Sections 19 and 20, Township 17 South, Range 32 East, Lea County, New Mexico.
- CASE 2101: Application of Cities Service Oil Company for an order force-pooling all mineral interests in a standard 80-acre oil production unit. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests within the vertical limits of the Southwest Gladiol Devonian Pool in a standard 80-acre unit consisting of the S₁ W/4 of Section 27, Township 12 South, Range 37 East, Lea County, New Mexico. The non-consenting royalty owners include B. F. Turner and wife, George C. Koch and wife, Hugh O. Sears and wife, Harry J. Kaindl and wife, and Clark and Judge Properties, a partnership.
- CASE 2102: Application of Amerada Petroleum Corporation for permission to commingle the production from several separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the Blinebry, Drinkard, and Fasselman production from all wells on its Ida Wimberley lease comprising portions of Sections 24, 25 and 26, Township 25 South, Range 37 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

CASE 2103: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Vinson-Ramsay "B" Well No. 6, located in Unit K, Section 36, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Justis-Blinebry Pool and the production of oil from an undesignated Tubb Pool through parallel strings of 1½-inch tubing.

CASE 2104: Application of Shell Oil Company for permission to commingle the production from separate pools. Applicant, in the above-styled cause, seeks permission to commingle the Drinkard Pool and Tubb Pool production from all wells located in Section 4, Township 22 South, Range 37 East, Lea County, New Mexico, after separately metering the production from the Tubb Pool only.

CASE 2105: Application of Shell Oil Company for permission to commingle the production from two separate pools from several separate leases and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the Eunice and Eumont Pool production from all wells on four leases in Section 1, Township 21 South, Range 35 East, and Section 6, Township 21 South, Range 36 East, Lea County, New Mexico. Applicant further seeks authorization to install an automatic custody transfer system to handle said commingled production.

CASE 2106: Application of Texaco Inc. for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of the State "BH" Well No. 3, located in Unit E, Section 11, Township 12 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Wolfcamp Pool and the production of oil from an undesignated Pennsylvanian Pool through parallel strings of tubing.

CASE 2107: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the Denton (Devonian) and Denton (Wolfcamp) Pool production from two wells on the W. H. Fort "A" lease comprising the E/2 of Section 25, Township 14 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

Docket No. 31-60

-3-

CASE 2108: Application of Chambers and Kennedy for an unorthodox oil well location. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Sinclair State Well No. 1 to be located in an undesignated Abo pool at a point 990 feet from the South line and 200 feet from the West line of Section 35, Township 17 South, Range 28 East, Eddy County, New Mexico.

CASE 2109: Application of Jack S. Reaves for the establishment of a 52-acre non-standard oil proration unit. Applicant, in the above-styled cause, seeks an order establishing a 52-acre non-standard Delaware oil proration unit consisting of lots 3 and 4 of Section 36, Township 26 South, Range 28 East, Eddy County, New Mexico.

CASE 2110: Application of Chambers and Kennedy for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Monterey State Well No. 3, located 660 feet from the North line and 1650 feet from the West line of Section 32, Township 18 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from an undesignated Yates oil pool and the production of oil from the North Shugart-Queen Grayburg Pool through parallel strings of 2-inch tubing.

GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER



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

P. O. BOX 871
SANTA FE

October 24, 1960

Mr. Charles Malone
Roswell Petroleum Building
Roswell, New Mexico

Re: Case No. 2107
Order No. R-1809
Applicant:

Pan American Petroleum Corporation

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.,
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other Guy Buell - Fort Worth, Texas

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. 2107
Order No. R-1909

APPLICATION OF PAN AMERICAN
PETROLEUM CORPORATION FOR
PERMISSION TO COMMINGLE THE
PRODUCTION FROM TWO SEPARATE
POOLS, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 19, 1960, 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 24th day of October, 1960, 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, Pan American Petroleum Corporation, is the owner and operator of the W. H. Fort "A" Lease comprising the SE/4 of Section 25, Township 14 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant seeks permission to commingle the Denton (Devonian) Pool production with the Denton (Wolfcamp) Pool production from two wells located on the above-described W. H. Fort "A" Lease, both of which are presently completed in the Devonian formation and one of which is to be recompleted in the Wolfcamp formation.
- (4) That the Devonian well from which the production is proposed to be commingled is a marginal well and it is expected that the Wolfcamp well will also be marginal.
- (5) That the ownership of the said W. H. Fort "A" Lease is common at all depths.

-2-
CASE No. 2107
Order No. R-1809

IT IS THEREFORE ORDERED:

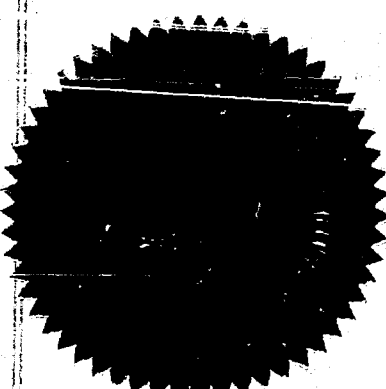
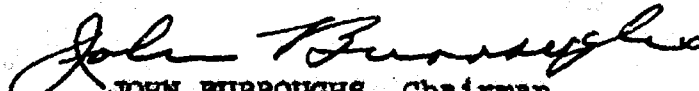
That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to commingle the Denton (Devonian) Pool production with the Denton (Wolfcamp) Pool production from two wells on the W. H. Fort "A" Lease, comprising the SE/4 of Section 25, Township 14 South, Range 37 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER, That the applicant shall notify the Commission's Santa Fe Office in the event that either well on the subject lease becomes a top allowable well in either producing zone, at which time this case may be reopened.


PROVIDED FURTHER, That the applicant shall install adequate facilities to permit the testing of all wells on the said W. H. Fort "A" Lease at least once each month to determine the individual production from each well.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



JOHN BURROUGHS, Chairman


MURRAY E. MORGAN, Member


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

esr/

EXHIBIT

PAN AMERICAN PETROLEUM CORPORATION
PROPOSAL TO COMMINGLE WITHOUT PRIOR
METERING PRODUCTION FROM THE
DENTON (DEVONIAN) AND DENTON (WOLFCAMP)
RESERVOIRS ON PAN AMERICAN'S
W. H. FORT "A" LEASE
SE/4 SEC. 25, T-14-S, R-37-E, LEA COUNTY, NEW MEXICO
NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING CASE NO. 2107
OCTOBER 19, 1960

CASE NO. _____
EXHIBIT NO. _____
OIL CONSERVATION COMMISSION
BEFORE EXAMINER NUTTER

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 2107

44 0 Dev gross
41 0 gross Wolcamp 0.521
no differential on acct
expect 25000 bbls more
from #1 in Dev
20000 bbls
est reserves
in WC

CONTENTS

A. General

B. Discussion of Flow Diagrams which show manner
in which wells will be produced and tested.

GENERAL

Pan American Petroleum Corporation respectfully requests that the New Mexico Oil Conservation Commission grant an exception to Statewide Rule No. 303(a) to permit commingling without prior metering of production from the Devonian and Wolfcamp Reservoirs underlying its W. H. Fort "A" Lease in the Denton Fields of Lea County, New Mexico. The Fort Lease is located in the SE/4 of Section 25, T-14-S, R-37-E, and is in the northeastern portion of the Denton Fields as shown on Attachment I.

