

October 9, 1962

El Paso Natural Gas Company  
El Paso, Texas

Re: Fifth, Sixth and Seventh  
Expansions, Gallup  
Participating Area,  
Huerfano Unit, San Juan  
County, New Mexico

Attention: Mr. C. T. Richardson

Gentlemen:

The Commissioner of Public Lands has approved as of October 9, 1962, the Fifth, Sixth and Seventh Expansions, Gallup Participating Area for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are returning five approved copies of these Expansions.

Very truly yours,

E. S. JOHNNY WALKER  
COMMISSIONER OF PUBLIC LANDS

BY:  
(Mrs.) Marian M. Rhea, Supervisor  
Unit Division

ESW/mmr/v

cc: U. S. Geological Survey  
Roswell, New Mexico

Oil Conservation Commission  
Santa Fe, New Mexico

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

195

September 24, 1962

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. C. T. Richardson

Re: Fifth, Sixth and Seventh  
Expansions Gallup  
Participating Area,  
Huerfano Unit, San Juan  
County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Fifth, Sixth and Seventh Revisions of the Participating Area, Gallup Formation, for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Seven approved copies of the application are being forwarded to the Commissioner of Public Lands.

Very truly yours,

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

ALP/JEK/ig

cc: Commissioner of Public Lands  
Santa Fe, New Mexico

United States Geological Survey

Roswell, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

September 19, 1962

Oil Conservation Commission  
Of the State of New Mexico  
Post Office Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FIFTH, SIXTH AND SEVENTH REVISIONS  
OF THE PARTICIPATING AREA FOR THE  
GALLUP FORMATION

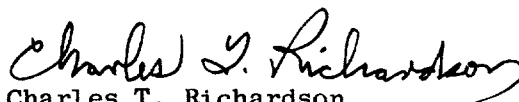
Gentlemen:

Attached are eight (8) copies of the subject Fifth, Sixth and Seventh Revisions of the Participating Area of the Huerfano Unit, together with exhibits and geological information.

It is requested, upon your approval, that you kindly sign all copies in the space provided, retaining one (1) copy of same and forward the remaining seven (7) copies to the Commissioner of Public Lands for his approval and execution. Upon the approval by the Commissioner of Public Lands they are to retain one (1) copy and return the remaining six (6) copies to the office for our further handling in obtaining the approval of the United States Geological Survey.

After we have received fully executed and approved copies of these Expansions we will forward one (1) fully executed and approved copy to the Commissioner of Public Lands.

Very truly yours,



Charles T. Richardson  
Area Coordinator  
Land Department

CTR:GA:cah  
Attachments

cc: Commissioner of Public Lands

# El Paso Natural Gas Company

El Paso, Texas

September 19, 1962

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D.C.

Commissioner of Public Lands  
Of the State of New Mexico  
Post Office Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Post Office Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FIFTH, SIXTH AND SEVENTH REVISIONS  
OF THE PARTICIPATING AREA FOR THE  
GALLUP FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Fifth, Sixth and Seventh Revisions of the Participating Area for the Gallup Formation, to wit:

Fifth Revision - Effective October 1, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Section 2: S/2	320.00

This proposed Fifth Expansion of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #109 (GD) Well, located in the SE/4 of Section 2, Township 26 North, Range 10 West, N.M.P.M.

The Huerfano Unit #109 (GD) Well was spudded on May 18, 1959, and completed on June 26, 1959, at a total depth of 7025'. The Gallup Formation in the intervals between 5905' - 5914', 5920' - 5925', 5945' - 5957', 6015' - 6027', 6080' - 6087', 6093' - 6107', 6117' - 6125', 6172' - 6184', 6191' - 6199' was treated with a sand-oil fracturing process on August 2, and August 3, 1959, and shut-in on August 14, 1959. After being shut-in for forty-five (45) days, the well was tested on September 28, 1959, and following a three (3) hour blow-down period gauged 2293 MCFGPD through a 3/4" choke and 3036 MCFGPD by the calculated absolute open-flow method, with an SIPC of 1151 PSIA.

Sixth Revision - Effective November 1, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Section 17: NW/4, W/2 NE/4, N/2 SW/4	320.00

This proposed Sixth Expansion of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #112 (GD) Well, located in the NW/4 of Section 17, Township 26 North, Range 10 West, N.M.P.M.

The Huerfano Unit #112 (GD) Well was spudded on July 29, 1959, and completed on August 20, 1959, at a total depth of 6795'. The Gallup Formation in the intervals between 5650' - 5662', 5674' - 5686', 5698' - 5706', 5762' - 5776', 5784' - 5792', 5832' - 5842', 5848' - 5856', 5864' - 5872', 5900' - 5910' was treated with a sand-oil fracturing process on September 9, and September 10, 1959, and shut-in on October 14, 1959. After being shut-in for fifteen (15) days, the well was tested on October 29, 1959, by a pumping test and made 291.76 MCFGPD and 167.87 barrels oil per day through a 30/64 inch choke with a flow pressure of 155 PSIG tubing and 558 PSIG casing on 11 strokes per minute with length of stroke 74 inches.

Seventh Revision - Effective February 1, 1961

<u>Description of Lands</u>	<u>Acreage</u>
T-27-N, R-10-W, N.M.P.M. Section 19: W/2	334.08

This proposed Seventh Expansion of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #101 (GD) Well, located in the NW/4 of Section 19, Township 27 North, Range 10 West, N.M.P.M.

The Huerfano Unit #101 (GD) Well was spudded on October 3, 1960, and completed on October 17, 1960, at a total depth of 6340'. The Gallup Formation in the intervals between 5336' - 5348', 5404' - 5410', 5420' - 5436', 5444' - 5452', 5502' - 5518' was treated with a sand-oil fracturing process on November 13, 1960, and shut-in on January 9, 1961. After being shut-in for eight (8) days, the well was tested on January 17, 1961, and gauged 1000 MCFGPD and 28.8 barrels of oil per day through a 24/64" choke with a flow pressure of 300 PSIG tubing and 476 PSIG casing.

In support of this application the following Exhibits are made a part hereof:

EXHIBIT "A"

Ownership map reflecting the boundaries of the Unit and the proposed Fifth, Sixth and Seventh Revisions of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Fifth, Sixth and Seventh Expansions of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

Schedule of Gallup oil and gas production to the proposed Fifth, Sixth and Seventh Expansions.

EXHIBIT "D"

Huerfano Unit Structure Map contoured on the top of the Gallup Formation.

Attached to this application are Schedules VI through VIII showing the lands entitled to participation in the unitized substances produced from the Gallup Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Fifth, Sixth, and Seventh Revisions of the Gallup Participating Area meets with your approval, please indicate such approval in the space provided and return an approved copy hereof for our files.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:GA:cah

APPROVED: \_\_\_\_\_  
Director, United States Geological  
Survey

DATE: \_\_\_\_\_

Subject to like approval by the appropriate State Officials.

APPROVED: \_\_\_\_\_  
Commissioner of Public Lands

DATE: \_\_\_\_\_

Subject to like approval by the United States Geological Survey  
and the Oil Conservation Commission.

APPROVED:  \_\_\_\_\_  
Oil Conservation Commission

DATE: 9.24.62

Subject to like approval by the United States Geological Survey  
and the Commissioner of Public Lands.

The foregoing approvals are for the Fifth, Sixth, and Seventh Revisions of  
the Participating Area for the Gallup Formation, effective October 1, 1957,  
November 1, 1959, and February 1, 1961, respectively, under Huerfano Unit,  
I Sec. No. 731, San Juan County, New Mexico.

# El Paso Natural Gas Company

El Paso, Texas

175

August 15, 1962

Mr. John A. Anderson  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I. Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
NINTH, TENTH, ELEVENTH, TWELFTH  
AND THIRTEENTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

The above captioned expansions were approved by the regulatory bodies on the following dates:

United States Geological Survey	- July 31, 1962
Commissioner of Public Lands	- April 26, 1962
Oil Conservation Commission	- April 20, 1962

Copies of this letter are being sent to the working interest owners of the Huerfano Unit.

Very truly yours,

*Charles T. Richardson*  
Charles T. Richardson  
Area Coordinator  
Land Department

CTR:GA:js

# El Paso Natural Gas Company

El Paso, Texas

August 10, 1962

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: 1962 Drilling Program  
Huerfano Unit


Gentlemen:

The 1962 Drilling Program for the Huerfano Unit was approved by the regulatory bodies on the dates indicated:

1. United States Geological Survey - June 21, 1962
2. Commissioner of Public Lands - July 3, 1962
3. Oil Conservation Commission - July 25, 1962

Copies of this letter are being sent to the working interest owners of the Huerfano Unit.

Very truly yours,

  
Charles T. Richardson  
Area Coordinator  
Land Department

CTR:GA: js

**OIL CONSERVATION COMMISSION**

**P. O. BOX 871**

**SANTA FE, NEW MEXICO**

**July 25, 1962**

**El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas**

**Attention: Mr. Sam Smith**

**Re: 1962 Drilling Program  
Huerfano Unit, San Juan  
County, New Mexico**

**Gentlemen:**

**This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1962 Drilling Program for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.**

**One approved copy of the plan is returned herewith.**

**Very truly yours,**

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

**ALP/JEK/ig**

**cc: U. S. Geological Survey  
Roswell, New Mexico**

**Commissioner of Public Lands  
Santa Fe, New Mexico**



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
Drawer 1857

Esoswell, New Mexico

July 3, 1962

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. Sam Smith

Gentlemen:

Your 1962 plan of development dated May 10, 1962, for the Huerfano unit area, San Juan County, New Mexico, proposing the drilling of six Dakota wells, has been approved on this date subject to like approval by the appropriate State officials.

Two approved copies of the plan are enclosed.

Very truly yours,

~~John A. Anderson~~ JOHN A. ANDERSON

JOHN A. ANDERSON

Copy to: Washington (w/cy of plan)  
Farmington (w/cy of plan)  
NMOCC-Santa Fe (ltr. only)  
Comp. of Pub. Lands-Santa Fe (ltr. only)

RPearcy:mlb

June 21, 1962

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: 1962 Drilling Program  
Huerfano Unit, San Juan  
County, New Mexico

Attention: Mr. Sam Smith

Gentlemen:

The Commissioner of Public Lands has of this date approved the 1962 Drilling Program for the Huerfano Unit Area, subject to like approval by the U. S. Geological Survey and the Oil Conservation Commission.

This Program provides for the drilling of six (6) Dakota wells within the Huerfano Unit Area during 1962.

We are enclosing one approved copy of this Plan Of Development.

Very truly yours,

E. S. JOHNNY WALKER  
COMMISSIONER OF PUBLIC LANDS

BY:  
(Mrs.) Marian M. Rhea, Supervisor  
Unit Division

ESW/~~medr~~/v  
cc: U. S. Geological Survey  
Roswell, New Mexico

Oil Conservation Commission  
Santa Fe, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

May 10, 1962

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
1962 DRILLING PROGRAM

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, on October 16, 1961, filed a Drilling Program covering captioned unit for the calendar year of 1961, consisting of four (4) Dakota wells. Said Drilling Program was not approved and the Commissioner of Public Lands' objections were incorporated in his letter dated October 24, 1961. We believe the following suggested drilling program will satisfy all previous objections.

El Paso Natural Gas Company, as Unit Operator, requested, by letter dated December 15, 1961, permission from all working interest owners to file a 1962 Drilling Program calling for the withdrawal of the 1961 Drilling Program and the filing in lieu thereof of a 1962 Drilling Program providing for the drilling of six (6) Dakota wells within the Huerfano Unit Area. Said approval from the working interest owners was requested with the understanding that the actual locations of the six (6) wells would be subject to their approval upon selection of locations during the first half of 1962. The necessary approval from the working interest owners for the drilling of six (6) wells at locations to be subsequently chosen has been received.

El Paso Natural Gas Company, as Unit Operator, hereby withdraws the 1961 Drilling Program dated October 16, 1961, and submits a proposed Drilling Program for the calendar year 1962 providing for the drilling of six (6) Dakota wells at locations to be selected at a later date and in

such a manner as to outline the commercial limits of the Dakota Formation of the Huerfano Unit. This program will satisfy the obligation of Unit Operator to file a drilling program for 1961 and 1962.

El Paso Natural Gas Company intends to drill the Dakota wells to the base of the Dakota Formation using rotary tools. Surface casing will be set to the depth of approximately 300' and an intermediate string will be run if necessary, through the Pictured Cliffs Formation to a depth of approximately 3200', and then a production casing string will be run to the base of the Dakota Formation. The casing in the Dakota Formation will then be perforated and the Dakota Formation subjected to a hydraulic fracturing process. Mud will be used in setting the intermediate string of casing when said casing is run and the hole below the intermediate string of casing will be drilled with either mud or gas. Due care will be taken to protect all horizons.


