

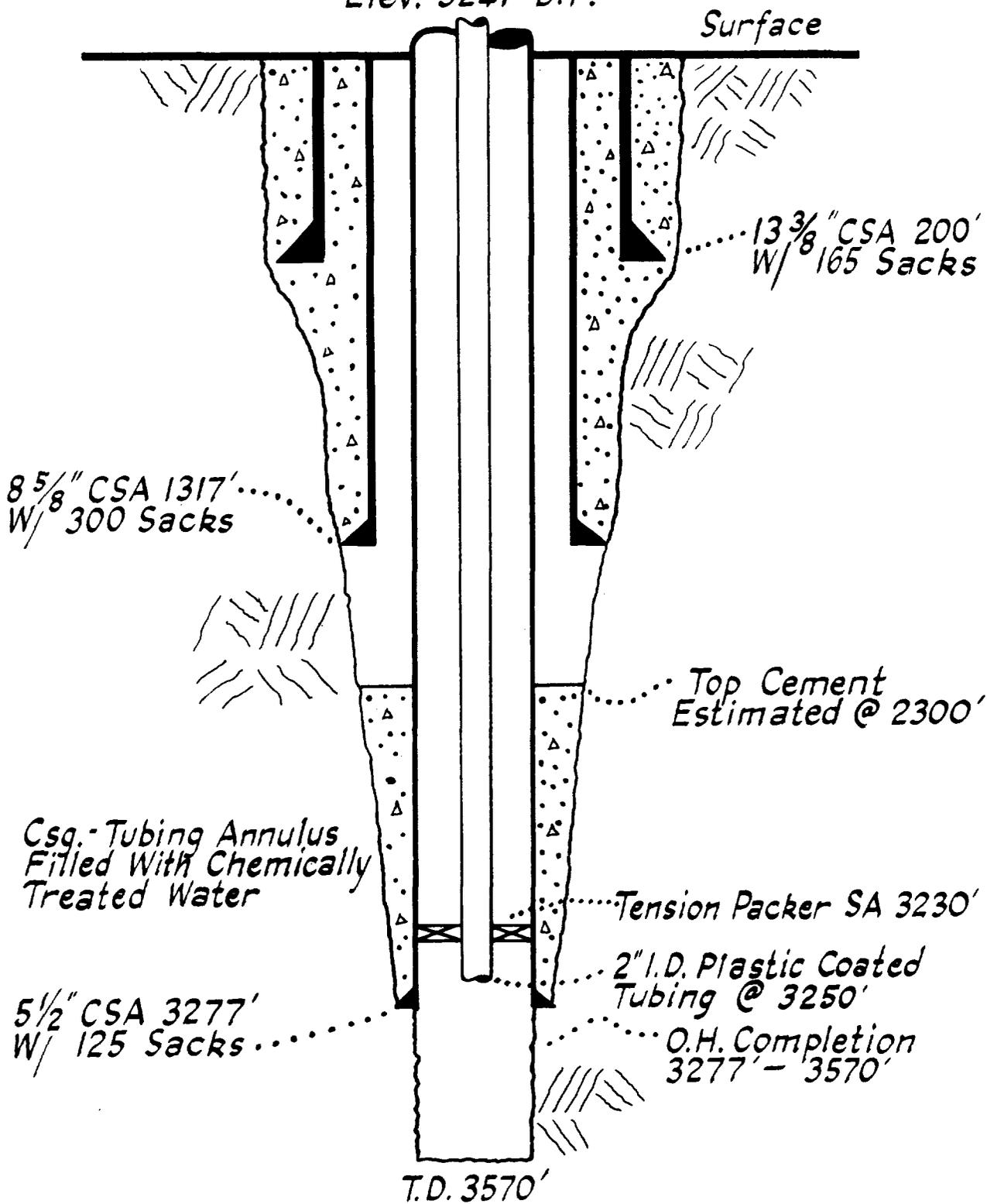
~ proposed ~

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 3783

