CASE 1773: Application of PAN AMER. for approval of 2 automatic custody transfer systems. (Amend Order No. R-1399) - Eddy County.

1773

Case No.

1773

Application, Transcript,
Small Exhibits, Etc.

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

August 30, 1967

Pan American Petroleum Corporation
P. O. Box 68
Hobbs, New Mexico

Attention: Mr. V. E. Staley

Gentlemen:

Reference is made to your letter dated July 17, 1967, wherein you request that the meter proving frequency for certain commingling meters in the Empire Abo Pool be extended.

The tabulation of meter factors and the graphic depiction thereof indicates that reliable performance has been obtained from said meters. The following meters are hereby authorized for a 90-day meter proving frequency:

Lease and Well No.	Meter Number
Malco Federal A Lease, Well No. 1	98774
Malco Federal B Lease, Well No. 1 & 2	99060
Malco Federal C Lease, Well No. 1	179250
Malco Federal J Lease, Well No. 1	175519

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSN/esr

cc: Oil Conservation Commission - Artesia

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. 1773
Order No. R-1399-A

APPLICATION OF PAN AMERICAN
PETROLEUM CORPORATION FOR AN
AMENDMENT TO ORDER NO. R-1399
TO PERMIT THE INSTALLATION OF
TWO AUTOMATIC CUSTODY TRANSFER
SYSTEMS TO HANDLE THE COMMINGLED
EMPIRE-ABO PRODUCTION FROM SEVEN
FEDERAL LEASES IN EDDY COUNTY,
NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 30, 1959, 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 12th day of October, 1959, 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, proposes that Order No. R-1399 be amended to authorize the installation of an automatic custody transfer system to handle that portion of the Empire-Abo Pool production permitted to be commingled by paragraph (1) of said Order No. R-1399.

(3) That the applicant proposes that Order No. R-1399 be further amended to authorize the installation of another automatic custody transfer system to handle that portion of the Empire-Abo Pool production permitted to be commingled by paragraph (2) of said Order No. R-1399.

(4) That the applicant proposes to measure the oil passing through said automatic custody transfer equipment by means of either dump-type or positive displacement meters.

(5) That the meters used in the above-described systems should be checked for accuracy at least once each month and the results of such tests furnished to the Commission.

(6) That the above-described systems should be so equipped as to prevent the undue waste of oil in the event of malfunction or flow-line break.

(7) That the previous use of automatic custody transfer equipment, similar to that proposed by the applicant, has shown that such equipment is a reliable and economic means of transferring the custody of oil and, that the use of such equipment should be permitted.

IT IS THEREFORE ORDERED:

(1) That Order No. R-1399 be and the same is hereby amended to authorize the installation of an automatic custody transfer system to handle that portion of the Empire-Abo Pool production permitted to be commingled by Paragraph (1) of said Order No. R-1399.

(2) That Order No. R-1399 be and the same is hereby further amended to authorize the installation of another automatic custody transfer system to handle that portion of the Empire-Abo Pool production permitted to be commingled by Paragraph (2) of said Order No. R-1399.

(3) That the above-described automatic custody transfer systems shall be so equipped as to prevent the undue waste of oil in the event of malfunction or flow-line break.

PROVIDED HOWEVER, That all provisions of Order No. R-1399 shall continue in full force and effect.

PROVIDED FURTHER, That meters used in the automatic custody transfer systems herein authorized shall be tested in the same manner as is provided in Order No. R-1399 for testing lease production meters.

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

lcr/

DOCKET: EXAMINER HEARING SEPTEMBER 30, 19..

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

The following cases will be heard before Daniel S. Nutter, Examiner, or A. L. Porter, Jr., Secretary-Director.

CONTINUED CASE

CASE 1739: Application of Shell Oil Company for approval of a unit agreemnt. Applicant, in the above-styled cause, seeks an order approving its Hershaw Deep Unit Agreement comprising 4824 acres, more or less, of Federal and State lands in Township 16 South, Ranges 30 and 31 East, Eddy County, New Mexico.

NEW CASES

CASE 1760: Application of The Atlantic Refining Company for an automatic custody transfer system and for permission to produce more than 16 wells into a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system to handle the production from all Horseshoe-Gallup oil wells on its Navajo "B" Lease comprising certain acreage in Township 31 North, Range 16 West, San Juan County, New Mexico.

CASE 1761: Application of Stanton Oil Company, Ltd., for a pilot water flood project. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Turkey Track Pool in Eddy County, New Mexico, by the injection of water into the Queen formation through four wells located in Section 34, Township 18 South, Range 29 East.

CASE 1762: Application of Newmont Oil Company for an unorthodox water injection well location. Applicant, in the above-styled cause, seeks an order authorizing it to reopen and utilize for water injection a well located on an unorthodox location at a point 1620 feet from the North line and 1020 feet from the West line of Section 32, Township 16 South, Range 31 East, Square Lake Pool, Eddy County, New Mexico.

CASE 1763: Application of Southwestern Hydrocarbon Company for an order abolishing the Sawyer-San Andres and South Sawyer-San Andres Oil Pools in Lea County, New Mexico, and creating the Sawyer-San Andres Gas Pool; or in the alternative for an order extending the horizontal limits of the South Sawyer-San Andres Oil Pool to include the NE/4 of Section 5, the N/2 of Section 5 and the NW/4 of Section 4, Township 10 South, Range 38 East, Lea County, New Mexico, and removing all gas-oil ratio limitations for wells in said pool; or in the alternative for an order combining the Sawyer-San Andres and the South Sawyer-San Andres Oil Pools, as well as the intervening acreage, and removing all gas-oil ratio limitations for such pool.

CASE 1764: Application of Standard Oil Company of Texas for an unorthodox gas well location. Applicant, in the above-styled cause, seeks an order authorizing an unorthodox gas well location in the Atoka-Pennsylvanina Gas Pool, at a point 1850 feet from the South line and 1650 feet from the East line of Section 14, Township 18 South, Range 26 East, Eddy County, New Mexico.

CASE 1765: Application of The Ohio Oil Company for a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Lower San Andres formation through its State B-4286 "A" Well No. 2, located in Unit F, Section 2, Township 17 South, Range 36 East, Lea County, New Mexico. The proposed injection interval is from 5725 feet to 5968 feet.

CASE 1766: Application of Northwest Production Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its "S" Well No. 16-2, located in the SW/4 SW/4 of Section 2, Township 24 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to produce oil from an undesignated Gallup oil pool and to produce oil from an undesignated Dakota oil pool through parallel strings of tubing.

CASE 1767: Application of El Paso Natural Gas Products Company for permission to produce more than 16 wells in a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of a maximum of 35 wells in the Horseshoe-Gallup Oil Pool into a common tank battery. Said wells are located on applicant's horseshoe Ute Lease comprising portions of Sections 27, 28, 33 and 34, Township 31 North, Range 16 West, San Juan County, New Mexico.

