

CONFIDENTIAL - SECURITY INFORMATION

John - See me  
for memo to  
district.

John

-asa No.

2212

Application, Transcript,  
Small Exhibits, Etc.



# GULF REFINING COMPANY

CRUDE OIL AND PRODUCTS PIPE LINE

P. O. DRAWER 1150 MIDLAND TEXAS

February 21, 1961

Union Oil Co. of California  
Union Oil Building  
619 W. Texas Ave  
Midland, Texas

Attention: Mr. C. C. Maloney

Gentlemen:

After review of your proposed installation of automatic lease custody transfer units on your State and State (A) leases, Anderson Ranch Field, Lea County, New Mexico, we are agreeable to using such measurements to determine the volume run from your leases to the Gulf Refining Company Gathering System, should these installations be approved by the New Mexico Conservation Commission.

Very truly yours,

GULF REFINING COMPANY

*R. L. Barker*

R. L. Barker  
District Superintendent

RLB/cp

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>Union Oil</i>	EXHIBIT NO. <u>4</u>
CASE NO.	<u>2212</u>

GOVERNOR  
JOHN BURROUGHS  
CHAIRMAN

RETURN TO  
TOLLS DEPT.

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

November 22, 1960

Union Oil Company of California  
Midland, Texas

Attention: Mr. R. W. Yarbrough

Administrative Order PC-22

Gentlemen:

Reference is made to your application for administrative approval of an exception to Rule 303 (a) of the Commission Rules and Regulations to permit the commingling of the oil production from the Anderson Ranch-Wolfcamp Pool and an undesignated Devonian Pool from all wells presently completed or hereafter drilled on State Lease "A" (E-8974) comprising the SW/4 SW/4, NW/4 SE/4, SW/4 NE/4 of Section 33 and SE/4 SW/4, E/2 SE/4, SE/4 SE/4 and NW/4 NW/4 of Section 28, Township 15 South, Range 32 East, Lea County, New Mexico, after separately metering the production from each pool.

Such authorization is hereby approved pursuant to Rule 303 (b) of the Commission Rules and Regulations.

Very truly yours,

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

ALP/OEP/og

cc: Oil Conservation Commission - Hobbs  
Oil & Gas Engineering Committee - Hobbs

*File  
11-20-60*

*Mr. Porter  
Hobbs  
1-3-61*

BEFORE EXAMINER NOTED

OIL CONSERVATION COM.

EXHIBIT NO. 3

CASE NO. 2212

The oil from the wells flows from the wells to a centralized header at a point downstream of the header, on both production and test lines is located a 3" diameter gate valve. A solenoid valve is used to control the gas to the diaphragm of the motor valve. In this manner an electric control for a system shut-in is possible. From the centralized header the oil is directed either through the production separator and treater or through the metering test separator. The well stream that is directed to the test separator, is metered and then routed with the rest of the lease production through the emulsion treater. From the treater the clean oil is dumped into a 500 barrel working tank. This tank serves as an accumulative chamber for the oil prior to metering and delivery to the pipe line.

The oil from the wells flows from the wells to a centralized header at a point downstream of the header, on both production and test lines is located a 3" diameter gate valve. A solenoid valve is used to control the gas to the diaphragm of the motor valve. In this manner an electric control for a system shut-in is possible. From the centralized header the oil is directed either through the production separator and treater or through the metering test separator. The well stream that is directed to the test separator, is metered and then routed with the rest of the lease production through the emulsion treater. From the treater the clean oil is dumped into a 500 barrel working tank. This tank serves as an accumulative chamber for the oil prior to metering and delivery to the pipe line.

