

Case No.

3784

Unit Agreement
Active at time
of filming. See
Unit Agreement files.

Case Number

3782

Application
Transcripts.

Small Exhibits

ETC.

ATWOOD & MALONE
LAWYERS

P. O. DRAWER 700
TELEPHONE 505 622-6221
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO
88201

JEFF D. ATWOOD (883-1980)
CHARLES F. MALONE
RUSSELL D. HANN
PAUL A. COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. BAGIN

June 24, 1968

J. K. Smith, Esquire
Division Attorney
Pan American Petroleum Corporation
P. O. Box 1410
Fort Worth, Texas 76101

Re: Pan American Cortland Myers Waterflood Project
Oil Conservation Commission Order No. R-3434
OCC Case No. 3782

Dear Mr. Smith:

We have received the enclosed letter dated June 21, 1968 from the Oil Conservation Commission, signed by Mr. Porter, specifying details of completion of the water injection wells in this project, and discussing allowables. The letter requests that Pan American immediately report any error in the calculated maximum allowable and requests notification when various steps in the project have been taken.

With regards.

Very truly yours,

MAIN OFFICE OF O

'68 JUN 25 AM 8 49

ATWOOD & MALONE

By: 

CFM:bc

Enc.

cc: Mr. A. L. Porter, Jr. ✓

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

June 21, 1968

C
Mr. Charles Malone
Atwood & Malone
Attorneys at Law
Post Office Box 700
Roswell, New Mexico 88201

Dear Sir:

O
Reference is made to Commission Order No. R-3434, recently entered in Case No. 3782, approving the Pan American Cortland Myers Water-flood Project.

P
Injection is to be through the three authorized water injection wells, each of which shall be equipped with a string of two-inch internally plastic-coated tubing set in a packer with the packers to be located within 100 feet of the casing shoe.

The casing-tubing annulus is to be loaded with an inert fluid and left open at the surface or equipped with a pressure gauge to facilitate detection of tubing or packer leaks.

Y
As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 252 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

Mr. Charles Malone
Atwood & Malone
Attorneys at Law
Roswell, New Mexico

June 21, 1968

C
O
P
Y
In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. POSTER, Jr.
Secretary-Director

ALP/DSH/ir

cc: Oil Conservation Commission
Hobbs, New Mexico

U. S. Geological Survey
Post Office Box 1838
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

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. 3782
Order No. R-3434

APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR A WATERFLOOD PROJECT,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 5, 1968,
at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 18th day of June, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Pan American Petroleum Corporation,
seeks permission to institute a waterflood project in its Cort-
land Myers Unit Area, Langlie-Mattix Pool, by the injection of
water into the Seven Rivers and Queen formations through three
injection wells in Units F, J, and P of Section 22, Township 24
South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

(4) That the proposed waterflood project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

-2-

CASE No. 3782
Order No. R-3434

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to institute a waterflood project in its Cortland Myers Unit Area, Langlie-Mattix Pool, by the injection of water into the Seven Rivers and Queen formations through the following-described wells in Section 22, Township 24 South, Range 37 East, NMPM, Lea County, New Mexico:

Cortland Myers "A" Well No. 5, located
in Unit F;

Cortland Myers "A" Well No. 6, located
in Unit J; and

Cortland Myers "A" Well No. 2, located
in Unit P.

(2) That the subject waterflood project is hereby designated the Pan American Cortland Myers Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. WAYS, Member

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

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

June 18, 1968

Mr. Charles Malone
Atwood & Malone
Attorneys at Law
Post Office Box 700
Roswell, New Mexico 88201

Re: Case No. 3782
Order No. R-3434
Applicant:
Pan American Petroleum Corp.

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

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

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
State Engineer x

Other



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

April 29, 1968

RECEIVED	
UNIT SECTION	
FORT WORTH	
MAY 1 1968	
B.A.L.	
I.V.A.	<i>[initials]</i>
R.R.D.	
1968	<i>[initials]</i>
L.L.M.	
E.K.	
M.L.	

Pan American Petroleum Corporation
P. O. Box 1410
Fort Worth, Texas 76101

Attention: Mr. J. W. Austin

Gentlemen:

This office is currently processing your application for final approval of the Cortland Myers unit agreement, Lea County, New Mexico.

Section 20 of the unit agreement requires approval by the New Mexico Oil Conservation Commission. Approval of the Cortland Myers unit agreement by the U. S. Geological Survey can be completed after you file copies of approval by New Mexico Oil Conservation Commission with this office.

Sincerely yours,

Carl C. Traywick
CARL C. TRAYWICK
Acting Oil & Gas Supervisor

"C"

PAN AMERICAN PETROLEUM CORPORATION

OIL AND GAS BUILDING P. O. BOX 1410

FORT WORTH, TEXAS-76101

D. L. RAY
DIVISION ENGINEER

May 14, 1968

Case 3782

File: GHF-249-986.510.1

Subject: Unit Agreement and Waterflood
Project, Cortland Myers Unit
Langlie-Mattix Pool
Lea County, New Mexico

Mr. A. L. Porter (3)
Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

Pan American Petroleum Corporation respectfully requests that a hearing be scheduled to consider our application for approval of a Unit Agreement and to initiate waterflooding operations in the Cortland Myers Unit, Langlie-Mattix Pool, Lea County, New Mexico. Pan American will request approval of the Cortland Myers Unit Agreement covering 240 acres, this acreage being the E/2 SW/4, SE/4 NW/4, W/2 SE/4, SE/4 of the SE/4, Section 22, T24S, R37E, Lea County, New Mexico. We will also request approval to initiate a waterflood project for this unit by conversion to water injection of Cortland Myers Unit Wells 2, 5 and 6 for injection purposes in the Langlie-Mattix Pool.

Attached are a copy of the Unit Agreement, a plat of the project area, schematic diagrams for each injection well, a log on Cortland Myers Unit Well 6, a proposed injector, and a pertinent data sheet for the project area.

Yours very truly,

Original Signed
D. L. RAY
By JVM

DGW:mp
Attachments

DOCKET MAILED

Date 5/23/68

PAN AMERICAN PETROLEUM CORPORATION

OIL AND GAS BUILDING P. O. BOX 1410

FORT WORTH, TEXAS-76101

D. L. RAY
DIVISION ENGINEER

May 14, 1968

Case 3782

File: GHF-249-986.510.1

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Langlie-Mattix Pool
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P. O. Box 871
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Yours very truly,

Original Signed
D. L. RAY
By JVM

DGW:mp
Attachments

DOCKET MAILED

Date 5/23/68

UNIT AGREEMENT
CORTLAND MYERS UNIT
LEA COUNTY, NEW MEXICO

Case 3782

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CORTLAND MYERS UNIT AGREEMENT

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UNIT AGREEMENT
FOR THE OPERATION OF THE
CORTLAND MYERS UNIT
LEA COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, entered into as of the 1st day of March, 1968, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto";

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty or other oil or gas interests in the Unit Area subject to this Agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949, Chapter 65, Art. 3, Sec. 14, N. M. S., 1953 anno) to approve this Agreement, and the conservation provisions hereof; and

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the Cortland Myers Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto, to enable institution and consummation of secondary recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions, and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their entire respective interests in the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, theretofore issued thereunder and valid pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS. The area described by tracts in Exhibit "B" and depicted on Exhibit "A" attached hereto is hereby designated and recognized as constituting the Unit Area containing 240.00 acres, more or less, in Lea County, New Mexico. Said land is described as follows:

<u>T24S-R37E</u>		
Section 22:	E/2 SW/4, SE/4 NW/4, W/2 SE/4, SE/4 SE/4	240.00

For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

(a) "Director" is defined as the Director of the United States Geological Survey.

(b) "Secretary" is defined as the Secretary of the Interior of the United States of America.

(c) "Department" is defined as the Department of the Interior of the United States of America.

(d) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(e) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(f) "Unitized Formation" is defined as the interval within the Unit Area from the top of the Seven Rivers to the base of the Queen formations, being the interval found between the depth of 2730 feet and 3461 feet on the Lane Wells Radioactivity Log run on December 2, 1950, in the Stanolind Oil and Gas Company's South Mattix Unit Well No. 3, located 660 feet from the North line and 1980 feet from the East line of Section 22, Township 24 South, Range 37 East, NMPM.

(g) "Unitized Substances" means all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

(h) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit "B".

(i) "Tract Participation" is defined as that percentage of Unitized Substances produced from the Unitized Formation which is allocated to a Tract under this Agreement.

(j) "Unit Participation" of each Working Interest Owner, is defined as the sum of the percentages obtained by multiplying such Working Interest Owner's fractional Working Interest in each Tract by the Tract Participation of such Tract.

(k) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise held.

(l) "Working Interest Owner" is defined as and shall mean any party here-to owning a Working Interest, including a carried working interest owner, whether by virtue of a lease, operating agreement, fee title or otherwise, whose interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and operating therefor hereunder.

(m) "Royalty Interest" or "Royalty" is defined as an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor by an oil and gas lease and any overriding royalty interest, oil payment interest, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances.

(n) "Royalty Owner" is defined as and shall mean the owner of a Royalty Interest.

(o) "Paying Quantities" is defined as production of Unitized Substances in quantities sufficient to pay for the cost of producing same from wells on the unitized land.

(p) "Tract Cumulative Production" is defined as the barrels of oil produced from the Unitized Formation from a Tract since the date of first production until June 1, 1967.

(q) "Unit Area Cumulative Production" is defined as the sum of Tract Cumulative Production to June 1, 1967, for all Tracts in the Unit Area.

(r) "Tract Current Production" is defined as the barrels of oil produced from the Unitized Formation in a Tract from December 1, 1966, to June 1, 1967.

(s) "Unit Area Current Production" is defined as the sum of Tract Current Production for all Tracts in the Unit Area.

SECTION 3. EXHIBITS. Exhibit "A" attached hereto is a map showing the Unit Area and, to the extent known to the Unit Operator, the boundaries and identity of Tracts and Leases in said Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to the Unit Operator, the acreage comprising each Tract, percentage ownership of each Working Interest Owner in each Tract, and the Royalty Interests in each Tract and the ownership thereof. Exhibit "C" attached hereto is a schedule showing the percentage of participation each Tract has in the Unit Area. Nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or

interests as are shown in said map or schedule as owned by such party.