There are two wells on the Fort "A" Lease which are presently completed in the Devonian reservoir. Well No. 1 produces approximately 17 BOPD plus 11 BWPD. Well No. 2 has been shut-in due to an uneconomical producing rate from the Devonian. Upon approval of this application, Pan American will request through regular channels, Commission authorization to recomplete Well No. 2 in the Wolfcamp reservoir.

Granting of this application will permit use of existing hydraulic lift equipment and battery equipment thereby resulting in a savings of approximately \$24,000.

PROVISIONS FOR PRODUCING AND FOR TESTING WELLS SEPARATELY

Attachments II, III, and IV show diagrammatically the existing power oil manifold now on the W. H. Fort "A" Lease and additional facilities which Pan American proposes to install to permit periodic testing of the two wells individually.

Attachment II indicates the flow of power oil and production oil through these manifolds under normal producing operations. No meters will be in operation under these conditions and the volume of commingled production will be determined by tank gauging.

Attachment III shows the flow of power oil and production oil through these manifolds when Well No. 1 is being tested to determine Devonian production. Test production will be determined by subtracting the metered volume of input power oil from the volume of power oil - production oil indicated by the test meter. No correction for BS&W will be required since the returning power oil and production oil will pass through the treater prior to being metered.

Attachment IV shows the flow of power oil and production oil through these manifolds when Well No. 2 is being tested to determine Wolfcamp production. To determine test production, input power oil will be metered and subtracted from the volume of power oil - production oil indicated by the test meter. A correction for BS&W will be made if necessary.

EXHIBIT

PAN AMERICAN PETROLEUM CORPORATION
PROPOSAL TO COMINGLE WITHOUT PRIOR
METERING PRODUCTION FROM THE
DENTON (DEVONIAN) AND DENTON (WOLFCAMP)
RESERVOIRS ON PAN AMERICAN'S