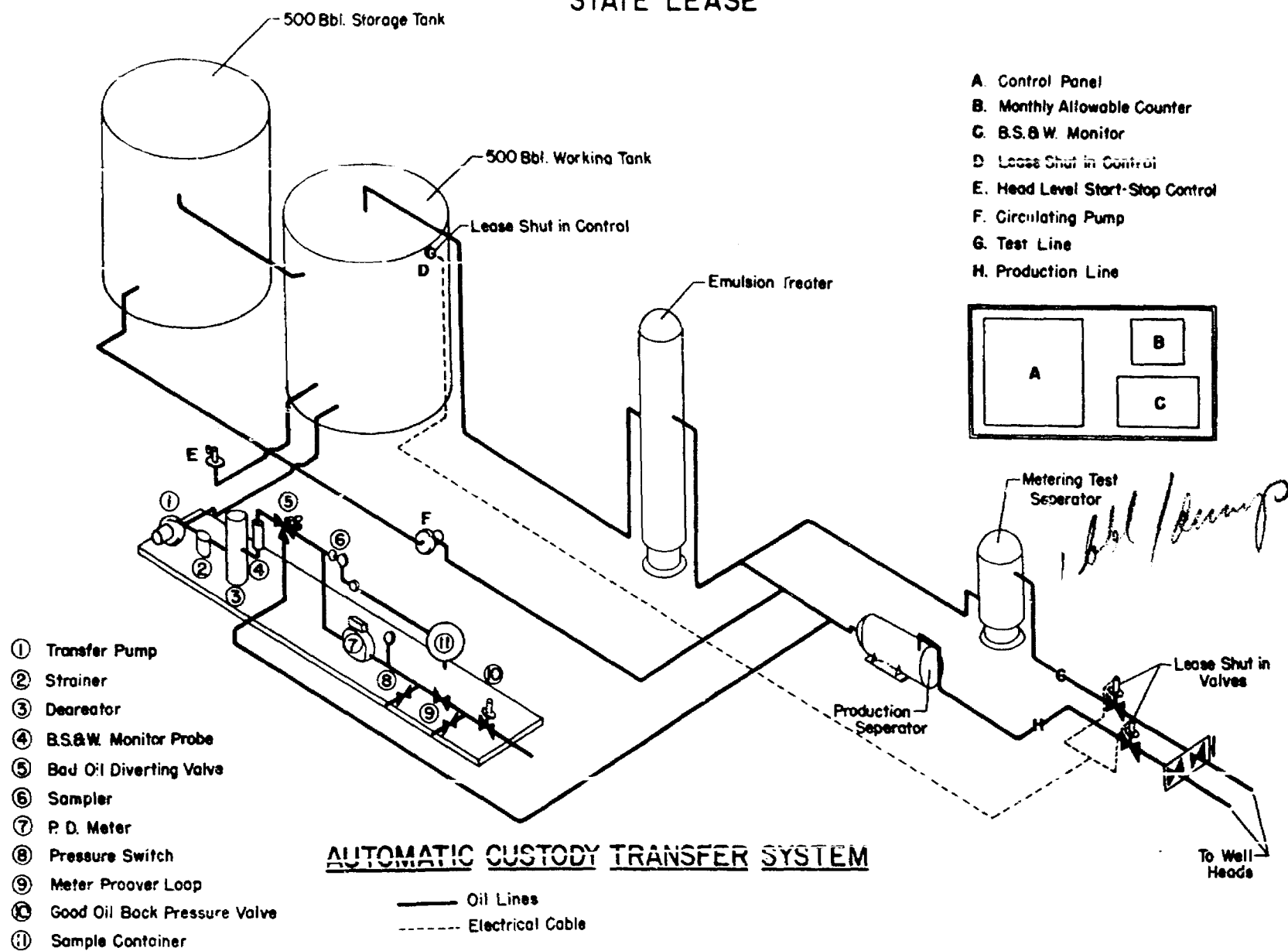
A head level control valve (E) located on the skid will sense the level in the working tank. At the time a sufficient quantity of oil is accumulated in the working tank, level control (E) will start the pump (1) transferring oil to the pipe line. From the transfer pump (1) the oil is passed through a 1/4 mesh strainer (2) in order to remove any foreign particles that would damage the meter, to a deaerator (3), to remove any air or entrained gas, and into the ES&W monitor probe (4) to insure that the oil is pipe line quality. The monitor control (C) is directly connected to the monitor probe and is located on the control panel. In the event the oil is not of pipe line quality, the monitor will electrically switch the oil through the bad oil valve (5) back to the treater and will circulate the oil until the monitor detects oil of pipe line quality. At this time the oil passes from the probe (4) to an electrically driven sampler (6), which takes an impulse per barrel from the temperature compensated positive displacement meter (7). The net barrels sold through the meter will be registered on a temperature, compensated, large numeral, five digit counter with a run ticket printer attachment. The ticket is inserted at the beginning of a measurement period, and the opening reading is printed. The ticket is automatically locked in place and can not be removed without mutilation until the closing reading is printed. The meter also sends an impulse to a monthly allowable set stop counter (8) that will automatically shut the unit off the pipe line when the monthly allowable has been produced. The monthly allowable counter is mounted on the control panel in an enclosed case for pipe line seal. Downstream from the meter is a pressure switch (8) which will shut down the transfer pump in the event of excessive pipe line pressure. A three valve meter prover loop (9) in the line is for the purpose of proving the accuracy of the D.P. meter with a master meter or a prover tank. Back pressure is held on the meter by a solenoid operated contact pressure, back pressure valve (10). The sample collected from each barrel produced is stored in a vapor proof, five gallon, sample container (11) with a hand operated mixer. Control box (A) will be panel mounted and will contain a meter monitor for flow control of the meter, motor starters for the pumps, safety fuse wiring, and necessary relays.

State Loan

In the event of a failure of the good oil back pressure valve (5) fails open to direct the oil and gas to the well and the valves (13 and 14) fail closed to shut in the well.

If the monthly allowable is used in the working tank is full of bad oil, a high level switch (1) located in the working tank will automatically close the back pressure valve (5) and shut in the well.

# ANDERSON RANCH FIELD-LEA CO. NEW MEXICO STATE LEASE



Drawn 1-25-61

*pm*  
*3/23*  
*est*  
**DRAFT #2**

RSM/esr  
March 23, 1961

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:

*20-3-3*  
CASE No. 2212

Order No. R- 1923

APPLICATION OF UNION OIL COMPANY  
OF CALIFORNIA FOR PERMISSION TO  
COMMINGLE THE PRODUCTION FROM TWO  
SEPARATE LEASES FROM TWO SEPARATE  
POOLS AND FOR PERMISSION TO INSTALL  
AN AUTOMATIC CUSTODY TRANSFER SYSTEM,  
LEA COUNTY, NEW MEXICO.

*est*  
*3/23*  
**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on  
March 3, 1961, 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 March, 1961, 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, Union Oil Company of California,  
is the owner and operator of the North Anderson Ranch Unit Area,  
comprising the E/2 NE/4 and the NE/4 SE/4 of Section 32, and the  
NW/4 and the N/2 SW/4 of Section 33; and of the State "A" Lease,  
comprising the NW/4 NW/4, the SE/4 SW/4, the NW/4 SE/4 and the  
E/2 SE/4 of Section 28, and the NW/4 NE/4, the NW/4 SE/4 and the  
SW/4 SW/4 of Section 33; all in Township <sup>15</sup>~~23~~ South, Range 32 East,  
NMPM, Lea County, New Mexico.

(3) That the applicant seeks permission to commingle, after  
separate measurement, the Anderson Ranch-Devonian and Anderson  
Ranch-Wolfcamp Pool production from all wells presently completed  
or hereafter drilled on the said North Anderson Ranch Unit Area.



(4) That the applicant also seeks permission to commingle, after separate measurement, the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the said State "A" Lease.

(5) That the applicant further proposes to install an automatic custody transfer system on its North Anderson Ranch Unit Area as specified in Exhibit No. 3 herein until such time as production is obtained from the Anderson Ranch-Devonian Pool, at which time the system will be modified to conform to Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter as shown on Exhibit No. 2 herein should be omitted, *and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.*

(6) That the applicant further proposes to install an automatic custody transfer system on its State "A" Lease as specified in Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter should be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(7) That a sampler should be installed on the bad oil line.

(8) That all production meters should be of the type utilizing a non-reset totalizer.

(9) 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, provided adequate safety features are incorporated therein.

(10) That inasmuch as an industry committee has been appointed to study all phases of commingling and to recommend minimum standards to prevent abuses thereof, it may be that this installation, at a later date, will have to be altered to conform to such standards as the Commission may prescribe.

IT IS THEREFORE ORDERED:

(1) That the applicant, Union Oil Company of California, is hereby authorized to commingle, after separate measurement,

the production from the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pools from all wells presently completed or hereafter drilled on the North Anderson Ranch Unit Area, comprising the E/2 NE/4 and the NE/4 SE/4 of Section 32. and the NW/4 and the N/2 SW/4 of Section 33, Township 15 South, Range 32 East, NMPM, Lea County, New Mexico.