CASE 1768: Application of T. F. Hodge for the rededication of acreage assigned to three oil wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order rededicating the acreage assigned to three oil wells on his Mary E. Wills Lease, Section 33, Township 26 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico. Applicant proposes to dedicate 40 acres to each of the three wells, said 40-acre units not to comprise a quarter-quarter section or legal subdivision.

CASE 1769: Application of Pan American Petroleum Corporation for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Northeast Hogback Unit Agreement, comprising 10,572 acres, more or less, in Township 30 North, Range 16 West, San Juan County, New Mexico.

CASE 1770: Application of Pan American Petroleum Corporation for approval of a lease automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the automatic custody transfer of oil produced from its Lois Wengerd Lease in Sections 23 and 24, Township 12 South, Range 37 East, Gladiola-Devonian Pool, Lea County, New Mexico.

CASE 1771: Application of Pan American Petroleum Corporation for approval of a lease automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing the automatic custody transfer of oil produced from its USA Malco Refinery "F" Lease, Section 1, Township 18 South, Range 27 East, Empire-Abo Pool, Eddy County, New Mexico.

CASE 1772: Application of Pan American Petroleum Corporation for approval of an automatic custody transfer system for four state leases in the Empire-Abo Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order amending Order No. R-1292 to provide for automatic custody transfer of oil commingled thereunder.

CASE 1773: Application of Pan American Petroleum Corporation for approval of two automatic custody transfer systems for seven federal leases in the Empire-Abo Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order amending Order No. R-1399 to provide for automatic custody transfer of oil produced into the two commingled tank batteries authorized therein.

CASE 1774: Application of Continental Oil Company for a non-standard gas unit. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas unit in an undesignated Tubb gas pool consisting of the E/2 NW/4 and the W/2 NE/4 of Section 15, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Britt B-15 No. 10 Well, located in the SW/4 NE/4 of said Section 15.

CASE 1775: Application of Continental Oil Company for a non-standard gas unit. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas unit in an undesignated Tubb gas pool consisting of the E/2 SE/4 of Section 15 and the W/2 SW/4 of Section 14, all in Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's SEMU Well No. 70, located in the NW/4 SW/4 of said Section 15.

CASE 1776: Application of Continental Oil Company for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for nine wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:
Ascarate D-24 Well No. 1, Unit J, Section 24, T-25-S, R-36-E, Danciger A-8 Well No. 2, Unit P, Section 8, T-23-S, R-36-E, Jack A-20 Well No. 4, Unit G, Section 20, T-24-S, R-37-E, Jack A-29 Well No. 3, Unit H, Section 29, T-24-S, R-37-E, Meyer A-29 Well No. 1, Unit O, Section 29, T-22-S, R-36-E, Meyer B-28 Well No. 1, Unit E, Section 28, T-22-S, R-36-E, State A-32 Well No. 4, Unit F, Section 32, T-22-S, R-36-E, Stevens A-34 Well No. 1, Unit E, Section 34, T-23-S, R-36-E, Wells B-1 Well No. 1, Unit A, Section 1, T-25-S, R-36-E, all in Lea County, New Mexico.

CASE 1777: Application of El Paso Natural Gas Company for an exception to the over-production shut-in provisions of Order R-520, as amended by Order R-967, for two wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing its E. J. Wells Lease Well No. 13, Unit L, Section 5, and its Wells B-4 Lease Well No. 1, Unit D, Section 4, both in Township 25 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to compensate for their overproduced status without being completely shut-in in order to prevent possible waste.

CASE 1778: Application of Olsen Oils, Inc., for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for four wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:
Cooper B Well No. 2, NE/4 NW/4 of Section 14, T-24-S, R-36-E, Myers B Well No. 1, SE/4 NW/4 of Section 13, T-24-S, R-36-E, S. R. Cooper Well No. 1, SE/4 NE/4 of Section 23, T-24-S, R-36-E,
Winningham Well No. 3, NE/4 SE/4 of Section 30, T-25-S, R-37-E,
all in Lea County, New Mexico.

CASE 1779: Application of Jal Oil Company for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for four wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:
Legal Well No. 2, NE/4 SE/4 of Section 21,
Dyer Well No. 3, SE/4 NE/4 of Section 31,
Jenkins Well No. 2, NE/4 SW/4 of Section 29,
Ropollo Well No. 1, SW/4 NW/4 of Section 28,
all in Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 1780: Application of Husky Oil Company for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for one well in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing its Montecito Woolworth Well No. 2, Unit M, Section 33, Township 24 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to compensate for its overproduced status without being completely shut-in in order to prevent possible waste.

CASE 1781: Application of Texaco, Inc. for permission to continue producing an over-produced Jalmat gas well at a lesser rate. Applicant, in the above-styled cause, seeks an order authorizing it to produce its C. C. Fristoe (b) NCT-4 Well No. 2, Unit M, Section 31, Township 24 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, at a maximum rate of 2500 MCF per month for lease use until over production has been compensated for.

ig/

FORM 446 4-58

PAN AMERICAN PETROLEUM CORPORATION

OIL AND GAS BUILDING

FORT WORTH, TEXAS

ALEX CLARKE, JR.
DIVISION ENGINEER

August 17, 1959

File: GMK-44c6-9e6.310.1

Subject: LACT Hearing
Various Leases
Empire Abo Field
Eddy County, New Mexico

Mr. A. L. Porter
New Mexico Oil Conservation Commission
Capitol Annex Building
Santa Fe, New Mexico

Dear Sir:

As a result of hearing Case No. 1662 the New Mexico Oil Conservation Commission entered Order No. R-1399 giving Pan American Petroleum Corporation permission to commingle production from seven seperate Federal Leases in the Empire Abo Pool, Eddy County, New Mexico. Also as a result of hearing Case No. 1552, the New Mexico Oil Conservation Commission entered Order No. R-1292 giving Pan American Petroleum Corporation permission to commingle the production from four separate State leases. We now desire to install lease automatic custody transfer units to serve each of the commingled batteries. In addition, we desire to install a lease automatic custody transfer unit on our USA Malco Refinery "F" Lease, Empire Abo Pool, Eddy County, New Mexico. Therefore, it is respectfully requested that a hearing date be set on the earliest docket so that we may present our application to obtain approval for operation of these LACT Units.

Very truly yours,

Alex Clarke, Jr.

