Union Oil Company of California

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

May 19, 1961

File

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

Attention: Mr. Daniel S. Nutter

Gentlemen:

Union Oil Company of California hereby sumbits attached ammendments 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

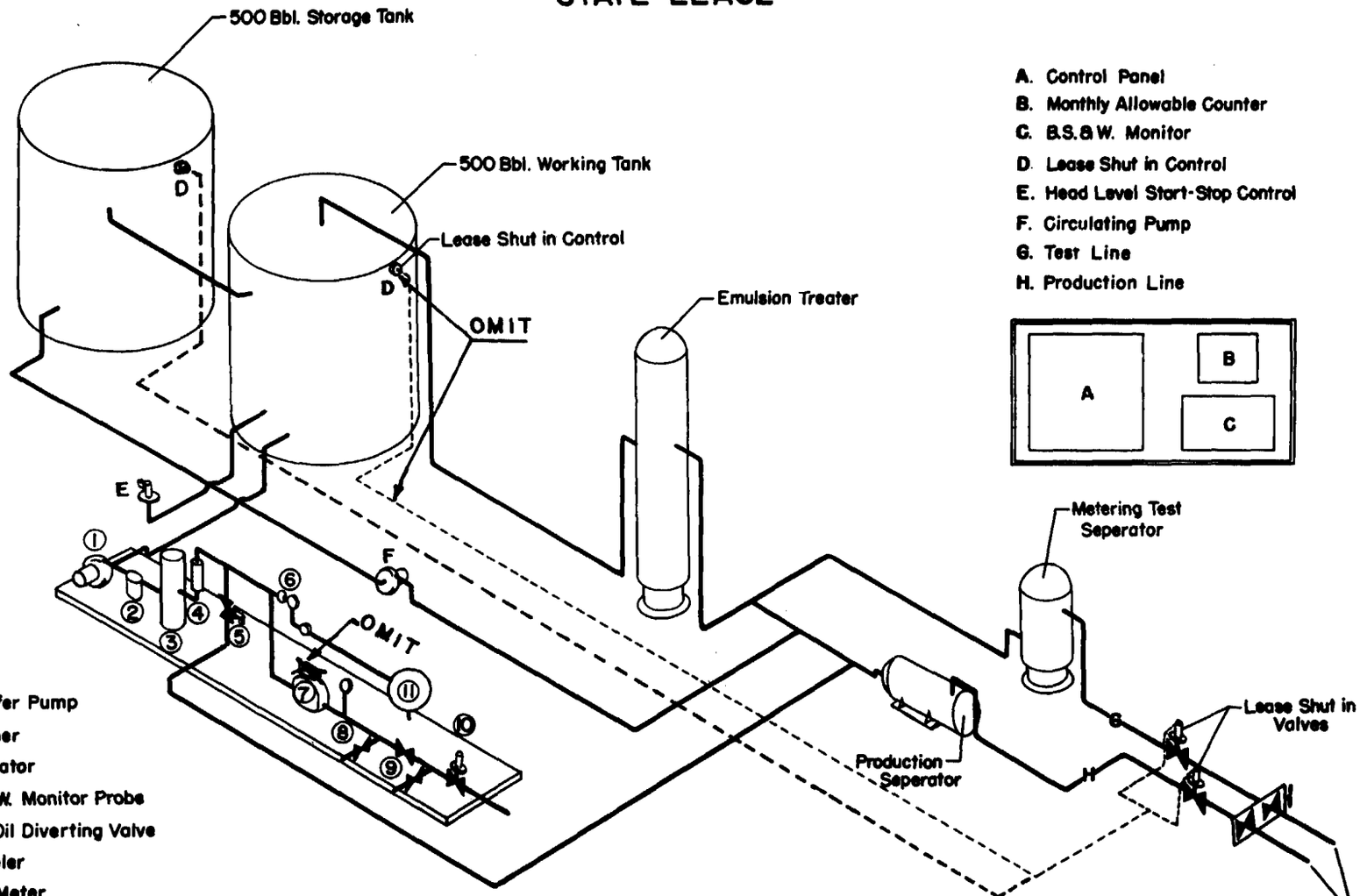
RTS:bt

FORM 401

AMENDMENTS TO EXHIBIT #3, CASE NO. 2212, ORDER # R-1923