Exhibits "A", "B", and "C" shall be revised by the Unit Operator whenever changes render such revision necessary, or when requested by the Supervisor; and not less than six copies of such revision shall be filed with the Supervisor.

SECTION 4. UNITIZED LAND AND UNITIZED SUBSTANCES. All oil and gas in and under the land effectively committed to this Agreement within and producible from the Unitized Formation are herein called "Unitized Substances". All land committed to this Agreement as to the Unitized Formation shall constitute land referred to herein as Unitized Land or "Land subject to this Agreement".

SECTION 5. UNIT OPERATOR. Pan American Petroleum Corporation, a Delaware corporation, is hereby designated as Unit Operator, and, by signing this instrument as Unit Operator, it agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 6. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit operations hereunder shall be paid and borne by Pan American Petroleum Corporation. No Unit Operating Agreement has been developed for the Unit Area inasmuch as Pan American Petroleum Corporation is the owner of all Working Interests in the Unitized Land. In the event more than one working interest owner is created, a Unit Operating Agreement will be developed and three copies of the Agreement filed with the Supervisor.

SECTION 7. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. The parties hereto, to the extent they have the right to do so, grant to Unit Operator the use of brine or water, or both, from any formation in and under

the Unit Area for injection into the Unitized Formation. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 8. EASEMENTS OR USE OF SURFACE.

(a) The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest Owner the right to use as much of the surface of the land within the Unit Area as may reasonably be necessary for Unit Operations; provided that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owner a site for a water, gas injection, processing or other plant, or camp site.

(b) Working Interest Owner shall have free use of water from the Unit Area for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner.

(c) Working Interest Owner shall pay the owner for damages to growing crops, timber, fences, improvements, and structures on the Unit Area that result from Unit Operations.

SECTION 9. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances in paying quantities and that the object and purpose of this Agreement is to formulate and to put into effect a secondary recovery project in order to effect the greatest recovery of Unitized Substances, prevent waste and conserve natural resources consistent with good engineering practices expected of a prudent operator. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Supervisor, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil and any one or more other substances whether produced from the Unitized Land or not, and that the location of input wells and the rates of injection therein shall

be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Supervisor monthly injection and production reports for each well in the Unit. The Supervisor shall be furnished periodic reports on the progress of the plan of operation and any revision or changes thereto; provided, however, that any major revisions of the plan of operation involving a basic deviation from the initial plan of operation shall be subject to the consent and approval of the Supervisor.

The initial plan of operation shall be filed with the Supervisor concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operation and all revisions thereof shall be as complete and adequate as the Supervisor may determine to be necessary for timely operation consistent herewith. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for like approval a plan for an additional specified period of operation. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation.

Notwithstanding anything to the contrary herein contained, the Unit Operator shall commence operations for the secondary recovery of Unitized Substances from the Unit Area within six (6) months after the effective date of this Agreement, or any extension thereof approved by the Supervisor. After such operations are commenced, Unit Operator shall carry on such operations as would a reasonably prudent operator under the same or similar circumstances.

SECTION 10. TRACT PARTICIPATION. In Exhibit "C" attached hereto, there are listed and numbered the various tracts within the Unit Area and set forth opposite each Tract is the Tract Participation of each Tract in the Unit Area calculated on the basis of 100 per cent commitment. The Tract Participation of each Tract was determined by the following formula:

Percentage of Tract Participation equals:

$$50\% \times \frac{\text{Tract Current Production}}{\text{Unit Area Current Production}}$$

+

$$50\% \times \frac{\text{Tract Cumulative Production}}{\text{Unit Area Cumulative Production}}$$

SECTION 11. TRACTS QUALIFIED FOR UNIT PARTICIPATION. Qualification of Tracts.

On and after the effective date hereof, the tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be each Tract as to which Working Interest Owner owning one hundred per cent (100%) of the Working Interest has become a party to this Agreement and as to which the record title owners owning one hundred per cent (100%) of the record title have become parties to this agreement. All Tracts shown on Exhibit "B" must participate as provided in Section 11 hereof, or this Agreement shall terminate under the provisions of Section 20.

SECTION 12. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on Unitized Land for drilling, operating, camp, and other production or development purposes and for pressure maintenance or unavoidable loss) shall be apportioned among and allocated to the committed Tracts within the Unitized Land in accordance with the respective Tract Participation effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the then effective schedule of participation in Exhibit "C". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract), shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for to, the parties executing, consenting to, or ratifying this Agreement entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances; and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the joinder of any Tract.

If the Working Interest and the Royalty Interest in any Tract are or become divided with respect to separate parcels or portions of such Tract and owned severally

by different persons, the Tract Participation assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owner and parties entitled thereto by virtue of the ownership of oil and gas rights therein. Each Working Interest Owner and party entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose of Unitized Land, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Subject to Section 13 (ROYALTY SETTLEMENT) hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party responsible for the payment of such expenses.

In the event any party hereto shall fail to take or otherwise adequately dispose of its proportionate share of the Unitized Substances as and when produced, then so long as such conditions continue, Unit Operator, for the account and at the expense of such party, and in order to avoid curtailing the operation of the Unit Area, may sell or otherwise dispose of such production to itself or others on a day-to-day basis at not less than the prevailing market price in the area for like production; and the account of such party shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto. The Working Interest Owner of each Tract shall be responsible for the payment of all Royalty on or affecting such Tract.

SECTION 13. ROYALTY SETTLEMENT. The United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the Unitized Substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract; and the Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts on or before the last day of each month

for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this Unit Agreement.

If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation, for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan approved pursuant to Section 9 (PLAN OF OPERATIONS), a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, Royalty free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor; and provided, further, that such right of withdrawal shall terminate as of the effective date of termination of the Unit Agreement.

All Royalty due the United States of America and the other Royalty Owners hereunder shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to Unitized Federal Land as provided herein at the rates specified in the respective Federal leases, or at such lower rate or rates as may be authorized by law or regulation; provided that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulations as though the Unitized Land were a single consolidated lease.

Each Royalty Owner (other than the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a Tract or Tracts within the Unit Area as its interest appears in Exhibit "3" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interest of all parties in the affected Tracts or Tracts shall be adjusted accordingly.

Notwithstanding anything to the contrary, this Unit Agreement shall not serve to extend the period of time that a royalty rate of 5 per cent shall be applicable to any Federal lease. In the event that this agreement extends the term of a Federal lease which is now subject to a 5 per cent royalty rate, that lease shall then become subject to the same royalty rate as would be applicable to a renewal lease.

SECTION 14. RENTAL SETTLEMENT. Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owner responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof, due under their leases. Rental or minimum royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 15. CONSERVATION. Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 16. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this Agreement.

SECTION 17. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary shall, by his approval hereof, or by the approval hereof by his duly authorized representatives, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and

contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part of separately owned tract subject to this Agreement, regardless of whether there is any development of any particular part or Tract of the Unit Area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing or secondary recovery operations performed hereunder upon any Tract of Unitized Lands shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land; and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all Unitized Land pursuant to direction or consent of the Supervisor or his duly authorized representative shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Land.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas, which by its terms might expire prior to the termination of this Agreement, is hereby extended beyond any such term so provided therein, subject to the royalty provisions of Section 13, Royalty Settlement, so that it shall be continued in full force and effect for and during the term of this Agreement.

(e) Termination of this Agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws, shall continue in force and effect thereafter.

(f) The segregation of any Federal lease committed to this Agreement is governed by the following provisions in the fourth paragraph of Sec. 17 (j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, That any such lease as to the non-unitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 18. MATHEMATICAL ERRORS. It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which might exist in the pertinent exhibits to this Agreement and file such changes with the Supervisor.

SECTION 19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working

Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 20. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executed or ratified it as of the date of execution or ratification by such party and shall become effective as of 7 a.m. on the first day of the month next following:

(a) The execution or ratification of this agreement by the Working Interest Owners owning one hundred per cent (100%) of the Unit Participation and the execution or ratification of this agreement by the owners of one hundred per cent (100%) of the record to the interest.

(b) The approval of this Agreement by the Director, and the Commission.

(c) If (a) and (b) above are not accomplished on or before July 1, 1968, this Agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto 100% of the Working Interest Owners have become parties to this Agreement and have decided to extend the expiration date for a period not to exceed six (6) months. If the expiration date is so extended and requirements of Section 20(a) are not accomplished on or before the extended expiration date, this Agreement shall ipso facto terminate on the extended expiration date and thereafter be of no further effect.

(d) Unit Operator shall, within thirty (30) days after the effective date of this Agreement, file for record with the Supervisor in the offices where a counterpart of this Agreement is recorded, a certificate to the effect that this Agreement has become effective according to its terms and stating further the effective date.

(e) At least one counterpart of this Agreement is to be filed for record in the office of the county clerk of Lea County, New Mexico, by the Unit Operator.

The term of this Agreement shall be for and during the time that Unitized Substances are, or can be, produced in paying quantities from the Unitized Land and as long thereafter as drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, and so long thereafter as Unitized Substances can be produced as aforesaid, unless sooner terminated in the manner hereinafter provided.

This Agreement may be terminated at any time for any reason with the approval of the Director. Notice of any such termination shall be given by Unit Operator to all parties hereto.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate tracts.

If not otherwise covered by the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after

termination of this Agreement in which to salvage, sell, distribute or otherwise-wise dispose of the personal property and facilities used in connection with Unit operations.

SECTION 21. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The Director is hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and within the limits made or fixed by the Commission to alter or modify the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

Powers in this Section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice.

SECTION 22. NON-DISCRIMINATION. In connection with the performance of work under this Agreement, Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive, of Executive Order 11246, as amended (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 23. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Department and the Commission, and to appeal from any order issued under the rules and regulations or in any proceedings relative to operations before the Department or the Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 24. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by post-paid certified mail, addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 25. NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said Unitized Lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

Each party hereto covenants that, during the existence of this Agreement, it will not resort to any action to partition the Unit Area or the Unit Equipment and to that extent waives the benefits of all laws authorizing such partition.

SECTION 26. EQUIPMENT AND FACILITIES - FIXTURES ATTACHED TO REALTY.

Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment and facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unit Area as now or hereafter constituted. Therefore, for all purposes of this Agreement, any and all such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and it is agreed that any and all such equipment and personal property shall be and remain personal property of Working Interest Owner for all purposes.