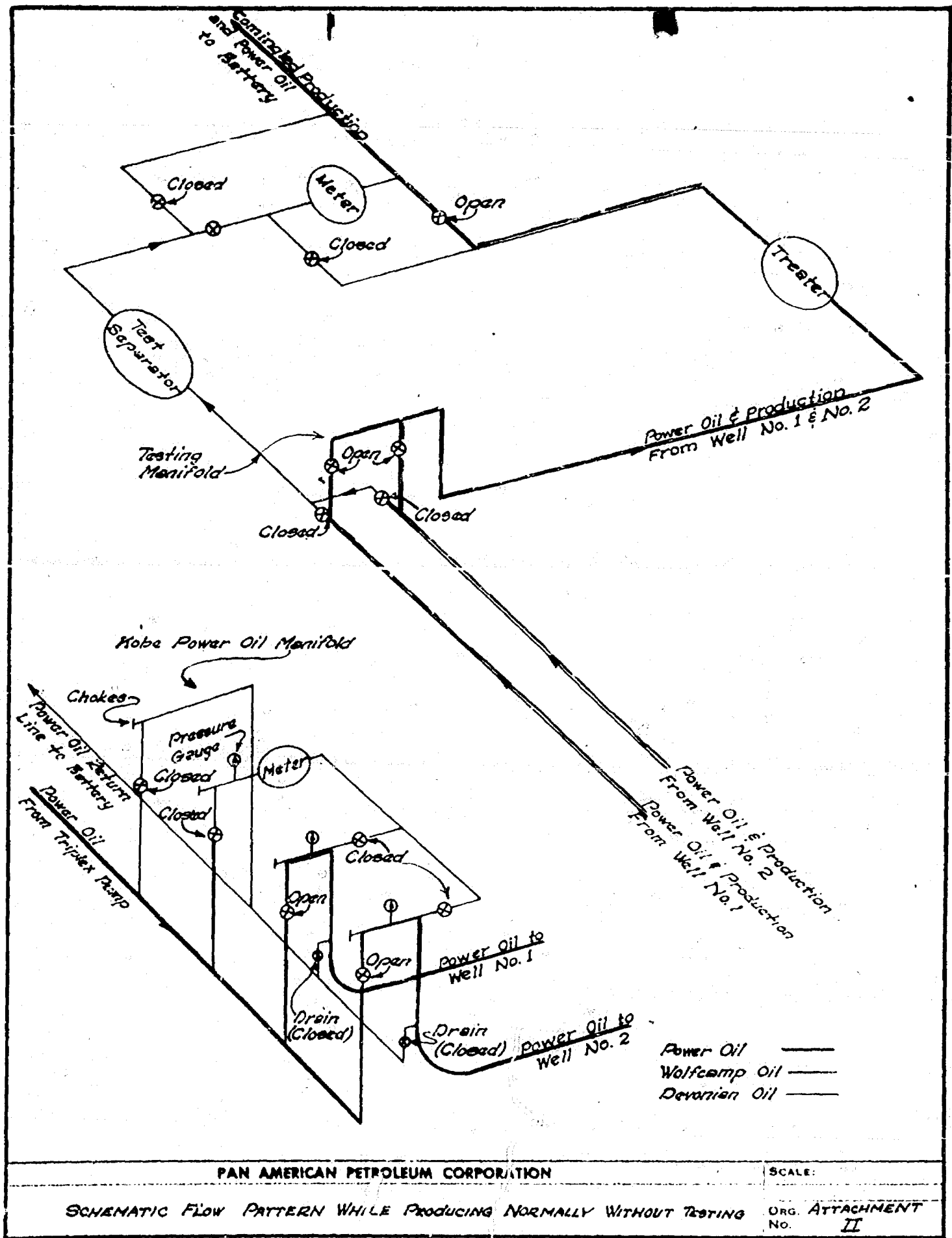
W. H. FORT "A" LEASE

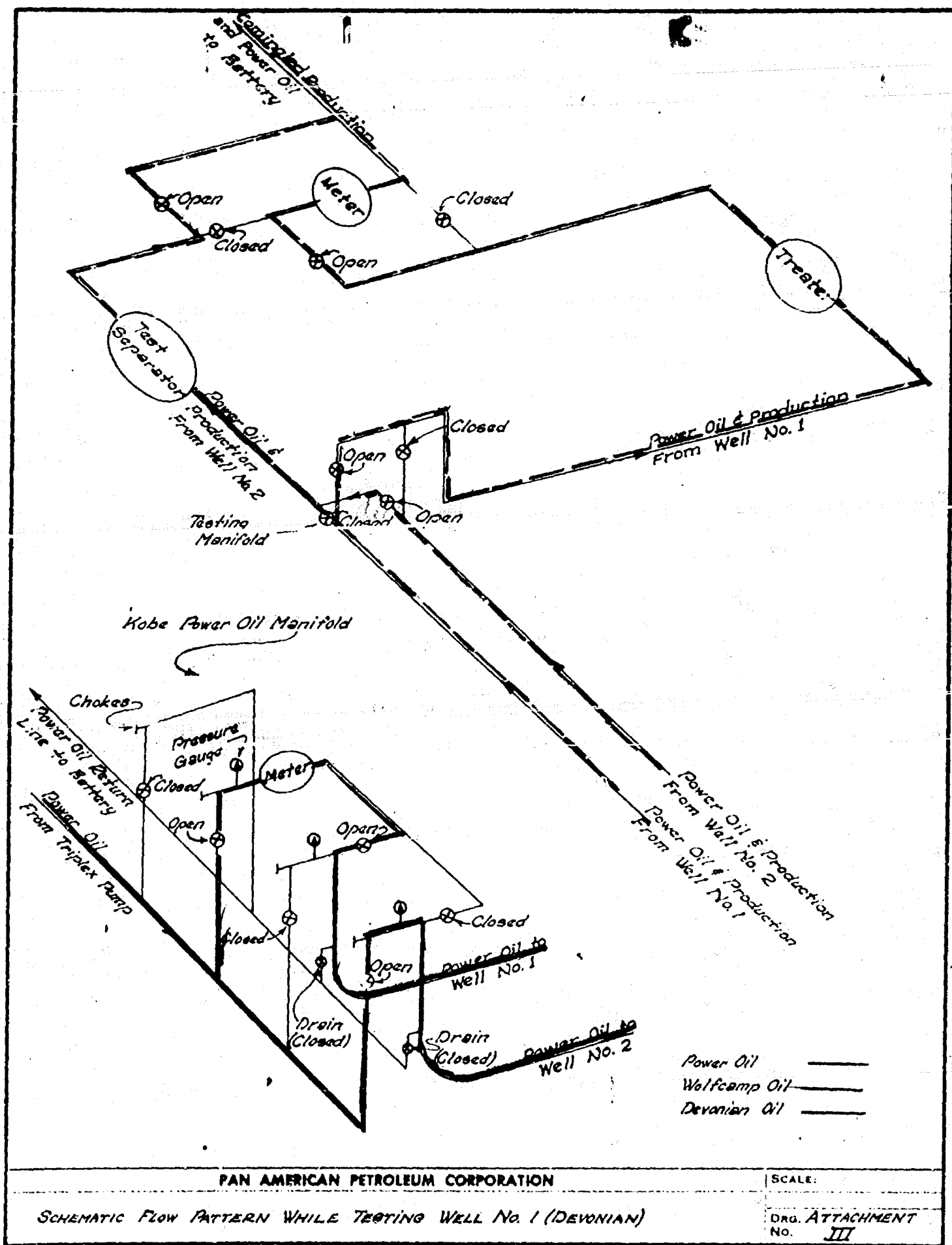
SE/4 SEC. 25, T-14-S, R-37-E, LEA COUNTY, NEW MEXICO