(2) That the applicant is hereby authorized to commingle, after separate measurement, the production from the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pools from all wells presently completed or hereafter drilled on the State "A" Lease, comprising the NW/4 NW/4, the SE/4 SW/4, the NW/4 SE/4 and the E/2 SE/4 of Section 28, and the NW/4 NE/4, the NW/4 SE/4 and the SW/4 SW/4 ~~of Section~~ of Section 33, Township 15 South, Range 32 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER, That it may be that each of these installations, at a later date, will have to be altered to conform to such standards as the Commission may prescribe.

(2) That the applicant is hereby authorized to install an automatic custody transfer system on the North Anderson Ranch Unit Area as specified in Exhibit No. 3 herein until such time as production is obtained from the Anderson Ranch-Devonian Pool, at which time the system shall be modified to conform to Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter as shown on Exhibit No. 2 shall be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(3) That a sampler shall be installed on the bad oil line.

(4) That all production meters shall be of the type utilizing a non-reset totalizer.

(5) That the applicant is hereby authorized to install an automatic custody transfer system on its State "A" Lease as specified in Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter shall be omitted, *and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.*

(6) That Administrative Order No. PC-22 is hereby superseded.

PROVIDED HOWEVER, That the applicant shall install adequate facilities to permit the testing of all wells located on the above-described leases at least once each month to determine the individual production from each well.

PROVIDED FURTHER, That in order to prevent the overflow and waste of oil in the event either of the automatic custody transfer systems fails to transfer oil to the pipeline, the applicant shall add additional storage facilities from time to time, as it becomes necessary, to store the production which will accrue during the hours that said lease is unattended, or in the alternative, shall either so equip the existing facilities as to automatically shut-in the lease production at the wellhead in the event the storage facilities become full, or test the flow-lines to a pressure of at least  $1\frac{1}{2}$  times the shut-in pressure of the wells.

IT IS FURTHER ORDERED:

That all meters used in the above-described automatic custody transfer systems 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.

GOVERNOR  
EDWIN L. MECHEM  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission

LAND COMMISSIONER  
E. S. JOHNNY WALKER  
MEMBER

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

P. O. BOX 671  
SANTA FE

March 24, 1961

Mr. Jack Campbell  
Campbell & Russell  
Box 766  
Edgewood, New Mexico

Re: Case No. 2212  
Order No. 2-1923  
Applicant:  
Union Oil Company

Dear Sir:

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

Very truly yours,

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x  
Artesia OCC         
Aztec OCC       

OTHER

**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. 2212  
Order No. R-1923**

**APPLICATION OF UNION OIL COMPANY  
OF CALIFORNIA FOR PERMISSION TO  
COMMINGLE THE PRODUCTION FROM TWO  
SEPARATE LEASES FROM TWO SEPARATE  
POOLS AND FOR PERMISSION TO INSTALL  
AN AUTOMATIC CUSTODY TRANSFER SYSTEM,  
LEA COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on March 3, 1961, 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 March, 1961, 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, Union Oil Company of California, is the owner and operator of the North Anderson Ranch Unit Area, comprising the E/2 NE/4 and the NE/4 SE/4 of Section 32, and the NW/4 and the N/2 SW/4 of Section 33; and of the State "A" Lease, comprising the NW/4 NW/4, the SE/4 SW/4, the NW/4 SE/4 and the E/2 SE/4 of Section 28, and the NW/4 NE/4, the NW/4 SE/4 and the SW/4 SW/4 of Section 33; all in Township 15 South, Range 32 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks permission to commingle, after separate measurement, the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the said North Anderson Ranch Unit Area.

(4) That the applicant also seeks permission to commingle, after separate measurement, the Anderson Ranch-Devonian and

-2-  
CASE No. 2212  
Order No. R-1923

Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the said State "A" Lease.

(5) That the applicant further proposes to install an automatic custody transfer system on its North Anderson Ranch Unit Area as specified in Exhibit No. 3 herein until such time as production is obtained from the Anderson Ranch-Devonian Pool, at which time the system will be modified to conform to Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter as shown on Exhibit No. 2 herein should be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(6) That the applicant further proposes to install an automatic custody transfer system on its State "A" Lease as specified in Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter should be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(7) That a sampler should be installed on the bad oil line.

(8) That all production meters should be of the type utilizing a non-reset totalizer.

(9) 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, provided adequate safety features are incorporated therein.

(10) That inasmuch as an industry committee has been appointed to study all phases of commingling and to recommend minimum standards to prevent abuses thereof, it may be that this installation, at a later date, will have to be altered to conform to such standards as the Commission may prescribe.

IT IS THEREFORE ORDERED:

(1) That the applicant, Union Oil Company of California, is hereby authorized to commingle, after separate measurement, the production from the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pools from all wells presently completed or hereafter drilled on the North Anderson Ranch Unit Area, comprising the E/2 NE/4 and the NE/4 SE/4 of Section 32, and the NW/4 and the N/2 SW/4 of Section 33, Township 15 South, Range 32 East, NMPM, Lea County, New Mexico.

(2) That the applicant is hereby authorized to commingle, after separate measurement, the production from the Anderson

Ranch-Devonian and Anderson Ranch-Wolfcamp Pools from all wells presently completed or hereafter drilled on the State "A" Lease, comprising the NW/4 NW/4, the SE/4 SW/4, the NW/4 SE/4 and the E/2 SE/4 of Section 28, and the NW/4 NE/4, the NW/4 SE/4 and the SW/4 SW/4 of Section 33, Township 15 South, Range 32 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER, That it may be that each of these installations, at a later date, will have to be altered to conform to such standards as the Commission may prescribe.

(3) That the applicant is hereby authorized to install an automatic custody transfer system on the North Anderson Ranch Unit Area as specified in Exhibit No. 3 herein until such time as production is obtained from the Anderson Ranch-Devonian Pool, at which time the system shall be modified to conform to Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter as shown on Exhibit No. 2 shall be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(4) That a sampler shall be installed on the bad oil line.

(5) That all production meters shall be of the type utilizing a non-reset totalizer.

(6) That the applicant is hereby authorized to install an automatic custody transfer system on its State "A" Lease as specified in Exhibit No. 2 herein, provided that the by-pass loop around the bad oil meter shall be omitted, and, provided further, that this meter shall be of a type utilizing a non-reset totalizer.

(7) That Administrative Order No. PC-22 is hereby superseded.