If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

  
Sam Smith, Manager  
Land Department

SS:GA:js

Huerfano 3.0, 5.0

HUERFANO UNIT  
All Formations  
Working Interest Owners

B & M Construction Company  
2808 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Brookhaven Oil Company  
P. O. Box 1267  
Scottsdale, Arizona

Barbara Ann McConnell Bruss  
6011 N. 48th Avenue  
Glendale, Arizona

Delhi-Taylor Oil Corporation  
2630 Fidelity Union Tower  
Dallas 1, Texas

Edward C. & Hulda Evensen  
739 Haight Street  
San Francisco 17, California

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mrs. Charline Greer  
109 East Ute  
Farmington, New Mexico

Vincent B. Hamilton  
815 First Avenue, SE  
Hamton, Iowa

Bernice Jeffs  
P. O. Box 51  
Gorman, Texas

Mr. Harold Kogan and Mathilda Kogan  
742-35th Avenue  
San Francisco, California

La Plata Gathering System, Inc.  
1900 Mercantile Dallas Building  
Dallas, Texas

Lignum Oil Company  
2919 Ella Lee Lane  
Houston, Texas

Mr. Marjorie Lundean  
One West 67th Street  
New York 23, New York

Mr. J. W. McConnell, Jr.  
P. O. Box 102  
Lone Wolf, Oklahoma

Mrs. Barbara Irene McConnell  
1224 Laguna Cove  
Farmington, New Mexico

Pan American Petroleum Corporation (12)  
Attention: Mr. T. M. Curtis  
P. O. Box 480  
Farmington, New Mexico

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. H. K. Riddle  
644 East Barcelona  
Santa Fe, New Mexico

Joseph Seagram and Sons, Inc.  
P. O. Box 747  
1500 Davis Building  
Dallas 21, Texas

Stekoll Petroleum Corporation  
1100 Mercantile Continental Building  
Dallas, Texas

Sunland Refining Corporation  
P. O. Box 1512  
Fresno 16, California

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Union Texas Petroleum Company  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Western Natural Gas Company  
Attention: Mr. K. P. Moore  
P. O. Box 1508  
Houston 2, Texas

Dr. Sherman Wengerd  
1044 Stanford Drive, NE  
Albuquerque, New Mexico

APPROVED: \_\_\_\_\_  
United States Geological Survey

DATE: \_\_\_\_\_

Subject to like approval by the appropriate  
State regulatory bodies.

APPROVED: \_\_\_\_\_  
Commissioner of Public Lands

DATE: \_\_\_\_\_

Subject to like approval by the United  
States Geological Survey and the Oil  
Conservation Commission.

APPROVED:  \_\_\_\_\_  
Oil Conservation Commission

DATE: 7.25.62

Subject to like approval by the United  
States Geological Survey and the Com-  
missioner of Public Lands.

The foregoing approvals are for the Huerfano Unit Drilling Program for the  
calendar year 1962.

175  
April 26, 1962

C  
O  
P  
Y  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: Huerfano Unit, San Juan  
County, New Mexico,  
Ninth, Tenth, Eleventh,  
Twelfth and Thirteenth  
Revisions of the Dakota  
Participating Area

Attention: Mr. T. W. Bittick

Gentlemen:

The Commissioner of Public Lands has approved as of this date the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Dakota Participating Area, Huerfano Unit, San Juan County, New Mexico.

We are forwarding five approved copies of this application to the U. S. Geological Survey at Roswell, attention Mr. John A. Anderson, for their consideration.

Very truly yours,

E. S. JOHNNY WALKER  
COMMISSIONER OF PUBLIC LANDS

BY:

(Mrs.) Marian M. Rhea, Supervisor  
Unit Division

ESW/mmr/v

cc: Mr. John A. Anderson  
Regional Oil & Gas Supervisor  
U. S. Geological Survey  
Roswell, New Mexico

Oil Conservation Commission  
Santa Fe, New Mexico

**NEW MEXICO OIL CONSERVATION COMMISSION**

P. O. BOX 871

SANTA FE, NEW MEXICO

April 20, 1962

**El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas**

**Attention: Mr. T. W. Bittick**

**Re: Ninth, Tenth, Eleventh, Twelfth  
and Thirteenth Revisions of the  
Dakota Formation Participating  
Area, Huerfano Unit, San Juan  
County, New Mexico**

**Gentlemen:**

**This is to advise that the New Mexico Oil Conservation Commission has this date approved the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Participating Area for the Dakota Formation in the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.**

**Seven approved copies of the application are being forwarded to the Commissioner of Public Lands.**

**Very truly yours,**

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

**ALP/JEK/ig**

**cc: United States Geological Survey  
Roswell, New Mexico**

**Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico**

# El Paso Natural Gas Company

El Paso, Texas

APR 13 1962  
APR 13 1962 PM 11 10

Oil Conservation Commission  
Of the State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I. Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
NINTH, TENTH, ELEVENTH, TWELFTH  
AND THIRTEENTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

Attached are eight (8) copies of the subject Initial Participating Area of the Huerfano Unit, together with exhibits and geological information.

It is requested, upon your approval, that you kindly sign all copies in the space provided, retaining one (1) copy of same and forward the remaining seven (7) copies to the Commissioner of Public Lands for their approval and execution. Upon the approval by the Commissioner of Public Lands, they are to retain one (1) copy and return the remaining six (6) copies to this office for our further handling in obtaining the approval of the United States Geological Survey.

After we have received fully executed and approved copies of this Initial Participating Area, we will forward one (1) fully executed and approved copy to the Commissioner of Public Lands.

Very truly yours,



Charles T. Richardson  
Area Coordinator  
Land Department

CTR:GA:js  
Enclosures

cc: Commissioner of Public Lands

# *El Paso Natural Gas Company*

*El Paso, Texas*

April 9, 1962

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D. C.

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I. Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
NINTH, TENTH, ELEVENTH, TWELFTH  
AND THIRTEENTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

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Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Director of the United States Geological Survey on June 6, 1950, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Participating Area for the Dakota Formation, to wit:

Ninth Revision - Effective 1st day of December, 1960

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	
Sec. 18: W/2	328.20
Sec. 19: NW/4	163.40

T-26-N, R-10-W, N.M.P.M.		
Sec. 12:	S/2	320.00
Sec. 13:	All	640.00
Sec. 24:	All	640.00
Sec. 25:	N/2	320.00

This proposed Ninth Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on November 10, 1960, of the Huerfano Unit Well No. 115 located 990' from the North line and 1650' from the West line of Section 12, Township 26 North, Range 10 West, with an initial potential of 3217 MCF from the Dakota Formation at a depth of 6748' - 6756', 6768' - 6776', 6788' - 6794', 6828' - 6836', 6842' - 6858' and 6862' - 6872'. The proposed Ninth Revision is also predicated on the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on October 16, 1960, of the Huerfano Unit No. 120 Well, located 990' from the North line and 1650' from the West line of Section 25, Township 26 North, Range 10 West, with an initial potential of 8372 MCF from the Dakota Formation at a depth of 6646' - 6664', 6670' - 6682' and 6686' - 6690'. This proposed Ninth Revision is additionally predicated upon the knowledge and general information obtained from the Pan American McNaughton #1-A Well (NW/4 Section 24, T-26-N, R-10-W, Huerfano Unit #111 Well (Section 20, T-26-N, R-9-W) and the Huerfano Unit #104 Well (Section 17, T-26-N, R-10-W) which are discussed in Exhibit "A" included herewith. The effective date of the Ninth Revision shall be December 1, 1960, pursuant to Section 10 of the Unit Agreement, based upon the test dates of the Huerfano Unit #115 Well and the Huerfano Unit #120 Well, which are November 18, 1960, and November 8, 1960, respectively.

Tenth Revision - Effective 1st day of January, 1961

<u>Description of Lands</u>	<u>Acreage</u>
T-27-N, R-10-W, N.M.P.M.	
Sec. 19: W/2	334.08
Sec. 29: SW/4	160.00
Sec. 30: NW/4	167.40
Sec. 30: SE/4	160.00
T-27-N, R-11-W, N.M.P.M.	
Sec. 24: E/2	320.00
Sec. 25: NE/4	160.00
T-26-N, R-10-W, N.M.P.M.	
Sec. 10: SE/4	160.00
Sec. 11: S/2	320.00

This proposed Tenth Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the

Huerfano Unit Agreement on November 22, 1960, of the Huerfano Unit Well #101 (Dual, Gallup-Dakota), located 1700' from the North line and 1620' from the West line of Section 19, Township 27 North, Range 10 West, with an initial potential of 9765 MCF from the Dakota Formation at a depth of 6078' - 6088', 6108' - 6114' and 6167' - 6182'. The proposed Tenth Revision is also predicated on the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on December 5, 1960, of the Huerfano Unit #116 Well (Dual, Gallup-Dakota), located 990' from the North line and 1652' from the West line of Section 11, Township 26 North, Range 10 West, with an initial potential of 3084 MCF from the Dakota Formation at a depth of 6840' - 6850', 6856' - 6866' and 6873' - 6884'. This proposed Tenth Revision is additionally predicated upon the knowledge and general information obtained from the Frontier #2 Evensen Well (SE/4 Section 19, T-27-N, R-10-W), the Huerfano #105 Well (SE/4 Section 29, T-27-N, R-10-W), the Pan American #1-B McAdams Well (SE/4 Section 28, T-27-N, R-10-W), the Huerfano #104 Well (Section 17, T-26-N, R-10-W), the Huerfano Unit #115 Well (Section 12, T-26-N, R-10-W) and the Huerfano Unit #120 Well (Section 25, T-26-N, R-10-W), which wells are discussed in Exhibit "A" included herewith. The effective date of the Tenth Revision shall be January 1, 1961, pursuant to Section 10 of the Unit Agreement, based upon the test dates of the Huerfano Unit #101 Well and the Huerfano Unit #116 Well, which were December 23, 1960 and December 20, 1960 respectively.

Eleventh Revision - Effective 1st day of February, 1961

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Sec. 14: All	640.00
Sec. 15: All	640.00
Sec. 16: SE/4	160.00
Sec. 21: NE/4	160.00
Sec. 22: N/2	320.00
Sec. 23: N/2	320.00

This proposed Eleventh Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on January 16, 1961, of the Huerfano Unit Well #117, located 990' from the South line and 990' from the East line of Section 16, Township 26 North, Range 10 West, with an initial potential of 2226 MCF from the Dakota Formation at a depth of 6622' - 6654'. This proposed Eleventh Revision is additionally predicated upon the knowledge and general information obtained from the Huerfano Unit #104 Well (Section 17, T-26-N, R-10-W), the Huerfano Unit #115 Well (Section 12, T-26-N, R-10-W), the Huerfano Unit #116 Well (Section 11, T-26-N, R-10-W), and the Huerfano Unit #120 Well (Section 25, T-26-N, R-10-W), which wells are discussed in Exhibit "A" included herewith. The effective date of the Eleventh Revision shall be February 1, 1961, pursuant to Section 10 of the Unit Agreement, based upon the test date of the Huerfano Unit #117 Well, which is January 23, 1961.

The Huerfano Unit #113 Well (Dual, Gallup-Dakota), located 990' from the North line and 1700' from the West line of Section 33, T-27-N, R-10-W, and completed December 29, 1961, is within the present Huerfano Dakota Participating Area. Said well was tested on January 5, 1961, showing an initial potential of 804 MCF from the Dakota Formation at a depth of 6409' - 6413', 6414' - 6425', and 6461' - 6485'. For reasons denoted in the Exhibit "A" the drilling of this well did not prove up any additional acreage hereto.

Twelfth Revision - Effective 1st day of April, 1961

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	
Sec. 19: S/2	322.94
Sec. 30: All	646.40
T-26-N, R-10-W, N.M.P.M.	
Sec. 21: S/2	320.00
Sec. 22: S/2	320.00
Sec. 23: S/2	320.00
Sec. 25: S/2	320.00
Sec. 26: All	640.00
Sec. 27: All	640.00
Sec. 28: All	640.00

This proposed Twelfth Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on February 12, 1961, of the Huerfano Unit #121 Well, located 1650' from the North line and 1650' from the West line of Section 27, T-26-N, R-10-W, with an initial potential of 20,919 MCF, from the Dakota Formation at a depth of 6636' - 6645' and 6666' - 6678'. The proposed Twelfth Revision is also predicated on the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on January 29, 1961, of the Huerfano Unit #125 Well, located 1700' from the North line and 1040' from the West line of Section 30, T-26-N, R-9-W, with an initial potential of 7754 MCF, from the Dakota Formation at a depth of 6524' - 6530', 6580' - 6596' and 6616' - 6632'. This proposed Twelfth Revision is additionally predicated upon the knowledge and general information obtained from the Huerfano Unit #111 Well (Section 20, T-26-N, R-9-W), the Huerfano Unit #120 Well (Section 25, T-26-N, R-10-W), the Huerfano Unit #117 Well (Section 16, T-26-N, R-10-W), the Huerfano Unit #115 Well (Section 12, T-26-N, R-10-W), the E. P. Campbell--Hanson #1 Well (Section 5, T-25-N, R-10-W), Pan American #1-A McNaughton Well (Section 24, T-26-N, R-10-W) and the Huerfano Unit #127 Well (Section 26, T-26-N, R-10-W), which wells are discussed in Exhibit "A" included herewith. The effective date of the Twelfth Revision shall be April 1, 1961, pursuant to Section 10 of the Unit Agreement, based upon the test date of the Huerfano Unit #121 Well and the Huerfano Unit #125 Well, which are March 15, 1961 and March 14, 1961 respectively.