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

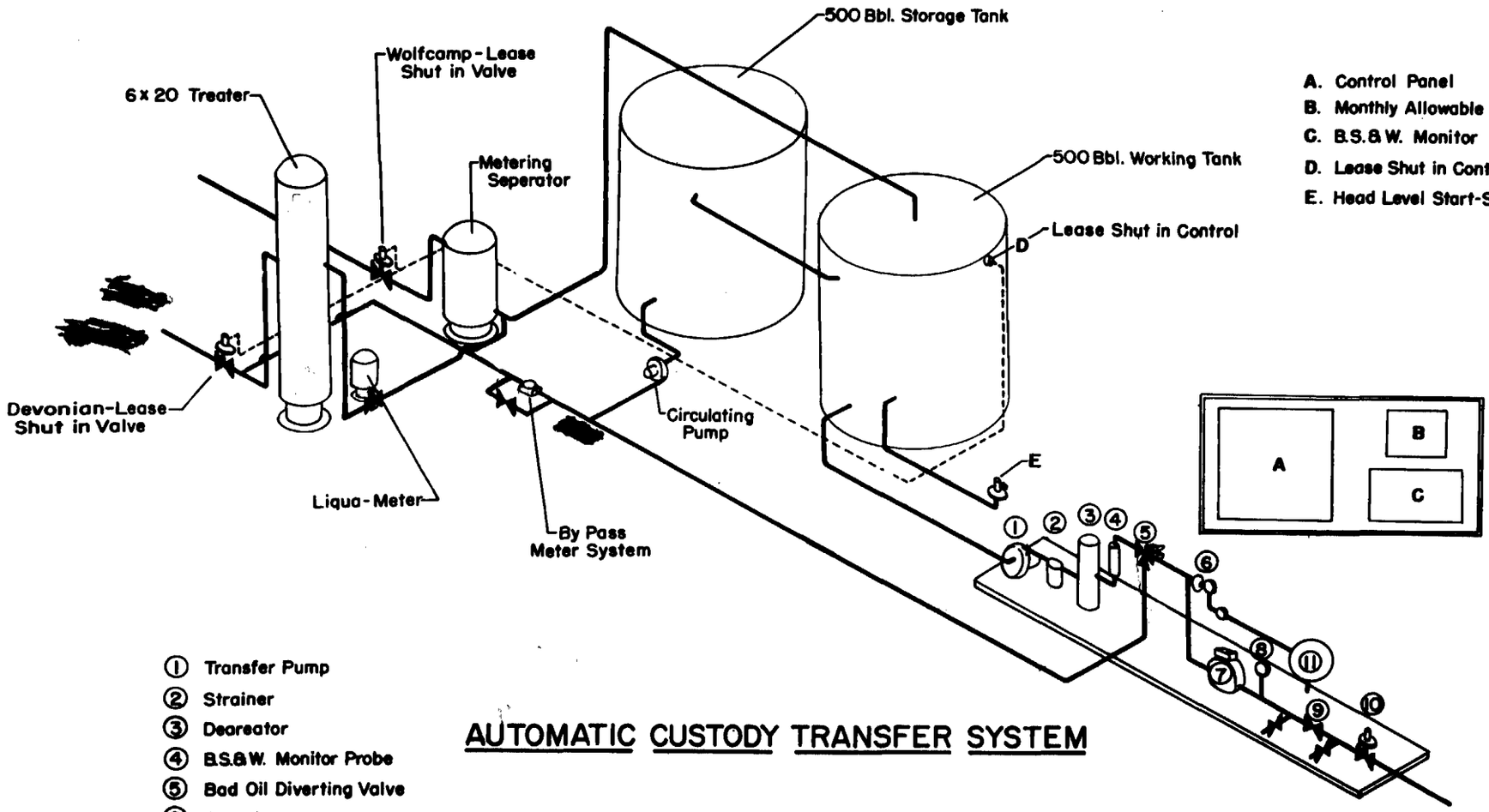


AUTOMATIC CUSTODY TRANSFER SYSTEM

Drawn 1-25-61

* THESE CHANGES WERE APPROVED BY GULF PIPE LINE - TRANSPORTER

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



A. Control Panel
B. Monthly Allowable Counter
C. B.S.& W. Monitor
D. Lease Shut in Control
E. Head Level Start-Stop Control