PROVIDED HOWEVER, That the applicant shall install adequate facilities to permit the testing of all wells located on the above-described leases at least once each month to determine the individual production from each well.

PROVIDED FURTHER, That in order to prevent the overflow and waste of oil in the event either of the automatic custody transfer systems fails to transfer oil to the pipeline, the applicant shall add additional storage facilities from time to time, as it becomes necessary, to store the production which will accrue during the hours that said leases are unattended, or in the alternative, shall either so equip the existing facilities as to automatically shut-in the lease production at the wellhead in the event the storage facilities become full, or test the flow-lines to a pressure of at least  $1\frac{1}{2}$  times the shut-in pressure of the wells.

-4-  
CASE No. 2212  
Order No. R-1923

IT IS FURTHER ORDERED:

That all meters used in the above-described automatic custody transfer systems 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.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
EDWIN L. MECHEM, Chairman

  
E. S. WALKER, Member

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



# Union Oil Company of California

M I D L A N D T E X A S

May 19, 1961

New Mexico Oil Conservation Commission  
Oil Conservation Building  
Santa Fe, New Mexico

Attention: Mr. Daniel S. Nutter

Gentlemen:

Union Oil Company of California hereby submits attached amendments to Exhibit #3, Case #2212, Order #R-1923, for our State Lease, Anderson Ranch Field, Lea County, New Mexico.

Very truly yours

UNION OIL COMPANY OF CALIFORNIA

*C. C. Maloney*

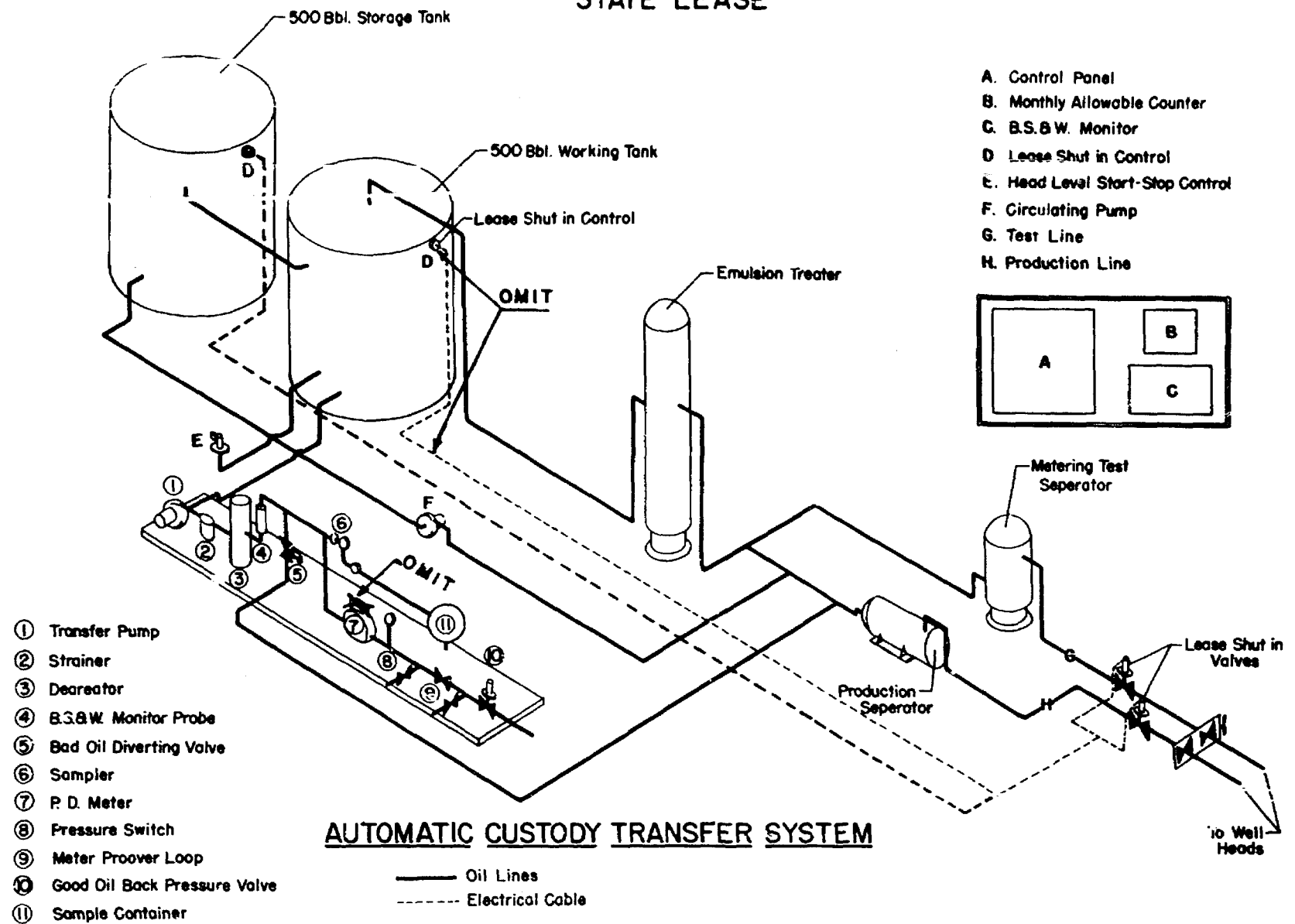
C. C. Maloney  
District Production Superintendent

RTS:bt

1. LEASE SHUT-IN CONTROL, MOVED FROM WORKING TANK TO 500BBL. STORAGE TANK - D

2. NO TICKET PRINTER TO BE USED ON P.D. METER - 7 \*

# ANDERSON RANCH FIELD - LEA CO. NEW MEXICO STATE LEASE



Drawn 1-25-61

\*THESE CHANGES WERE APPROVED BY GULF PIPE LINE-TRANSPORTER

Ex. 2

This is a schematic diagram of the oil transfer system, Anderson Ranch Field, page 6 in the Anderson Ranch Field description and the attached schematic diagram.

The oil flows from the well (Devonian and Wolfcamp) to the battery. The Devonian production is shut in by an automatic lease shut-in valve into an emulsion tank. The Wolfcamp oil after treating will flow to a liquid meter, which will measure and record the number of barrels of oil produced. From the liquid meter the Devonian oil will flow to the 500 barrel working tank.