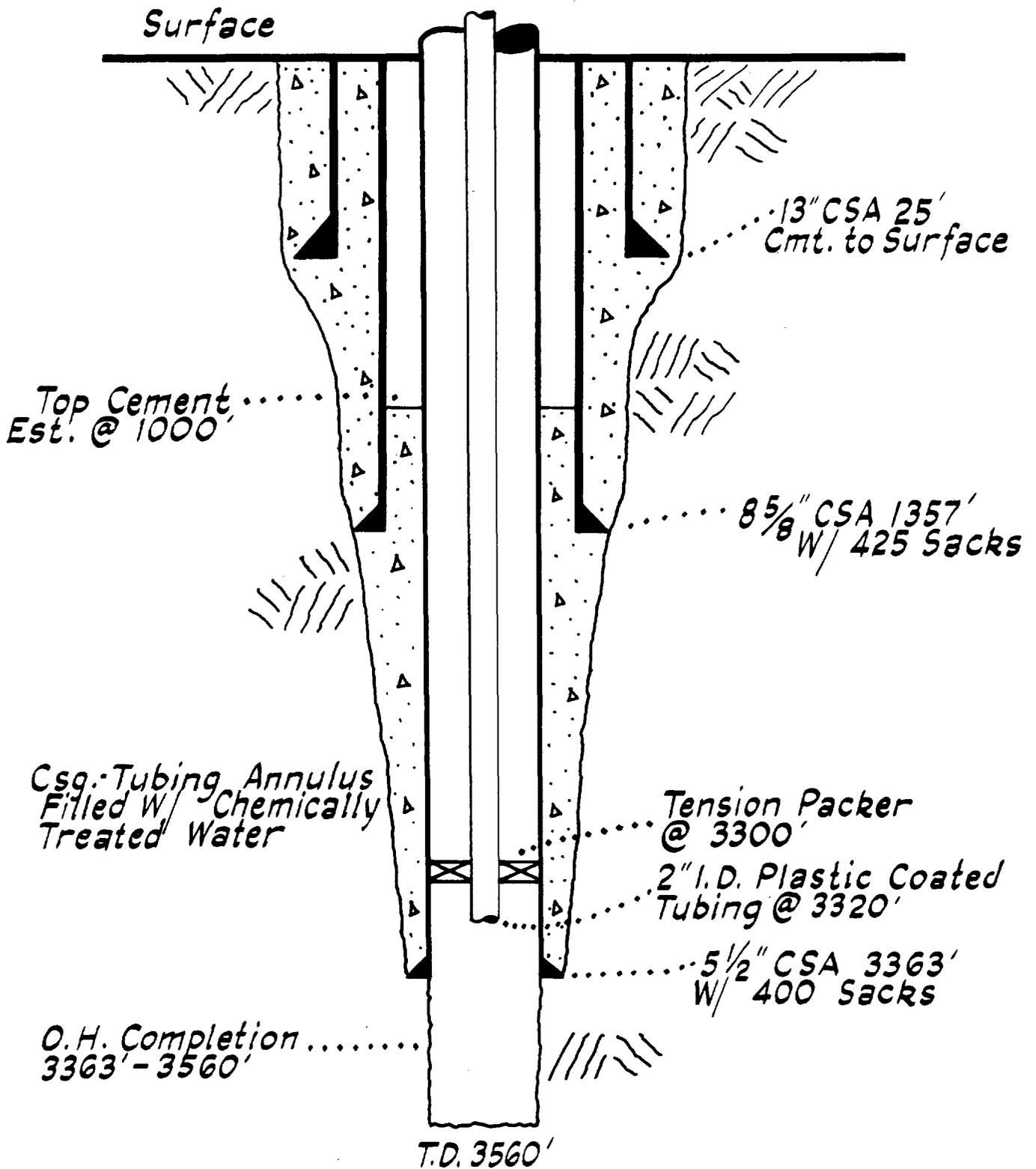
← proposed →

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 3783