GMK:lj

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. 1662
Order No. R-1399

APPLICATION OF PAN AMERICAN
PETROLEUM CORPORATION FOR
PERMISSION TO COMMINGLE THE
PRODUCTION FROM SEVERAL
SEPARATE FEDERAL LEASES IN THE
EMPIRE-ABO POOL, EDDY COUNTY,
NEW MEXICO, AND FOR PERMISSION TO
PRODUCE MORE THAN SIXTEEN WELLS
INTO A COMMON TANK BATTERY

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 6, 1959, 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 25th day of May, 1959, 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, is the owner and operator of the following-described Federal leases in the Empire-Abo Pool Eddy County, New Mexico:

LC-067858, N/2 and SW/4 of Section 11
LC-065478-B, N/2 NW/4, NE/4, E/2 SW/4 and
N/2 SE/4 of Section 3; S/2 SE/4
of Section 9; E/2 of Section 10
LC-061783-B, W/2 SW/4 of Section 3

NM-025604, S/2 SE/4 of Section 3; NE/4 and
N/2 SE/4 of Section 9; W/2 of Section 10
NM-033825, N/2 NE/4 and SW/4 NE/4 of Section 4
NM-025530, SE/4 NE/4 of Section 4
LC-061783-A, SE/4 of Section 4

all in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico.

(3) That the applicant proposes to produce the Empire-Abo wells on the following-described acreage into a battery located in the NE/4 NW/4 of said Section 11:

S/2 SE/4 and NE/4 SE/4 of Section 3
E/2 of Section 10
N/2 and SW/4 of Section 11

all in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico.

(4) That the applicant proposes to produce the Empire-Abo wells on the following-described acreage into a battery located in the SW/4 SW/4 of said Section 3:

NW/4 SE/4, NE/4, N/2 NW/4 and SW/4 of Section 3
E/2 of Section 4
E/2 of Section 9
W/2 of Section 10

all in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico.

(5) That the applicant further proposes to produce more than sixteen wells presently completed or hereafter drilled in the Empire-Abo Pool on the above-described acreage into each of the above-described tank batteries.

(6) That approval of the subject application will neither cause waste nor impair correlative rights provided that the production from each lease is separately metered prior to commingling and provided further that adequate testing and measuring equipment is installed.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to commingle the production from the Empire-Abo Pool from all existing and future wells on the following-described acreage into a common tank battery located in the NE/4 NW/4 of Section 11, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico:

S/2 SE/4 and NE/4 SE/4 of Section 3
E/2 of Section 10
N/2 and SW/4 of Section 11

(2) That the applicant be and the same is hereby authorized to commingle the production from the Empire-Abo Pool from all existing and future wells on the following-described acreage into a common tank battery located in the SW/4 SW/4 of Section 3, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico:

NW/4 SE/4, NE/4, N/2 NW/4 and SW/4 of Section 3
E/2 of Section 4
E/2 of Section 9
W/2 of Section 10

PROVIDED HOWEVER, That the production from each lease shall be separately measured with a corrosion-resistant type meter prior to commingling.

PROVIDED FURTHER, That meters shall be operated and maintained in such a manner as to ensure an accurate measurement of the liquid hydrocarbon production at all times.

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

PROVIDED FURTHER, That the applicant shall install adequate testing facilities to permit the testing of each well at least once each month to determine the individual production from each well.

(3) That Order No. R-1295 be and the same is hereby superseded.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

SEAL

MURRAY E. MORGAN, Member

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

vem/

EXHIBIT

PAN AMERICAN PETROLEUM CORPORATION

LEASE AUTOMATIC CUSTODY TRANSFER INSTALLATION
STORAGE SYSTEM I - EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

OF

SEPTEMBER 30, 1959

CONTENTS

INTRODUCTION

Pan American Petroleum Corporation respectfully submits this exhibit in support of its request to the Oil Conservation Commission of the State of New Mexico for approval to install and operate lease automatic custody transfer facilities at Storage System I, Empire Abo Pool, Eddy County, New Mexico.

The proposed LACT unit will be located at the site of Storage System I, located in NE/4 NW/4 Section 11, T-18-S, R-27-E, Eddy County, New Mexico. This tank battery stores and the LACT unit will handle oil produced from several Federal Leases in S/2 SE/4 (NM-025604) and NE/4 SE/4 (LC-065478-B) of Section 3, E/2 (LC-065478-B) of Section 10 and N/2 and SW/4 (LC-067858) of Section 11, T-18-S, R-27-E, Eddy County, New Mexico. Attachment No. 1 is a plat of these leases, the tank battery and the connected wells.

Permission to commingle oil produced from the above described leases was granted by Order No. R-1399 which was entered by the Commission after hearing Case No. 1662.

Prior to commingling, Pan American will separately measure the production from each lease with corrosion-resistant type meters which will be maintained in such a manner as to insure accurate measurement of the produced oil at all times. The meters shall be checked for accuracy in accordance with the instructions of the Commission.

LACT unit operating data collected by Pan American and other companies shows that the installation of facilities to accurately record temperature corrected volumes and automatically transfer lease produced crude oil to pipeline custody will:

1. Conserve natural resources in the form of light hydrocarbons which are now being lost from produced

crude oil to the atmosphere during the gauging operation at which time accumulated light ends escape and others flash from the stored oil to the atmosphere.

2. Substantially reduce residence time of the treated crude in the storage tanks thereby lessening vapor losses by way of normal tank venting or breathing.

3. Conserve manpower and improve lease operation by substantially reducing the current tank battery attendance time which will in turn release lease operating personnel and pipeline personnel for performance of other duties.

4. Release more money for finding and developing additional oil reserves since LACT equipment requires less capital investment than equivalent conventional lease facilities.

LACT UNIT

Equipment

The positive displacement meter type LACT unit is to be installed at Storage System I, Empire Abo Pool, Eddy County, New Mexico, is basically the same as a number of LACT units already approved by the Oil Conservation Commission. Recently, the Commission granted approval of similar positive displacement meter type LACT units in the Artesia Field, Eddy County, (Order No. R-1346 ~~1994~~), the South Vacuum Unit, Lea County (Order No. R-1327), and the Caprock-Queen Pool, Chaves County, (Order No. R-1326).

EXHIBIT

PAN AMERICAN PETROLEUM CORPORATION

LEASE AUTOMATIC CUSTODY TRANSFER INSTALLATION
STORAGE SYSTEM I - EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING
SEPTEMBER 30, 1959

The LACT unit which Pan American proposes to install will consist of a pipeline pump; a BS&W monitor to detect the presence of unmerchantable oil; a valve to divert unmerchantable oil back to the treating facilities; a strainer; an air eliminator; a temperature compensated corrosion resistant positive displacement meter equipped with counter-ticket printer, set-stop counter, and fail-safe safety shutdown switch; a proportional pipeline sampler; a back pressure valve to assure that the line to and from the meter is packed with oil at a pressure in excess of the vapor pressure of the metered fluid; a calibrated meter prover tank; a LACT unit control panel; and other fail-safe safety features.