The oil from the Wolfcamp well produce through an automatic lease shut-in valve into a two phase (oil-gas) separating separator. This separator will measure the barrels of oil produced from this zone and record on a non-reset accumulating counter. The Wolfcamp oil from the separator will then be commingled down stream of the liquid meter and sent to the 500 barrel working tank.

The working tank and the B&W constitute the complete unit of the custody transfer system. Located on the unit is a head level control (E) that will sense the level in the working tank. When sufficient quantity of oil is produced into the working tank, level control (E) will start the pump (1) transferring oil to the pipe line. From the transfer pump (1) the oil is passed through a 14 mesh strainer (2) into a separator (3) and into the BS&W monitor probe (4) to insure that the oil is of pipe line quality. The monitor control (C) is directly connected to the monitor probe and located on the control panel. If the oil is not of pipe line quality, the monitor will electrically switch the oil through bad oil valve (5) through a by-pass meter system back to the treater and will circulate the oil until the monitor detects pipe line quality oil. The oil of pipe line quality from the probe (4) passes to an electrically driven sampler (6), which takes one impulse per barrel from the temperature compensated positive displacement meter (7). The meter also send an impulse to a monthly allowable set stop counter (8) that shuts the unit off the pipe line when the monthly allowable is made. The net barrels sold through the meter will be registered on a temperature compensated, large numeral, five digit counter with a run ticket printer attachment. The ticket is inserted at the beginning of a measurement period, and the opening reading is printed. The ticket is automatically locked in place and can not be removed without mutilation until the closing reading is printed. The monthly allowable counter is mounted on the control panel in an enclosed case for pipe line seal. Down stream from the meter is a pressure switch (8), which will shut down the transfer pump in case of excessive pipe line pressure. In the line is located a three valve meter prover loop (9) for the purpose of proving the accuracy of the meter with a master meter or a prover tank. Back pressure is built on the meter by a motor operated, constant pressure, back pressure valve (10). The sample collected from each barrel produced is stored in a vapor proof sample container (11) with a hand operated mixer. Control box (12) will be provided and contain a meter monitor for flow control of the meter, motor starters for the pumps, safety fuse wiring, and necessary relays.

Shut-in lease

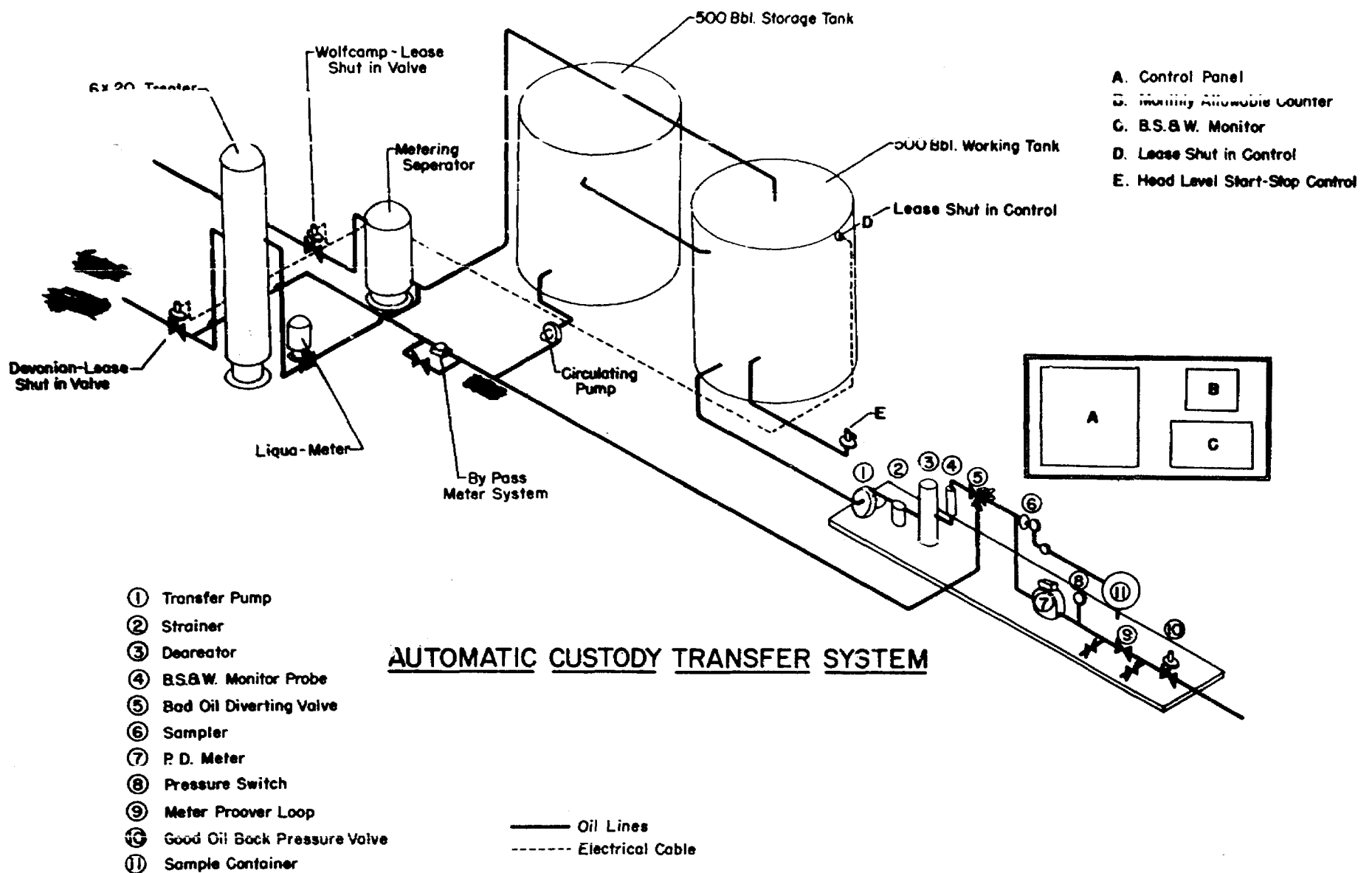
The battery is equipped with a zone of pump failure, the good oil back pressure valve (10) will close and valve (5) will open to direct the oil back to stock, and the lease valve (11) will close to shut in the lease.

The bad oil as it is directed through valve (5) is metered through the P.D. by-pass meter system where it is returned to the treater. This amount of bad oil will be registered and deducted from the total produced on the Devonian liquid meter in order to have an accurate account of oil produced from each zone.