Thirteenth Revision - Effective the 1st day of September, 1961

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	
Sec. 5: All	644.10
Sec. 6: All	650.11
Sec. 8: All	640.00
Sec. 17: E/2	320.00

This proposed Thirteenth Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on August 5, 1961, of the Huerfano Unit #126 Well located 1180' from the South line and 990' from the East line of Section 5, T-26-N, R-9-W, with an initial potential of 3832 MCF from the Dakota Formation at a depth of 6586' - 6600', 6684' - 6690', 6694' - 6700', and 6760' - 6766'. This proposed Thirteenth Revision is additionally predicated upon the knowledge and general information obtained from the Huerfano Unit #108 Well (NW/4 Section 1, T-26-N, R-10-W), the Huerfano Unit #92 Well (NW/4 Section 7, T-26-N, R-9-W), and the Huerfano Unit #111 Well (NW/4 Section 20, T-26-N, R-9-W), which wells are discussed in Exhibit "A" included herewith. The effective date of the Thirteenth Revision shall be September 1, 1961, pursuant to Section 10 of the Unit Agreement, based upon the test date of the Huerfano Unit #126 Well, which is August 24, 1961.

In support of this application the following exhibits are made a part hereof:

EXHIBIT "A"

Ownership map reflecting the boundaries of the Unit and the proposed Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report in quadruplicate on the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "C"

Schedule of the Dakota Gas Production to the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "D"

Isopach Map.

EXHIBIT "E"

Isopach Map.

EXHIBIT "F"

Subsurface Structure Map Top of Graneros Shale.

EXHIBIT "G"

Proposed Ninth, Tenth, Eleventh, Twelfth and Thirteenth Expansions of the Huerfano Unit Dakota Participating Area, San Juan County, New Mexico.

Attached herewith are Schedules X through XIV, showing the lands entitled to participation in the unitized substances produced from the Dakota Formation with the percentage of participation of each lease or tract indicated thereon.

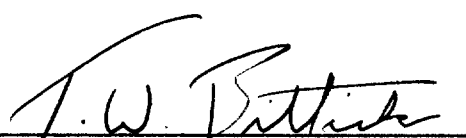
If the above selection of lands to constitute the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By



T. W. Bittick  
Assistant Manager  
Land Department

TWB:GA:js

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Director, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the United  
States Geological Survey and the Oil  
Conservation Commission.

APPROVED: A. H. Carter, Jr. DATE: 4-20-62  
Oil Conservation Commission  
Subject to like approval by the United  
States Geological Survey and the Com-  
missioner of Public Lands.

The foregoing approvals are for the Ninth, Tenth, Eleventh, Twelfth and Thirteenth Revisions of the Participating Area for the Dakota Formation, effective December 1, 1960, January 1, 1961, February 1, 1961, April 1, 1961 and September 1, 1961, respectively, under the Huerfano Unit, I. Sec. No. 731, San Juan County, New Mexico.

**HUERFANO UNIT**  
**All Formations**  
**Working Interest Owners**

**B & M Construction Company**  
**2808 First National Building**  
**Oklahoma City, Oklahoma**

**Benson-Montin-Greer Drilling Corporation**  
**2808 First National Building**  
**Oklahoma City, Oklahoma**

**Brookhaven Oil Company**  
**P.O. Box 1267**  
**Scottsdale, Arizona**

**Barbara Ann McConnell Bruss**  
**6011 North 48th Avenue**  
**Glendale, Arizona**

**Delhi-Taylor Oil Corporation**  
**2630 Fidelity Union Tower**  
**Dallas 1, Texas**

**Edward C. & Hulda Evensen**  
**739 Haight Street**  
**San Francisco 17, California**

**Mr. Albert R. Greer**  
**405½ West Broadway**  
**Farmington, New Mexico**

**Mrs. Charline Greer**  
**109 East Ute**  
**Farmington, New Mexico**

**Berenice Jeffs**  
**P.O. Box 51**  
**Gorman, Texas**

**Mr. Harold Kogan and Mathilda Kogan**  
**742-35th Avenue**  
**San Francisco, California**

**La Plata Gathering System, Inc..**  
**1900 Mercantile Dallas Building**  
**Dallas, Texas**

**Lignum Oil Company**  
**1030 Bank of the Southwest Building**  
**Houston, Texas**

**Mrs. Marjorie Lundean**  
**One West 67th Street**  
**New York 23, New York**

**Mr. J. W. McConnell, Jr.**  
**P.O. Box 102**  
**Lone Wolf, Oklahoma**

**Mr. Barbara Irene McConnell**  
**1224 Laguna Cove**  
**Farmington, New Mexico**

**Pan American Petroleum Corporation (12)**  
**Attention: Mr. T. M. Curtis**  
**P.O. Box 480**  
**Farmington, New Mexico**

**Mr. E. H. Pipkin**  
**P.O. Box 1174**  
**Roswell, New Mexico**

**Mr. H. K. Riddle**  
**644 East Barcelona**  
**Santa Fe, New Mexico**

**Joseph Seagram and Sons, Inc.**  
**P.O. Box 747**  
**1500 Davis Building**  
**Dallas 21, Texas**

**Stekoll Petroleum Corporation**  
**1100 Mercantile Continental Building**  
**Dallas, Texas**

**Sunland Refining Corporation**  
**P.O. Box 1512**  
**Fresno 16, California**

**Mr. J. Glenn Turner**  
**1900 Mercantile Dallas Building**  
**Dallas 1, Texas**

**Union Texas Petroleum Company**  
**Liberty Bank Building**  
**Oklahoma City 2, Oklahoma**

**Mr. William G. Webb**  
**1900 Mercantile Dallas Building**  
**Dallas 1, Texas**

**Western Natural Gas Company**  
**Attention: Mr. K. P. Moore**  
**P.O. Box 1508**  
**Houston 2, Texas**

**Dr. Sherman Wengerd**  
**1044 Stanford Drive, NE**  
**Albuquerque, New Mexico**

**Mr. Vincent B. Hamilton**  
**815 First Avenue, SE**  
**Hamton, Iowa**

# El Paso Natural Gas Company

El Paso, Texas  
1962 FEB 15 AM 8:10

February 8, 1962

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
P.O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P.O. Box 871  
Santa Fe, New Mexico

Gentlemen:

We are transmitting herewith for your approval copies of Ratification and Joinders to the Unit Agreement and Unit Operating Agreement for the Development and Operation of the Huerfano Unit Area, San Juan County, New Mexico.

These instruments serve to commit the working interest and operating rights of Sunshine Royalty, Inc. under United States Oil and Gas Lease SF 079787 covering all of Section 13, and the S/2 SW/4 of Section 14, T-25-N, R-10-W, to the Huerfano Unit. El Paso Natural Gas Company, as Unit Operator, has accepted this joinder by its execution of the attached instruments.

Copies of this letter are being furnished to all of the working interest owners in the Huerfano Unit.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By Charles T. Richardson  
Charles T. Richardson  
Area Coordinator  
Land Department

CTR: PNP: cah  
Attachments

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Muerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claim an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

**This instrument is intended to cover the following described lands only:**

**Township 25 North, Range 10 West, N.M.P.M.**

**Section 13: All**

**Section 14: S/2 SW/4**

**San Juan County, New Mexico**

ADDRESS


SIGNATURE

SUNSHINE ROYALTY COMPANY

<sup>1355</sup>  
**Post Office Box 793, Roswell, New Mexico**

By:   
**FRANK C. ELLIOTT**, Vice President

Attest:



Secretary

~~FRANK C. ELLIOTT~~

Date: \_\_\_\_\_

\_\_\_\_\_

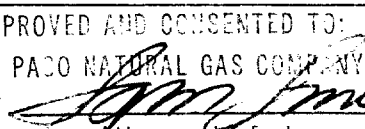
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
BY   
Attorney-in-Fact  
Unit Operator

My Commission Expires:

Notary Public

The foregoing instrument was acknowledged before me this 10 day of  
1962, by Sam Smith, Attorney in Fact for  
EL PASO NATURAL GAS COMPANY, a Delaware corporation, on behalf of said corporation.

COUNTY OF EL PASO

STATE OF TEXAS

State of  
County,

Notary Public in and for

My commission expires:

On this day of 19, before me  
personally appeared, a single person, to  
me known to be the person described in and who executed the foregoing instrument,  
and acknowledged to me that executed the same as free act and deed.

COUNTY OF

STATE OF

State of  
County,

Notary Public in and for

My commission expires:

On this day of 19, before me appeared  
his wife, to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.

COUNTY OF

STATE OF

State of New Mexico  
County,

Notary Public in and for

Dec. 20, 1963

My commission expires:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal  
the day and year in this certificate first above written.

and deed of said corporation.  
Frank O. Elliott  
acknowledged said instrument to be the free act  
behalf of said corporation by authority of its board of directors, and said  
corporate seal of said corporation, and that said instrument was signed and sealed in  
and that the seal affixed to said instrument is the  
by me duly sworn, did say that he is the Vice President of Sunshine Royalty  
Company, to me personally known, who, being  
Frank O. Elliott

On this 2d day of February, 19 62, before me appeared

COUNTY OF CHAVES

STATE OF NEW MEXICO

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

**This instrument is intended to cover the following described lands only:**

**Township 25 North, Range 10 West, N.M.P.M.**

**Section 13: All**

**Section 14: S/2 SW/4**

**San Juan County, New Mexico**

ADDRESS

1355

**Post Office Box 793, Roswell, New Mexico**

SIGNATURE

SUNSHINE ROYALTY COMPANY

By:   
**FRANK O. ELLIOTT**, Vice President

Attest:



Secretary

~~XXXXXX ELLIOTT~~

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

BY   
Attorney-in-Fact  
Unit Operator

STATE OF NEW MEXICO )  
COUNTY OF CHAVES )

The foregoing instrument was acknowledged before me this 24 day of February, 1962, by Frank O. Elliott, Vice President of Sunshyne Royalty Company, a New Mexico corporation, on behalf of said corporation.

My Commission expires: \_\_\_\_\_

Dec. 20, 1963

Notary Public \_\_\_\_\_

STATE OF )  
COUNTY OF )

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_, 1962, by Frank O. Elliott, Vice President of Sunshyne Royalty Company, a New Mexico corporation, on behalf of said corporation.

My Commission expires: \_\_\_\_\_

Notary Public \_\_\_\_\_

STATE OF )  
COUNTY OF )

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_, 1962, by \_\_\_\_\_, Attorney-in-Fact of \_\_\_\_\_

My Commission expires: \_\_\_\_\_

Notary Public \_\_\_\_\_

STATE OF TEXAS )  
COUNTY OF EL PASO )

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_, 1962, by Sam Smith, Attorney in Fact for EL PASO NATURAL GAS COMPANY, a Delaware corporation, on behalf of said corporation.

My Commission expires: \_\_\_\_\_

Notary Public \_\_\_\_\_

Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1963

195  
October 24, 1961

El Paso Natural Gas Co.  
P. O. Box 1492  
El Paso, Texas

Re: Huerfano Unit  
San Juan County, New Mexico  
Plan of Development  
Jan. 1, 1961 to Dec. 31, 1961

Attention: Mr. Sam Smith

Gentlemen:

We have received your 1961 Plan of Development dated October 16, 1961. This Plan lists four locations for Dakota wells, which evidently you anticipate drilling prior to December 31, 1961.

May we therefore assume you intend to file a 1962 Plan of Development in January 1962 including a number of obligation Dakota wells.

We wish to call to your attention a direct offset due in Sec. 32, T-26N, R-10W due to a Dakota well outside the Unit in Sec. 5, T-25N, R-10W, a diagonal offset due in Sec. 32, T-27N, R-10W. A direct offset due in Sec. 17, T-25N, R-9W due to two Dakota wells outside the Unit in Sec. 20, T-25N, R-9W.

We wish to be informed as to your intentions in regard to the drilling of these offset wells also your intentions in regard to the filing of a 1962 Plan of Development before consideration or approval of this Plan which you have submitted.