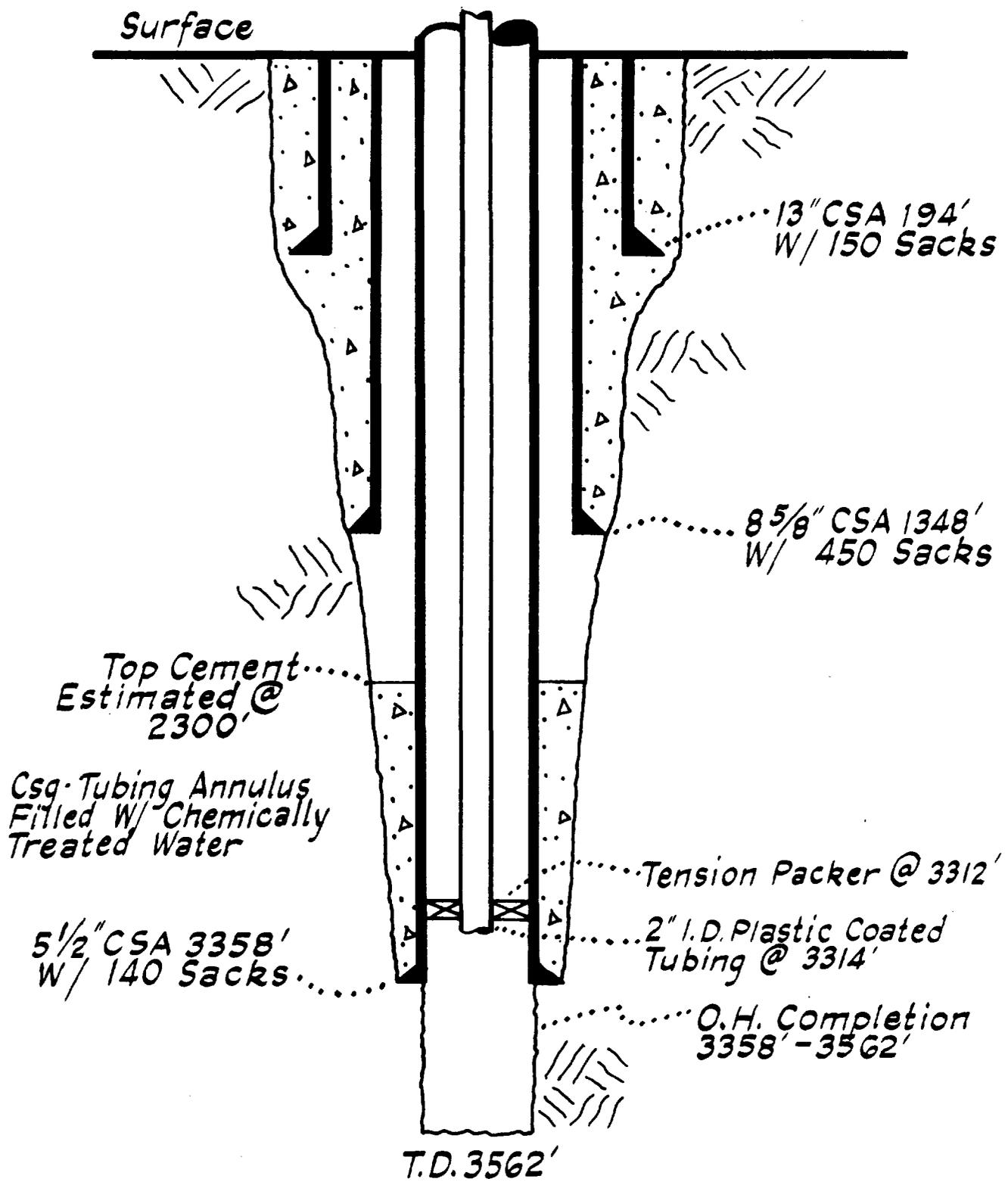
(proposed)

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.



Case 3783

PAN GEO ATLAS CORP.