SECTION 27. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this Agreement shall be suspended while, but only so long as, the Unit Operator, despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator, whether similar to matters herein enumerated or not.

SECTION 28. LOSS OF TITLE. In the event title to the Working Interest in any Tract of Unitized Land shall fail so as to render the Tract inoperable under this Agreement and the true owner cannot be induced to join this Unit Agreement,

such Tract shall be automatically regarded as not committed hereto effective as of 7:00 A.M. on the first day after such title failure is determined; and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any Royalty, Working Interest or other interest subject thereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided that, as to Federal land or leases, no payments of funds due the United States of America shall be withheld, but such funds shall be deposited as directed by the Supervisor (as the case may be), to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 29. SUBSEQUENT JOINDER. Any oil or gas interest in the Unitized Formation underlying the Unit Area not committed hereto prior to submission of this Agreement to the Director for final approval may be committed hereto, at any time up to the effective date hereof, on the same basis of participation as provided in Section 10. From and after the effective date hereof, the right of subsequent joinder shall be upon such terms as may be negotiated by Working Interest Owners and the owner of such oil or gas interest. Except as may be otherwise herein provided, subsequent joiners shall be effective as of 7:00 A.M. on the first day of the month following the filing with the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of the interest to this Agreement.

SECTION 30. OIL IN LEASE TANKAGE ON EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all lease and other tanks on Unitized Land in order to ascertain the amount of merchantable oil above the pipeline connection in such tanks as of 7:00 A.M. on the effective date hereof. All such oil which has then been produced legally shall be and remain the property of the Working Interest Owner entitled thereto the same as if the Unit had not been formed; and such Working Interest Owner shall promptly remove said oil from the Unitized Land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owner, subject to the payment of all Royalty to Royalty Owners under the terms and provisions of the Unit Agreement and any applicable lease or leases and other contracts.

SECTION 31. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that the Unit Operator or the Working Interest Owner must pay or advance said taxes for the account of the parties hereto it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 32. NO PARTNERSHIP. It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, express or implied, or any operations conducted hereunder, shall create or be deemed to have created a partnership or association between the parties hereto or any of them.

SECTION 33. BORDER AGREEMENTS. Subject to the approval of the Supervisor, the Unit Operator may enter into a border-protection agreement or agreements with the Working Interest Owners of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 34. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above-described Unit Area.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and have set opposite their respective names the date of execution.

DATE: _____

ATTEST:

PAN AMERICAN PETROLEUM CORPORATION

By: _____
Attorney-in-Fact

Secretary

THE STATE OF TEXAS

COUNTY OF TARRANT

The foregoing instrument was acknowledged before me this _____ day of

_____, 1968, by _____

Attorney-in-Fact of PAN AMERICAN PETROLEUM CORPORATION, a Delaware Corporation, on
behalf of said corporation.

NOTARY PUBLIC
TARRANT County, TEXAS

My Commission Expires:

EXHIBIT "B"
CORTLAND MYERS UNIT AGREEMENT

TRACT PARTICIPATION	OVERLAPPING ROYALTY OWNERSHIP	WORKING INT. OWNER AND PERCENTAGE	RECORD LESSEE	BASIC ROYALTY	SERIAL NO. & EXPIRATION DATE	NO. OF ACRES	DESCRIPTION OF LAND	TR. NO.
22.66139%	Firm Royalties, Inc.	Pan Ameri- Pan American can Petro- Petroleum Corporation 100%	Pan Ameri- leum Corporation	USA - 5%	LC-032450 HBP	120.00	SE/4 NW/4, NW/4 SE/4, SE/4 SE/4, Section 22, T24S, R37E	1
77.33861%	Firm Royalties, Inc. Anne Hughes Myers	Pan Ameri- Pan American can Petro- Petroleum Corporation 100%	Pan Ameri- leum Corporation	USA (See Below)	LC-036249 HBP	120.00	E/2 SW/4, SW/4 SE/4, Section 22, T24S, R37E	2

Two Federal Tracts containing 240.00 acres, or 100% of Unit Area

Basic Royalty in Tract No. 2
When the average production for the calendar month in barrels per well per day is:

Over	Not Over	Royalty Rate
-	110	12.5%
110	130	18.0
130	150	19.0
150	200	20.0
200	250	21.0
250	300	22.0
300	350	23.0
350	400	24.0
400	-	25.0

Gas, helium, or liquid products obtained from gas:
When average gas production per well per day for calendar month does not exceed 5000 MCF, royalty rate is 12.5%.
When average gas production per well per day for calendar month exceeds 5000 MCF, royalty rate is 16-2/3%.
When average gas production per well per day for calendar month exceeds 5000 MCF, royalty rate is 16-2/3%.

R-37-E

50. MATTIX UNIT
(PAN AM.)

LANGLIE MATTIX
UNIT NO. 1
(SHELL)

Plains Knight
GULF

U.S.A. Cortland Myers
PAN AMERICAN

J.A.E. Knight
BUCKLES

•3 Jamison
BUCKLES

pt. ①

pt. ①

pt. ①

⑪

⑤

③

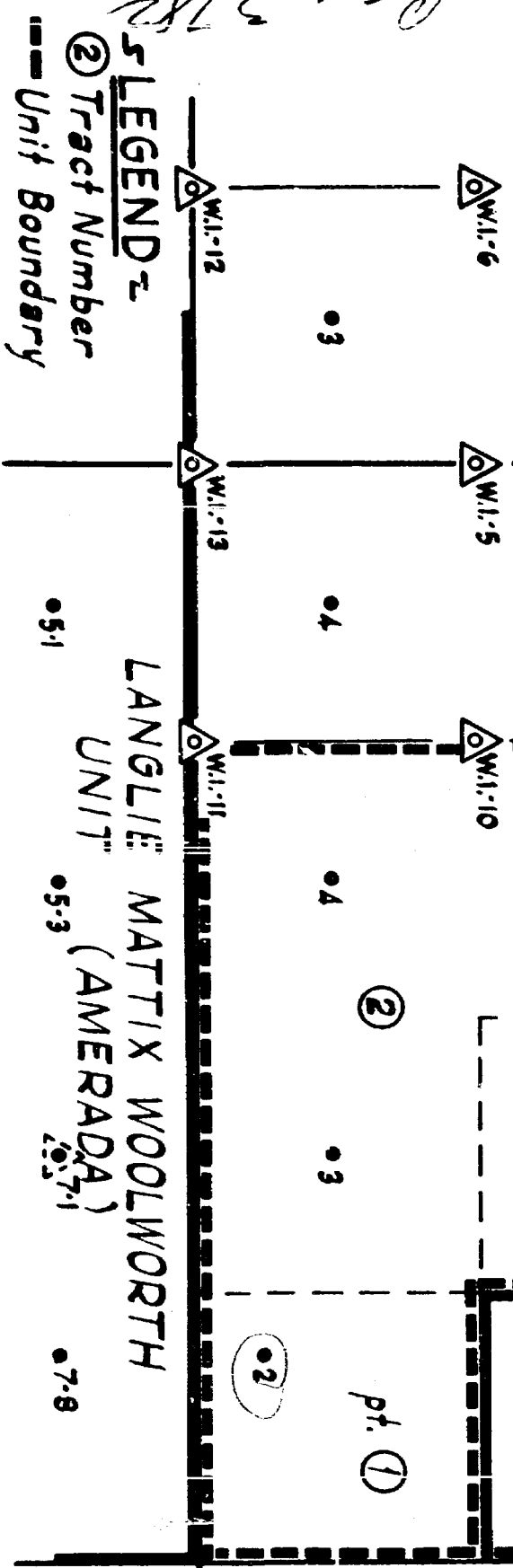
•6

•4

*1

•14

T
24
S



-EXHIBIT A-
CORTLAND MYERS UNIT
LEA CO, NEW MEXICO



LEGEND
② Tract Number
--- Unit Boundary

LANGLIE MATTIX WOOLWORTH
UNIT (AMERADA)