If the monthly allowable is used or all storage full of bad oil, a high level switch located in the working tank will automatically close the lease shut-in valves so the lease will not produce.

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# ANDERSON RANCH FIELD-LEA CO. NEW MEXICO STATE "A" LEASE



Drawn 1-25-61

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
March 3, 1961

IN THE MATTER OF:

Application of Union Oil Company of California for permission to commingle the production from two separate leases from two separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the following-described leases: North Anderson Ranch Unit, E/2 NE/4 and NE/4 SE/4 of Section 32 and NW/4 and N/2 SW/4 of Section 33; State "A" Lease, comprising 360 acres in Sections 28 and 33, all in Township 15 South, Range 32 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

Case  
2212

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 2212.

MR. MORRIS: Application of Union Oil Company of California for permission to commingle the production from two separate leases from two separate pools and for an automatic custody transfer system.

MR. CAMPBELL: Jack M. Campbell, Campbell & Russell, Roswell, New Mexico, appearing on behalf of the applicant Union Oil Company of California. We have one witness to be sworn in this case.

(Witness sworn.)

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

CLAUDE C. MALONEY

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

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name, please?

A Claude C. Maloney.

Q Where do you live, Mr. Maloney?

A Midland, Texas.

Q By whom are you employed?

A Union Oil.

Q In what capacity?

A District Superintendent.

Q How long have you been employed there?

A Thirteen years.

Q What has been the general nature of your work with Union Oil Company of California?

A Production supervision.

Q During all this time you have been in the production division; is that correct?

A Yes, sir.

Q Are you acquainted with the application of Union Oil Company of California in this Case No. 2212?

A Yes.

Q Are you acquainted with the leasehold interests involved



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

In the two leases?

A Yes, sir.

Q Will you refer to what has been identified as Union Oil Company Exhibit 1 in this case, the plat, and will you point out to the Examiner on that Exhibit No. 1 which two areas are involved and where they are situated?

A The unit acreage is this that is hashed in red. The yellow acreage is the State "A" Lease.

Q Will you point out the presently existing wells on the Anderson Ranch unit area and the State "A" Lease, please, and advise the Examiner from which zones those wells are now producing?

A The State "A" Lease at the lower bottom is a dual Wolfcamp Devonian. The No. 1 Well in the unit is a Wolfcamp single completion; the No. 2 Well is a Wolfcamp single.

Q Have you previously obtained authority from this Commission for the commingling of oil on your State "A" Lease from the Devonian and Wolfcamp?

A Yes, sir, we have.

MR. CAMPBELL: Will the Examiner take administrative notice of the Commission's letter of November 22, 1960, being administrative Order PC-22, in which authority is granted administratively for the commingling of the Wolfcamp and the Devonian on the State "A" Lease, which is the acreage outlined in yellow on Exhibit No. 1?

MR. NUTTER: Yes, we will take notice of that.





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MR. CAMPBELL: I would like also, at this time, with regard to Exhibit No. 1 to advise the Commission, or the Examiner, that I was in error in including the SW/4 of the SE/4 of Section 28 in the State "A" lease. The notice does not identify the acreage, but that is a Texas-Pacific Coal and Oil Company 40-acre tract, so there is actually 320 acres instead of 360 acres in the State "A" lease.

Q With regard to the commingling of oil, what is it that you propose to do, Mr. Maloney?

A The Devonian lease at the present time is, from the State "A" 1 well, is produced through an automatic lease shut in valve into an emulsion treater.

Q I am asking you, do you intend to commingle the oil from Anderson Ranch unit properties and State "A" Lease?

A No, sir, we do not.

Q You are going to have a separate unit for the Anderson Ranch unit area and the State "A" lease; is that correct?

A Yes, sir.

MR. CAMPBELL: Mr. Examiner, may I inquire whether, on this hearing where we do not have Devonian production in the Anderson Ranch Unit as yet, whether it is possible to obtain authority on the basis of this notice to commingle Wolfcamp and Devonian on that unit if and when Devonian production is obtained?

MR. NUTTER: I would say so, Mr. Campbell. The application is advertised to provide for commingling Anderson Ranch Devonian



and Anderson Ranch Wolfcamp production.

MR. CAMPBELL: When we present our evidence as to the automatic custody transfer system for the unit we will have the witness supplement his testimony by stating what would be done in the event Devonian production was obtained in the unit.

MR. NUTTER: Yes, sir.

Q (By Mr. Campbell) Now, Mr. Maloney, I refer you to what has been identified as Union Oil's Exhibit 2, a diagrammatic sketch of the automatic custody transfer system for Anderson Ranch unit. Will you refer to that and advise the Examiner what sort of set up you intend to install there with regard to the production from the Wolfcamp Formation within the unit, and advise approximately where that installation will be located on the unit?

A The location will be just north of the No. 1 Well. In the event we do get Devonian production there it will be metered separately from the Wolfcamp production.

Q In the event you obtain Devonian production will the set up then be the same as you are going to describe for the ACT unit on the State "A" Lease?

A Yes, sir.

Q It will be an identical plan; is that correct?

A Yes, sir.

Q Will you explain briefly to the Examiner the set up that you intend to install on the Anderson Ranch unit for the handling of Wolfcamp production within the unit? First, explain what company

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type installation this will do. -- By way of correction, will you refer to what has been identified as Union Oil Company Exhibit No. 2, which is the automatic custody transfer system for the State "A" lease, and describe to the Examiner the type of installation you intend to use there.

A The Devonian production is routed through the automatic lease shut in valve into an emulsion treater. The clean oil is then routed to a liquimeter which measures and records the Devonian production. It is then sent on to the working tank.

Q What is the capacity of the working tank?

A 500 barrels. The Wolfcamp production is produced through the lease shut in valve through a metering separator which records the production, and is then commingled downstream of the liquimeter and goes to the working tank. The head level start-stop control (a) on the working tank senses the working level in that tank and, in turn, starts the pump (1), transferring oil to the pipeline. The oil, from Pump (1) goes into the strainer (2), then into the deaerator (3), into the RS & W monitor probe. In the event bad oil is sensed in the probe the RS & W monitor diverts the bad oil through (5) and returns the oil back to stock for further treatment. This oil goes through a bypass meter system and is registered there in order that the Devonian oil can be accounted for, then returns back to the working tank. When the probe senses good oil the oil goes to the sampler which takes an impulse per barrel from the P. D. meter.