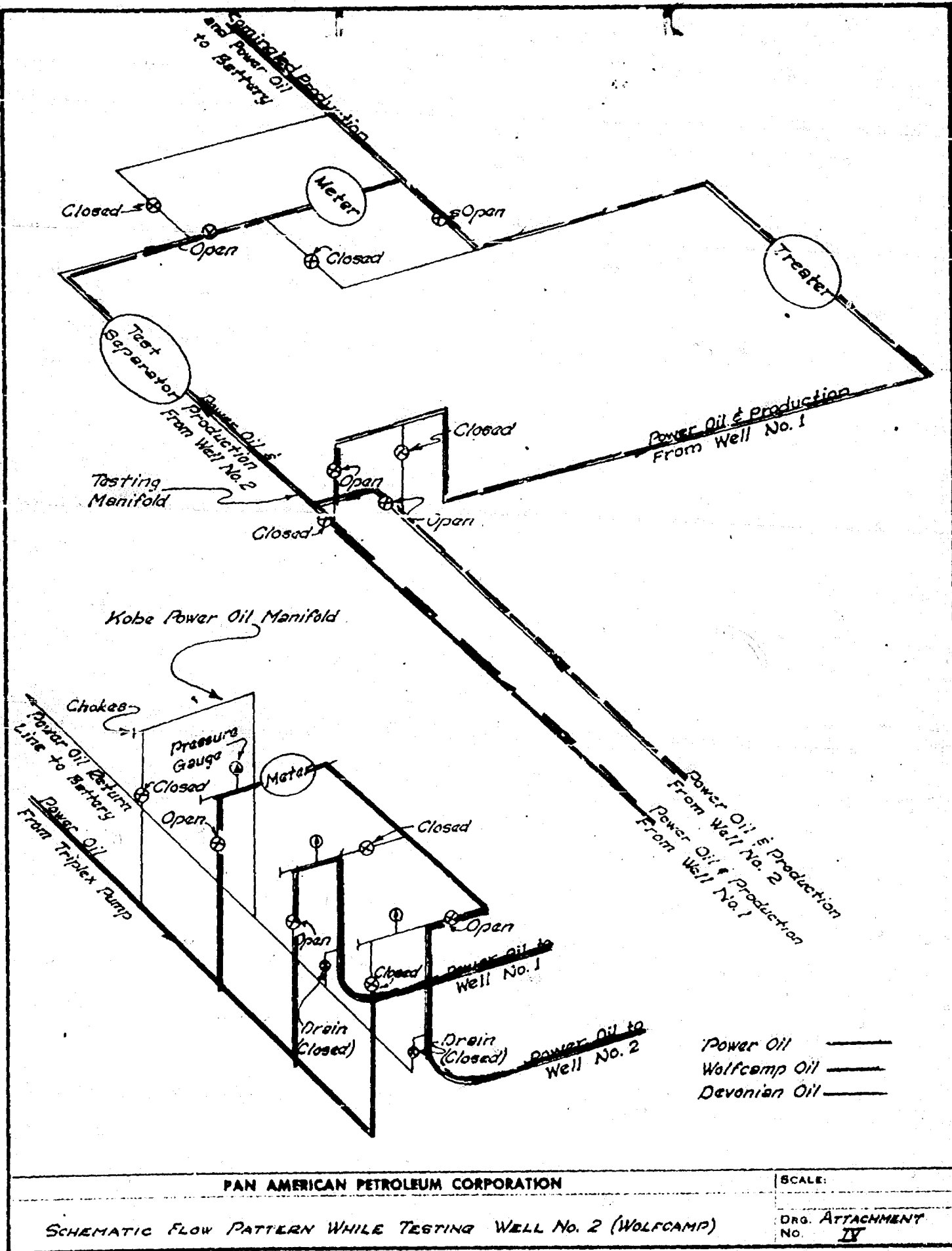
NEW MEXICO OIL CONSERVATION COMMISSION

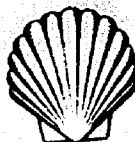
EXAMINER HEARING CASE NO. 2107

OCTOBER 19, 1960









SHELL OIL COMPANY

P. O. Box 845
Roswell, New Mexico

October 4, 1960

Subject: Pan American Petroleum
Corporation's Request for
Exception to Statewide Rule
No. 303-A

RECEIVED	
Lubbock State Office	
OCT 6 1960	
1	NS
2	CE
	DC
	WFS

wgs has file

Pan American Petroleum Corporation
P. O. Box 268
Lubbock, Texas

Gentlemen:

In reply to your letter of September 27, 1960, this is to advise that Shell Oil Company has no objection to your request for exception to Statewide Rule No. 303-A permitting you to commingle production from the Devonian and Wolfcamp formations without prior metering on your W. H. Fort "A" Lease located in the SE/4, Section 25, T-14-S, R-37-E, Lea County, New Mexico.

Yours very truly,

R. L. Rankin

R. L. Rankin
Division Production Manager

cc: New Mexico Oil Conservation Commission
P. O. Box 873
Santa Fe, New Mexico

Attachment V



SINCLAIR OIL & GAS COMPANY
PO BOX 1470 MIDLAND, TEXAS MUTUAL 5 276

R L ELSTON
VICE PRES. & DIV. MANAGER
O. S. SIMPSON
ASSISTANT DIV. & CO. MANAGER

October 13, 1960

S. TINKLER
VICE PRES. & DIV. MANAGER
W. E. FINE
VICE PRES. & DIV. MANAGER
ROGERS
VICE PRES. & DIV. MANAGER

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

Gentlemen:

We have been advised by Pan American Petroleum Corporation that they are requesting an exception to State-wide Rule 303-A to permit the commingling without prior metering of production from the Denton Devonian and Denton Wolfcamp reservoirs, Lea County, New Mexico, on their W. H. Fort "A" lease, located in the SE/4 of Section 25, T-14-S, R-37-E.

Sinclair Oil & Gas Company has no objection to the granting of the above described application and hereby waives their right to notice and hearing on same.

Yours very truly,

J. Mefford
J. Mefford

JM:EMA:lw

Orig. & 3 cc: Pan American Petroleum Corporation
Post Office Box 268
Lubbock, Texas
Attn: Mr. Neil S. Whitmore

Attachment VI

DRAFT

RSM/esr
October 20

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. 2107
Order No. R-1809

APPLICATION OF PAN AMERICAN
PETROLEUM CORPORATION FOR
PERMISSION TO COMMINGLE THE
PRODUCTION FROM TWO SEPARATE
POOLS, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
October 19, 1960, 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 _____ day of October, 1960, 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, Pan American Petroleum Corporation,
is the owner and operator of the W. H. Fort "A" Lease comprising
the ^{SE/4} ~~NE/4~~ of Section 25, Township 14 South, Range 37 East, NMPM, Lea
County, New Mexico.

(3) That the applicant seeks permission to commingle the
Denton (Devonian) Pool production with the Denton (Wolfcamp) Pool
production from two wells located on the above-described W. H.

Fort "A" Lease, both of which are presently completed in the Devonian
formation and one of which is to be recompleated in the Wolfcamp formation.

(4) That the ~~two~~ ^{Devonian} wells from which the production is
proposed to be commingled ~~are~~ ^{is a} both marginal wells and it is expected that
the Wolfcamp well will also be marginal ^{said W. H. Fort "A" Lease}

(5) That the ownership of the ~~above-described lease~~
common at all depths.

(6) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to commingle the Denton (Devonian) Pool production with the Denton (Wolfcamp) Pool production from two wells on the W. H. Fort "A" Lease, comprising the ^{SE 1/4} ~~NE 1/4~~ of Section 25, Township 14 South, Range 37 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER, That the applicant shall notify the Commission's Santa Fe Office in the event that either well on the subject lease becomes a top allowable well in either producing zone, at which time this case may be reopened.

PROVIDED FURTHER, That the applicant shall install adequate facilities to permit the testing of all wells on the said W. H. Fort "A" Lease at least once each month to determine the individual production from each well.

~~IT IS FURTHER ORDERED:~~

~~That all meters used in the above-described automatic custody transfer system shall be operated and maintained in such a manner as to ensure an accurate measurement of the liquid hydrocarbon production at all times.~~

~~That meters shall be checked for accuracy at least once each month until further direction by the Secretary-Director.~~

~~That meters shall be calibrated against a master meter or against a test tank of measured volume and the results of such calibration filed with the Commission on the Commission form entitled "Meter Test Report."~~

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

BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
October 19, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the Denton (Devonian) and Denton (Wolfcamp) Pool production from two wells on the W. H. Fort "A" lease comprising the E/2 of Section 25, Township 14 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

Case 2107

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. MORRIS: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools.

MR. MALONE: Charles Malone of Atwood and Malone, Roswell, New Mexico, appearing on behalf of Pan American. We have one witness, Mr. Sandidge, Jr. If it please the Commission, this application was erroneously filed and advertised as including the entire east half of Section 25, Township 24, 37, whereas in fact it involves only the southeast quarter and we do have a waiver in our exhibit from the working interest owner of the west half of the east half and would move that the consideration of the application be limited to the southeast quarter.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



MR. NUTTER: We are narrowing the scope of the hearing rather than broadening it. The limitation will be so amended. Let's see, the southeast quarter only.