Gamma Ray Neutron Log

FILE NO.	COMPANY <u>PAN AMERICAN PETROLEUM CORPORATION</u>	
	WELL <u>COURTLAND MYERS "A" NO. 6</u>	
	FIELD <u>LANGLIE MATTIX</u>	
	COUNTY <u>LEA</u>	STATE <u>NEW MEXICO</u>
	LOCATION: <u>NW 1/4 OF SE 1/4</u>	Other Services
	SEC <u>22</u> TWP <u>24-S</u> RGE <u>37-E</u>	

Permanent Datum <u>CENTER LINE B.H. OUTLET</u> Elev. <u>3243</u>	Elevations: KB <u>*</u>
Log Measured from <u>D.F. 15</u> Ft. Above Permanent Datum	DF <u>3258</u>
Drilling Measured from <u>D.F.</u>	GL _____

Date	<u>4-8-68</u>		
Run No.	<u>ONE</u>		
Type Log	<u>G/N CCL</u>		
Depth-Driller	<u>3562</u>		
Depth-Logger	<u>3496</u>		
Bottom Logged Interval	<u>3494</u>		
Top Logged Interval	<u>2000</u>		
Type Fluid in Hole	<u>OIL & WATER</u>		
Salinity Ppm Cl.	<u>-</u>		
Density Lb./Gal.	<u>-</u>		
Level	<u>3100</u>		
Max. Rec. Temp. Deg. F	<u>98°</u>		
Opr. Rig Time	<u>1:30</u>		
Recorded By	<u>ROSS</u>		
Witnessed By	<u>MR. SIMS</u>		

RETURN TO
PROB. DEPT.
ROOM 346

Run No.	Bore Hole Record			Casing Record			
	Bit	From	To	Size	Wgt.	From	To
	<u>7 7/8</u>	<u>1348</u>	<u>3359</u>	<u>8 5/8</u>	<u>*</u>	<u>SURF</u>	<u>1348</u>
				<u>5 1/2</u>	<u>*</u>	<u>SURF</u>	<u>3359</u>

4-2-68

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

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
- C. Source: Jal Water System
Operated by Skelly Oil Company

See 3783

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

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

C. Source: Jal Water System
Operated by Skelly Oil Company

W 218

PAN AMERICAN PETROLEUM CORPORATION

OIL AND GAS BUILDING P. O. BOX 1410

FORT WORTH, TEXAS—76101

PRODUCING DEPARTMENT
BRUCE A. LANDIS, JR.
DIVISION UNITIZATION
SUPERINTENDENT

August 21, 1968

File: BAL-824-416

Subject: Cortland Myers Unit,
Lea County, New Mexico

REGISTERED MAIL
RETURN RECEIPT REQUESTED

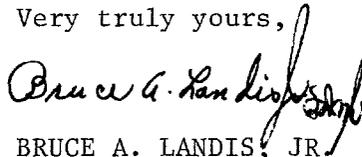
Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Gentlemen:

Under Case No. 3783, Order No. R-3435, the Oil Conservation Commission approved the Cortland Myers Unit, in Lea County, New Mexico. Commission approval was contingent on approval by the Director of the U.S.G.S., and filing certain instruments with the Commission.

Furnished herewith are instruments and approvals to effectuate the unit. Included is an original of the Unit Agreement executed by the overriding royalty owners and Pan American, plus copies of all other instruments relative to completing formation of the unit. Please note the Certificate of Effectiveness which designates August 1, 1968, as the effective date of the unit.

Very truly yours,



BRUCE A. LANDIS, JR.

JWA/ek
Attachments

1968 AUG 23 10 11 AM



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

RECEIVED		
UNIT SECTION		
FORT WORTH		
JUL 15 1968		
July 11, 1968		
2	J.W.A.	
	J.R.D.	
1	F.A.M.	
	C.L.M.	
	E.K.	
	M.L.	

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

Attention: Mr. Bruce A. Landis, Jr.

Gentlemen:

Your initial plan of operation covering secondary recovery operations for the Cortland Myers unit, Lea County, New Mexico, has been approved on this date.

Two approved copies of the plan are enclosed.