Operation

Operation of the LACT system can be followed by reference to the LACT unit flow diagram, included as Attachment No. 2.

Production from each lease served by Storage System I enters the tank battery and passes through the respective lease separator or treater. The treated crude is then measured by individual lease production meters. From the lease meters the oil is collected and transferred to common storage in the LACT unit surge tank. When the oil level in the surge tank reaches the high level float switch (A), the pipeline pump (C) is automatically started and the crude oil is then pumped through the LACT unit into the pipeline.

In order to assure delivery of merchantable oil to the pipeline at all times, a BS&W probe (E) is mounted downstream of the pump (C). If oil delivered by the LACT unit exceeds 1% BS&W content, the BS&W monitor will cause the diverting valve (F) to close the meter run and direct all bad oil into the recycling tank. When the BS&W content of the

oil returns to a satisfactory range as determined by the BS&W monitor, the diverting valve (F) will close to the recycling tank and again direct the flow of oil to the LACT meter run. Merchantable oil passes through the strainer (G), the gas eliminator (H), and on through the positive displacement meter (I). The P.D. meter will be an A. O. Smith Model S-12 automatic temperature compensated, corrosion resistant meter equipped with fail-safe controls, counter-ticket printer and set-stop counter to allow the pumper to follow daily and monthly lease production. After being metered, the oil is sampled at point (J), passes through the back pressure valve (K), and flows on to the pipeline. The back pressure valve will be set at approximately 5 psi to assure that a positive head is held across the P.D. meter (I) and to prevent flow when the transfer pump (C) is not operating. The meter prover tank (L) is located downstream of the back pressure valve. When sufficient oil has been transferred to the pipeline to lower the fluid level in the surge tank to the low level float switch (B), the pipeline pump is automatically stopped. When lease production again fills the surge tank up to the level of float switch (A) the automatic custody transfer cycle again commences.

Any unmerchantable oil which is collected in the recycling tank will be treated in the tank. After the water is drawn off from the tank bottom, the recycle pump (N) will return the treated oil to the LACT unit surge tank. The volume of unmerchantable oil will be a very small percentage of the total lease produced volume as the wells on the leases served by this tank battery now produce little or no water.

Sampling

A composite representative sample of all oil delivered to the pipeline will be obtained by the sampler (J). The A. O. Smith P.D. meter

will be equipped with an electric impulse transmitter which will signal the electric pump driven sampler to extract a proportionate sample of each unit volume of oil passing through the meter. Collection of a composite sample will be accomplished in a vapor-proof container. The sample will be tested by the pipeline. Calibration of the BS&W monitor, if required, will be made on the basis of the analysis of the composite sample.

Meter Proving

The LACT unit P.D. meter will be proven to the satisfaction of the New Mexico Oil Conservation Commission, the pipeline company, and Pan American Petroleum Corporation. Meter proving tests will be witnessed by representatives of the pipeline and Pan American.

The meter will be proven against a fixed volume tank calibrated to the satisfaction of the pipeline and Pan American. The tank will be built to conform to the standards of API Code 1101. The inside surfaces of the tank will be plastic coated to prevent corrosion and the adherence of crude products to the vessel, thereby reducing to an absolute minimum meter proving errors introduced by such factors. Oil collected in the prover tank during the meter proving tests will flow out of the tank and into the pipeline by gravity.

Fail-Safe Features

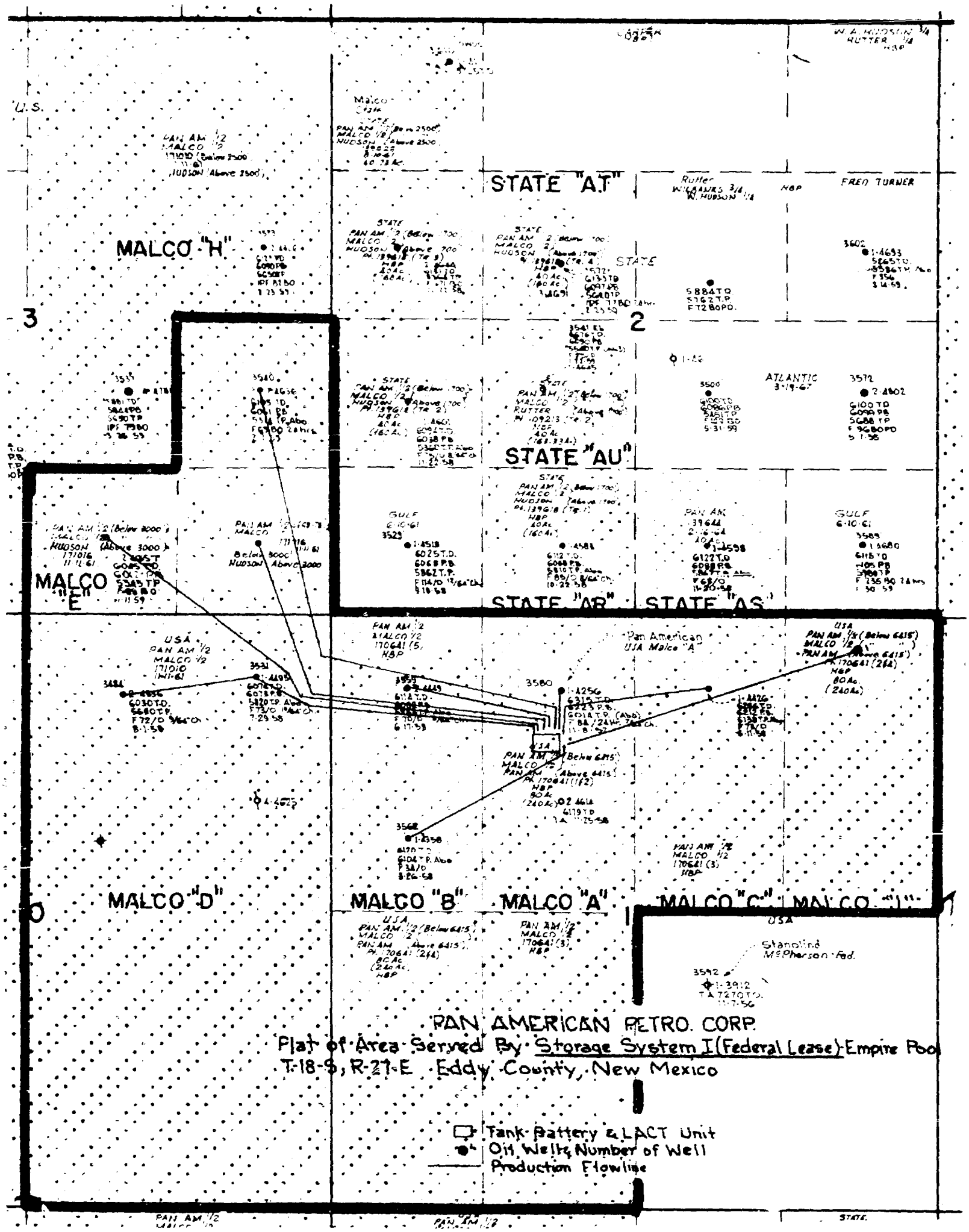
The LACT unit will be checked daily by a pumper. All operations are designed to be fail-safe for unattended operation as follows:

1. No oil can be run from the battery without passing through the LACT unit P.D. meter.

2. The P.D. meter will be equipped with a safety switch which will automatically de-energize the pipeline pump if the meter counter fails to operate or if the oil flow rate through the meter falls below a preset value.
3. In the event of failure of the low level float switch (B), a low pressure safety shutdown switch (D) will de-energize the pipeline pump, thereby preventing the lowering of the fluid level in the surge tank to the point that air or vapors would be drawn into the meter run.
4. In the event of failure of the high level float switch (A) the surge tank can overflow via an equalizing line into the recycle tank. If the recycle tank fills up to the level of float switch (M) all leases served by the battery will be automatically shutin. Combined storage will contain a minimum of one day's production. The battery and LACT unit will be checked daily by a pumper.
5. The P.D. meter will be equipped with set-stop controls to prevent over production.
6. The BS&W monitor performance will be automatically checked by the manual determination of sample BS&W content at the end of each month or during intervening periods as desired.
7. On electric power failure, transfer of oil to the pipeline will stop.

Tamper Proof Design

The P.D. meter cumulative barrels counter is non-resettable. The BS&W monitor controller and the LACT unit control panel will be locked to prevent tampering. The prover tank plug valves will be sealed at all times except during proving runs by authorized personnel.

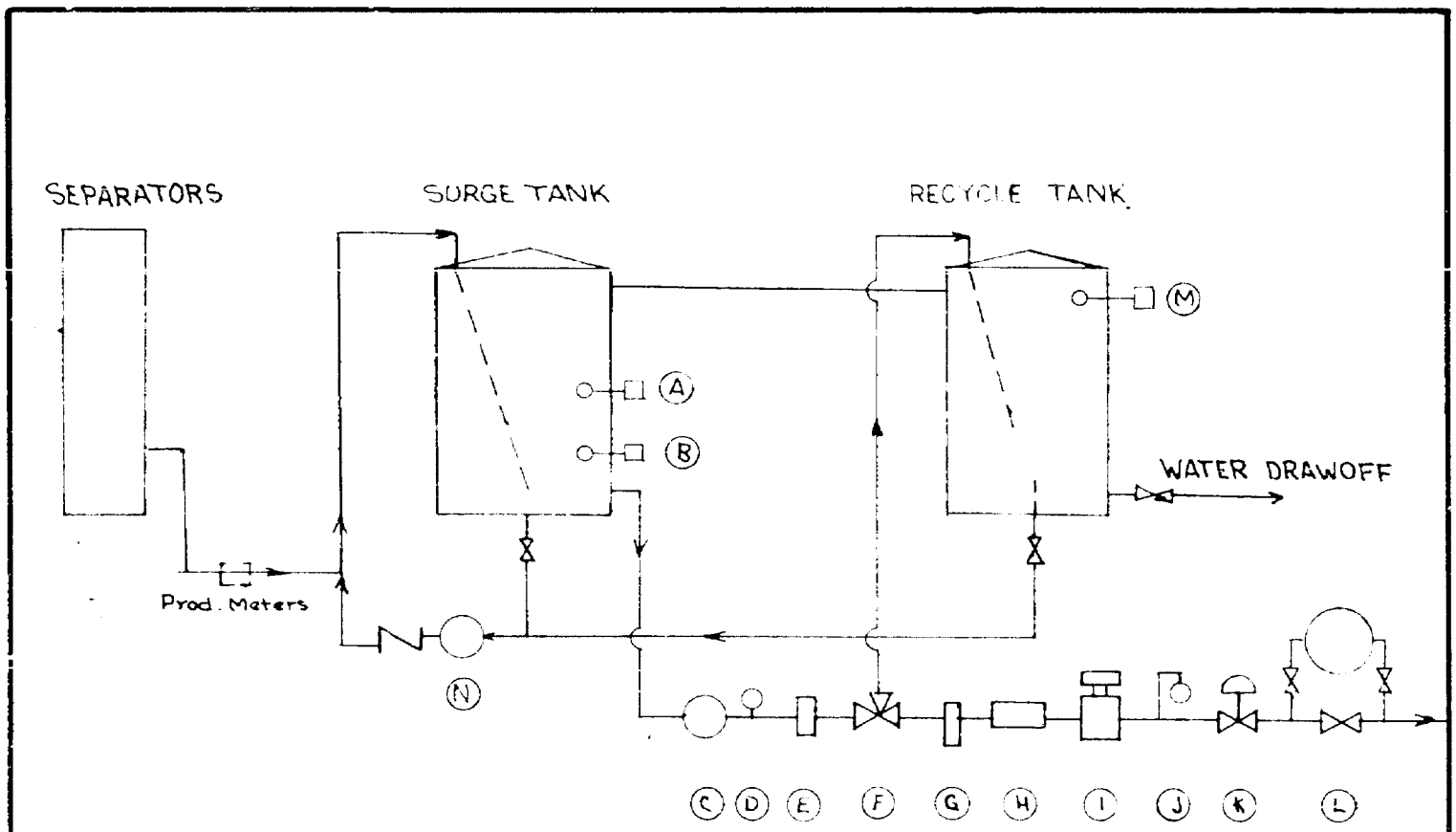


PAN AMERICAN PETRO. CORP.

Plat of Area Served By Storage System I (Federal Lease) Empire Pool

T-18-S, R-21-E Eddy County, New Mexico

- Tank Battery & LACT Unit
- Oil Wells, Number of Well
- Production Flowline



PAN AMERICAN PETROLEUM CORPORATION
P. D. METER LACT UNIT
STORAGE SYSTEM I (FEDERAL LEASES)
EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

A. High Level Float Switch
B. Low Level Float Switch
C. Pipeline Pump
D. Pressure Safety Shutdown Switch
E. BS&W Monitor
F. Bad Oil Diverting Valve
G. Strainer
H. Air Eliminator
I. P.D. Meter
J. Sampler
K. Back Pressure Valve
L. Prover Tank
M. Lease Shutdown Switch
N. Recycle Pump

SERVICE PIPE LINE COMPANY

WEST TEXAS DIVISION

C. E. WILSON
DIVISION MANAGER

1628 19TH STREET
LUBBOCK TEXAS

September 1, 1959

Automatic Custody Transfer
Facilities - Empire Abo
Field, Eddy County, New
Mexico

Mr. Neil S. Whitmore
District Superintendent
Pan American Petroleum Corporation
P. O. Box 268
Lubbock, Texas

Dear Mr. Whitmore,

We have reviewed your plans for lease automatic custody transfer by meters in the Empire - Abo Field, Eddy County, New Mexico.