•5.1

•5.3

•7.1

•7.8

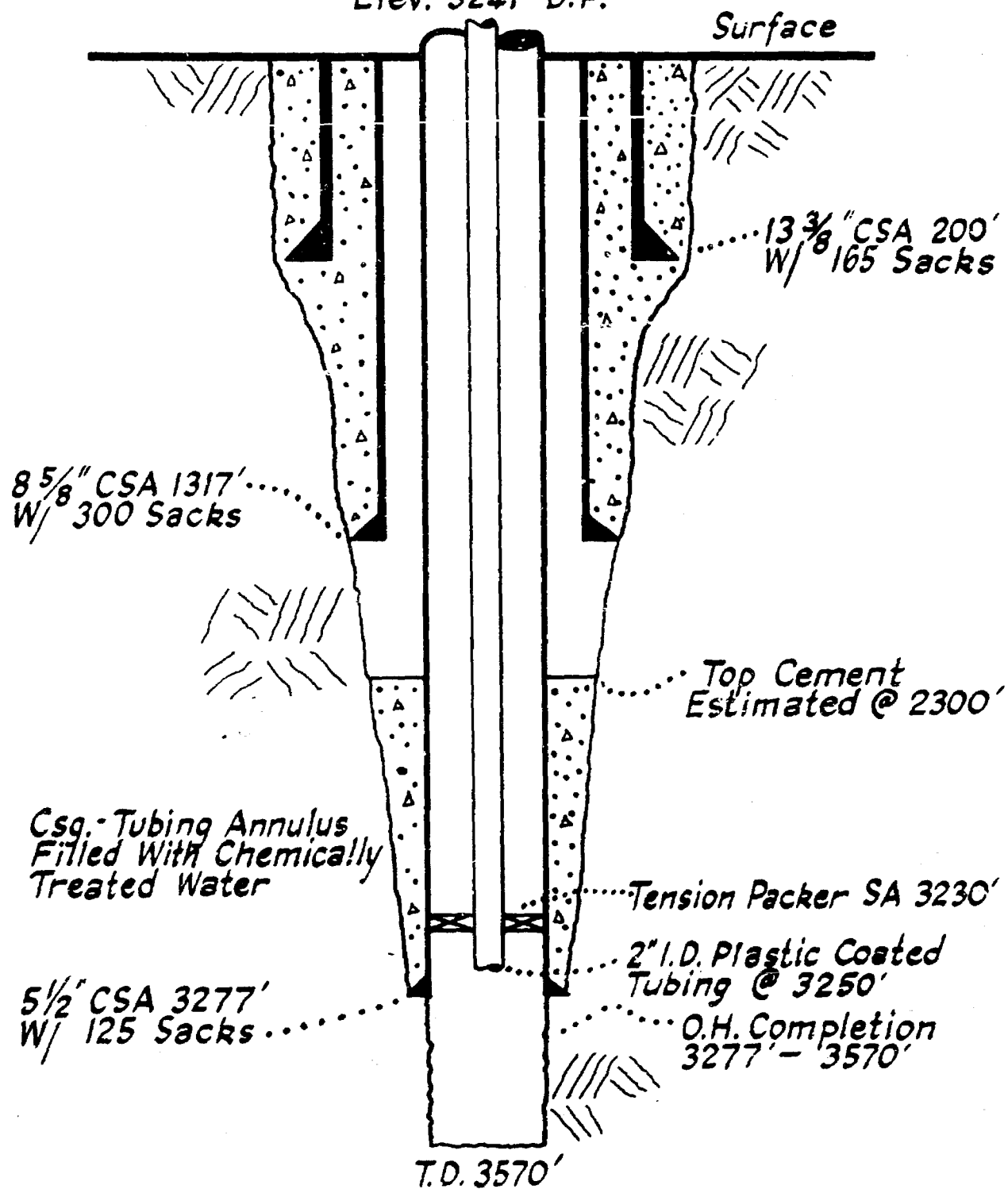
See 2782

EXHIBIT "C"
CORTLAND MYERS UNIT AGREEMENT

<u>TRACT NO.</u>	<u>WORKING INTEREST OWNER</u>	<u>WI IN TRACT 7</u>	<u>TRACT PARTICIPATION</u>
1	Pan American Petroleum Corporation	100	22.56139%
2	Pan American Petroleum Corporation	100	<u>77.33861%</u>
TOTAL			100.00000%

~ proposed ~
INJECTION WELL
CORTLAND MYERS "A"
WELL No. 2

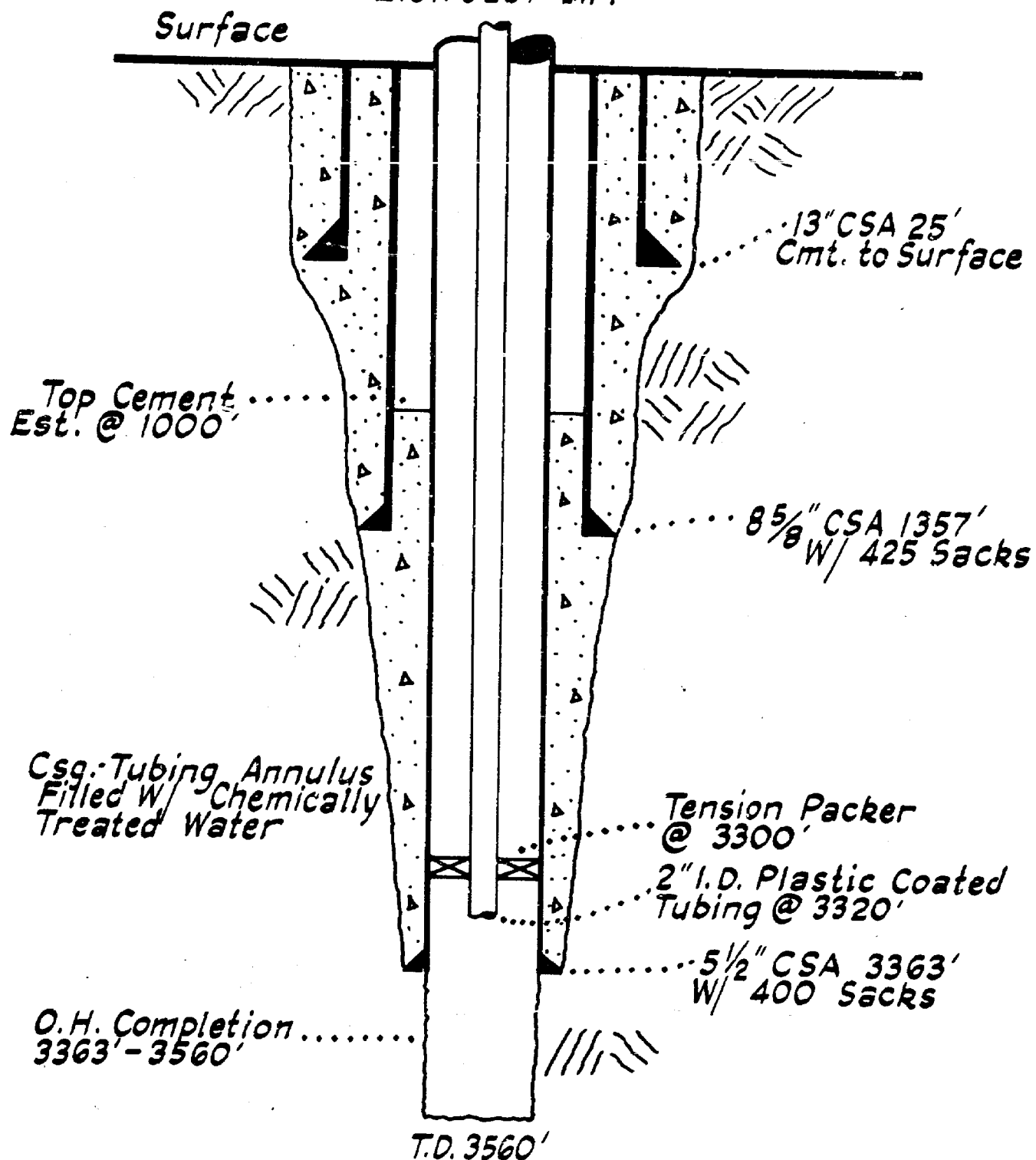
Unit P, Section 22, T-24-S, R-37-E
Lea County, New Mex.
Elev. 3241' D.F.



Case 3782

~ proposed ~
INJECTION WELL
CORTLAND MYERS "A"
WELL No. 5

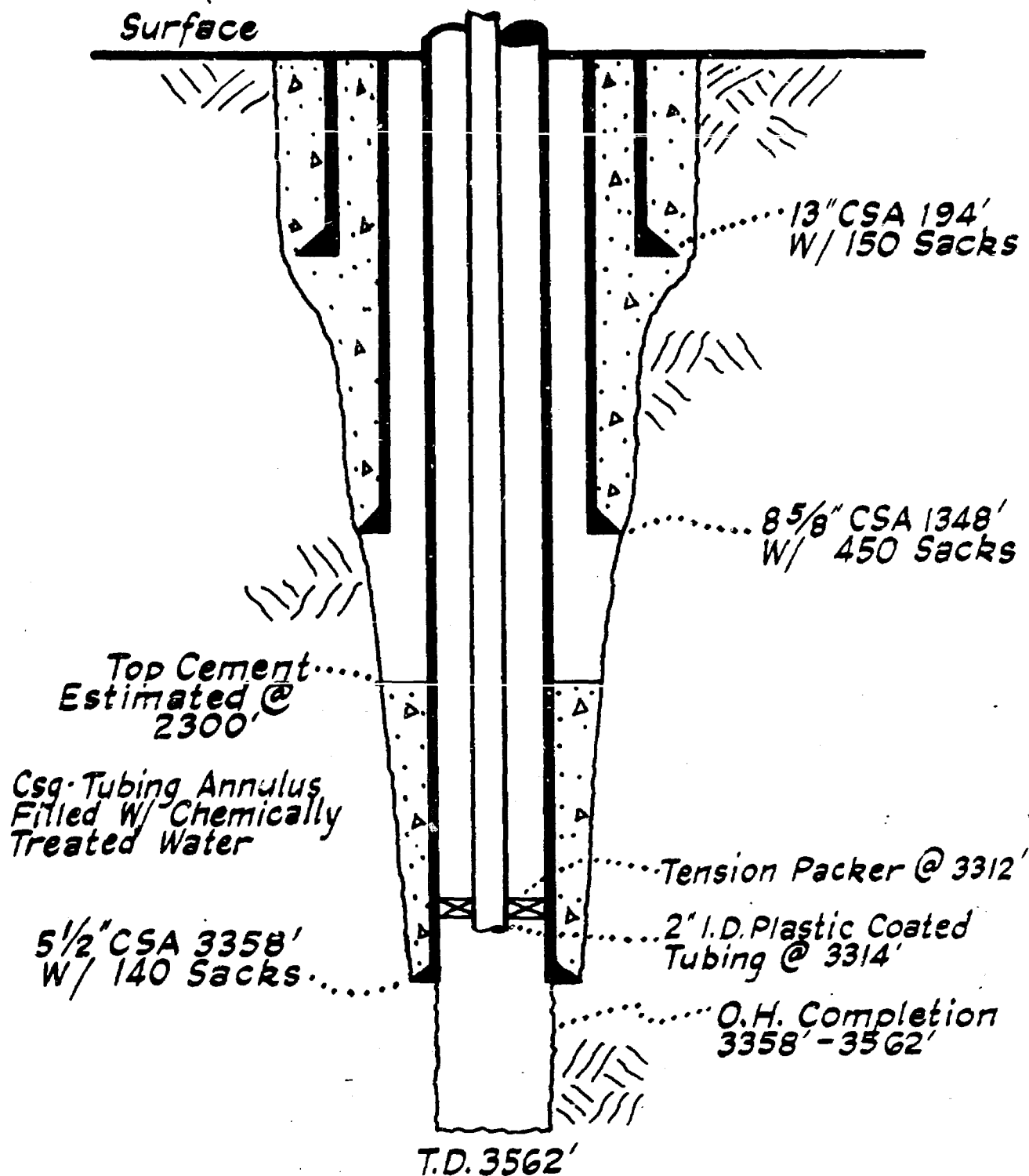
Unit F, Section 22, T-24-S, R-37-E
 Lea County, New Mex.
 Elev. 3267' D.F.



Case 3782

~ proposed ~
INJECTION WELL
CORTLAND MYERS "A"
WELL NO. 6

Unit J, Section 22, T-24-S, R-37-E
 Lea County, New Mex.
 Elev. 3258' D.F.



dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 5, 1968

EXAMINER HEARING

IN THE MATTER OF:)

Application of Pan American
Petroleum Corporation for a
waterflood project, Lea County,
New Mexico.)