# El Paso Natural Gas Company

El Paso, Texas

October 16, 1961

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
P.O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
P.O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
PLAN OF DEVELOPMENT  
For Period January 1, 1961 -  
December 31, 1961

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, on January 29, 1960, filed a Plan of Development for the period of January 1, 1960, to December 31, 1960. Subsequent to the submission of said Drilling Program ten (10) wells were drilled on the Huerfano Unit and the following information is submitted in connection therewith:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit #101	NW/4 Sec. 19, T-27-N, R-10-W	12-16-60	Gallup 28.8 BOPD  Dakota CV 6753 MCF AOF 9765 MCF

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit #113	NW/4 Sec. 33, T-27-N, R-10-W	12-29-60	Gallup CV 2127 MCF 27.8 BOPD  Dakota CV 802 MCF AOF 804 MCF
Huerfano Unit #115	NW/4 Sec. 12, T-26-N, R-10-W	11-10-60	Dakota CV 2874 MCF AOF 3217 MCF
Huerfano Unit #116	NW/4 Sec. 11, T-26-N, R-10-W	12-5-60	Gallup CV 272 MCF 7.8 BOPD  Dakota CV 2994 MCF AOF 3084 MCF
Huerfano Unit #117	SE/4 Sec. 16, T-26-N, R-10-W	1-16-61	Dakota CV 1731 MCF AOF 2221 MCF
Huerfano Unit #120	NW/4 Sec. 25, T-26-N, R-10-W	10-16-60	Dakota CV 5896 MCF AOF 8372 MCF
Huerfano Unit #121	NW/4 Sec. 27, T-26-N, R-10-W	2-13-61	Dakota CV 9487 MCF AOF 20,919 MCF
Huerfano Unit #125	NW/4 Sec. 30, T-26-N, R-10-W	1-21-61	Dakota CV 5883 MCF AOF 7754 MCF
Huerfano Unit #126	SE/4 Sec. 5, T-26-N, R-9-W	8-5-61	Dakota CV 3465 MCF AOF 3832 MCF
Huerfano Unit #127	NW/4 Sec. 26, T-26-N, R-10-W	7-13-61	Dakota P&A

As of this date, the total number of wells in the Huerfano Unit is as follows:

Pictured Cliffs (Commercial)	54
Dakota (Commercial)	4
Gallup (Commercial)	1
Dakota-Gallup (Commercial)	16
Pictured Cliffs (Non-commercial)	2
Dakota (Non-commercial)	1
Pictured Cliffs (Plugged & Abandoned)	24
Dakota (Plugged & Abandoned)	1

El Paso Natural Gas Company, as Unit Operator, submitted by letter dated September 27, 1961, to all working interest owners a Plan of Development for the period of January 1, 1961, to December 31, 1961. The proposed Plan of Development provided for the drilling of four (4) Dakota wells for the calendar year 1961. The working interest owners have approved the filing of a Plan of Development for 1961 providing for the drilling of four (4) Dakota wells.

El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Drilling Program for the calendar year 1961, consisting of four (4) wells to be completed in the Dakota Formation. The proposed wells are as follows:

<u>ACREAGE DEDICATED</u>	<u>LOCATION</u>	<u>FORMATION</u>
N/2 Section 36, T-27-N, R-10-W	NW/4 Section 36, T-27-N, R-10-W	Dakota
N/2 Section 9, T-26-N, R-9-W	NW/4 Section 9, T-26-N, R-9-W	Dakota
N/2 Section 29, T-26-N, R-9-W	NW/4 Section 29, T-26-N, R-9-W	Dakota
S/2 Section 26, T-26-N, R-10-W	SE/4 Section 26, T-26-N, R-10-W	Dakota

El Paso Natural Gas Company intends to drill the subject wells to the base of the Dakota Formation using rotary tools. Surface casing will be set to the depth of approximately 300' and then a production casing string will be run to the base of the Dakota Formation. The casing in the Dakota Formation will then be perforated and the Dakota Formation subjected to a hydraulic fracturing process. Due care will be taken to protect all horizons.

If this Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By 

Sam Smith, Manager  
Land Department

SS:PNP:cah

Huerfano 3.0

**HUERFANO UNIT**

**All Formations**

**Working Interest Owners**

B & M Construction Company  
2808 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Brookhaven Oil Company  
P.O. Box 1267  
Scottsdale, Arizona

Barbara Ann McConnell Bruss  
1300 Mesa Verde  
Farmington, New Mexico

Edward C. Evensen & Hulda Evensen (2)  
739 Haight Street  
San Francisco 17, California

Delhi-Taylor Oil Corporation  
Attention: Mr. R. L. Caldwell  
2630 Fidelity Union Tower  
Dallas, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Charline Greer  
109 East Ute  
Farmington, New Mexico

Berenice Jeffs  
P.O. Box 51  
Gorman, Texas

Mr. Harold Kogan and Mathilda Kogan  
742-35th Avenue  
San Francisco, California

La Plata Gathering System, Inc.  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. O. J. Lilly  
P.O. Box 185  
Farmington, New Mexico

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mrs. Barbara Irene McConnell  
1224 Laguna Cove  
Farmington, New Mexico

Pan American Petroleum Corporation (12)  
Attention: Mr. T. M. Curtis  
P.O. Box 480  
Farmington, New Mexico

Mr. E. H. Pipkin  
P.O. Box 1174  
Roswell, New Mexico

Mr. H. K. Riddle  
P.O. Box 1985  
Salt Lake City, Utah

Joseph Seagram & Sons, Inc.  
P.O. Box 747  
1500 Davis Building  
Dallas 21, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston, Texas

Stekoll Petroleum Corporation  
1100 Mercantile Continental Building  
Dallas 1, Texas

Sunland Refining Corporation  
P.O. Box 1512  
Fresno 16, California

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Union Texas Natural Gas Corporation  
A-P Division  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas, Texas

Western Natural Gas Company  
Attention: Mr. K. P. Moore  
P.O. Box 1508  
Houston 2, Texas

Dr. Sherman Wengerd  
1044 Stanford Drive, NE  
Albuquerque, New Mexico

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

United States Geological Survey

Subject to like approval by the appropriate  
State regulatory bodies.

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

Commissioner of Public Lands

Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

Oil Conservation Commission

Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

The foregoing approvals are for the Huerfano Unit Plan of Development for  
period January 1, 1961, to December 31, 1961.

# El Paso Natural Gas Company

El Paso, Texas

September 29, 1961

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPROVAL OF FOURTH, FIFTH, SIXTH,  
SEVENTH AND EIGHTH REVISIONS OF  
THE PARTICIPATING AREA FOR THE  
DAKOTA FORMATION

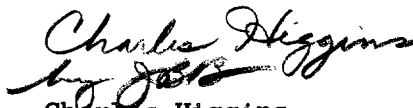
Gentlemen:

El Paso Natural Gas Company's Application, dated May 22, 1961, for the Fourth through the Eighth Enlargements of the Dakota Participating Area under the Huerfano Unit Agreement was approved as follows:

1. Acting Director, U.S.G.S. - September 12, 1961
2. Commissioner of Public Lands - May 31, 1961
3. Oil Conservation Commission - May 22, 1961

A copy of this letter is being sent to the Dakota working interest owners of the Huerfano Unit.

Very truly yours,

  
Charles Higgins  
Area Coordinator  
Land Department

CH:PNP:js

Huerfano, 4.3  
Huerfano, 5.0



UNITED STATES  
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY  
Drawer 1857  
Roswell, New Mexico

September 22, 1961

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. T. W. Bittick

Gentlemen:

Your application of May 22, 1961, for the fourth, fifth, sixth, seventh and eighth revisions of the Dakota participating area, Huerfano unit agreement, San Juan County, New Mexico, was approved by the Acting Director, Geological Survey, on September 12, 1961, effective as of August 1, October 1, November 1, 1959, January 1, and February 1, 1960, respectively.

One approved copy of the application is enclosed. It is assumed that you will furnish the State of New Mexico and any other interested party with appropriate evidence of this approval.

Very truly yours,

WILLIAM H. FELUMILLER  
Acting Regional Oil and Gas Supervisor

Copy to: Washington (ltr. only)  
BLM-Santa Fe (w/cy of appln)  
Farmington (w/cy of appln)  
NMOCC, Santa Fe (ltr. only)  
Com. of Pub. Lands, Santa Fe (ltr. only)

# El Paso Natural Gas Company

El Paso, Texas

September 1, 1961

*Case # 1961*

Director  
United States Geological Survey  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit - EIGHTH EXPANSION  
Dakota Participating Area  
San Juan County, New Mexico

Gentlemen:

Certain corrections have been made in the corrected Eighth Expansion of the Dakota Participating Area of the Huerfano Unit previously submitted to your office for approval.

We are enclosing the corrected pages 7 and 8 of Schedule IX, which should be substituted in place of the previous ones sent you.

A copy of this letter and attachments are being sent to the working interest owners of the Huerfano Unit.

Very truly yours,

*Charles Higgins*

Charles Higgins  
Area Coordinator  
Land Department

CH:PNP:js  
Attachments

SCHEDULE IX

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE		
<u>TRACT 27</u>						
NM 0396	<u>T-26-N, R-10-W</u>	159.65	Royalty;	12.500000%	12.500000%	<u>1.890643%</u>
	<u>Sec. 4: Lots 1,2,</u>		Working Interest:			
	<u>S/2 NE/4</u>		*El Paso Natural Gas Co.;	47.674684%	47.674684%	
			Pan American Pet. Corp.;	29.697500%	29.697500%	
			ORRI;	10.127816%	10.127816%	
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 32-A</u>						
NM 0433-A	<u>T-26-N, R-10-W</u>	160.00	Royalty;	12.500000%	12.500000%	<u>1.894787%</u>
	<u>Sec. 21: NW/4</u>		Working Interest:			
			*El Paso Natural Gas Co.;	48.106442%	48.106442%	
			Pan American Pet. Corp.;	29.697500%	29.697500%	
			ORRI;	9.696058%	9.696058%	
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 34</u>						
SF 30456	<u>T-26-N, R-10-W</u>	160.00	Royalty;	12.500000%	12.500000%	<u>1.89478</u>
	<u>Sec. 9: SE/4</u>		Working Interest:			
			*El Paso Natural Gas Co.;	48.106442%	48.106442%	
			Pan American Pet. Corp.;	29.697500%	29.697500%	
			ORRI;	9.696058%	9.696058%	
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	

Effective February 1, 1960

SCHEDULE IX

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE		
<u>TRACT 36</u>						
SF 079658	<u>T-26-N, R-10-W</u> Sec. 10: W/2	320.00	Royalty; Working Interest: *El Paso Natural Gas Co.; Pan American Pet. Corp.; ORRI;	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	<u>3.789574%</u>
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 36-A</u>						
SF 079658-A	<u>T-26-N, R-10-W</u> Sec. 10: NE/4	160.00	Royalty; Working Interest: *El Paso Natural Gas Co.; Pan American Pet. Corp.; ORRI;	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	<u>1.894787%</u>
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 38</u>						
SF 0646	<u>T-26-N, R-10-W</u> Sec. 11: NW/4	160.00	Royalty; Working Interest: *El Paso Natural Gas Co.; Pan American Pet. Corp.; ORRI;	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	12.500000%  50.209082% 29.697500% <u>7.593418%</u>	<u>1.894787%</u>
			TOTAL	<u>100.000000%</u>	<u>100.000000%</u>	

# El Paso Natural Gas Company

El Paso, Texas

August 10, 1961

Director  
United States Geological Survey  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
P. O. Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
P. O. Box 871  
Santa Fe, New Mexico

Re: Huerfano Unit - Eighth  
Expansion, Dakota Participating Area  
San Juan County, New Mexico

Gentlemen:

Certain corrections have been made in the Eighth Expansion of the Dakota Participating Area of the Huerfano Unit previously submitted to your office for approval.

We are enclosing the corrected pages 7 and 8 of Schedule IX, which should be substituted in place of the previous ones sent you.

A copy of this letter and attachments are being sent to the working interest owners of the Huerfano Unit.

Very truly yours,

*Charles Higgins*

Charles Higgins  
Area Coordinator  
Land Department

CH:OL:js  
Attachments

*Case 195*

May 31, 1961

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: Fourth, Fifth, Sixth,  
Seventh and Eighth Expansions,  
Dakota Participating Area,  
Huerfano Unit, San Juan County,  
New Mexico

Attention: Mr. T. W. Bittick

Gentlemen:

This is to advise that the Commissioner of Public Lands has approved the Fourth, Fifth, Sixth, Seventh, and Eighth Expansions of the Dakota Participating Area, for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey. This application has received prior approval by the Oil Conservation Commission.

This application dated May 22, 1961, replaces the one approved by the Commissioner of Public Lands on January 10, 1961, having been revised upon request of the Director of the United States Geological Survey.

Five approved copies are being returned.

Very truly yours,  
E. S. JOHNNY WALKER  
COMMISSIONER OF PUBLIC LANDS

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

May 31, 1961  
Page (2).

ESW/mmr/s  
cc:

Mr. John A. Anderson  
United States Geological Survey  
P. O. Box 6721  
Roswell, New Mexico

Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

**OIL CONSERVATION COMMISSION**

P. O. BOX 871

SANTA FE, NEW MEXICO

*Case #145*

May 22, 1961

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Fourth, Fifth, Sixth, Seventh  
and Eighth Expansions of the  
Dakota Participating Area,  
Huerfano Unit, San Juan County,  
New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Fourth, Fifth, Sixth, Seventh and Eighth Expansions of the Dakota Participating Area for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

The application as submitted is a revision of the application approved on January 5, 1961. The revision was made at the request of the Director of the United States Geological Survey.