The facilities shown in these plans are satisfactory with Service Pipe Line Company, and we will accept custody of oil delivered by the proposed LACT units in lieu of conventional manual gauging.

Yours very truly,

SERVICE PIPE LINE COMPANY

Charles E. Wilson
Division Manager

CW

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 6721
Roswell, New Mexico

September 17, 1959

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

Attention: Mr. Neil S. Whitmore

Gentlemen:

Your letter of August 26, 1959, requests our approval of the use of lease automatic custody transfer equipment for the shipment of lease products from three separate storage facilities located in the Empire Abo field, Eddy County, New Mexico.

The storage facilities are located in sections 1, 3, and 11, T. 18 S., R. 27 E., N.M.P.M., on leases Las Cruces 062412, 061783(b), and 067858, respectively.

The method that you have proposed for custody transfers of lease production from the aforementioned storage facilities is satisfactory to this office.

Very truly yours,

EDWIN M. THOMASSON
Acting Oil and Gas Supervisor

EXHIBIT

PAN AMERICAN PETROLEUM CORPORATION

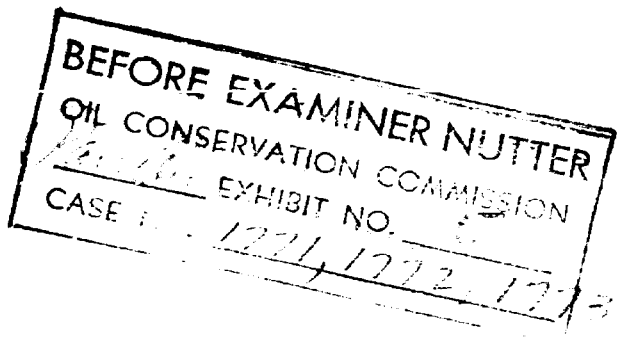
LEASE AUTOMATIC CUSTODY TRANSFER INSTALLATION
STORAGE SYSTEM III - EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

OF

SEPTEMBER 30, 1959



CONTENTS

INTRODUCTION

Pan American Petroleum Corporation respectfully submits this exhibit in support of its request to the Oil Conservation Commission of the State of New Mexico for approval to install and operate lease automatic custody transfer facilities at Storage System III, Empire Abo Pool, Eddy County, New Mexico.

The proposed LACT unit will be located at the site of Storage System III, located in the SW/4 SW/4 Section 3, T-18-S, R-27-E, Eddy County, New Mexico. This tank battery stores and the LACT unit will handle oil produced from several Federal Leases in the N/2 NE/4 and SW/4 NE/4 (NM-033825) of Section 4, SE/4 NE/4 (NM-025530) of Section 4, SE/4 (LC-061783-A) of Section 4, NE/4 and N/2 SE/4 (NM-025604) of Section 9, S/2 SE/4 (LC-065478-B) of Section 9, N/2 NW/4 and NE/4 and E/2 SW/4 and NW/4 SE/4 (LC-065478-B) of Section 3, W/2 SW/4 (LC-061783-B) of Section 3, W/2 (NM-025604) of Section 10, T-18-S, R-27-E,Eddy County, New Mexico. Attachment No. 1 is a plat of these leases, the tank battery, and the connected wells.

Permission to commingle oil produced from the above described leases was granted by Order No. R-1399 which was entered by the Commission after hearing Case No. 1662.

Prior to commingling, Pan American will separately measure the production from each lease with corrosion-resistant type meters which will be maintained in such a manner as to insure accurate measurement of the produced oil at all times. The meters shall be checked for accuracy in accordance with the instructions of the Commission.

LACT unit operating data collected by Pan American and other companies shows that the installation of facilities to accurately record

temperature corrected volumes and automatically transfer lease produced crude oil to pipeline custody will:

1. Conserve natural resources in the form of light hydrocarbons which are now being lost from produced crude oil to the atmosphere during the gauging operation at which time accumulated light ends escape and others flash from the stored oil to the atmosphere.
2. Substantially reduce residence time of the treated crude in the storage tanks thereby lessening vapor losses by way of normal tank venting or breathing.
3. Conserve manpower and improve lease operation by substantially reducing the current tank battery attendance time which will in turn release lease operating personnel and pipeline personnel for performance of other duties.
4. Release more money for finding and developing additional oil reserves since LACT equipment requires less capital investment than equivalent convention lease facilities.

LACT UNIT

Equipment

The positive displacement meter type LACT unit to be installed at Storage System III is basically the same as a number of LACT units already approved by the Oil Conservation Commission. Recently, the Commission granted approval of similar positive displacement meter type LACT units in the Artesia Field, Eddy County (Order No. ~~1594~~ R-1346), the South Vacuum Unit, Lea County (Order No. R-1327), and the Caprock-Queen Pool, Chaves County, (Order No. R-1326).

The LACT unit which Pan American proposes to install will consist of a pipeline pump; a BS&W monitor to detect the presence of unmerchantable oil; a valve to divert unmerchantable oil back to the treating facilities; a strainer; an air eliminator; a temperature compensated corrosion resistant positive displacement meter equipped with counter-ticket printer, set-stop counter, and fail-safe safety shutdown switch; a proportional pipeline sampler; a back pressure valve to assure that the line to and from the meter is packed with oil at a pressure in excess of the vapor pressure of the metered fluid; a calibrated meter prover tank; a LACT unit control panel; and other fail-safe safety features.

Operation

Operation of the LACT system can be followed by reference to the LACT unit flow diagram, included as Attachment No. 2.

Production from each lease served by Storage System III enters the tank battery and passes through the respective lease separator or treater. The treated crude is then measured by individual lease production meters. From the lease meters the oil is collected and transferred to common storage in the LACT unit surge tank. When the oil level in the surge tank reaches the high level float switch (A), the pipeline pump (C) is automatically started and the crude oil is then pumped through the LACT unit into the pipeline.