Case No. 3782

Application of Pan American
Petroleum Corporation for a
unit agreement, Lea County,
New Mexico.)

Case No. 3783

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call next Case 3782.

MR. HATCH: Case 3782. Application of Pan American Petroleum Corporation for a waterflood project, Lea County, New Mexico.

MR. MALONE: May it please the Commission, Charles Malone of Atwood and Malone, Roswell. We have two witnesses and seven exhibits, and I am wondering whether in order to save the time of the Commission it might be possible to consolidate for purposes of this hearing Cases 3782 and 3783.

MR. NUTTER: We will call next Case 3783.

MR. HATCH: Case 3783. Application of Pan American Petroleum Corporation for a unit agreement, Lea County, New Mexico.

MR. NUTTER: Case 3782 will be consolidated with Case 3783 for purposes of testimony.

(Witnesses sworn.)

(Whereupon, Exhibits A through C were marked for identification.)

J. W. AUSTIN

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MALONE:

Q Would you please give us your name and address?

A My name is J. W. Austin, I am a staff engineer with Pan American Petroleum Corporation in the Fort Worth, Texas Office.

Q How long have you been with Pan American, Mr. Austin?

A I have been employed by Pan American for twenty-two years.

Q Does the jurisdiction of the Fort Worth Office of Pan American include the area in question in this application?

A Yes, sir, it does.

Q Are you personally familiar with the matters dealt with in the two applications which have been consolidated here for hearing?

A I am.

Q Very briefly, what does Pan American seek by its applications?

A In this application 3783, Pan American seeks the approval of a Unit Agreement for the Cortland Myers Unit area. This unit is proposed for secondary recovery process by means of waterflooding.

Q And 3782 is the request or application for permits for that flood, is that correct?

A That is correct, and testimony for this will be

presented by another witness.

Q Would you go now to what was marked Exhibit A and describe what it depicts, please?

A Exhibit A is a map of the proposed Cortland Myers Unit. This outlines an area of some 240 acres, more or less, composed of two Federal leases. This acreage is all located in Section 22, Township 24 South, Range 37 East. This area includes a total of six wells, all of which are completed in the Langlie-Mattix Pool.

Q What formation is producing in that pool, please?

A In this pool, this is in the Seven Rivers-Queen formation.

Q What is the status of production of those six wells shown on the proposed unit area?

A These six wells are approximately thirty years old, and as such, are producing at the rate of some four barrels a day or less, each, and are now in a stripper stage of production.

Q Does Exhibit A show the injection wells or just the old producing wells?

A Within the proposed unit area it shows only producing wells. There are some injection wells shown to the east of this area and some to the west, in another exhibit to

be presented later we will show this in more detail.

Q What is the type of production which is now being obtained in the areas which surround this proposed unit? Do we have primary or secondary production in those areas?

A In general, to the west this is under secondary type operations, this is the J. E. Knight lease operated by Buckles, in which they have instituted a secondary recovery program which has been under way for some time. Earlier testimony in another case by Amerada proposed an injection well for the south for cooperative program there.

Q Is there anything else with respect to Exhibit A?

A Well, under these particular conditions of the stage of these wells, this application, of course, has been submitted for this unit to permit the secondary recovery operation so we can prevent economic waste and obtain additional recovery from this area.

Q Is it the belief of Pan American, then, and as of yourself as a witness, that additional oil would be recovered if this application were granted and the project carried out as to compared to what would be recovered solely under primary methods?

A Yes, sir. We believe that additional oil can be recovered by this. Due to the surrounding injection programs,

which indicates that such a program will be successful, we think it would also be here.

Q Would you go now to Exhibit B and state briefly what that is?

A Exhibit B is a Unit Agreement for this proposed project.

Q What type of form have you used for that?

A This particular agreement is patterned after the standard Federal form of the Unit Agreement. Now, this particular instrument has been modified to the extent necessary to make it applicable only to a single working interest owner since Pan American owns all the working interest involved in this entire unit area.

Q And all of the acreage is Federal?

A All of the acreage is Federal. There are two Federal leases.

Q Do you have a unit operating agreement?

A Since Pan American owns all of the working interest in this particular area, there is no working agreement for this project. Provision has been made in this instrument that an operating agreement would be developed in the event that more than one working interest owner becomes involved.

Q Is this Unit Agreement shown in Exhibit B the form

generally used by Pan American in New Mexico for this type project and has it been approved by the Oil Conservation Commission in the past?

A It is, yes.

Q What about the question of approval by the United States Geological Survey?

A This approval by the United States Geological Survey in that they own the entire royalty interest, has not been granted at this particular time. Exhibit C has been presented to the Commission. It is a letter from the United States Geological Survey in which they have indicated that they will grant their approval following approval of the project by the New Mexico Conservation Commission. Pan American, of course, has approved it. There are two overriding royalty interest owners, both of which have ratified this agreement and upon receiving approval of the Commission subsequently by the United States Geological Survey, it will be a one hundred percent signed unit.

Q Is there anything further with respect to these exhibits or the project that you wish to offer, Mr. Austin?

A No, sir. I believe this would cover this particular phase of this project.

MR. MALONE: That completes our direct examination.

MR. NUTTER: Are there any questions of Mr. Austin?
He may be excused.

(Witness excused.)

DAVID G. WIGHT

called as a witness, having been first duly sworn, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. MALONE:

Q Could you give us your name and address, please?

A David George Wight. I'm employed by Pan American
Petroleum Corporation as a petroleum engineer in their Fort
Worth Division Office.

Q Have you previously testified before this Commission
and had your qualifications in this field accepted?

A Yes, sir, I have.

Q What is your college and degree?

A I went to Texas Technological College and received
a petroleum engineering degree.

MR. MALONE: Are the qualifications of the witness
satisfactory?

MR. NUTTER: Yes.

Q (By Mr. Malone) Would you go now to what is being
marked as Exhibit D, and after it has been marked, discuss it,
please?

(Whereupon, Exhibits D, E, F
& G were marked for
identification.)

Q Go ahead, please.

A Our Exhibit D is a plat showing wells completed within a two-mile radius of our proposed Cortland Myers waterflood. Briefly in explanation of the plat, itself, in the lower left-hand corner there's a legend; this will show you the nomenclature used to describe each producer, the numbers indicate the intervals that they produce from, various symbols indicate oil producers or the status of the well at the current time.

Looking a little bit toward the center we'll see that the various formations producing in this area are numbered. The one with which we are concerned here today is Number 2, which is the Seven Rivers and Queen. This is known as the Langlie-Mattix Pool.

Our unit area of 240 acres is outlined in a red and white dashed tape surrounding this unit area to the north, excuse me, to the south, and to the west are current injection wells in the Langlie-Mattix Pool. To the east of our unit area and to the north there aren't Langlie-Mattix Pool producers. Just to the south, as previously discussed, there's a current waterflood that just has recently been

expanded, it's Amerada Langlie-Mattix Woolworth Unit. We are cooperating with them and are participating in this injection well that they are drilling or have drilled along the boundary of our proposed unit.

To the west are some additional injection wells. These are operated by Buckles and on his Knight lease. They are along our unit boundary also and they will be in cooperation with our injection. On our lease we show the three proposed injection wells, Wells 2, 5 and 6. These are located in Units F, J and P of Section 22.

Q Are these injection wells the old wells to be converted or will they be new wells?

A They are the old wells that are currently in the stripper state of production.

Q Is the method which you propose to use in flooding these Seven Rivers and Queen similar to or the same as that which is being used in adjacent areas?

A Yes, sir, it is. We are continuing the pattern that has been established in this area of the pool. We are also cooperating with our offset operators. Offset operators have seen beneficial response to water injection in this area and for that reason we desire to initiate it on our own lease.

Q Is there anything else you wish to mention on this

exhibit?

A No, sir.

Q Would you go, then, to Exhibit E and describe what it reflects?

A Exhibit E is a log of the proposed injection well Number 6. This is the only log that we have on the three proposed injection wells.

Q Logs are simply not available on the other two injection wells, is that correct?

A Yes, sir, that is correct.

Q Would you go now to Exhibit F and describe it, please?

A Exhibit F consists of three parts, it's a diagrammatic sketch on each individual proposed injection well; basically they're very similar. The pertinent data contained on them shows that intermediate string of casing was set, it is 8-5/8ths casing in each well, they were set to about 1300 feet with cement circulated to the surface. This is adequate to protect all fresh water sands in the area.

Then an oil string was run to about 3200 to 3250 feet and set with sufficient cement to bring it up to about twenty-two to twenty-three hundred feet. In one case we put sufficient cement in the well to bring it back up into the

intermediate string. All three wells are open hole completions in the Langlie-Mattix, Seven Rivers and Queen formation. They are completed to a T.D. of about 3550 feet. The proposed injection equipment is to be two-inch I.D. tubing, internally coated with plastic, a plastic-coated tension packer, and an annulus filled with inhibited water to prevent any corrosion between the tubing and casing.

Q Is the description you have just given applicable to each of the three wells with minor variations?

A Yes, it is.

Q Would you go, then, to Exhibit G and describe what it reflects?

A Our Exhibit G has two portions of pertinent information, the first being the injection interval, which is the Seven Rivers and Queen, in the Langlie-Mattix Pool the depth, 3277 to 3570 feet. Then we list the type of fluid to be injected, it's non-potable water obtained from the Seven Rivers formation and the Capitan Reef. The volume, 500 barrels per day per well or a total of 1500 barrels for the project area. We are obtaining this water from the Jal Water System, which is operated by Skelly. We have an executed contract with them for purchase of the water.

Q Mr. Wight, in your opinion would the granting

of this application tend to prevent the waste of secondary oil which would not otherwise be recovered?

A Yes, sir, it would.

Q In your opinion are the correlative rights of offset operators protected by the method which you propose?

A Yes. As I pointed out, we have entered into cooperative agreements to protect all the offset operators.

Q Pan American is a working interest owner in the Amerada operated unit to the south of this acreage, is it not?

A Yes, it is.

Q Were these exhibits prepared by you or under your direct supervision, referring to Exhibits D through G?

A Yes, sir, they were.