Seven approved copies of the application are handed to Mr. Wm. Cheek.

Very truly yours,

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

ALP/JEK/ig

cc: United States Geological Survey  
Commissioner of Public Lands

- Case #195

# El Paso Natural Gas Company

El Paso, Texas

May 22, 1961

Oil Conservation Commission  
State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

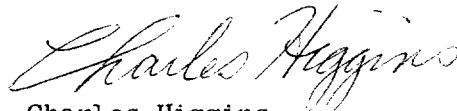
Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF FOURTH,  
FIFTH, SIXTH, SEVENTH, AND EIGHTH  
REVISIONS OF THE PARTICIPATING  
AREA FOR THE DAKOTA FORMATION

Gentlemen:

Attached are eight (8) copies of the subject expansions of the Huerfano Unit, together with map exhibits and geological information.

It is requested, upon your approval, that you kindly sign all copies in the space provided, retaining one (1) copy of the expansions and attached exhibits and forwarding the remaining seven (7) copies to the office of the Commissioner of Public Lands for his consideration.

Very truly yours,



Charles Higgins  
Area Coordinator  
Land Department

CH:WVC:cah  
Attachments

# El Paso Natural Gas Company

El Paso, Texas

May 3, 1961

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Drawer 1857  
Roswell, New Mexico

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfanito Unit  
1961 Drilling Program

Gentlemen:

This is to advise you that the 1961 Drilling Program has been approved by the regulatory bodies as follows:

1. United States Geological Survey - March 24, 1961
2. Commissioner of Public Lands - April 6, 1961
3. Oil Conservation Commission - April 28, 1961

Copies of this letter are being sent to the working interest owners of the Huerfanito Unit.

Very truly yours,



Charles Higgins  
Area Coordinator  
Land Department

CH:WVC:cah

# *El Paso Natural Gas Company*

*El Paso, Texas*

May 22, 1961

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
Post Office Box 791  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF FOURTH,  
FIFTH, SIXTH, SEVENTH AND EIGHTH  
REVISIONS OF THE PARTICIPATING AREA  
FOR THE DAKOTA FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 29, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Fourth, Fifth, Sixth, Seventh and Eighth Revisions of the Participating Area for the Dakota Formation, to-wit:

Fourth Participating Area - Effective date: August 1, 1959

<u>Description</u>	<u>Acres</u>
Township 27 North, Range 10 West	640.00
Section 19: E/2	
Section 29: NW/4	
Section 30: NE/4	

This proposed expansion of the participating area is based on the completion of the Frontier Government Evensen #2 Well located in the SE/4 of Section 19, Township 27 North, Range 10 West, which was tested on July 22, 1959 for an initial potential of 8200 MCF/D, absolute open-flow from the Dakota formation. This expansion proposes to admit the above described acreage.

Fifth Participating Area - Effective Date: October 1, 1959

<u>Description</u>	<u>Acres</u>
Township 26 North, Range 10 West Section 11: N/2	320.00

This proposed expansion of the participating area is based on the proven commercial value of the Huerfano Unit #109 Well, tested on September 28, 1959 for an initial potential of 3761 MCF/D, absolute open-flow from the Dakota formation. Reference to the isopach map (Exhibit "D") which indicates that, though the well was drilled on acreage previously admitted to a participating area, the thickness of net effective sand within the "A" Zone indicates that the acreage described in the immediate locale of this well justifies the admission of this acreage to the participating area.

Sixth Participating Area - Effective Date: November 1, 1959

<u>Description</u>	<u>Acres</u>
Township 26 North, Range 9 West Section 17: W/2 Section 18: E/2 Section 19: NE/4 Section 20: All	1440.00

The Huerfano Unit #111 Well was tested on October 27, 1959 for an initial potential of 3703 MCF/D, absolute open-flow from the Dakota formation. Reference to the geological report (Exhibit "B") describes the geological basis for the proposed admission of the above captioned acreage to a participating area.

Seventh Participating Area - Effective Date: January 1, 1960

<u>Description</u>	<u>Acres</u>
Township 26 North, Range 10 West Section 3: S/2 Section 9: SE/4 Section 10: N/2, SW/4 Section 16: NE/4	1120.00

The Huerfano Unit #110 Well located in the SE/4 of Section 3, Township 26 North, Range 10 West was tested on December 22, 1959 for an initial potential of 2242 MCF/D, absolute open-flow in the Dakota formation. Such well has been declared of commercial quality. Certain geological information and inference drawn from the commercial quality of this well justifies the proposal to admit this acreage to a participating area.

Eighth Participating Area - Effective Date: February 1, 1960

<u>Description</u>	<u>Acres</u>
Township 26 North, Range 10 West Section 1: N/2	319.48

The Huerfano Unit #108 Well located in the NW/4 of Section 1, Township 26 North, Range 10 West, which was tested on January 7, 1960 for an initial potential of 5437 MCF/D, absolute open-flow from the Dakota formation, indicates that the acreage described above should be admitted to a participating area.

In support of the application for the five participating areas the following exhibits are attached and made a part hereof:

EXHIBIT "A"

Ownership Map reflecting the boundaries of the Unit and the proposed Fourth, Fifth, Sixth, Seventh and Eighth Revisions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report on the Fourth, Fifth, Sixth, Seventh, and Eighth Revisions of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "C"

Structural Contour Map.

EXHIBIT "D"

Isopach Map of Dakota "A" Zone.

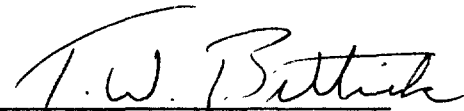
Attached herewith are Schedules V through IX showing the lands entitled to participation in the unitized substances produced from the Dakota formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Fourth, Fifth, Sixth, Seventh and Eighth Revisions of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By 

T. W. Bittick  
Assistant Manager  
Land Department

TWB:WVC:js

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Director, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the United  
States Geological Survey and the Oil  
Conservation Commission.

APPROVED: Oil Conservation Commission DATE: May 24, 1961  
Subject to like approval by the United  
States Geological Survey and the  
Commissioner of Public Lands.

The foregoing approvals are for the Fourth, Fifth, Sixth, Seventh and Eighth Revisions of the Participating Area for the Dakota Formation, effective August 1, 1959, October 1, 1959, November 1, 1959, January 1, 1960 and February 1, 1960, respectively, under the Huerfano Unit, San Juan County, New Mexico.

**HUERFANO UNIT**  
**Dakota Formation**  
**Working Interest Owners**

Anderson-Prichard Oil Corporation  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

B & M Construction Company  
2808 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Brookhaven Oil Company  
P. O. Box 1267  
Scottsdale, Arizona

Barbara Ann McConnell Bruss  
1300 Mesa Verde  
Farmington, New Mexico

Mr. Edward Evensen  
739 Haight Street  
San Francisco 17, California

Hulda Evensen  
739 Haight Street  
San Francisco 17, California

Dr. Sherman A. Wengerd  
1044 Stanford Drive, NE  
Albuquerque, New Mexico

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mrs. Charline Greer  
109 East Ute  
Farmington, New Mexico

Berenice Jeffs  
P. O. Box 51  
Gorman, Texas

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

La Plata Gathering System, Inc.  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. O. J. Lilly  
P. O. Box 185  
Farmington, New Mexico

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mrs. Barbara Irene McConnell  
1224 Laguna Cove  
Farmington, New Mexico

Pan American Petroleum Corporation (12)  
Attention: Mr. L. O. Speer, Jr.  
P. O. Box 480  
Farmington, New Mexico

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. H. K. Riddle  
P. O. Box 1985  
Salt Lake City, Utah

Stekoll Petroleum Corporation  
1100 Mercantile Continental Bldg.  
Dallas, Texas

Sunland Refining Corporation  
Attention: Mr. G. A. Olsen  
East and California Avenues  
Fresno, California

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Western Natural Gas Company  
P. O. Box 1508  
Houston 2, Texas

195  
April 11, 1961

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: Huerfano Unit  
San Juan County, New Mexico

Attention: Mr. Sam Smith

Gentlemen:

We have your proposal relative to submitting your 1961 Plan of Development at a later date for the Huerfano Unit.

This office will be willing to give you a few months extension in which to file an amendment to your 1960 and your 1961 Drilling Program, subject to like approval by the Oil Conservation Commission and the US Geological Survey.

Very truly yours,

E. S. JOHNNY WALKER  
COMMISSIONER OF PUBLIC LANDS

ESW/mmz/s

cc: Oil Conservation Commission  
Santa Fe, New Mexico

US Geological Survey  
Roswell, New Mexico

# *El Paso Natural Gas Company*

*El Paso, Texas*

December 30, 1960

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Proposed 1961 Drilling Program  
and Amendment to 1960 Huerfano Unit Program

Dear Sir:

Although it is the policy of this company to propose its Drilling Program early in the calendar year, we find that due to certain developments it is not possible to provide you with such information at this time on the Huerfano Unit.

Our 1960 Plan of Development provided for the drilling of ten (10) Gallup-Dakota wells. To date, the following dual wells have been completed to the expected depths, but have not been tested:

<u>Number</u>	<u>Location</u>
#101	NW/4 19, 27-10
#115	NW/4 12, 26-10
#116	NW/4 11, 26-10
#120	NW/4 25, 26-10

Another well, the Huerfano Unit #113 located in the NW/4 of Section 23, T-27-N, R-10-W, is presently being completed.

Although none of the above wells have been tested, it is probable that these five wells will be of commercial quality in the Dakota Formation with the Gallup Formation generally considered very doubtful at this time.

In view of the apparent results of the drilling program to this time, the remaining five wells are proposed to be drilled as straight Dakota tests with dual completion in the Gallup Formation if such be warranted. The NW/4 of Section 27, and the SE/4 of Section 16, T-26-N, R-10-W, and the NW/4 of Section 30, T-26-N, R-9-W, have been selected as locations for Units #117, #121, and #125, which are scheduled for immediate commencement of drilling operations. Two other locations will be selected upon the completion and testing of the Huerfano #115 and #116 Wells.

It is our desire to wait until such time as the other two locations have been selected before submitting an amendment to the 1960 Program. It is our feeling that before a comprehensive 1961 Drilling Program can be intelligently prepared, we should have the results of our current program in hand. We therefore request your permission to delay the submission of the 1961 Plan of Development until such time as all of the wells have been completed and tested.

We would appreciate your comments and recommendations relative to our proposal to wait until some later date to submit our 1961 Plan of Development.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By 

Sam Smith, Manager  
Land Department

SS:WC:cah

In reply refer to:

Unit Division

MAIL OFFICE CDD

1961 JAN 14 AM 10 20

January 11, 1961

*Case #195*

El Paso Natural Gas Company  
El Paso, Texas

Attention: Mr. T. W. Bittick

Re: Fourth, Fifth and Sixth  
Expansions of the Dakota  
Participating Area Huerfano  
Unit San Juan County, New Mexico

Gentlemen:

The Commissioner of Public Lands is of this date approving the Fourth, Fifth and Sixth Expansions of the Dakota Participating Area for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the US Geological Survey and the Oil Conservation Commission.

We are retaining two copies and forwarding five approved copies.

Very truly yours,  
E. S. JOHNNY WALKER  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

ESW/mar/s

cc: Oil Conservation Commission  
Santa Fe, New Mexico

US Geological Survey  
Roswell, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

*Case #195*

January 5, 1961

El Paso Natural Gas Company  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

RE: Fourth, Fifth and Sixth  
Expansions of the Dakota  
Participating Area Huerfano  
Unit San Juan County,  
New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Fourth, Fifth and Sixth Expansions of the Dakota Participating Area for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Seven approved copies of the application are handed to Mr. Wm. Cheek.

Very truly yours,

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

ALP/JEK/ig

cc: Commissioner of Public Lands  
Santa Fe

United States Geological Survey  
Roswell

C  
O  
P  
Y

# *El Paso Natural Gas Company*

*El Paso, Texas*

January 3, 1961

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF FOURTH,  
FIFTH AND SIXTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

---

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Fourth, Fifth and Sixth Revisions of the Participating Area for the Dakota Formation, to-wit:

Fourth Participating Area - Effective date: November 1, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	1440.00
Section 17: W/2	
Section 18: E/2	
Section 19: NE/4	
Section 20: All	

This proposed expansion of the Participating Area is predicated on the proven commercial quality of the Huerfano Unit Well #111 (G-D), located in the NW/4 of Section 20, Township 26 North, Range 9 West, which was tested on October 27, 1959 for an initial potential of 3410 MCF/D from the Dakota Formation. This

expansion proposes to admit all of Section 20, Township 26 North, Range 9 West. This calls for the admission of the NE/4 of Section 19, Township 26 North, Range 9 West, since this area is directly offset by the Huerfano #111 (G-D).