MR. MALONE: Yes, sir.

MR. SANDIDGE, JR.

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. MALONE:

Q You are W. J. Sandidge, Jr.?

A That is correct.

Q You have not previously testified before the Oil Conservation Commission in New Mexico, will you state your educational background.

A I graduated from Texas A&M College and have a degree as Petroleum Engineer.

Q How many years of experience and what capacity?

A I have about 14 and a half years actual experience in petroleum industries in various capacities in Oklahoma, Texas, North and South Louisiana, Arkansas, Mississippi and in New Mexico.

Q You are testifying here as an employee of the applicant, Pan American.

A I am.

Q What is your title for Pan American?

A I am an operation section leader in the Operation Section of Pan American, Lubbock District, I have jurisdiction over its production in Southeast New Mexico.

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 Including Lea County?

A It includes Lea County.

Q Have you prepared an exhibit to substantiate your application?

A I have.

MR. MALONE: Does the Commission desire more than two copies?

MR. NUTTER: Two will be sufficient. This will be all one exhibit, is that correct?

MR. MALONE: Yes, those are identical copies of the same exhibit.

Q (By Mr. Malone) Mr. Sandidge, was this Exhibit 1 of Pan American prepared by you or under your direct supervision and control?

A It was.

Q What is the purpose of this application?

A To obtain Commission authorization to commingle crude production from the Denton (Devonian) Reservoir and the Denton (Wolfcamp) without prior metering.

Q Where will this be done?

A If you will refer to an attachment 1 in the exhibit which is a map of the Denton field, it will be done on Pan American's W. H. Fort Lease up in the northeastern portion of the map which is previously located in the southeast quarter of Section 25, Township 14 South, Range 37 East.

Q What is the present nature of those two wells that are shown in the red outline?

A The southeasternmost well is the Fort "A" No. 1 which is a



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Devonian completion producing at a rate of approximately 17 barrels of oil per day and 11 barrels of water per day. Well No. 2 as marked by the green dot, which has pencil marks on it, is presently a shut-in Devonian completion and it has reached an uneconomical producing rate. Pan American proposes to re-complete this well in the Wolfcamp formation.

Q And I believe at first it was a Devonian Well.

A It will remain as a Devonian Well so long as it is economical to produce.

Q What is the top allowable for the Devonian Wells on that lease?

A The top allowable for the Devonian formation in this field is 188 barrels per day.

Q Who are the off-set operators.

A Sinclair operates the lease to the south and to the southwest, Shell operates the lease to the west and northwest, Pan American operates the one well lease to the north which is designated the W. H. Fort "B" Lease.

Q And there are no operations to the east of it at all?

A The acreage east is undesignated.

Q Entries 3 and 4 of your exhibit are waivers from Sinclair and numbers 5 and 6.

A Yes, sir.

Q Why do you wish to commingle this production?

A Commingling of production will permit the use of the existing hydraulic artificial lifting, utilizing tank batteries.

Q What is the name of that equipment?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A It's Polar Cobe equipment. Cobe is the leading manufacturer of that type of equipment.

Q Is that equipment injection oil to bring back more oil, is that correct?

A Yes, sir. We commonly designate the oil that is injected as power oil.

Q Power oil?

A Power oil.

Q What is the recent production history in these two wells in their condition in the Devonian?

A As I previously mentioned, Well No.2 has been shut-in due to uneconomical production. It was shut-in in March after producing approximately 34000 barrels of oil. Well No.1 is producing at a rate of approximately 17 barrels of oil per day and 11 barrels of water. It has cumulative production of approximately 115,000 barrels.

Q Switching to the Wolfcamp, what is the current production on near like Wolfcamp wells, if you know.

A We operate the well to the north as I previously mentioned. It was termed the W.H.Fort "B" No.1. In July that well averaged 8 barrels of oil and no water.

Q From the Wolfcamp formation. If you will refer to the map, travel to the west to location "E", there is a twin well there which is a Shell well, that well averaged 27 barrels of oil in July. If you will come south from there, from that particular well to location "G", there is a Wolfcamp well which averaged 18 barrels of oil per day in July.

Q What is the top allowable for the Wolfcamp there?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A The top allowable for the Wolfcamp in this field is 125 barrels of oil per day.

Q How much will the procedure which you have outlined in your application save Pan American if this application be granted?

A We estimate that we will save approximately \$24,000.00 if we utilize the existing facilities.

Q Would an expenditure of that amount be justified on this lease without this proposed procedure for which you are applying?

A In my opinion, it would not be justified. We propose to spend an additional \$7600.00 to re-complete Well No. 2 in the Wolfcamp. In view of the marginal nature of this lease, our management is of course very anxious to get expenditures to an absolute minimum.

Q How do you propose to allocate production to each of these reservoirs?

A We propose to allocate production to each reservoir on the basis of periodic well tests.

Q Now, then, at this point the lease ownership is common on this southeast quarter of Section 25, is it not?

A Our company records indicate that the mineral and royalty and working interests ownership is identical in both of the Devonian and Wolfcamp reservoirs.

Q How would these wells be produced and tested if this application is granted.

A If you will refer to attachments 2, 3 and 4, we have



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demonstrated schematically how they will be produced. Attachment 2 shows the schematic flow pattern while producing normally without any test in operation and effect. In the lower left portion of the attachment, we have shown diagrammatically the power oil manifold. Power oil will come to this manifold from the tri-plex-power oil pump and will pass it to the power oil line, to the pipeline through the control section and out section. Power oil will be designated in brown on the drawing. If you will look at the upper portion of the diagram, we have drawn a flow line coming from the individual wells to the testing manifold, the valves at the manifold will be set in such a position that the power oil and production oil from both wells will be commingled at this manifold and will pass there from through the treater and thence into the tank battery where it will first enter the power oil supply tank, that is not shown on the exhibit.

For testing of Well No. 1, the Devonian completion if you will refer to attachment No. 3, power oil again will come from the power oil supply pump; instead of passing through the control section for Well No. 1, the control section for that well will be closed. The power oil will be diverted through the power oil meter loop and thence to the power oil line to Well No. 1. This will afford a measure of the oil that is pumped into Well No. 1, to operate the hydraulic pump. Power oil then will become power oil and production well will come from Well No. 1 into the testing manifold where it will be diverted upward through the manifold, through the treater, where the water will be eliminated and thence back to this manifold around the testing meter. It will pass through the meter where the running power oil production oil will be measured. We can deduct the oil



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we pump in from the oil metered there and determine the amount of production oil made on that particular test. If you will refer to an attachment number 4, that will show schematically how we will test the Wolfcamp Well. Essentially the flow pattern is similar, the power oil passing again through the meter loop and thence to Well No. 2. Power oil and production oil from Well No. 2 will come to the testing manifold instead of going through the treater and will pass through a test separator and thence through the testing meter in the upper portion of the drawing. There again, we will deduct the amount of oil pumped in from the amount of power oil and production oil recovered and make a correction for any BS & W noted and that will be our test from that well. I neglected to mention on the test that while one well is being metered, the production from the other well will continue and will pass directly to the battery.