MR. MALONE: We offer Exhibits D through G.

MR. NUTTER: Pan Am's Exhibits D through G will be admitted in evidence.

(Whereupon, Exhibits D through G were offered and admitted in evidence.)

MR. MALONE: May I now ask the previous witness, Mr. Austin, if the Exhibits A through C were prepared by him or under his supervision?

MR. AUSTIN: Exhibits A and B were. Exhibit C is a letter that I did not prepare.

MR. MALONE: We offer Exhibits A through C.

MR. NUTTER: Exhibits A through C will be admitted in evidence.

(Whereupon, Exhibits A through C were offered and admitted in evidence.)

Q (By Mr. Malone) Do you have anything further to offer on this, Mr. Wight?

A No, I don't.

MR. MALONE: That completes our direct examination.

CROSS EXAMINATION

BY MR. NUTTER:

Q You didn't mention the current rate of production, I think Mr. Austin did, about four barrels of oil a day or less?

A Yes, this is correct, four barrels or less, some of them down to one barrel a day.

Q The Exhibit A shows it being a gas well. Is it a gas well or an oil well or a dual completion?

A It is a gas well but it is completed in the Langlie-Mattix Pool; a Seven Rivers-Queen producer, it did produce oil for a time before the gas-oil ratio made it a gas well.

Q You anticipate that this GOR will go down on the injection of water?

A This well, itself, is to be an injector. We feel

there is sufficient oil to where we can form an oil bank and sweep it into on the interior of our lease with this waterflood project.

Q You are taking a line of wells on the northeast flank of your unit and proposing to inject water, or move an oil bank southwest from that line of wells?

A Yes, sir, and then the remainder of the unit already has wells, or approved wells, which will move it into the wells from the other direction.

Q What has been the cumulative production from this lease, or these leases?

A Approximately 200,000 barrels.

Q Do you have an estimate on what the secondary recovery will be?

A We anticipate secondary recovery of about the same amount.

Q One to one. In each of these you have intermediate casing, Mr. Wight, set in the neighborhood of 1300 feet. Does this protect the waters that are present in the Santa Rosa formation?

A Yes, sir, it does.

Q You will equip each well with a packer and tubing and the tubing will be plastic-coated and the annulus have an

inhibited fluid?

A Yes.

Q Will the annulus be left open?

A It will probably be left open or we will close it in and put a gauge on it.

MR. NUTTER: Does anyone have anything further of Mr. Wight?

A Looking at this map, I would like to revise one thing. In adding up the cumulatives, it looks like our cumulative is on the order of 300,000, so we're looking at about a .4 to one on our secondary to primary ratio.

Q (By Mr. Nutter) You are expecting 200,000?

A 200,000 is our engineering estimate of secondary reserves. I was wrong previously on the primary, it looks like it's around 500,000. So that would give us a .4 to one anticipated secondary to primary ratio.

MR. NUTTER: Any other questions of Mr. Wight? He may be excused.

(Witness excused.)

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

MR. MALONE: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Cases 3782 and 3783? We will take the cases under advisement.

I N D E X

<u>WITNESS</u>		<u>PAGE</u>
J. W. AUSTIN		
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DAVID G. WIGHT		
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<u>EXHIBIT</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Exhibits A, B, C	2	14
Exhibits D, E, F, G	9	13

STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.


Witness my Hand and Seal this 9th day of July, 1968.


 NOTARY PUBLIC

My Commission Expires:

June 19, 1971.

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. **3782-3783**
 noted by me on **6/5**, 19**68**.


 New Mexico Oil Conservation Commission

R-37-E

JAMISON
BUCKLES

•3

W.I.-5

W.I.-6

•2

W.I.-7

•1

W.I.-8

J.A.E. Knight
BUCKLES

•1

•2

W.I.-6

W.I.-5

•3

•4

W.I.-12

W.I.-13

•5-1

SO. MATTIX UNIT
(PAN AM.)

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Accepted EXHIBIT NO. *5782-5783*
CASE NO. *5782-5783*

pt. ①

②

22

W.I.-9

U.S.A. Cortland Myers
PAN AMERICAN

•1-A

pt. ①

②

②

•3

•4

W.I.-10

W.I.-11

pt. ①

LANGLIE MATTIX WOOLWORTH
(AMERADA)

•7-1

•5-3

•7-8

LEGEND
② Tract Number
--- Unit Boundary

△3

•4

LANGLIE MATTIX
UNIT NO. 1
(SHELL)

△5

•6

△11

Plains-Knight
GULF

*1

•14

--EXHIBIT A--
CORTLAND MYERS UNIT
LEA CO, NEW MEXICO

0 1000' 2000'

T
24
S

Quarry
1 (Quarry on surface)
4 (BOPD on surface)

UNIT AGREEMENT

CORTLAND MYERS UNIT

LEA COUNTY, NEW MEXICO

BEFORE EXAMINER NUTTER
C. R. CONSERVATION COMMISSION
App EXHIBIT NO. 13
CASE NO. 3782-3783

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UNIT AGREEMENT
FOR THE OPERATION OF THE
CORTLAND MYERS UNIT
LEA COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, entered into as of the 1st day of March, 1968, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto";

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty or other oil or gas interests in the Unit Area subject to this Agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949, Chapter 65, Art. 3, Sec. 14, N. M. S., 1953 anno) to approve this Agreement, and the conservation provisions hereof; and

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the Cortland Myers Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto, to enable institution and consummation of secondary recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions, and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their entire respective interests in the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, theretofore issued thereunder and valid pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS. The area described by tracts in Exhibit "B" and depicted on Exhibit "A" attached hereto is hereby designated and recognized as constituting the Unit Area containing 240.00 acres, more or less, in Lea County, New Mexico. Said land is described as follows:

<u>T24S-R37E</u>		
Section 22:	E/2 SW/4, SE/4 NW/4, W/2 SE/4, SE/4 SE/4	240.00

For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

(a) "Director" is defined as the Director of the United States Geological Survey.

(b) "Secretary" is defined as the Secretary of the Interior of the United States of America.

(c) "Department" is defined as the Department of the Interior of the United States of America.

(d) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(e) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(f) "Unitized Formation" is defined as the interval within the Unit Area from the top of the Seven Rivers to the base of the Queen formations, being the interval found between the depth of 2730 feet and 3461 feet on the Lane Wells Radioactivity Log run on December 2, 1950, in the Stanolind Oil and Gas Company's South Mattix Unit Well No. 3, located 660 feet from the North line and 1980 feet from the East line of Section 22, Township 24 South, Range 37 East, NMPM.

(g) "Unitized Substances" means all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

(h) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit "B".

(i) "Tract Participation" is defined as that percentage of Unitized Substances produced from the Unitized Formation which is allocated to a Tract under this Agreement.

(j) "Unit Participation" of each Working Interest Owner, is defined as the sum of the percentages obtained by multiplying such Working Interest Owner's fractional Working Interest in each Tract by the Tract Participation of such Tract.

(k) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise held.

(l) "Working Interest Owner" is defined as and shall mean any party hereto owning a Working Interest, including a carried working interest owner, whether by virtue of a lease, operating agreement, fee title or otherwise, whose interest is chargeable with and obligated to pay or bear, either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substances from the Unitized Formation and operating therefor hereunder.

(m) "Royalty Interest" or "Royalty" is defined as an interest other than a Working Interest in or right to receive a portion of the Unitized Substances or the proceeds thereof and includes the royalty interest reserved by the lessor by an oil and gas lease and any overriding royalty interest, oil payment interest, or any other payment or burden which does not carry with it the right to search for and produce Unitized Substances.

(n) "Royalty Owner" is defined as and shall mean the owner of a Royalty Interest.

(o) "Paying Quantities" is defined as production of Unitized Substances in quantities sufficient to pay for the cost of producing same from wells on the unitized land.

(p) "Tract Cumulative Production" is defined as the barrels of oil produced from the Unitized Formation from a Tract since the date of first production until June 1, 1967.

(q) "Unit Area Cumulative Production" is defined as the sum of Tract Cumulative Production to June 1, 1967, for all Tracts in the Unit Area.

(r) "Tract Current Production" is defined as the barrels of oil produced from the Unitized Formation in a Tract from December 1, 1966, to June 1, 1967.

(s) "Unit Area Current Production" is defined as the sum of Tract Current Production for all Tracts in the Unit Area.

SECTION 3. EXHIBITS. Exhibit "A" attached hereto is a map showing the Unit Area and, to the extent known to the Unit Operator, the boundaries and identity of Tracts and Leases in said Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to the Unit Operator, the acreage comprising each Tract, percentage ownership of each Working Interest Owner in each Tract, and the Royalty Interests in each Tract and the ownership thereof. Exhibit "C" attached hereto is a schedule showing the percentage of participation each Tract has in the Unit Area. Nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or

interests as are shown in said map or schedule as owned by such party.

Exhibits "A", "B", and "C" shall be revised by the Unit Operator whenever changes render such revision necessary, or when requested by the Supervisor; and not less than six copies of such revision shall be filed with the Supervisor.

SECTION 4. UNITIZED LAND AND UNITIZED SUBSTANCES. All oil and gas in and under the land effectively committed to this Agreement within and producible from the Unitized Formation are herein called "Unitized Substances". All land committed to this Agreement as to the Unitized Formation shall constitute land referred to herein as Unitized Land or "Land subject to this Agreement".

SECTION 5. UNIT OPERATOR. Pan American Petroleum Corporation, a Delaware corporation, is hereby designated as Unit Operator, and, by signing this instrument as Unit Operator, it agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 6. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit operations hereunder shall be paid and borne by Pan American Petroleum Corporation. No Unit Operating Agreement has been developed for the Unit Area inasmuch as Pan American Petroleum Corporation is the owner of all Working Interests in the Unitized Land. In the event more than one working interest owner is created, a Unit Operating Agreement will be developed and three copies of the Agreement filed with the Supervisor.

SECTION 7. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. The parties hereto, to the extent they have the right to do so, grant to Unit Operator the use of brine or water, or both, from any formation in and under

the Unit Area for injection into the Unitized Formation. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges, and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 8. EASEMENTS OR USE OF SURFACE.

(a) The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest Owner the right to use as much of the surface of the land within the Unit Area as may reasonably be necessary for Unit Operations; provided that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owner a site for a water, gas injection, processing or other plant, or camp site.