Two additional areas are included in the Fourth Expansion, being the E/2 of Section 18, Township 26 North, Range 9 West and the W/2 of Section 17, Township 26 North, Range 9 West, since this area now lies between two producing wells, the Huerfano #92 in the NW/4 of Section 7, Township 26 North, Range 9 West and the Huerfano #111, Township 26 North, Range 9 West.

Fifth Participating Area - Effective date: January 1, 1960

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Section 3: S/2	320.00

This proposed expansion of the Participating Area is based on the proven commercial quality of the Huerfano Unit Well #110 (G-D), located in the SE/4 of Section 3, Township 26 North, Range 10 West, which was completed on December 22, 1959 for an initial potential of 2110 MCF/D from the Dakota Formation. This expansion proposes to admit all of the S/2 of Section 3, Township 26 North, Range 10 West.

Sixth Participating Area - Effective date: February 1, 1960

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Section 1: N/2	479.48
T-27-N, R-10-W, N.M.P.M. Section 36: SW/4	

This proposed expansion of the Participating Area is based on the proven commercial value of the Huerfano Unit Well #108 (G-D), located in the NW/4 of Section 1, Township 26 North, Range 10 West, which was completed on January 7, 1960 for an initial potential of 4562 MCF/D from the Dakota Formation. This expansion proposes to admit all of the N/2 of Section 1, Township 26 North, Range 10 West as well as the SW/4 of Section 36, Township 27 North, Range 10 West, which is a direct offset to the quarter section in which the Huerfano #108 (G-D) is located.

The Huerfano Unit #109 (G-D) in Section 2, Township 26 North, Range 10 West, was completed on September 28, 1959 for an initial potential of 3432 MCF/D from the Dakota Formation, but the location lies within previously committed acreage and therefore no expansion is warranted or requested as a result of this completion. You have previously been notified by Notice of Completion of Non-Commercial Well, concerning the Huerfano Unit Well #112. Such Notice was sent to the Regulatory Bodies under date of May 31, 1960 by the undersigned company. This well was completed on October 24, 1959 for an initial potential of 964 MCF/D from the Dakota Formation, and since it was deemed non-commercial no expansion is warranted or requested.

In support of the application for the three participating areas the following exhibits are made a part hereof:

EXHIBIT "A"

Ownership Map reflecting the boundaries of the Unit and the proposed Fourth, Fifth and Sixth Revisions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report in quadruplicate on the Fourth, Fifth and Sixth Revisions of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "C"

Structural Contour Map.

Attached herewith are Schedules V through VII showing the lands entitled to participation in the unitized substances produced from the Dakota Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Fourth, Fifth and Sixth Revisions of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:WVC:js

APPROVED: \_\_\_\_\_

Director, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.


DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

Commissioner of Public Lands  
Subject to like approval by the United  
States Geological Survey and the Oil  
Conservation Commission.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

  
Oil Conservation Commission  
Subject to like approval by the United  
States Geological Survey and the  
Commissioner of Public Lands.

DATE: 1-5-61

The foregoing approvals are for the Fourth, Fifth and Sixth Revisions of the Participating Area for the Dakota Formation, effective November 1, 1959, January 1, 1960, and February 1, 1960, respectively, under the Huerfano Unit, San Juan County, New Mexico.

100 SEP 7 AM 1960  
In reply refer to:  
Unit Division

September 6, 1960

C  
O  
P  
V  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

RE: Huerfano Unit  
San Juan County, New Mexico  
Application for approval of the  
Fifth, Sixth, Seventh, and Eighth  
Revisions of the Participating Area  
for the Gallup Formation

ATTENTION: Mr. Charles Higgins

Gentlemen:

We are enclosing five copies of the above designated Participating Areas for the Gallup Formation, Huerfano Unit, which was approved by the Commissioner of Public Lands as of September 6, 1960.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Hilberry, Supervisor  
Oil and Gas Division

MMR/nmr/s  
cc:

United States Geological Survey  
Roswell, New Mexico

Oil Conservation Commission ✓  
Santa Fe, New Mexico

**C CONSERVATION COMMISSK**

P. O. BOX 871

SANTA FE, NEW MEXICO

*Case #195*

September 2, 1960

**C**  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

**O**  
ATTENTION: Mr. T. W. Bittick

**P**  
RE: Fifth, Sixth, Seventh and  
Eighth Expansions Gallup  
Participating Area Huerfano  
Unit San Juan County, New  
Mexico.

**P**  
Gentlemen:

**Y**  
This is to advise that the New Mexico Oil Conservation Commission has this date approved the Fifth, Sixth, Seventh and Eighth Expansions Gallup Participating Area for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Seven approved copies of the application are handed Mr. David T. Burleson.

Very truly yours,

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

ALP/JEK/ig

cc: US Geological Survey  
Roswell, New Mexico

Commissioner of Public Lands  
Santa Fe, New Mexico

# *El Paso Natural Gas Company*

*El Paso, Texas*

Director  
United States Geological Survey  
Department of the Interior  
Washington, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FIFTH, SIXTH, SEVENTH AND EIGHTH  
REVISIONS OF THE PARTICIPATING  
AREA FOR THE GALLUP FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator under the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 of such agreement, respectfully submits for your approval the following selection of lands to constitute the Fifth, Sixth, Seventh and Eighth Revisions of the Participating Area for the Gallup Formation, to wit:

Fifth Revision - Effective 1st day of October, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Section 2: SE/4, SW/4	320.00

This proposed Fifth Revision of the Participating Area for the Gallup Formation is based upon the information obtained from the completion in paying quantities of Huerfano Unit Well No. 109 (Dual, Gallup-Dakota) located 1650' North of the South line and 990' West of the East line of Section 2, Township 26 North, Range 10 West, which well officially tested 2293 MCFGPD from the Gallup Formation at a depth of 5905' to 6199' on September 28, 1959. This revision is also based on the information obtained from the Huerfano No. 99 Well (Dual, Gallup-Dakota) located 990' South of the North line and 1650' East of the West line of Section 2, Township 26 North, Range 10

West completed under our 1958 Drilling Program. The effective date of this Fifth Revision shall be October 1, 1959, pursuant to Section 10 of the Unit Agreement.

Sixth Revision - Effective 1st day of November, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Sec. 17: NW/4, SW/4 NE/4, NE/4 SW/4	240.00

This proposed Sixth Revision of the Participating Area for the Gallup Formation is based upon the information obtained from the completion in paying quantities of Huerfano Unit No. 112 (Dual, Gallup-Dakota) located 1650' South of the North line and 1650' East of the West line of Section 17, Township 26 North, Range 10 West, which well officially tested 292 MCFGPD and 167.87 BOPD from the Gallup Formation at a depth of 5650' to 5910' on October 24, 1959. The effective date of this Sixth Revision shall be November 1, 1959, pursuant to Section 10 of the Unit Agreement. This proposed Sixth Revision is also based upon the general information obtained from the Huerfano Unit No. 104 Well (Dual, Gallup-Dakota) located 990' North of the South line and 990' West of the East line of Section 17, Township 26 North, Range 10 West, and completed under our 1958 Drilling Program.

Seventh Revision - Effective 1st day of December, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M. Sec. 20: All	640.00

This proposed Seventh Revision of the Participating Area for the Gallup Formation is based upon the information obtained from the completion in paying quantities of Huerfano Unit Well No. 111 (Dual, Gallup-Dakota) located 1550' South of the North line, and 1550' East of the West line of Section 20, Township 26 North, Range 9 West, which well officially tested 1923 MCFGPD from the Gallup Formation at a depth of 5603' to 5894' on November 2, 1959. The effective date of the Seventh Revision shall be December 1, 1959, pursuant to Section 10 of the Unit Agreement.

Eighth Revision - Effective 1st day of January, 1960

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Sec. 3: SE/4	160.00

This proposed Eighth Revision of the Participating Area for the Gallup Formation is based upon the information obtained from the completion in paying quantities of Huerfano Unit Well No. 110 (Dual, Gallup-Dakota) located 1650' North of the South line and 990' West of the East line of Section 3, Township 26 North, Range 10 West, which well officially tested 385 MCFGPD and 211 BOPD from the Gallup Formation at a depth of 5917' to 6220' on December 31, 1959. The effective date of this Eighth Revision shall be January 1, 1960.

The Huerfano #108 (Gallup-Dakota) located 1650' South of the North line and 1040' East of the West line of Section 1, Township 26 North, Range 10 West, was officially tested on January 21, 1960, with an Initial Potential of 1,079 MCFGPD from the Gallup Formation at a depth of 5899' to 6178' on acreage previously included in the Participating Area. On the basis of the low initial potential and the location of this well, no additional revision of the participating area is warranted by the completion of this well.

In support of this application the following Exhibits are made a part hereof:

Exhibit "A"

Ownership map reflecting the boundaries of the Unit and the proposed Fifth, Sixth, Seventh, and Eighth Revisions of the Gallup Participating Area.

Exhibit "B"

Geological Report in quadruplicate on the Fifth, Sixth, Seventh, and Eighth Revisions of the Gallup Participating Area in the Huerfano Unit.

Exhibit "C"

Structural Contour Map.


Attached to this application are Schedules VI through IX showing the lands entitled to participation in the unitized substances produced from the Gallup Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Fifth, Sixth, Seventh, and Eighth Revisions of the Gallup Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy for our files.

Copies of this letter and schedules are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By 

T. W. Bittick  
Assistant Manager  
Land Department

APPROVED

United States Geological Survey  
Subject to like approval by the appropriate  
State officials.


DATE

APPROVED

Commissioner of Public Lands  
Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

DATE

APPROVED

  
Oil Conservation Commission  
Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

DATE 9-2-60

The foregoing approvals are for the Fifth, Sixth, Seventh and Eighth Revisions of the Participating Area for the Gallup Formation, effective October 1, 1959, November 1, 1959, December 1, 1959, and January 1, 1960, respectively, for the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 12, 1960

C El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. Sam Smith

O RE: 1960 Plan of Development  
Huerfano Unit San Juan  
County, New Mexico.

Gentlemen:

P This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1960 Plan of Development for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Y One approved copy of the plan is returned herewith.

Very truly yours,

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

ALP/JEK/1g

cc: USGS - Roswell

Commissioner of Public Lands - Santa Fe



P. O. Box 6721  
Roswell, New Mexico

August 3, 1960

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. Sam Smith

Gentlemen:

Your plan of development for 1960, dated January 29, 1960, for the Huerfano unit area, San Juan County, New Mexico, which proposes the drilling of ten dually completed Gallup-Sakota wells, seven to be located at a subsequent date, has been approved on this date subject to like approval by the appropriate State officials.

Two approved copies of the plan are enclosed.

Very truly yours,



EDWIN M. THOMASSON  
Acting Oil and Gas Supervisor

**Enclosures**

Copy to: Washington (w/cy of plan)  
Farmington (w/cy of plan)  
NMOCC-Santa Fe (ltr. only) ✓  
Comm. of Pub. Lands-Santa Fe (ltr. only)

CAS 111  
In reply refer to:  
Unit Division

April 4, 1960

C  
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P  
Y  
El Paso Natural Gas Company  
El Paso, Texas

ATTENTION: Mr. Sam Smith

Re: 1960 Plan of Development  
Huerfano Unit Area  
San Juan County, New Mexico

Gentlemen:

We are enclosing one copy of the 1960 Plan of Development for the Huerfano Unit Area, which was approved by the Commissioner of Public Lands April 4, 1960.

Our approval of this program is contingent upon the filing for approval of a supplemental plan for 1960. This supplement to give the proposed locations of seven (7) Gallup-Dakota dual well locations, which are to be drilled during the calendar year 1960.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc:

OCC-Santa Fe  
USGS-Roswell

# El Paso Natural Gas Company

El Paso, Texas

January 29, 1960

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
PLAN OF DEVELOPMENT for Period  
January 1, 1960 - December 31, 1960

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, on April 15, 1959 filed a Plan of Development for the period January 1, 1959 - December 31, 1959, which proposed the drilling of five (5) Dakota wells. These wells were completed in both the Gallup and Dakota Formations and the following information is submitted in connection therewith:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit #108	NW/4 Sec. 1, T-26-N; R-10-W	12-24-59	Gallup CV 1079 MCF AOF 1227 MCF 32.4 BO 3 hr. test Dakota CV 4562 MCF AOF 5437 MCF

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit #109	SE/4 Sec. 2, T-26-N, R-10-W	8-14-59	Gallup CV 2293 MCF AOF 3036 MCF Dakota CV 3432 MCF AOF 3761 MCF
Huerfano Unit #110	SE/4 Sec. 3, T-26-N, R-10-W	12-11-59	Gallup CV 321 MCF 176 BOPD Dakota CV 2110 MCF AOF 2242 MCF
Huerfano Unit #111	NW/4 Sec. 20, T-26-N, R-9-W	9-5-59	Gallup CV 1923 MCF AOF 2198 MCF Dakota CV 3410 MCF AOF 3703 MCF
Huerfano Unit #112	NW/4 Sec. 17, T-26-N, R-10-W	9-28-59	Gallup CV 291.76 MCF 167.87 BOPD Dakota CV 964 MCF AOF 983 MCF

El Paso Natural Gas Company, as Unit Operator, submitted, by letter dated December 14, 1959, to all working interest owners a Plan of Development for the period of January 1, 1960 to December 31, 1960. The proposed Plan of Development provided for the drilling of three (3) exploratory and seven (7) development Gallup-Dakota dual wells for the calendar year 1960. The working interest owners have approved the filing of a Plan of Development for 1960 providing for the drilling of ten (10) Gallup-Dakota dual wells, but have only agreed upon three (3) locations, with a desire to observe additional production data prior to approving the remaining seven (7) locations.