Q Is it correct that there will be no commingling within the well bores, instead it will occur at the surface.

A All commingling will be affected on the surface.

Q And your attachments show that there is metering available on each well for use.

A The meters that are in place now and will be installed will be sufficient to meter both wells on a periodic basis.

Q What policy has Pan American on testing production of its wells, how frequently is it done?

A As a general policy, we test every well in the company at least quarterly. If the pumper or production forman feels he need additional test data, he performs it, at need.



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Q Attachment number 5 and 6 have been mentioned, is there anything else about the exhibit which you wish to explain to the Commission?

A I have nothing further to add.

MR. MALONE: We would offer this exhibit.

MR. NUTTER: Pan American's Exhibit 1 will be admitted.

Q (By Mr. Malone) Will any price differential result from the commingling?

A Well No. 1, the Devonian Well, produces 44 API gravity oil, an average of the gravities of 10 of the Wolfcamp Wells near this lease indicates that Well No. 2 when it's re-completed from the Wolfcamp will produce 41 degree gravity oil. The purchaser, Independent Oil Purchasing Company, pays \$3.01 from oil photographs from 40 degrees API through 44.9 degrees API. Therefore, there will be no price differential involved.

Q Would Pan American re-complete Well No. 2 in the Wolfcamp if this exception is not granted?

A I can't answer definitely for the management of the company. Of course, however, I would like to emphasize the very marginal nature of this lease. We have approximately \$450,000.00 invested in the two wells plus our initial lease equipment plus the tank battery and to the first of 1960, our cumulative recovery from both wells has been only 145,479 barrels of oil. Our operating cost during the year 1959 was \$407.88 per well per month. So for that reason, you can see we are very anxious to get our expenses on the lease to the minimum.

Q Has Pan American made a study of oil reserves in the



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Devonian No. 1 and Wolfcamp No. 2, if so, what does it show?

A Our reserve studies indicate remaining reserves of 25,000 barrels from the Devonian for Well No. 1. We estimate reserves of 20,000 barrels for Well No. 2.

MR. NUTTER: is that the Wolfcamp?

A In the Wolfcamp.

MR. NUTTER: How much?

A 20,000.

Q (By Mr. Malone) Correlative righees are protected by this application, are they not?

A They are.

Q This granting of this application would tend to prevent waste, would it not?

A Granting of this application will tend to prevent waste through permitting Pan American to produce the lease for a longer period of time and therefore recover additional oil.

MR. MALONE: That concludes the questions that I have to the witness, Mr. Examiner.

MR. NUTTER: How do you spell your name?

A S-A-N-D-I-D-G-E

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

CROSS EXAMINATION

BY MR. MORRIS:

Q I am a little confused, Mr. Sandidge, how are you going to attribute back your power oil and deduct it from your meter reading? Where did you take out your power oil to begin with?

A Power oil plus production passes through this manifold



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and test set up into a large vessel at the tank battery, which is commonly the power oil tank. That vessel normally stays almost full. I think the outlet is approximately 18 inches to 5 feet down, depending on the operator, from the top. And production oil spills over through this outlet into the tank battery. In other words, you start off with this power oil tank with a certain volume of oil in it and any additional oil that passes through there into the battery is your production oil.

Q What I am getting at is this, maybe you have answered it, your metering takes place and then your total production including the power oil comes together on the top part of the page on attachment 4.

A Yes, sir.

Q Now, how do you know how much of that meter reading was power oil from the - in this case the green and brown?

A If you will refer to the Cobe power manifold, there is a meter indicated power oil as passing through that we measure the quantity of power oil that passes through that meter.

MR. NUTTER: You don't measure power oil unless you are on test.

A Only when we are on test.

Q (By Mr. Morris) You measure the amount of power oil as it is introduced into the system, you don't measure it again.

A Well, then we measure what comes back which will be both power oil and production oil to determine the production. We deduct the amount of power oil introduced.

Q Is there any chance throughout the whole system of



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losing any power oil so that your amounts either Wolfcamp or Devonian would thereby seem to be increased in the meter reading?

A I know of none.

MR. MORRIS: That is all. Thank you.

A Unless of course you should develop a leak in your system on the surface, then you would see oil spraying, you would know something is wrong. That would be a possibility but to the probability, the system has operated for a number of runnings with no trouble.

MR. MORRIS: Thank you.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Sandidge, does Pan American expect to get a top allowable in the pool when they re-complete this well?

A We anticipate it will produce at 15 or 20 barrels per day commensurate with the production from the nearby wells.

Q Even on the potential?

A Yes, sir.

Q Initial potential?

A Yes, sir.

Q If you get that type of production, chances are the oil won't be pipeline quality oil, isn't there?

A Our reservoir engineers have studied this area and they think that the Wolfcamp in this vicinity will produce little or no water, perhaps some BS & W. That is one reason we don't want to measure the oil on a daily basis. We feel we can introduce this contaminated oil into the power oil on the periodic basis and it won't present a problem. However, if we put in untreated



oil on a day to day basis, we will have considerable trouble on the hydraulic equipment there.

Q So your normal process, the oil from the two pools on commingling will be passing through a treater.

A Yes, sir.

Q Would that be clean prior to entering into the power tank?

A That is correct.

Q When you got the Devonian on test, you pass the Devonian production through the treater but your Wolfcamp oil goes on into the tank which will introduce BS & W into the power oil supply.

A On that particular supply when it goes into the tank, we feel it is a 750 barrel tank, will be introducing 15 or 20 barrels of oil and 2 or 3 percent of that will be BS & W which will be a negligible amount on the daily basis.

Q In the event the Wolfcamp production, while you got the Devonian on test, should contaminate the power oil supply to the degree that you have trouble with your pumps or something, you could shut in the Devonian.

A We could shut it in.

Q And pass the Wolfcamp through the treater?

A That would be done, then we would lose a days production from the Devonian.

Q You haven't lost much, have you?

A We are trying to get every drop we can.