(b) Working Interest Owner shall have free use of water from the Unit Area for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner.

(c) Working Interest Owner shall pay the owner for damages to growing crops, timber, fences, improvements, and structures on the Unit Area that result from Unit Operations.

SECTION 9. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances in paying quantities and that the object and purpose of this Agreement is to formulate and to put into effect a secondary recovery project in order to effect the greatest recovery of Unitized Substances, prevent waste and conserve natural resources consistent with good engineering practices expected of a prudent operator. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Supervisor, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil and any one or more other substances whether produced from the Unitized Land or not, and that the location of input wells and the rates of injection therein shall

be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Supervisor monthly injection and production reports for each well in the Unit. The Supervisor shall be furnished periodic reports on the progress of the plan of operation and any revision or changes thereto; provided, however, that any major revisions of the plan of operation involving a basic deviation from the initial plan of operation shall be subject to the consent and approval of the Supervisor.

The initial plan of operation shall be filed with the Supervisor concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operation and all revisions thereof shall be as complete and adequate as the Supervisor may determine to be necessary for timely operation consistent herewith. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for like approval a plan for an additional specified period of operation. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation.

Notwithstanding anything to the contrary herein contained, the Unit Operator shall commence operations for the secondary recovery of Unitized Substances from the Unit Area within six (6) months after the effective date of this Agreement, or any extension thereof approved by the Supervisor. After such operations are commenced, Unit Operator shall carry on such operations as would a reasonably prudent operator under the same or similar circumstances.

SECTION 10. TRACT PARTICIPATION. In Exhibit "C" attached hereto, there are listed and numbered the various tracts within the Unit Area and set forth opposite each Tract is the Tract Participation of each Tract in the Unit Area calculated on the basis of 100 per cent commitment. The Tract Participation of each Tract was determined by the following formula:

Percentage of Tract Participation equals:

$$50\% \times \frac{\text{Tract Current Production}}{\text{Unit Area Current Production}}$$

+

$$50\% \times \frac{\text{Tract Cumulative Production}}{\text{Unit Area Cumulative Production}}$$

SECTION 11. TRACTS QUALIFIED FOR UNIT PARTICIPATION. Qualification of Tracts.

On and after the effective date hereof, the tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be each Tract as to which Working Interest Owner owning one hundred per cent (100%) of the Working Interest has become a party to this Agreement and as to which the record title owners owning one hundred per cent (100%) of the record title have become parties to this agreement. All Tracts shown on Exhibit "B" must participate as provided in Section 11 hereof, or this Agreement shall terminate under the provisions of Section 20.

SECTION 12. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on Unitized Land for drilling, operating, camp, and other production or development purposes and for pressure maintenance or unavoidable loss) shall be apportioned among and allocated to the committed Tracts within the Unitized Land in accordance with the respective Tract Participation effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the then effective schedule of participation in Exhibit "C". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract), shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for to, the parties executing, consenting to, or ratifying this Agreement entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances; and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the joinder of any Tract.

If the Working Interest and the Royalty Interest in any Tract are or become divided with respect to separate parcels or portions of such Tract and owned severally

by different persons, the Tract Participation assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owner and parties entitled thereto by virtue of the ownership of oil and gas rights therein. Each Working Interest Owner and party entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose of Unitized Land, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Subject to Section 13 (ROYALTY SETTLEMENT) hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party responsible for the payment of such expenses.

In the event any party hereto shall fail to take or otherwise adequately dispose of its proportionate share of the Unitized Substances as and when produced, then so long as such conditions continue, Unit Operator, for the account and at the expense of such party, and in order to avoid curtailing the operation of the Unit Area, may sell or otherwise dispose of such production to itself or others on a day-to-day basis at not less than the prevailing market price in the area for like production; and the account of such party shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto. The Working Interest Owner of each Tract shall be responsible for the payment of all Royalty on or affecting such Tract.

SECTION 13. ROYALTY SETTLEMENT. The United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the Unitized Substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract; and the Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts on or before the last day of each month

for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this Unit Agreement.

If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation, for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan approved pursuant to Section 9 (PLAN OF OPERATIONS), a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, Royalty free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor; and provided, further, that such right of withdrawal shall terminate as of the effective date of termination of the Unit Agreement.

All Royalty due the United States of America and the other Royalty Owners hereunder shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to Unitized Federal Land as provided herein at the rates specified in the respective Federal leases, or at such lower rate or rates as may be authorized by law or regulation; provided that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulations as though the Unitized Land were a single consolidated lease.

Each Royalty Owner (other than the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a Tract or Tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interest of all parties in the affected Tracts or Tracts shall be adjusted accordingly.

Notwithstanding anything to the contrary, this Unit Agreement shall not serve to extend the period of time that a royalty rate of 5 per cent shall be applicable to any Federal lease. In the event that this agreement extends the term of a Federal lease which is now subject to a 5 per cent royalty rate, that lease shall then become subject to the same royalty rate as would be applicable to a renewal lease.

SECTION 14. RENTAL SETTLEMENT. Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owner responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof, due under their leases. Rental or minimum royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 15. CONSERVATION. Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 16. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this Agreement.

SECTION 17. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect; and the parties hereto hereby consent that the Secretary shall, by his approval hereof, or by the approval hereof by his duly authorized representatives, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and

contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part of separately owned tract subject to this Agreement, regardless of whether there is any development of any particular part or Tract of the Unit Area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing or secondary recovery operations performed hereunder upon any Tract of Unitized Lands shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land; and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all Unitized Land pursuant to direction or consent of the Supervisor or his duly authorized representative shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Land.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas, which by its terms might expire prior to the termination of this Agreement, is hereby extended beyond any such term so provided therein, subject to the royalty provisions of Section 13, Royalty Settlement, so that it shall be continued in full force and effect for and during the term of this Agreement.

(e) Termination of this Agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws, shall continue in force and effect thereafter.

(f) The segregation of any Federal lease committed to this Agreement is governed by the following provisions in the fourth paragraph of Sec. 17 (j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, That any such lease as to the non-unitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

SECTION 18. MATHEMATICAL ERRORS. It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which might exist in the pertinent exhibits to this Agreement and file such changes with the Supervisor.

SECTION 19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working

Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 20. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executed or ratified it as of the date of execution or ratification by such party and shall become effective as of 7 a.m. on the first day of the month next following:

(a) The execution or ratification of this agreement by the Working Interest Owners owning one hundred per cent (100%) of the Unit Participation and the execution or ratification of this agreement by the owners of one hundred per cent (100%) of the record to the interest.

(b) The approval of this Agreement by the Director, and the Commission.

(c) If (a) and (b) above are not accomplished on or before July 1, 1968, this Agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto 100% of the Working Interest Owners have become parties to this Agreement and have decided to extend the expiration date for a period not to exceed six (6) months. If the expiration date is so extended and requirements of Section 20(a) are not accomplished on or before the extended expiration date, this Agreement shall ipso facto terminate on the extended expiration date and thereafter be of no further effect.

(d) Unit Operator shall, within thirty (30) days after the effective date of this Agreement, file for record with the Supervisor in the offices where a counterpart of this Agreement is recorded, a certificate to the effect that this Agreement has become effective according to its terms and stating further the effective date.

(e) At least one counterpart of this Agreement is to be filed for record in the office of the county clerk of Lea County, New Mexico, by the Unit Operator.

The term of this Agreement shall be for and during the time that Unitized Substances are, or can be, produced in paying quantities from the Unitized Land and as long thereafter as drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, and so long thereafter as Unitized Substances can be produced as aforesaid, unless sooner terminated in the manner hereinafter provided.

This Agreement may be terminated at any time for any reason with the approval of the Director. Notice of any such termination shall be given by Unit Operator to all parties hereto.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate tracts.

If not otherwise covered by the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after

termination of this Agreement in which to salvage, sell, distribute or otherwise-wise dispose of the personal property and facilities used in connection with Unit operations.

SECTION 21. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The Director is hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and within the limits made or fixed by the Commission to alter or modify the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

Powers in this Section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice.

SECTION 22. NON-DISCRIMINATION. In connection with the performance of work under this Agreement, Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive, of Executive Order 11246, as amended (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 23. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Department and the Commission, and to appeal from any order issued under the rules and regulations or in any proceedings relative to operations before the Department or the Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 24. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by post-paid certified mail, addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 25. NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said Unitized Lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

Each party hereto covenants that, during the existence of this Agreement, it will not resort to any action to partition the Unit Area or the Unit Equipment and to that extent waives the benefits of all laws authorizing such partition.

SECTION 26. EQUIPMENT AND FACILITIES - FIXTURES ATTACHED TO REALTY. Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment and facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unit Area as now or hereafter constituted. Therefore, for all purposes of this Agreement, any and all such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and it is agreed that any and all such equipment and personal property shall be and remain personal property of Working Interest Owner for all purposes.

SECTION 27. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this Agreement shall be suspended while, but only so long as, the Unit Operator, despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator, whether similar to matters herein enumerated or not.

SECTION 28. LOSS OF TITLE. In the event title to the Working Interest in any Tract of Unitized Land shall fail so as to render the Tract inoperable under this Agreement and the true owner cannot be induced to join this Unit Agreement,

such Tract shall be automatically regarded as not committed hereto effective as of 7:00 A.M. on the first day after such title failure is determined; and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any Royalty, Working Interest or other interest subject thereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided that, as to Federal land or leases, no payments of funds due the United States of America shall be withheld, but such funds shall be deposited as directed by the Supervisor (as the case may be), to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 29. SUBSEQUENT JOINDER. Any oil or gas interest in the Unitized Formation underlying the Unit Area not committed hereto prior to submission of this Agreement to the Director for final approval may be committed hereto, at any time up to the effective date hereof, on the same basis of participation as provided in Section 10. From and after the effective date hereof, the right of subsequent joinder shall be upon such terms as may be negotiated by Working Interest Owners and the owner of such oil or gas interest. Except as may be otherwise herein provided, subsequent jointers shall be effective as of 7:00 A.M. on the first day of the month following the filing with the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of the interest to this Agreement.