Sincerely yours,

Carl C. Traywick

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

INITIAL PLAN OF OPERATION

CORTLAND MYERS UNIT

LEA COUNTY, NEW MEXICO

Pan American Petroleum Corporation operates six Langlie Mattix Pool wells located in Section 22 of T-24-S, R-37-E, Lea County, New Mexico. A map of the lease and offset leases is attached as Exhibit A. The six Cortland Myers Unit wells were completed in the period from 1936 to 1940 as Langlie Mattix oil producers. The wells were completed in open hole sections of the Penrose Sand of the Langlie Mattix pay using a solidified nitroglycerin stimulation technique which was the type of stimulation generally being performed at that time. Pan American plans to undertake a waterflood program on this lease upon approval of the necessary regulatory bodies.

Initial Plan of Operation

Pan American Petroleum Corporation plans to convert Cortland Myers Unit Wells No. 2, 5 and 6 to water injection status resulting in a line drive flood toward Wells No. 1, 3, and 4 in conjunction with the lease line flood already installed on the George Buckles' Knight and Jamison Leases to the west and to cooperatively flood with the Amerada-operated Langlie Mattix Woolworth Unit to the south. Cumulative recoveries for the three wells on Tract 2 are over 408,000 barrels of oil as of 6-1-67, as compared to 112,000 barrels for Tract 1, indicating a higher magnitude of reserves under the three wells toward which the line drive flood is planned.

Pan American will purchase water from Skelly Oil Company's Jal Water

System for injection purposes. The source of water for the Jal Water System is a combination of Seven Rivers Zone produced water and Capitan Reef water. Initial injection rates of 1400 barrels per day are anticipated for the project.

The logs obtained back in the late 1930's on the Pan American wells are of such poor quality that volumetric calculations are not meaningful. The cumulative recoveries to date are an indication of the quality of the pay involved. During the conversion of the injection wells, modern logs will be obtained to ascertain that the wells have all the Langlie Mattix Penrose pay opened for successful water injection and wells will be deepened, if in order, and other corrective measures taken as necessary.

Costs of Project

The cost to install the three well flood is initially estimated at \$37,600. Injection water will cost 2.5¢ per barrel and at initial injection rate of 1400 barrels per day the monthly cost for water will equal approximately \$1,000. Based on the assumption that secondary recovery will be equivalent to at least one-half of ultimate primary, economics of waterflooding are attractive. Monies are included for cement lining of pipes and coated tubing to prevent corrosive damage. Produced water will be reinjected into the wells to supplement the purchased injection water.

R-37-E

Jamison
BUCKLES

SO. MATTIX UNIT
(PAN AM.)

LANGLIE MATTIX
UNIT NO. 1
(SHELL)

J.A.E. Knight
BUCKLES

U.S.A. Cortland Myers
PAN AMERICAN

Plains-Knight
GULF

LANGLIE MATTIX WOOLWORTH
UNIT (AMERADA)

EXHIBIT A -
CORTLAND MYERS UNIT
LEA CO, NEW MEXICO

T
24
S

LEGEND -

② Tract Number

Unit Boundary
Wt. 1/2 Wall

● 8

● 10

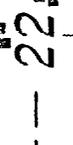
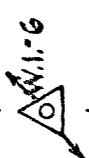
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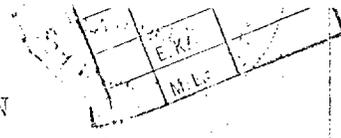
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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO



IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3783
Order No. R-3435

APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR APPROVAL OF THE CORT-
LAND MYERS UNIT AGREEMENT, 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. Nutter.

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 approval of the Cortland Myers Unit Agreement covering 240
acres, more or less, of Federal lands described as follows:

LEA COUNTY, NEW MEXICO
TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM
Section 22: E/2 SW/4, SE/4 NW/4,
W/2 SE/4, and SE/4 SE/4

(3) That approval of the proposed unit agreement should
promote the prevention of waste and the protection of correlative
rights within the unit area.