El Paso Natural Gas Company, as Unit Operator, therefore submits for your approval a proposed Plan of Development for the period of January 1, 1960, to December 31, 1960, consisting of three (3) Gallup-Dakota dual wells with the understanding that seven (7) Gallup-Dakota dual well locations will be selected and submitted for your approval at a subsequent date.

The approved locations are as follows:

1. NW/4 of Section 19, T-27-N, R-10-W
2. NW/4 of Section 33, T-27-N, R-10-W
3. NW/4 of Section 25, T-26-N, R-10-W

El Paso Natural Gas Company, as Unit Operator, intends to drill the above listed Gallup-Dakota dual wells to the base of the Dakota Formation using rotary tools. Surface casing, normally 10 3/4" will be set at 300' and a 8 3/4" hole will be drilled to total depth (approximately 7000') using an oil, driscose, emulsion mud from the top of the Gallup Formation to total depth. Seven inch casing will be used as the production string. The Dakota Formation will be perforated and sand-oil fractured in one or more stages and immediately bridged off with a temporary bridge plug while the Gallup Formation is perforated and sand-oil fractured. The Gallup Formation will be allowed to unload the fracturing fluid and clean out, after which the temporary bridge plug, or plugs, will be drilled to allow the Dakota Formation to unload the fracturing fluid and clean out. A drillable production packer will then be set between the Gallup and Dakota Formations to isolate the two zones, with two strings of tubing used for production purposes, one going through the packer to produce the Dakota Formation, and the other going through the Gallup Formation to produce the Gallup. This combination of a production packer and two strings of tubing effectively isolate both zones and allow each zone to be produced separately. Due care will be taken to protect all horizons.

If this Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter have been sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By   
Sam Smith, Manager  
Land Department

SS:CH: ch

APPROVED: \_\_\_\_\_

Supervisor, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

Commissioner of Public Lands  
Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

*A. L. Porter Jr*  
Oil Conservation Commission  
Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

DATE: *8/16/60*

The foregoing approvals are for the Huerfano Unit Plan of Development for the period  
January 1, 1960 - December 31, 1960.

WORKING INTEREST OWNERS  
HUERFANO UNIT

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas

Benson-Montin-Greer Drilling Corp.  
2808 First National Building  
Oklahoma City 2, Oklahoma

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
P.O. Box 185  
Farmington, New Mexico

Mr. Harold Kogan and Mathilda Kogan  
742-35th Avenue  
San Francisco, California

Western Natural Gas Company  
1006 Main St.  
Houston 2, Texas

Mr. James L. Lundean  
One West 67th St.  
New York 23, New York

El Paso Natural Gas Products Company  
Luther Building  
El Paso, Texas

Anderson-Prichard Oil Corporation  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

B & M Construction Company  
2808 First National Building  
Oklahoma City 2, Oklahoma

Mrs. Barbara Irene McConnell  
1224 Laguna Cove  
Farmington, New Mexico

Barbara Ann McConnell Bruss  
Detachment 14, First Air Postal Squadron  
APO 929, San Francisco, California

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. C. F. Stringer  
208 East Navajo  
Farmington, New Mexico

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Stekoll Petroleum Corporation  
P.O. Box 956  
Dallas, Texas

Mr. R. N. Richey (2)  
Mr. M. J. Jordan (1)  
El Paso Natural Gas Company  
Northwest Division  
P.O. Box 1526  
Salt Lake City 10, Utah

Mr. J. W. McConnell, Jr.  
Executor of Estate of  
W. O. McConnell, Deceased  
P.O. Box 102  
Lone Wolf, Oklahoma

Mr. E. H. Pipkin  
P.O. Box 1174  
Roswell, New Mexico

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

Mr. C. W. Murchison  
P.O. Box 4795  
Dallas, Texas

Berenice Jeffs  
P.O. Box 310  
Gorman, Texas

Mr. L. O. Speer (12)  
Pan American Petroleum Corporation  
P.O. Box 487  
Farmington, New Mexico

Cleary Petroleum, Inc.  
1374 First National Building

El Paso Natural Gas Company  
MAIN OFFICE DCC

REC'D JUL 7 PM 1:16 El Paso, Texas  
May 31, 1960

195

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Well #112  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF  
NON-COMMERCIAL WELL  
Dakota Formation

Gentlemen:

El Paso Natural Gas Company, as Unit Operator, has concluded that the following described well, located within the Huerfano Unit, is not capable of producing unitized substances in paying quantities from the Dakota Formation:

The Huerfano Unit Well #112 is located 1650' South of the North line and 1650' East of the West line of Section 17, Township 26 North, Range 10 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on July 29, 1959 and was dually completed on September 28, 1959 at a total depth of 7890'. The Dakota Formation between 6668' - 6176', 6689' - 6697', 6705' - 6714', 6570' - 6578', 6614' - 6623', 6630' - 6638' was treated with a sand-oil fracturing process. The well was shut-in October 6, 1959 and, after being shut-in for fifteen (15) days, was tested on October 21, 1959, gauging 964 MCFGPD through a 3/4" choke and 983 MCFGPD by the calculated absolute open-flow method with an SIPT of 1139#. The committed drilling block upon which this well is located is described as the W/2 of Section 17, Township 26 North, Range 10 West, N.M.P.M., and consists of 320.00 acres, more or less.

Pursuant to Section 10 of the Unit Agreement for the Development and Operation of the Huerfano Unit Area, Unit Operator hereby requests the approval of the foregoing determination by the Regional Oil and Gas Supervisor, as the above described well is located on a drilling block involving Federal lands.

Copies of this letter are being sent to the working interest owners as shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By 

Sam Smith, Manager  
Land Department

SS:DB:nl

cc: Attached list

APPROVED: \_\_\_\_\_  
Supervisor, United States Geological Survey

DATE: \_\_\_\_\_

The foregoing approval is for the recommendation declaring the Huerfano  
Unit Well #112 non-commercial as to the Dakota Formation only.

Huerfano Unit  
Dakota Formation  
Working Interest Owners

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Mr. W. C. Barneburg  
Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas

Dr. Sherman Wingerd  
1044 Stanford Drive, S.E.  
Albuquerque, New Mexico

Benson-Montin-Greer Drilling Corp.  
2808 First National Building  
Oklahoma City 2, Oklahoma

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan & Mathilda Kogan  
742-35th Avenue  
San Francisco, California

Mr. K. P. Moore  
Western Natural Gas Company  
P. O. Box 1508  
Houston 1, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. L. O. Speer, Jr.  
Pan American Petroleum Corporation  
P. O. Box 487  
Farmington, New Mexico

El Paso Natural Gas Products Company  
Luther Building  
El Paso, Texas

Anderson-Prichard Oil Corporation  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Mr. E. A. Olsen, Pres.  
Sunland Refining Corp.  
East & California Aves.  
Fresno, California

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. C. F. Stringer  
208 East Navajo  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Stekoll Petroleum Corporation  
Post Office Box 956  
Dallas, Texas

Mr. R. N. Richey (2)  
Mr. M. J. Jordan (1)  
El Paso Natural Gas Company  
Northwest Division  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. J. W. McConnell, Jr.  
Executor of the Estate of  
W. O. McConnell, Deceased  
P. O. Box 102  
Lone Wolf, Oklahoma

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas 1, Texas

Mr. C. W. Murchison  
P. O. Box 4795  
Dallas, Texas

Berenice Jeffs  
P. O. Box 310  
Gorman, Texas

B & M Construction Company  
1374 First National Building  
Oklahoma City 2, Oklahoma

Mrs. Barbara Irene McConnell  
1224 Laguna Cove  
Farmington, New Mexico

Barbara Ann McConnell Bruss  
Detachment 14, First Air Postal  
Squadron  
APO 929, San Francisco, California

Cleary Petroleum, Inc.  
1374 First National Building  
Oklahoma City, Oklahoma

# El Paso Natural Gas Company

El Paso, Texas

September 28, 1959

RECEIVED SEP 30 1959

*File # 195*  
*Case*

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Muerfano Unit I Sec. No. 731  
San Juan County, New Mexico

Gentlemen:

We are enclosing for your information and files one (1) copy each of El Paso Natural Gas Company's Applications dated July 16, 1959, for the Initial through the Third Revisions of the Dakota Participating Area and the Initial through the Fourth Revisions of the Gallup Participating Area.

Each of the enclosed copies reflect executed approvals thereto by all necessary regulatory bodies.

Very truly yours,

ORIGINAL SIGNED BY:  
HARRY GEVERTZ  
Harry Gevertz  
Area Landman  
Land Department

HG:BKB:ch  
Attachment

COPY

# El Paso Natural Gas Company

El Paso, Texas

September 25 1959

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Change of Percentage Allocation  
Pictured Cliffs Participating Area  
Huerfano Unit  
San Juan County, New Mexico

Gentlemen:

The United States Geological Survey by letter of September 2, 1959, approved the commitment of the Pictured Cliffs interests under Tract No. 141 to the Huerfano Unit, effective August 1, 1959. Since Tract No. 141 is situated within the present Participating Area for the Pictured Cliffs Formation, it is necessary that the percentages of tract participation be adjusted as a result of the commitment of said tract.

We are, therefore, enclosing for your information and files Schedule XXVII, effective August 1, 1959, which is the Twenty-Fourth Revised Expanded Participating Area for the Pictured Cliffs Formation, Huerfano Unit Area, which schedule reflects the new percentages of tract participation for the Pictured Cliffs Participating Area as a result of the commitment of Tract No. 141.

Copies of this letter and Schedule XXVII are being sent to the Working Interest Owners on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

  
Harry G. Gertz

Area Landman

Land Department

HG:BB:pc  
Enclosures  
Huerfano 4.1, 5.0

Huerfano U.  
Working Interest Owners  
Pictured Cliffs Formation

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Mr. W. C. Barneburg  
Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

B & M Construction Company  
1374 First National Bldg.  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Bldg.  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Bldg.  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Pan American Petroleum Corporation  
Post Office Box 487  
Farmington, New Mexico

Anderson-Prichard Oil Corporation  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

Mr. J. Glenn Turner  
1900 Mercantile Dallas Bldg.  
Dallas 1, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Bldg.  
Dallas 1, Texas

Mr. C. F. Stringer  
208 E. Navajo  
Farmington, New Mexico

Stekoll Petroleum Corporation  
Post Office Box 956  
Dallas, Texas

Mr. R. N. Richey (2)  
Mr. M. J. Jordan (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. J. W. McConnell, Jr.  
Executor of the Estate of  
W. O. McConnell, Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

Mr. E. H. Pipkin  
Post Office Box 1174  
Roswell, New Mexico

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

Mr. C. W. Murchison  
Post Office Box 4795  
Dallas, Texas

Berenice Jeffs  
Post Office Box 51  
Gorman, Texas

El Paso Natural Gas Products Company  
Luther Building  
El Paso, Texas

# *El Paso Natural Gas Company*

*El Paso, Texas*

August 17, 1959

## **REGISTERED MAIL**

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Re: Huerfano Unit  
Gallup and Dakota  
Participating Areas  
San Juan County, New Mexico

Dear Mr. Anderson:

In accordance with your recent advice we have revised the percentages of tract participation for the First through the Third Dakota Expansions and the First through Fourth Gallup Expansions in view of the fact that Tract 101 has been found to have been committed to the Huerfano Unit.

We are therefore enclosing eight (8) copies each of the Schedules of participation of the Initial through the Third Expansions for the Dakota Formation and the Initial through the Fourth Expansions for the Gallup Formation with the percentages revised accordingly.

We would appreciate your placing the enclosed Schedules with our applications for the Gallup and Dakota Participating Areas which you are presently holding and destroying the Schedules originally furnished you. Upon approval by the Director we would appreciate your returning for our files four (4) approved copies of each application.

We wish to express our appreciation for your calling this matter to our attention.

By copy of this letter to the Commissioner of Public Lands of the State of New Mexico and the Oil Conservation Commission of the State of New Mexico we are furnishing one (1) copy each of said revised Schedules and request that said Schedules be included with the copies of the respective applications in their files in lieu of the Schedules originally furnished them.