SECTION 30. OIL IN LEASE TANKAGE ON EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all lease and other tanks on Unitized Land in order to ascertain the amount of merchantable oil above the pipeline connection in such tanks as of 7:00 A.M. on the effective date hereof. All such oil which has then been produced legally shall be and remain the property of the Working Interest Owner entitled thereto the same as if the Unit had not been formed; and such Working Interest Owner shall promptly remove said oil from the Unitized Land. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owner, subject to the payment of all Royalty to Royalty Owners under the terms and provisions of the Unit Agreement and any applicable lease or leases and other contracts.

SECTION 31. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that the Unit Operator or the Working Interest Owner must pay or advance said taxes for the account of the parties hereto it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States, nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 32. NO PARTNERSHIP. It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, express or implied, or any operations conducted hereunder, shall create or be deemed to have created a partnership or association between the parties hereto or any of them.

SECTION 33. BORDER AGREEMENTS. Subject to the approval of the Supervisor, the Unit Operator may enter into a border-protection agreement or agreements with the Working Interest Owners of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 34. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above-described Unit Area.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and have set opposite their respective names the date of execution.

DATE: _____

ATTEST:

PAN AMERICAN PETROLEUM CORPORATION

By: _____
Attorney-in-Fact

Secretary

THE STATE OF TEXAS

COUNTY OF TARRANT

The foregoing instrument was acknowledged before me this _____ day of

_____, 1968, by _____

Attorney-in-Fact of PAN AMERICAN PETROLEUM CORPORATION, a Delaware Corporation, on
behalf of said corporation.

NOTARY PUBLIC
TARRANT County, TEXAS

My Commission Expires:

R-37-E

T
24
S

•3
JAMISON
BUCKLES

W.I.-5

W.I.-6

W.I.-7

W.I.-8

W.I.-6

W.I.-5

W.I.-12

W.I.-13

W.I.-11

W.I.-10

W.I.-9

•1
J.A.E. Knight
BUCKLES

•2

•3

•4

pt. ①
•5

SO. MATTIX UNIT
(PAN AM.)

•1-A
U.S.A. Cortland Myers
PAN AMERICAN

22

pt. ①
•6

②

•4

•3

pt. ①
•2

LANGLIE MATTIX WOOLWORTH
UNIT
(AMERADA)
•5.1
•5.3
•7.1
•7.8

•4
•3
LANGLIE MATTIX
UNIT NO. 1
(SHELL)

•5

•6

Plains-Knight
GULF

•11

*1

•14

-EXHIBIT A-
CORTLAND MYERS UNIT
LEA CO, NEW MEXICO



LEGEND

② Tract Number

-- Unit Boundary

EXHIBIT "B"
CORTLAND MYERS UNIT AGREEMENT

TR. NO.	DESCRIPTION OF LAND	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	BASIC ROYALTY	RECORD LESSEE	WORKING INT. OWNER AND PERCENTAGE	OVERRIDING ROYALTY OWNERSHIP	TRACT PARTICIPATION
1	SE/4 NW/4, NW/4 SE/4, SE/4 SE/4, Section 22, T24S, R37E	120.00	LC-032450 HBP	USA - 5%	Pan Ameri- can Petro- leum Corporation	Pan American Petroleum Corporation 100%	Firm Royalties, Inc. Anne Hughes Myers	22.66139%
2	E/2 SW/4, SW/4 SE/4, Section 22, T24S, R37E	120.00	LC-036249 HBP	USA (See below)	Pan Ameri- can Petro- leum Corporation	Pan American Petroleum Corporation 100%	Firm Royalties, Inc. Anne Hughes Myers	77.33861%

Two Federal Tracts containing 240.00 acres, or 100% of Unit Area

Basic Royalty in Tract No. 2
When the average production for the calendar month in barrels per well per day is:

Over	Not Over	Royalty Rate
-	110	12.5%
110	130	18.0
130	150	19.0
150	200	20.0
200	250	21.0
250	300	22.0
300	350	23.0
350	400	24.0
400	-	25.0

Gas, helium, or liquid products obtained from gas:
When average gas production per well per day for calendar month does not exceed 5000 MCF, royalty rate is 12.5%.
When average gas production per well per day for calendar month exceeds 5000 MCF, royalty rate is 16-2/3%.

EXHIBIT "C"
CORTLAND MYERS UNIT AGREEMENT

<u>TRACT NO.</u>	<u>WORKING INTEREST OWNER</u>	<u>WI IN TRACT %</u>	<u>TRACT PARTICIPATION</u>
1	Pan American Petroleum Corporation	100	22.66139%
2	Pan American Petroleum Corporation	100	<u>77.33861%</u>
		TOTAL	100.00000%



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

RECEIVED	
UNIT SECTION	
FORT WORTH	
MAY 1 1968	
B.A.L.	
J.W.A.	<i>[initials]</i>
R.R.D.	
April 22, 1968	<i>[initials]</i>
L.L.M.	
E.K.	
M.L.	

Pan American Petroleum Corporation
P. O. Box 1410
Fort Worth, Texas 76101

Attention: Mr. J. W. Austin

Gentlemen:

This office is currently processing your application for final approval of the Cortland Myers unit agreement, Lea County, New Mexico.

Section 20 of the unit agreement requires approval by the New Mexico Oil Conservation Commission. Approval of the Cortland Myers unit agreement by the U. S. Geological Survey can be completed after you file copies of approval by New Mexico Oil Conservation Commission with this office.

Sincerely yours,

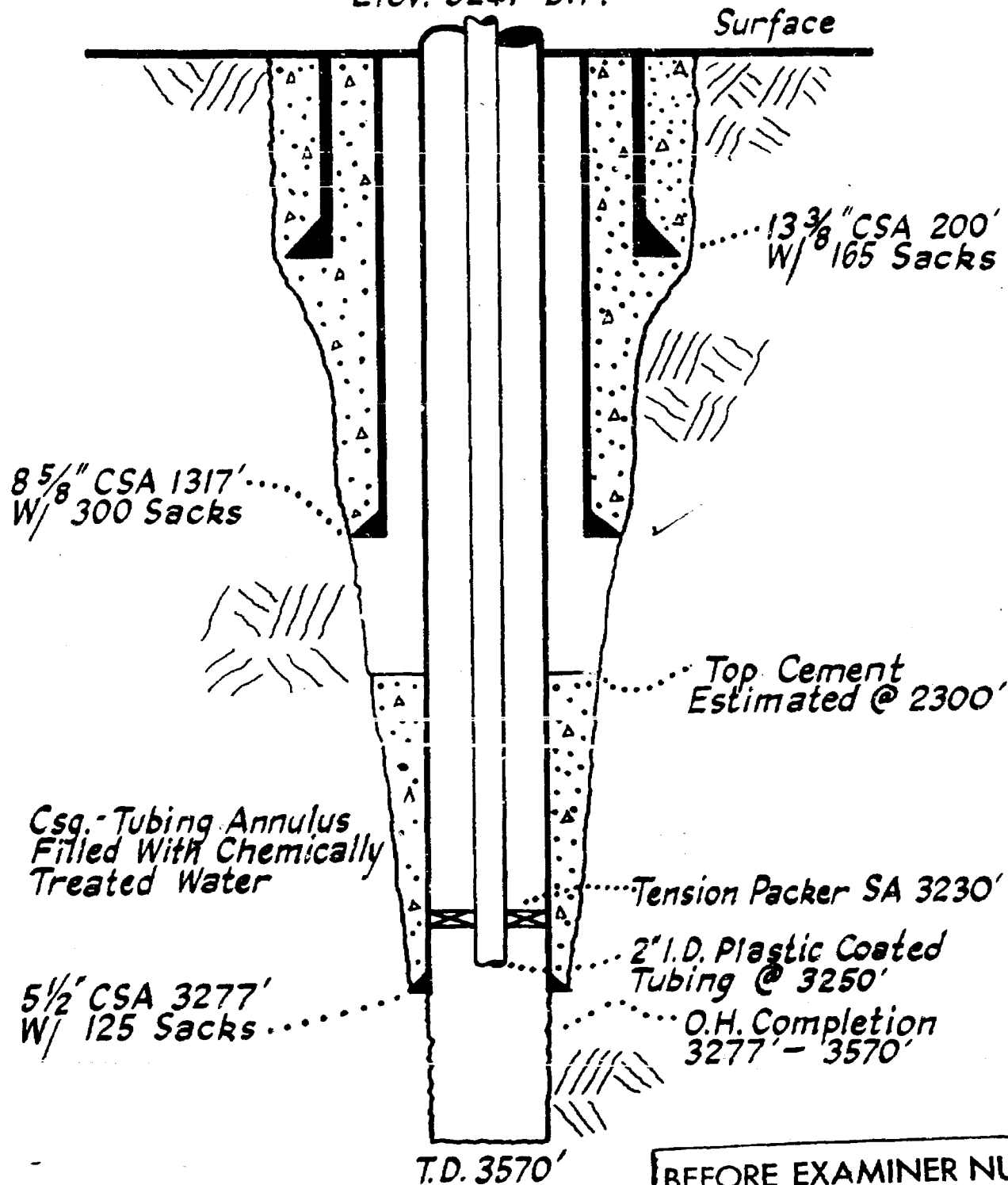
Carl C. Traywick

CARL C. TRAYWICK
Acting Oil & Gas Supervisor

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>Appl</i>	EXHIBIT NO. <i>C</i>
CASE NO. <i>3782</i>	<i>3783</i>

~ proposed ~
INJECTION WELL
CORTLAND MYERS "A"
WELL No. 2

Unit P, Section 22, T-24-S, R-37-E
Lea County, New Mex.
Elev. 3241' D.F.



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. F
CASE NO. 5782-3753

PAN AMERICAN PETROLEUM CORPORATION
PROPOSED WATERFLOOD PROJECT
CORTLAND MYERS UNIT
SECTION 22-T24S-R37E
LEA COUNTY, NEW MEXICO

*Primary 500,000
200,000 on
secondary or
0.4 to 1 on
secondary.*

I. Injection Interval

- A. Formation: Seven Rivers-Queen
- B. Depth: 3277' to 3570'

II. Fluid to be Injected

- A. Type: Nonpotable Water from the Capitan Reef and Seven Rivers Formations
- B. Volume: 1500 Barrels Per Day *(for 3 wells)*
- C. Source: Jal Water System
Operated by Skelly Oil Company

current

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>App</i>	EXHIBIT NO. <i>9</i>
CASE NO. <i>3782 3783</i>	