IT IS THEREFORE ORDERED:

- (1) That the Cortland Myers Unit Agreement is hereby approved.
- (2) That the plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.
- (3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that in the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.
- (4) That this order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.
- (5) 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. HAYS, Member

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

S E A L

csr/

17962

CERTIFICATE OF EXTENSION
UNIT AGREEMENT
CORTLAND MYERS UNIT
LEA COUNTY, NEW MEXICO

JUN 25 1968

at 11:15 o'clock A M
and Recorded in Book 272
Page 109
EFFIE HALDIMAN County Clerk
By Jane Rice Deputy

THE STATE OF NEW MEXICO)
)
COUNTY OF LEA)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Pan American Petroleum Corporation has been designated as Unit Operator of the Cortland Myers Unit pursuant to the Unit Agreement, entitled "Unit Agreement, Cortland Myers Unit, Lea County, New Mexico", dated the first day of March, 1968, hereinafter referred to as the "Unit Agreement"; and

WHEREAS, Section 20 of the Unit Agreement provides that if the Unit Agreement does not become effective on or before July 1, 1968, then it shall ipso facto terminate unless said termination date is extended for a period not to exceed six (6) months in the manner provided in said Section 20; and

WHEREAS, said termination date has been extended in accordance with said Section 20 of the Unit Agreement.

NOW, THEREFORE, Pan American Petroleum Corporation, as Unit Operator, hereby certifies that the termination date specified in Section 20 of the Unit Agreement has been extended for a period of six (6) months from and after July 1, 1968.

IN WITNESS WHEREOF, Pan American Petroleum Corporation, acting in its capacity as Unit Operator, has of the 19th day of June, 1968, executed this instrument.

DATE: June 19, 1968

ATTEST:
[Signature]
Assistant Secretary

PAN AMERICAN PETROLEUM CORPORATION

By: [Signature]
Attorney-in-Fact

APPROVED
[Signature]

THE STATE OF TEXAS
COUNTY OF TARRANT

The foregoing instrument was acknowledged before me this 19 day of June, 1968, by [Signature] Attorney-in-Fact of PAN AMERICAN PETROLEUM CORPORATION, a Delaware Corporation, on behalf of said corporation.

[Signature] THORA PRATER
NOTARY PUBLIC of TARRANT County, TEXAS

My Commission Expires:
6-1-69

Lovington Abstract Co.
Lovington, New Mexico

17962



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

572 7.

RECEIVED		
Prod. Dept.		
FORT WORTH		
JUL 15 1968		
	D.P.M.	
	A.D.P.M.	
July 11, 1968	SS-L	
	D.S.-O	
	DRLG.	
	GAS	
	PLANT	
	ENGR.	
	UNIT.	
	ADM.	
	FILE	

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

Gentlemen:

On July 11, 1968, the Acting Oil and Gas Supervisor approved the Cortland Myers unit agreement, Lea County, New Mexico, filed by your company as unit operator. This agreement has been designated No. 14-08-0001-8968. Please furnish this office evidence of the effective date of the Cortland Myers unit agreement after the requirements of section 20 have been satisfied.

Enclosed are two copies of the approved unit agreement for your records. Please furnish the State of New Mexico and any other interested principal with appropriate evidence of this approval.

Sincerely yours,

Carl C. Traywick

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

CERTIFICATION--DETERMINATION

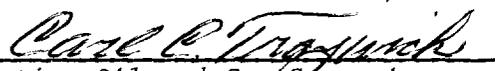
Pursuant to the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U. S. C. secs. 181, et seq., and delegated to the Oil and Gas Supervisors of the Geological Survey (33 F.R. 5812), I do hereby:

A. Approve the attached agreement for the development and operation of the Cortland Myers Unit Area, State of New Mexico.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated July 11, 1968


Acting Oil and Gas Supervisor
United States Geological Survey

Contract Number 14-08-0001-8968

Oper...