① Transfer Pump
② Strainer
③ Deareator
④ B.S.&W. Monitor Probe
⑤ Bad Oil Diverting Valve
⑥ Sampler
⑦ P. D. Meter
⑧ Pressure Switch
⑨ Meter Proover Loop
⑩ Good Oil Back Pressure Valve
⑪ Sample Container

——— Oil Lines
------- Electrical Cable

AUTOMATIC CUSTODY TRANSFER SYSTEM

Drawn 1-25-61

0-82

R-31-E

T 15 S

CHAVES COUNTY

LEA COUNTY

R-32-E

R-33-E

BOTTOM BORDER N.W. LEA CO.

Champlin Refg. 10-10-62

PC-22

2 ACRES

Andrew C. Taylor

U.S.A.

E.A. Hanson 4-1-67

State

Humble 5-17-65

Humble 10-18-65

R.W. Fair 8-10-61

T.P.C.&O. 2-10-61

Tenn. Gas 4-21-69

Tenn. Gas 9-16-68

Union 4-19-65

Champlin 9-10-62

Sinclair 3-19-69

T.P.C.&O. 7-10-61

Sinclair 11-67

Champlin 9-10-61

Aztec 8-11-62

Cabot Carbon 9-15-69

Sinclair 10-10-62

Sinclair 9-15-63

Tide Water 5-17-65

Sohio 7-19-65

Cont'l 6-11-61

Gulf 4-19-65

Carper 2-16-70

Texas Co. HBP

Phillips 4-10-61

McAlester 3-10-62

McAlester Fuel 3-10-62

Warren 3-19-67

Ralph Lowe 7-19-65

T.P.C.&O. 10-10-61

Champlin 12-15-63

R. Lowe 7-19-65

Tex-Gulf 3-16-64

Sinclair 9-10-59

(Amerada) "CNA" E14299 TD 5025

Gulf HBP

Sunray Mid-Cont. 6-11-61

Magnolia Dual

Gulf 9-10-58

R. Ryan 3-10-61

Tide Water

Gulf "CLA" "Lea-State"

Sunray-Mid-Cont "76"

Plymouth

Gulf "CR" "Lea-State"

Continental "Unit"

Continental 4-10-60

Cont'l. HBP

W.A. Anderson "Aggie"

Cont'l. 9-W TD 10,250

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Union Oil EXHIBIT NO. 1
CASE NO. 2212

REVISIONS

UNION OIL CO. OF CALIFORNIA
WEST TEXAS DIVISION

ANDERSON RANCH FIELD

(NORTH ANDERSON RANCH PROSPECT)

LEA COUNTY, NEW MEXICO

State Lease

State "A" Lease

FIG. 2
CASE NO. 2167 NEW MEXICO OIL C

PROPOSED GAS UNIT

CHAMBERS & KENNEDY NO. 1 MONUMENT ST.

Top Yates: Int. 25'

T19S R37E

SCALE 1" = 1000'

LEGEND

- EUMONT GAS WELL
- EUMONT OIL
- MONUMENT GRAYBURG-SAN ANDRES OIL

State Lease (Unit)

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 2212

AUTOMATIC CUSTODY TRANSFER SYSTEM FOR STATE LEASE

ANDERSON RANCH FIELD, LEA COUNTY, NEW MEXICO

The automatic custody transfer system for the State Lease, Anderson Ranch Field, operates in accordance with the following description and its attached schematic drawing:

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 diaphragm operated motor 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 14 mesh strainer (2) in order to remove any foreign particles that would damage the meter, to a dearerator (3), to remove any air or entrained gas, and into the BS&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 (B) 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.

The battery will be so wired that in the event of power failure, the good oil back pressure valve (10) fails closed, bad oil valve (5) fails open to direct the oil back to stock, and the two lease shut-in valves (13 and 14) fail closed to shut in the wells.

If the monthly allowable is made or the working tank is full of bad oil, a high level switch (D) located in the working tank will automatically close the lease shut-in valves, thereby shutting in the wells.

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 volumn 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
Union Oil EXHIBIT NO. 4
CASE NO. 2212