~~This sample is stored in the receptacle No. 11. The oil goes~~

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through the temperature compensated P. D. meter (7) and impulses sent to the monthly allowance counter (8). In this manner the lease may be shut in when the monthly allowance is made. A ticket printer attachment is located on top of the P. D. meter. A ticket is inserted at the beginning of each measurement period and cannot be removed until the measurement period is ended, and this is enclosed for pipeline seal.

The oil then goes through pressure switch (8) and, in the event of excessive pipeline pressure this switch automatically shuts down the system. The oil then goes through the meter prover loop (9), from this loop through the good oil back pressure valve, (10), into the pipeline.

Q Will you state what is the capacity of your storage tank?

A Well, from the position of the head level control we will have approximately 800 barrels storage.

Q Will you explain to the Examiner what operation takes place in the event that the storage becomes full?

A When the working tank becomes full the oil is equalized into the emergency storage tank which is a 500 barrel tank, then, as that fluid level rises to position (D) the high level switch shuts in the lease.

MR. PAYNE: At the header?

A It shuts in each one of these automatic lease shut in valves at the header.

Q (By Mr. Campbell) You feel that this system can be oper-



used in such a manner that there will be no waste of oil in connection with the operation.

A Yes, sir.

Q To your knowledge is this type of installation in operation in the southeast New Mexico area at this time?

A Yes, sir, it is.

MR. CAMPBELL: Would the Examiner like to ask questions about this particular installation before we proceed to the next?

MR. NUTTER: Either way you want to do it.

MR. CAMPBELL: Perhaps that would be a little more orderly.

MR. NUTTER: Why don't you go ahead and proceed with the next one. Maybe there will be questions we can eliminate after we hear both of them.

Q (By Mr. Campbell) Now, Mr. Maloney, refer, please, to Exhibit No. 3, which is the automatic custody transfer system for the State Lease, or the Anderson Ranch Unit, and state to the Examiner what that installation is and in what respects, if any, it differs from the installation on the State "A" lease?

A Of course, the main difference is the fact we are only producing one zone there at this time. We are not commingling. Wolfcamp oil is produced to a centralized header. Downstream of the header are located two automatic lease shut in valves, one on the production side and one on the test side. The oil from the production side goes through a regular two-phase oil-gas production separator, then into an emulsion treater. The clean oil will then

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go to the 500-barrel working tank. On the test side, production is routed through a metering test separator and then is commingled downstream from the production separator into the emulsion treater, and this is just for testing only at this time. The IACT unit for this battery operates exactly the same as the other for the State "A" lease.

Q What would be necessary with regard to this unit in the event you obtained Devonian production and desire to commingle the production under proper authority from the Commission? What would you have to do with this unit?

A We would have to put in additional testing equipment for the Devonian.

Q Would you be prepared, in the event that authority were granted, and you did obtain Devonian production on your State lease, to make that installation which would, as I understand it, make it identical with the installation on the State "A" lease?

A Exactly, and it would be metered in the same way.

Q Mr. Maloney, have you discussed the proposed installation of these two IACT units with the purchaser of the oil?

A Yes, we have.

Q Who is the purchaser of the oil?

A Gulf Pipeline. Gulf Refining Company.

Q I refer you to what has been identified as Union Oil Company Exhibit No. 4 in this case and ask you to state what that is?

A This is just a letter of approval from Gulf Refining



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Company stating that they are agreeable to the measurements and the way we intend to install this system.

MR. CAMPBELL: I'd like to offer in evidence Union Oil Company Exhibits Nos. 1, 2, 3 and 4.

MR. NUTTER: Union's Exhibits 1 through 4 will be admitted.

MR. CAMPBELL: That is all the questions I have.

MR. NUTTER: Does anyone have any questions of Mr. Maloney?

BY MR. PAYNE:

Q As I understand it, all you are seeking insofar as the State "A" lease is concerned is permission to install an automatic custody transfer facility?

A That's right, sir.

Q As regards the Anderson Ranch Unit, what you want is permission to commingle the production from the Wolfcamp and the Devonian and to install an ACT to handle this commingled production?

A That's right, sir, with the understanding they do not have, presently, production on the Anderson Ranch, on the State lease.

Q How does the commingling on it affect the value?

A We were able to obtain an increase due to gravity difference there.

Q So you anticipate, I presume, the same situation would be true if you get Devonian production on the Anderson Ranch unit?

A That's right, sir.

Q What is the maximum unattended time on each of these?



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A We have a pumpjack there at the present time eight hours a day, approximately.

Q When the wells are shut in, when the lease is shut in at the header, what is the pressure on the flow line at that point?

A At the present time we have line pipe in there rather than tubing, and it is our intention, unless we change that well, to have two automatic valves, one at the header, which will automatically shut the well in at the header, but as the flow line pressure increases the well will be shut in at the well head.

Q Is this a dual completion in the Wolfcamp-Devonian a top allowable well in both zones?

A It is in the Wolfcamp, and the present allowable on the Devonian is 243 barrels a day.

Q What about the two Wolfcamp wells in the Anderson Ranch?

A They are both top allowable.

Q Is it physically possible under your proposed installation for Devonian oil to be charged to the Wolfcamp-Anderson and vice versa, inadvertently, of course?

A It would be physically possible, but at the time our allowable is made on the meters that we have installed in that zone will be shut in.

Q How many wells do you anticipate drilling on your State "A" lease?

A Possibly six.

Q You are still proposing to use this ACT even though the





acreage is spread out?

A Yes, sir. We do at the present time. In the event that we should get some production in the northernmost acreage there it might be necessary to put in another system.

BY MR. ATTORNEY.

Q Mr. Maloney, referring to the installation for the State "A" lease, which is Exhibit No. 2, your production from the Devonian comes through a treater, then it passes through a liquimeter. Would you describe the operation of a liquimeter?

A Yes, sir. That is a constant area liquimeter. It has a separate section in the top. The capacity remains the same all the time. It is flow-operated, and as the oil fills up and actuates the flow it then is dumped out, one barrel dump.

Q In other words, this is a little dump meter?

A That's right.

Q The metering separator, is that also a dump-type meter?

A Yes, sir.

Q What size of a liquimeter do you propose to use?

A It will be a one barrel dump.

Q And what will the metering separator dump?

A One barrel per dump.

Q Then, the commingled production from the output of the metering separator and the liquimeter passes into the 500-barrel working tank, is that correct?

A That's correct.