In order to assure delivery of merchantable oil to the pipeline at all times, a BS&W probe (E) is mounted downstream of the pump (C). If oil delivered by the LACT unit exceeds 1% BS&W content, the BS&W monitor will cause the diverting valve (F) to close the meter run and direct all bad oil into the recylcing tank. When the BS&W content of the

oil returns to a satisfactory range as determined by the BS&W monitor, the diverting valve (F) will close to the recycling tank and again direct the flow of oil to the LACT meter run. Merchantable oil passes through the strainer (G), the gas eliminator (H), and on through the positive displacement meter (I). The P.D. meter will be an A. O. Smith Model S-12 automatic temperature compensated, corrosion resistant meter equipped with fail-safe controls, counter-ticket printer and set-stop counter to allow the pumper to follow daily and monthly lease production. After being metered, the oil is sampled at point (J), passes through the back pressure valve (K), and flows on to the pipeline. The back pressure valve will be set at approximately 5 psi to assure that a positive head is held across the P.D. meter (I) and to prevent flow when the transfer pump (C) is not operating. The meter prover tank (L) is located downstream of the back pressure valve. When sufficient oil has been transferred to the pipeline to lower the fluid level in the surge tank to the low level float switch (B), the pipeline pump is automatically stopped. When lease production again fills the surge tank up to the level of float switch (A) the automatic custody transfer cycle again commences.

Any unmerchantable oil which is collected in the recycling tank will be treated in the tank. After the water is drawn off from the tank bottom, the recycle pump (N) will return the treated oil to the LACT unit surge tank. The volume of unmerchantable oil will be a very small percentage of the total lease produced volume as the wells on the leases served by this tank battery now produce little or no water.

Sampling

A composite representative sample of all oil delivered to the pipeline will be obtained by the sampler (J). The A. O. Smith P.D. meter

will be equipped with an electric impulse transmitter which will signal the electric pump driven sampler to extract a proportionate sample of each unit volume of oil passing through the meter. Collection of a composite sample will be accomplished in a vapor-proof container. The sample will be tested by the pipeline. Calibration of the BS&W monitor, if required, will be made on the basis of the analysis of the composite sample.

Meter Proving

The LACT unit P.D. meter will be proven to the satisfaction of the New Mexico Oil Conservation Commission, the pipeline company, and Pan American Petroleum Corporation. Meter proving tests will be witnessed by representatives of the pipeline and Pan American.

The meter will be proven against a fixed volume tank calibrated to the satisfaction of the pipeline and Pan American. The tank will be built to conform to the standards of API Code 1101. The inside surfaces of the tank will be plastic coated to prevent corrosion and the adherence of crude products to the vessel, thereby reducing to an absolute minimum meter proving errors introduced by such factors. Oil collected in the prover tank during the meter proving tests will flow out of the tank and into the pipeline by gravity.

Fail-Safe Features

The LACT unit will be checked daily by a pumper. All operations are designed to be fail-safe for unattended operation as follows:

1. No oil can be run from the battery without passing through the LACT unit P.D. meter.

2. The P.D. meter will be equipped with a safety switch which will automatically de-energize the pipeline pump if the meter counter fails to operate or if the oil flow rate through the meter fails below a preset value.
3. In the event of failure of the low level float switch (B), a low pressure safety shutdown switch (D) will de-energize the pipeline pump, thereby preventing the lowering of the fluid level in the surge tank to the point that air or vapors would be drawn into the meter run.
4. In the event of failure of the high level float switch (A) the surge tank can overflow via an equalizing line into the recycle tank. If the recycle tank fills up to the level of float switch (M) all leases served by the battery will be automatically shutin. Combined storage will contain a minimum of one day's production. The battery and LACT unit will be checked daily by a pumper.
5. The P.D. meter will be equipped with set-stop controls to prevent over production.
6. The BS&W monitor performance will be automatically checked by the manual determination of sample BS&W content at the end of each month or during intervening periods as desired.
7. On electric power failure, transfer of oil to the pipeline will stop.

Tamper Proof Design

The P.D. meter cumulative barrels counter is non-resettable. The BS&W monitor controller and the LACT unit control panel will be locked to prevent tampering. The prover tank plug valves will be sealed at all times except during proving runs by authorized personnel.