UNIT AGREEMENT

CORTLAND MYERS UNIT

LEA COUNTY, NEW MEXICO

INDEX
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 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: 4-10-68

ATTEST:

PAN AMERICAN PETROLEUM CORPORATION

By [Signature]
Attorney-in-Fact

APPROVED
[Signature]

[Signature]
A. S. T. Secretary

THE STATE OF TEXAS

COUNTY OF TARRANT

The foregoing instrument was acknowledged before me this 10 day of April, 1968, by C. F. BEDFORD Attorney-in-Fact of PAN AMERICAN PETROLEUM CORPORATION, a Delaware Corporation, on behalf of said corporation.

Shawn Porter
NOTARY PUBLIC
TARRANT County, TEXAS

My Commission Expires:

6-1-69

RATIFICATION OF UNIT AGREEMENT
CORTLAND MYERS UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated March 1, 1968, entitled "Unit Agreement, Cortland Myers Unit, Lea County, New Mexico", which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, Exhibit "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which may become a part of the Cortland Myers Unit as initially constituted, depending upon whether such tracts qualify for inclusion therein as provided in said agreement; and

WHEREAS, each of the undersigned represents that it is Royalty Owner as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

NOW, THEREFORE, each of the undersigned owners of a royalty interest or interests does hereby ratify and confirm said Unit Agreement with respect to all of its interest in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

Date March 26, 1968

Anne Hughes Myers
Anne Hughes Myers

Date March 26, 1968

FIRM ROYALTIES, INC.

ATTEST:

Clifford E. Hughes
Assistant Secretary
Clifford E. Hughes

By: J. Robert Meserve
J. Robert Meserve
Its: Vice President

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

The foregoing instrument was acknowledged before me this 26th day of March 1968, by J. Robert Meserve, Vice Pres. of Firm Royalties a corporation, on behalf of said corporation.

My Commission Expires:

Clifford B. Hughes
Notary Public,
County, _____

STATE OF CALIFORNIA

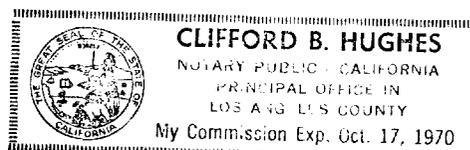
COUNTY OF LOS ANGELES



The foregoing instrument was acknowledged before me this 26th day of March, 1968, by Anne Hughes Myers.

My Commission Expires:

Clifford B. Hughes
Notary Public,
County, _____



R-37-E

•3 Jamison
BUCKLES

SO. MATTIX UNIT
(PAN AM.)

•4
LANGLIE MATTIX
UNIT NO. 1
(SHELL)

T
24
S

J.A.E. Knight
BUCKLES

U.S.A. Cortland Myers
PAN AMERICAN

Plains-Knight
GULF

LEGEND

② Tract Number

--- Unit Boundary

LANGLIE MATTIX WOOLWORTH
UNIT (AMERADA)