Q When you got the Wolfcamp on production, on test, I mean -

A All right, sir.

- You are still passing the oil through the meter, when



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going through the treater you are reserving the Devonian test, you are reserving the treating for the Devonian.

A Which makes the water.

Q You do that with the Devonian whether the Wolfcamp is on test.

A If you notice A, 3 and 4, the routing of power oil and production from both wells is identical on both of them except for the way it passes through the testing meter in the upper portion of the drawing.

Q Would Pan American be willing to take another look at this and consider the advisability of installing separate metering facilities in the event they should get a top allowable well in the Wolfcamp.

A I feel that Pan American will abide with the Commission's decision.

MR. NUTTER: Any further questions of Mr. Sandidge?
(No response)

MR. NUTTER: You may be excused.

MR. NUTTER: Do you have anything further Mr. Malone?

MR. MALONE: I believe not.

MR. NUTTER: Does anyone have anything further for Case 2107?
(No response)

MR. NUTTER: We will take the case under advisement and call 2108.



I N D E X

WITNESSES

PAGE

W. J. SANDIBGE
 Direct Examination by Mr. Malone
 Cross Examination by Mr. Morris
 Cross Examination by Mr. Nutter

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E X H I B I T S

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STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } ss

I, LEWELLYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 8th day of November, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Lewellyn J. Nelson
NOTARY PUBLIC

My Commission Expires:
June 14, 1964.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2107 heard by me on 10/19 1960

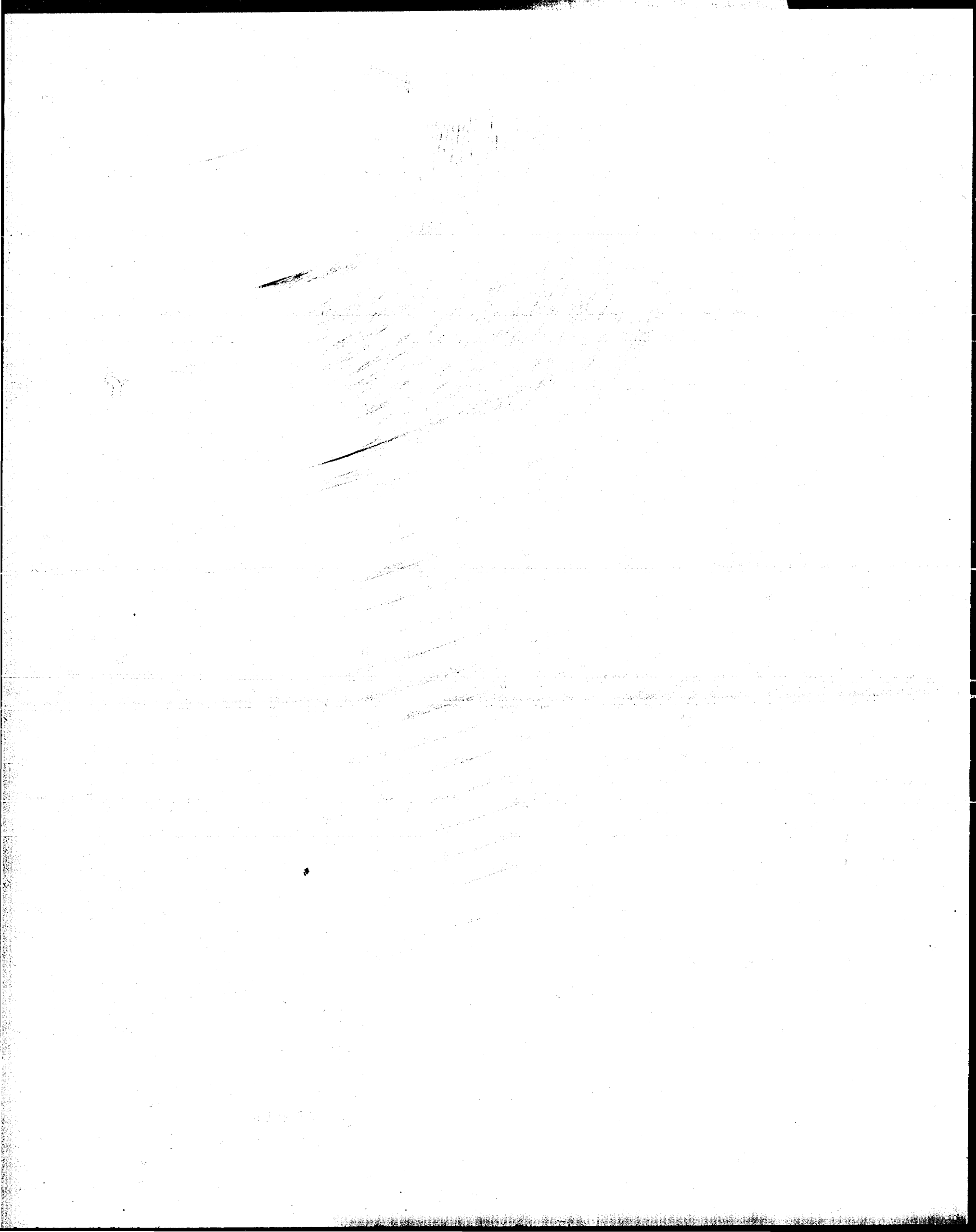
[Signature], Examiner
New Mexico Oil Conservation Commission

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BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
October 19, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the Denton (Devonian) and Denton (Wolfcamp) Pool production from two wells on the W. H. Fort "A" lease comprising the E/2 of Section 25, Township 14 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

Case 2107

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. MORRIS: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools.

MR. MALONE: Charles Malone of Atwood and Malone, Roswell, New Mexico, appearing on behalf of Pan American. We have one witness, Mr. Sandidge, Jr. If it please the Commission, this application was erroneously filed and advertised as including the entire east half of Section 25, Township 24, 37, whereas in fact it involves only the southeast quarter and we do have a waiver in our exhibit from the working interest owner of the west half of the east half and would move that the consideration of the application be limited to the southeast quarter.

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MR. NUTTER: We are narrowing the scope of the hearing rather than broadening it. The limitation will be so amended. Let's see, the southeast quarter only.

MR. MALONE: Yes, sir.

MR. SANDIDGE, JR.

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. MALONE:

Q You are W. J. Sandidge, Jr.?

A That is correct.

Q You have not previously testified before the Oil Conservation Commission in New Mexico, will you state your educational background.

A I graduated from Texas A&M College and have a degree as Petroleum Engineer.

Q How many years of experience and what capacity?