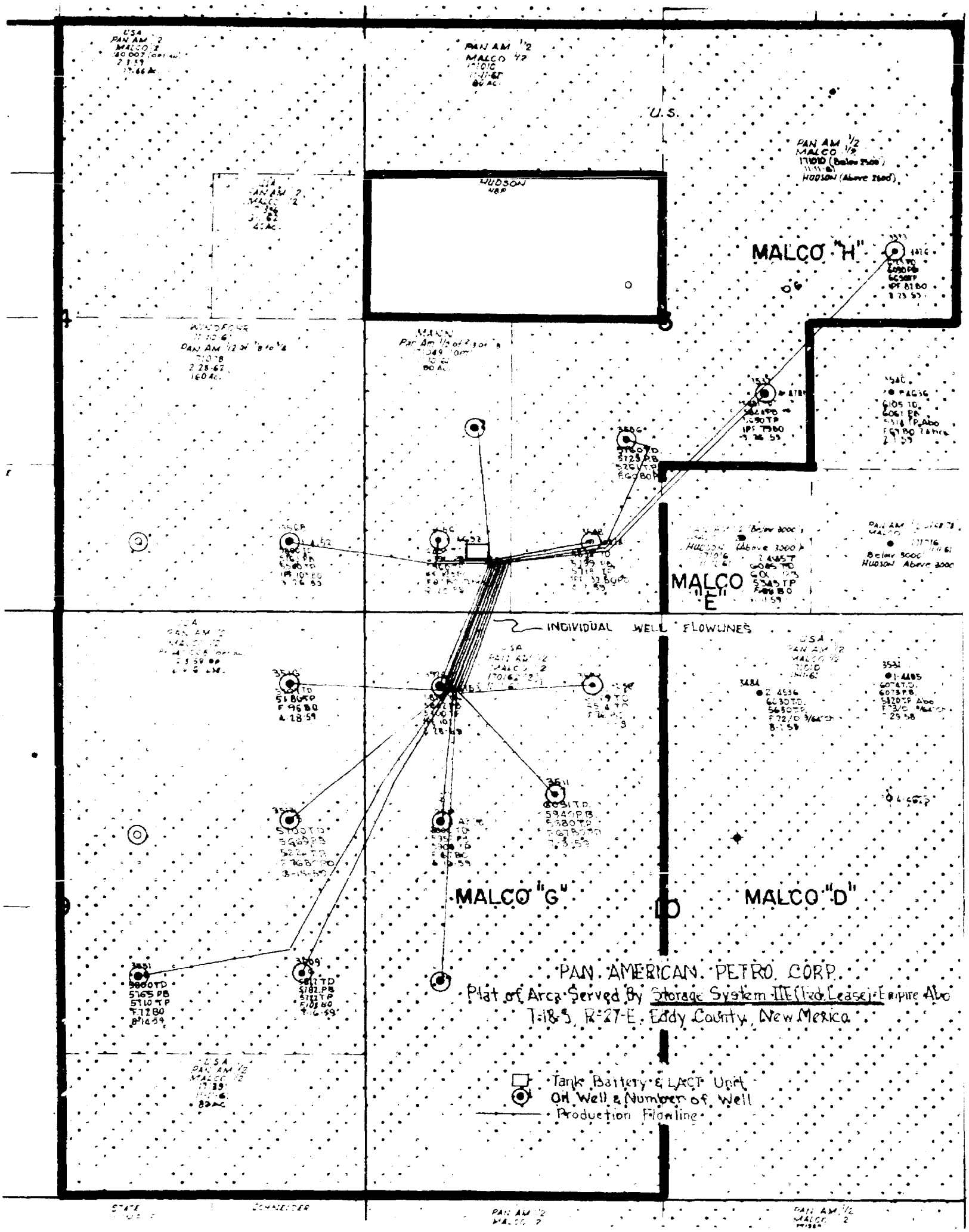
EXHIBIT

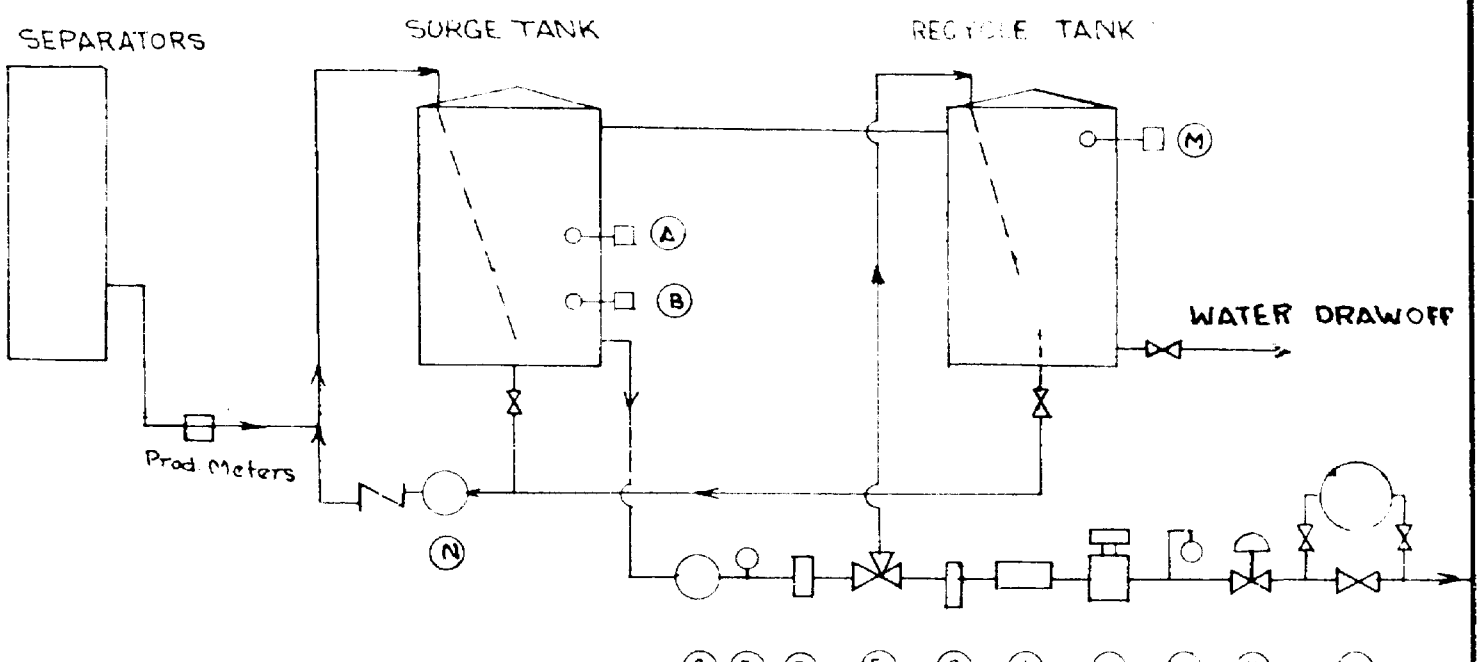
PAN AMERICAN PETROLEUM CORPORATION

LEASE AUTOMATIC CUSTODY TRANSFER INSTALLATION
STORAGE SYSTEM III - EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING
SEPTEMBER 30, 1959


MALCO "H"
MALCO "E"
MALCO "G"
MALCO "D"
INDIVIDUAL WELL FLOWLINES
PAN AMERICAN PETRO. CORP.
Plat of Area Served By Storage System III (Ind. Lease) Empire Abo
T-18-S, R-27-E, Eddy County, New Mexico
Tank Battery & LACT Unit
Oil Well & Number of Well
Production Flowline



PAN AMERICAN PETROLEUM CORPORATION
P. D. METER LACT UNIT
STORAGE SYSTEM III (FEDERAL LEASES)
EMPIRE ABO POOL
EDDY COUNTY, NEW MEXICO

A. High Level Float Switch
B. Low Level Float Switch
C. Pipeline Pump
D. Pressure Safety Shutdown Switch
E. BS&W Monitor
F. Bad Oil Diverting Valve
G. Strainer
H. Air Eliminator
I. P.D. Meter
J. Sampler
K. Back Pressure Valve
L. Prover Tank
M. Lease Shutdown Switch
N. Recycle Pump

SERVICE PIPE LINE COMPANY

WEST TEXAS DIVISION

C. E. WILSON
DIVISION MANAGER

September 1, 1959

1628 19TH STREET
LUBBOCK, TEXAS

Automatic Custody Transfer
Facilities - Empire Abo
Field, Eddy County, New
Mexico

Mr. Neil S. Whitmore
District Superintendent
Pan American Petroleum Corporation
P. O. Box 268
Lubbock, Texas

Dear Mr. Whitmore,

We have reviewed your plans for lease automatic custody transfer by meters in the Empire - Abo Field, Eddy County, New Mexico.

The facilities shown in these plans are satisfactory with Service Pipe Line Company, and we will accept custody of oil delivered by the proposed LACT units in lieu of conventional manual gauging.

Yours very truly,

SERVICE PIPE LINE COMPANY

Charles E. Wilson

Charles E. Wilson
Division Manager

tm

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 6721
Roswell, New Mexico

September 17, 1959

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

Attention: Mr. Neil S. Whitmore

Gentlemen:

Your letter of August 26, 1959, requests our approval of the use of lease automatic custody transfer equipment for the shipment of lease products from three separate storage facilities located in the Empire Abo field, Eddy County, New Mexico.

The storage facilities are located in sections 1, 3, and 11, T. 18 S., R. 27 E., N.M.P.M., on leases Las Cruces 062412, 061783(b), and 067858, respectively.

The method that you have proposed for custody transfers of lease production from the aforementioned storage facilities is satisfactory to this office.

Very truly yours,

ERWIN M. THOMASSON
Acting Oil and Gas Supervisor