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

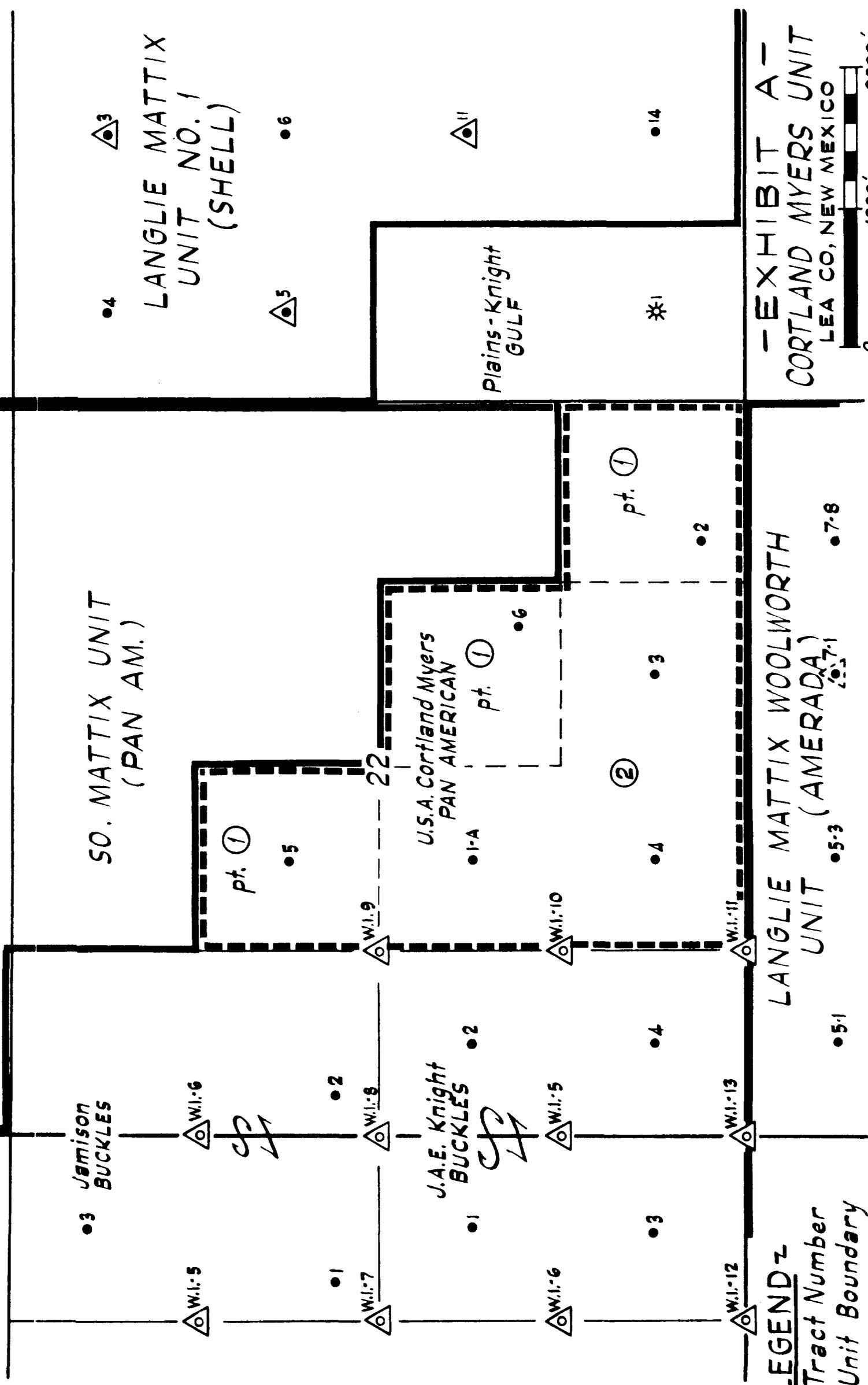


EXHIBIT "B"
CORTLAND MYERS UNIT AGREEMENT

<u>TR. NO.</u>	<u>DESCRIPTION OF LAND</u>	<u>SERIAL NO. & EXPIRATION DATE</u>	<u>BASIC ROYALTY</u>	<u>RECORD LESSEE</u>	<u>WORKING INT. OWNER AND PERCENTAGE</u>	<u>OVERRIDING ROYALTY OWNERSHIP</u>	<u>TRACT PARTICIPATION</u>
1	SE/4 NW/4, NW/4 SE/4, SE/4 SE/4, Section 22, T24S, R37E	LC-032450 HBP	USA - 5%	Pan American Petroleum Corporation	Pan American Petroleum Corporation 100%	Firm Royalties, Inc. Anne Hughes Myers	22.66139% 6.5% 1.0%
2	E/2 SW/4, SW/4 SE/4, Section 22, T24S, R37E	LC-036249 HBP	USA (See Below)	Pan American Petroleum Corporation	Pan American Petroleum Corporation 100%	Firm Royalties, Inc. Anne Hughes Myers	77.33861% 6.5% 1.0%

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:

<u>Over</u>	<u>Not Over</u>	<u>Royalty Rate</u>
-	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%