A I have about 14 and a half years actual experience in petroleum industries in various capacities in Oklahoma, Texas, North and South Louisiana, Arkansas, Mississippi and in New Mexico.

Q You are testifying here as an employee of the applicant, Pan American.

A I am.

Q What is your title for Pan American?

A I am an operation section leader in the Operation Section of Pan American, Lubbock District, I have jurisdiction over its production in Southeast New Mexico.

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Q Including Lea County?

A It includes Lea County.

Q Have you prepared an exhibit to substantuate your application?

A I have.

MR. MALONE: Does the Commission desire more than two copies?

MR. NUTTER: Two will be sufficient. This will be all one exhibit, is that correct?

MR. MALONE: Yes, those are identical copies of the same exhibit.

Q (By Mr. Malone) Mr. Sandidge, was this Exhibit 1 of Pan American prepared by you or under your direct supervision and control?

A It was.

Q What is the purpose of this application?

A To obtain Commission authorization to commingle crude production from the Denton (Devonian) Reservoir and the Denton (Wolfcamp) without prior metering.

Q Where will this be done?

A If you will refer to an attachment 1 in the exhibit which is a map of the Denton field, it will be done on Pan American's W. H. Fort Lease up in the northeastern portion of the map which is previously located in the southeast quarter of Section 25, Township 14 South, Range 37 East.

Q What is the present nature of those two wells that are shown in the red outline?

A The southeasternmost well is the Fort "A" No. 1 which is a



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Devonian completion producing at a rate of approximately 17 barrels of oil per day and 11 barrels of water per day. Well No. 2 as marked by the green dot, which has pencil marks on it, is presently a shut-in Devonian completion and it has reached an uneconomical producing rate. Pan American proposes to re-complete this well in the Wolfcamp formation.

Q And I believe at first it was a Devonian Well.

A It will remain as a Devonian Well so long as it is economical to produce.

Q What is the top allowable for the Devonian Wells on that lease?

A The top allowable for the Devonian formation in this field is 188 barrels per day.

Q Who are the off-set operators.

A Sinclair operates the lease to the south and to the southwest, Shell operates the lease to the west and northwest, Pan American operates the one well lease to the north which is designated the W. H. Fort "B" Lease.

Q And there are no operations to the east of it at all?

A The acreage east is undesignated.

Q Entries 3 and 4 of your exhibit are waivers from Sinclair and numbers 5 and 6.

A Yes, sir.

Q Why do you wish to commingle this production?

A Commingling of production will permit the use of the existing hydraulic artificial lifting, utilizing tank batteries.

Q What is the name of that equipment?



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A It's Polar Cobe equipment. Cobe is the leading manufacturer of that type of equipment.

Q Is that equipment injection oil to bring back more oil, is that correct?

A Yes, sir. We commonly designate the oil that is injected as power oil.

Q Power oil?

A Power oil.

Q What is the recent production history in these two wells in their condition in the Devonian?

A As I previously mentioned, Well No.2 has been shut-in due to uneconomical production. It was shut-in in March after producing approximately 34000 barrels of oil. Well No.1 is producing at a rate of approximately 17 barrels of oil per day and 11 barrels of water. It has cumulative production of approximately 115,000 barrels.

Q Switching to the Wolfcamp, what is the current production on near like Wolfcamp wells, if you know.

A We operate the well to the north as I previously mentioned. It was termed the W.H.Fort "B" No.1. In July that well averaged 8 barrels of oil and no water.

Q From the Wolfcamp formation. If you will refer to the map, travel to the west to location "E", there is a twin well there which is a Shell well, that well averaged 27 barrels of oil in July. If you will come south from there, from that particular well to location "S", there is a Wolfcamp well which averaged 18 barrels of oil per day in July.

Q What is the top allowable for the Wolfcamp there?



A The top allowable for the Wolfcamp in this field is 125 barrels of oil per day.

Q How much will the procedure which you have outlined in your application save Pan American if this application be granted?

A We estimate that we will save approximately \$24,000.00 if we utilize the existing facilities.

Q Would an expenditure of that amount be justified on this lease without this proposed procedure for which you are applying?

A In my opinion, it would not be justified. We propose to spend an additional \$7600.00 to re-complete Well No. 2 in the Wolfcamp. In view of the marginal nature of this lease, our management is of course very anxious to get expenditures to an absolute minimum.

Q How do you propose to allocate production to each of these reservoirs?

A We propose to allocate production to each reservoir on the basis of periodic well tests.

Q Now, then, at this point the lease ownership is common on this southeast quarter of Section 25, is it not?

A Our company records indicate that the mineral and royalty and working interests ownership is identical in both of the Devonian and Wolfcamp reservoirs.

Q How would these wells be produced and tested if this application is granted.

A If you will refer to attachments 2, 3 and 4, we have



demonstrated schematically how they will be produced. Attachment 2 shows the schematic flow pattern while producing normally without any test in operation and effect. In the lower left portion of the attachment, we have shown diagrammatically the power oil manifold. Power oil will come to this manifold from the tri-plex power oil pump and will pass it to the power oil line, to the pipeline through the control section and out section. Power oil will be designated in brown on the drawing. If you will look at the upper portion of the diagram, we have drawn a flow line coming from the individual wells to the testing manifold, the valves at the manifold will be set in such a position that the power oil and production oil from both wells will be commingled at this manifold and will pass there from through the treater and thence into the tank battery where it will first enter the power oil supply tank, that is not shown on the exhibit.

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MR. MALONE: We would offer this exhibit.

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Q Would Pan American be willing to take another look at this and consider the advisability of installing separate metering facilities in the event they should get a top allowable well in the Wolfcamp.

A I feel that Pan American will abide with the Commission's decision.

MR. NUTTER: Any further questions of Mr. Sandidge?

(No response)

MR. NUTTER: You may be excused.

MR. NUTTER: Do you have anything further Mr. Malone?

MR. MALONE: I believe not.

MR. NUTTER: Does anyone have anything further for Case 2107?

(No response)

MR. NUTTER: We will take the case under advisement and call 2108.



I N D E X

WITNESSES

PAGE

W. J. SANDIBGE
 Direct Examination by Mr. Malone
 Cross Examination by Mr. Morris
 Cross Examination by Mr. Nutter

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E X H I B I T S

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STATE OF NEW MEXICO }
COUNTY OF BERNALILLO }

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I, LEWELLYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 8th day of November, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Lewellyn Nelson
NOTARY PUBLIC

My Commission Expires:
June 14, 1964.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2107 heard by me on 10/19, 1960.
[Signature], Examiner
New Mexico Oil Conservation Commission