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Then if your sensor, No. C, detects sand oil, the oil is diverted there at valve No. 5 back to the left and into the upstream side of the streamer into the Devonian production line, correct?

A That's correct, sir.

Q It passes through a meter, so I presume the amount of oil that the pump would -- if he were circulating tank bottoms, or the oil was being diverted back -- he would produce his allowable through the liquidmeter plus the amount of oil that passes through the bypass meter, so we would know how much Devonian oil he could produce?

A Yes, sir. This production that goes through the bypass meter will be deducted from the total amount in order to keep an accurate gauge on the Devonian production.

Q Why is this little loop here around the bypass meter?

A That is a mistake. It shouldn't be there.

Q And it won't be installed?

A No, sir.

Q Is this the entire system, Mr. Maloney, or will there be any additional lines than indicated?

A Yes, sir. I haven't attempted to show any of the water lines, any of the gas lines.

Q These are all of the oil lines, though?

A Yes, sir.

Q Will these lines in this battery be installed below ground or above ground?



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A Above ground.

Q Item B, the head level stop-start, turns the circulating transfer pump on and also turns it off, is that correct?

A That's right.

Q Item D, the lease shut in, shuts the wells in at the header?

A Yes, sir.

BY MR. PAYNE:

Q Does the Anderson Ranch Unit provide for expansion?

A Yes, sir.

Q Do you anticipate at any time in the future that some of the State "A" acreage might be included within that unit?

A I am sorry, sir. I misunderstood your first question. I don't believe there has been any provision for expansion other than this hashed area in there.

BY MR. NUTTER:

Q On Exhibit No. 3, diverting valve 5 in the ACT kicks oil back into the output side of the production separator for circulation through the emulsion treater in the event bad oil is encountered?

A That's correct, sir.

Q You also have a line coming from the 500-barrel storage tank?

A The reason there is not a meter required there, at the present time, of course, is we are just producing one zone.



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Q This metering test separator you have here, will it be a one-barrel dump type separator?

A Yes, sir.

Q You have mentioned that you'd have a lease shut in control in the event the allowable was run?

A Yes, sir.

Q That would be the allowable for the entire lease, but there isn't any provision for shutting in either zone in the event it makes its allowable?

A That's correct. As this is presented, it is not. You would have to have two separate monthly allowable counters on this panel in order to provide what you are asking.

Q That could be installed?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Maloney? He may be excused.

MR. CAMPBELL: That is all I have.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 2212? Take the case under advisement.



STATE OF NEW MEXICO        )  
                                   ) ss  
 COUNTY OF BERNALILLO     )

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 11th day of March, 1961.

*June Paige*  
 Notary Public - Court Reporter

My Commission expires:

May 11, 1964.

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I N D E X

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E X H I B I T S

<u>NUMBER</u>	<u>EXHIBIT</u>	<u>IDENTIFIED</u>	<u>OFFERED</u>	<u>ADMITTED</u>
Ex.#1	Plat	3	10	10
Ex.#2	Diagrammatic Sketch	5	10	10
Ex.#3	ACT System Sketch	8	10	10
Ex.#4	Letter	9	10	10

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 2212  
heard by me on 3/3, 1961.

*[Signature]*, Examiner  
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 3/17/61

CASE ~~204~~ 2212

Hearing Date 9am 3/3/61 DSA @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter order for Union approving  
Commingle and LACT for its  
North Anderson Ranch Unit Area,  
Commingle Anderson Ranch Deer  
+ Anderson Ranch WC prod. Provide that applicant  
shall install the single zone system as shown on Ex 3, and  
when production from the Devonian is obtained they shall notify the SF  
of the Comm. and shall equip the installation the same as Ex. 2  
except the bypass loop around the bad oil meter shall be omitted.  
Also approve LACT and commingle  
State "A" lease, comprising NW/4 NE/4,  
SE/4 SW/4, N/2 SE/4, and SE/4 SE/4 of  
Section 28, and NW/4 NE/4, NW/4 SE/4  
and SW/4 SW/4 of Section 33, T 15S, R 32E.  
Installation shall be as shown on Ex 2  
with the exception that the bypass loop around  
the bad oil meter shall be omitted.  
Applicant already has approval to  
commingle on the State "A" lease, under  
PC-22 which should be rescinded  
or superseded.  
Include reservations re commingling  
Lawrence  
Staff Member  
Examiner

CASE 2212:

Application of Union Oil Company of California for permission to commingle the production from two separate leases from two separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the following-described leases: North Anderson Ranch Unit, E/2 NE/4 and NE/4 SE/4 of Section 32 and NW/4 and N/2 SW/4 of Section 33; State "A" Lease, comprising 360 acres in Sections 28 and 33, all in Township 15 South, Range 32 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

CASE 2213:

Application of E. G. Rodman for a 160-acre non-standard gas proration unit. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas proration unit in the Blinebry Gas Pool consisting of the W/2 NW/4, NE/4 NW/4 and NW/4 NE/4 of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 2214:

Application of Sinclair Oil & Gas Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks approval of the Keel Deep Unit Agreement, which unit embraces 6,155.5 acres of Federal and State lands in Township 17 South, Range 31 East, Eddy County, New Mexico.



GOVERNOR  
JOHN BURROUGHS  
CHAIRMAN

RETURN TO  
FIELD DEPT.

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

November 22, 1960

Union Oil Company of California  
Midland, Texas

Attention: Mr. R. W. Yarbrough

Administrative Order PC-22

Gentlemen:

Reference is made to your application for administrative approval of an exception to Rule 303 (a) of the Commission Rules and Regulations to permit the commingling of the oil production from the Anderson Ranch-Wolfcamp Pool and an undesignated Devonian Pool from all wells presently completed or hereafter drilled on State Lease "A" (E-8974) comprising the SW/4 SW/4, NW/4 SE/4, NE/4 NE/4 of Section 33 and SE/4 SW/4, N/2 SE/4, SE/4 SE/4 and NW/4 NW/4 of Section 28, Township 15 South, Range 32 East, Lea County, New Mexico, after separately metering the production from each pool.

Such authorization is hereby approved pursuant to Rule 303 (b) of the Commission Rules and Regulations.

Very truly yours,

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

ALP/CKP/og

cc: Oil Conservation Commission - Hobbs  
Oil & Gas Engineering Committee - Hobbs

*File  
11-20-60*

*Mr. Porter  
Hobbs  
1-3-61*