Very truly yours,  
ORIGINAL SIGNED BY  
HARRY GEVERTZ  
Harry Gevertz  
Area Landman

HG:EKB:ch

C O PLand Department

# El Paso Natural Gas Company

El Paso, Texas

September 18, 1959

## REGISTERED MAIL

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, Tract No. 141  
T-26-N, R-9-W  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

Gentlemen:

We are enclosing for your attention one (1) copy of a Ratification and Joinder of Unit Agreement, executed by J. Glenn Turner for the purpose of committing his overriding royalty interest below the base of the Pictured Cliffs Formation under Tract No. 141 to the Huerfano Unit.

The United States Geological Survey by letter of September 2, 1959, recently approved the commitment of Tract No. 141 to the Huerfano Unit with the exception of Mr. Turner's interest as aforementioned. This Ratification will complete the full commitment of Tract No. 141 as to all depths and all interests.

This Ratification has been approved and consented to by El Paso Natural Gas Company as Unit Operator and Working Interest Owner.

It is respectfully requested that you process the enclosed Ratification in your usual way in order that the subject tract will be completely committed to the Huerfano Unit.

Very truly yours,

*Harry Gevertz*

Harry Gevertz  
Area Landman  
Land Department

HG:BB:pc  
Enclosure  
NM 4111  
Huerfano 5.0

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which-ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

ADDRESS

SIGNATURE

Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

**1900 Mercantile Dallas Building**  
**Dallas 1, Texas**

Date: September 14, 1959

  
J. GLENN TURNER

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By 

Attorney-in-fact

Unit Operator and Working  
Interest Owner

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, President of \_\_\_\_\_, a corporation, on behalf of said corporation.

Notary Public

My Commission expires:

STATE OF **TEXAS**  
COUNTY OF **DALLAS**

The foregoing instrument was acknowledged before me this 14th day of September, 1958, by J. GLEN TURNER.

*Elaine Smith*  
Notary Public

My Commission expires:

June 1, 1961.

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, as attorney-in-fact on behalf of \_\_\_\_\_.

My Commission expires:

Y. O. Box 6721  
Roswell, New Mexico

September 3, 1959

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. Harry Gervata

Gentlemen:

This will acknowledge receipt of the following documents relating to the Huerfano unit agreement (I-Sec. 731), San Juan County, New Mexico:

1. Four copies of a Ratification and Joinder to the unit agreement and the unit operating agreement, executed by Pan American Petroleum Corporation, relating to Federal land unit tract 58 (lease SF 077981) and fee land unit tract 140. Revised Exhibit "B" (revision of June 1, 1959) shows Pan American owns the working interest under both tracts. However, it should be noted that C. V. Lyman, lessee of record under lease SF 077981 (unit tract 58), and formerly shown as working interest owner, executed the original unit agreement and operating agreement. Pursuant to Sec. 17 of the unit agreement, such original commitment is binding on subsequent parties in interest; therefore, unit tract 58 is considered to have been effectively committed to the unit agreement since its effective date. The Ratification and Joinder of Pan American insofar as unit tract 58 is concerned, is accepted for record purposes only.
- 2-a. Four copies of a Ratification and Joinder to the unit agreement, executed by R. Bruce Sullivan and Opal H. Sullivan. Approval and Consent of El Paso Natural Gas Company, unit operator, and Pan American Petroleum Corporation, working interest owner of unit tract 140 is affixed to each copy of the Ratification and Joinder.
- 2-b. Four copies of a Ratification and Joinder to the unit agreement, executed by Marguerite Frame and Ross Frame.

Approval and Consent of El Paso Natural Gas Company unit operator, and Pan American Petroleum Corporation, working interest owner of unit tract 140 is affixed to each copy of the Ratification and Joinder.

Revised Exhibit "B" shows R. Bruce Sullivan and Marguerite Sullivan (a single woman) own the basic royalty interest in fee land unit tract 140. It is presumed that Marguerite Sullivan and Marguerite Frame are one and the same person, and the Ratification and Joinder executed by Marguerite Frame et ux is accepted on that premise.

By virtue of the Ratifications and Joinders listed above, fee land unit tract 140 is considered effectively committed to the Huerfano unit agreement, effective November 1, 1938, the first day of the month following filing of the Ratifications and Joinders.

Copies of the Ratifications and Joinders are being distributed to appropriate Federal offices for inclusion in the official case records. It is assumed you will furnish other interested parties with appropriate evidence of this action. As four copies of each Ratification and Joinder are needed for appropriate Federal files, we are unable to return any copies to you.

Very truly yours,

JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

Copy to: Washington (w/cy of Joinders)  
Farmington (w/cy of Joinders)  
BLM-Santa Fe (w/cy of Joinders)  
State Land Office, (Mrs. Rhea) (Letter only)  
NMOCC ✓

MAIL OFFICE OCC

In reply refer to:  
Unit Division

1959 AUG 13 AM 3:18

August 4, 1959

AIR MAIL

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Huerfano Unit Area  
San Juan County, New Mexico  
Initial Participating Area for  
Dakota Formation and 1st, 2nd and  
3rd Revisions Thereof.

Gentlemen:

This is to advise you that the Commissioner of Public Lands has of this date, August 3, 1959, approved the above designated Participating Area for the Dakota Formation, Huerfano Unit Area, San Juan County, New Mexico, as set forth in your letter of July 16, 1959. Approval of this Participating Area and expansions, being subject to like approval being granted by the Oil Conservation Commission and the United States Geological Survey.

We are this date, August 3, 1959, forwarding the approved copies, with the exception of one, by Air Mail Attention-Mr. Barry Berkson.

Please disregard our letter of August 3, 1959 as we stated a forth revision for the Dakota Formation Participating Area and there was no forth revision submitted.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

By:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MER/m

cc: OCC- Santa Fe  
USGS- Roswell

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Y



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

September 2, 1959

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. Harry Gevertz

Gentlemen:

This will acknowledge receipt of the following documents relating to the Huerfano unit agreement (I-Sec. No. 731), San Juan County, New Mexico. All documents relate to fee land unit tract 141, described as NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 22, T. 26 N., R. 9 W., N.M.P.M.

- 1-a Five copies of a Ratification and Joinder to the unit agreement, executed by El Paso Natural Gas Company.  
Revised Exhibit "B" (revision of June 1, 1959) shows El Paso Natural Gas Company holds all oil and gas rights, before payout, and 67.5% interest after payout, in fee land unit tract 141.
- 1-b Five copies of a Ratification and Joinder to the unit operating agreement, executed by El Paso Natural Gas Company, also relating to fee land unit tract 141.
- 2-a Five copies of a Ratification and Joinder to the unit agreement, executed by J. W. McConnell, Jr., as Executor of the estate of W. O. McConnell, deceased.  
Revised Exhibit "B" shows the estate of W. O. McConnell, deceased, and others, hold a 32.5% working interest, after payout, in fee land unit tract 141. Approval and Consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.
- 2-b Five copies of a Ratification and Joinder to the unit operating agreement, executed by J. W. McConnell, Jr., as Executor of the estate of W. O. McConnell, deceased, and approved and consented to by El Paso Natural Gas Company, also relating to fee land unit tract 141.

- 3-a Five copies of a Ratification and Joinder to the unit agreement, executed by Barbara Irene McConnell, a widow.  
Revised Exhibit "B" shows Barbara Irene McConnell and others hold a 32.5% working interest, after payout, in fee land unit tract 141. Approval and Consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.
- 3-b Five copies of a Ratification and Joinder to the unit operating agreement, executed by Barbara Irene McConnell, a widow, and approved and consented to by El Paso Natural Gas Company, also relating to fee land unit tract 141.
- 4-a Five copies of a Ratification and Joinder to the unit agreement, executed by Barbara Ann McConnell Bruss (formerly Barbara Ann McConnell).  
Revised Exhibit "B" shows Barbara Ann McConnell and others hold a 32.5% working interest, after payout, in fee land unit tract 141. Approval and consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.
- 4-b Five copies of a Ratification and Joinder to the unit operating agreement, executed by Barbara Ann McConnell Bruss and approved and consented to by El Paso Natural Gas Company, also relating to fee land unit tract 141.
5. Five copies of a Ratification and Joinder to the unit agreement, executed by Mercantile National Bank at Dallas, Trustee of (1) the Elisabeth Jeanne Turner Trust, (2) the James Glenn Turner, Jr., Trust, (3) the Frederick Eugene Turner Trust, and (4) the John Lee Turner Trust.  
Revised Exhibit "B" shows the aforementioned trusts each hold a 1.3921375% overriding royalty interest in fee land unit tract 141 only as to formations above the base of the Pictured Cliffs Formation. Approval and Consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.
6. Five copies of a Ratification and Joinder to the unit agreement, executed by James W. Woodard and Anna L. Woodard.  
Revised Exhibit "B" shows James W. Woodard holds a 3.093750% overriding royalty interest as to formations

6. (Continued)  
above the base of the Pictured Cliffs formation, and a 3.875% overriding royalty interest in formations below the base of the Pictured Cliffs formation in fee land unit tract 141. Approval and Consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.
7. Five copies of a Ratification and Joinder to the unit agreement, executed by O. J. Lilly and Julia B. Lilly. Revised Exhibit "B" shows O. J. Lilly and Julia B. Lilly hold a 3.093750% overriding royalty interest in fee land unit tract 141 as to formations above the base of the Pictured Cliffs formation, and a 3.875% overriding royalty interest in formations below the base of the Pictured Cliffs formation.
8. Five copies of a Ratification and Joinder to the unit agreement, executed by William G. Webb. Revised Exhibit "B" shows William G. Webb holds a 0.618750% overriding royalty interest in fee land unit tract 141 as to formations above the base of the Pictured Cliffs formation, and a 0.775% overriding royalty interest in formations below the base of the Pictured Cliffs formation.
9. Five copies of a Ratification and Joinder to the unit agreement, executed by Chester E. Thompson and Eva G. Thompson. Revised Exhibit "B" shows Chester E. Thompson owns the basic royalty interest in fee land unit tract 141. Approval and Consent of El Paso Natural Gas Company, Unit Operator and major working interest owner of tract 141 is affixed to each copy of the Ratification and Joinder.

By virtue of the above-listed Ratifications and Joinders, fee land unit tract 141 (NE $\frac{1}{4}$  sec. 22, T. 26 N., R. 9 W., N.M.P.M.) is considered effectively committed to the Huerfano unit agreement, effective August 1, 1939, the first day of the month following filing of the Ratifications and Joinders. It appears, however, that the overriding royalty interest in tract 141 held by J. Glenn Turner remains uncommitted to the unit agreement. All other interests in tract 141, as shown on revised Exhibit "B," are now committed by reason of the Ratifications and Joinders listed herein.

Copies of the Ratifications and Joinders are being distributed to appropriate Federal offices for inclusion in the official

case records. It is assumed you will furnish other interested parties with appropriate evidence of this action. One copy of each of the Ratifications and Joinders is surplus to our needs and is returned herewith.

Very truly yours,

(Orig. Sgd.) JOHN A. ANDERSON

JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

Enclosures: 9

Copy to: Wash. (w/cys of Joinders)  
Farmington (w/cys of Joinders)  
BLM-Santa Fe (w/cys of Joinders)  
State Land Office - Mrs. Rhea (ltr only)  
NMOCC (ltr only) ✓

100-100000-000

In reply refer to:  
Unit Division

RECEIVED AUG 3 PM 1:20

August 3, 1959

A I R M A I L

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Initial and First, Second, Third  
and Fourth Revisions of the Par-  
ticipating Area, Gallup Formation,  
Huerfano Unit Area, San Juan County,  
New Mexico

Gentlemen:

This is to advise you that the Commissioner of Public Lands has of this date approved the above designated Participating Area for the Gallup Formation, Huerfano Unit Area, San Juan County, New Mexico, as set forth in your letter of July 16, 1959. Approval of this Participating Area and expansions, being subject to like approval being granted by the Oil Conservation Commission and the United States Geological Survey.

We are this date forwarding the approved copies, with the exception of one, by air mail attention Mr. Barry Berkson.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MER/m

cc:

OCC- Santa Fe  
UEGS- Roswell

C  
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Y

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 871  
SANTA FE, NEW MEXICO

July 29, 1959

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. Barry Berkson

Re: Huerfano Unit Area  
San Juan County, New Mexico  
Initial Participating Area  
for Dakota Formation and 1st,  
2nd & 3rd Revisions Thereof.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Initial Participating Area for the Dakota Formation, Huerfano Unit Area, San Juan County, New Mexico, and the 1st, 2nd, and 3rd revisions thereof, as set forth in your letter of July 16, 1959. Approval of the subject participating area and expansions is granted subject to like approval being granted by the Commissioner of Public Lands of the State of New Mexico and by the United States Geological Survey.

Approval of the Initial and Revised Participating Area shall in no way be construed as meaning that the Commission believes that the included acreage has been proven productive only by the drilling of the wells currently completed, nor shall it be construed that the Commission necessarily feels that the existing wells are effectively draining all of the acreage included in the participating area. Instead the Commission is of the opinion that geological inference along a known productive trend

C. L. CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

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is, in this case, sufficient reason to believe the subject lands reasonably proved to be productive, in accordance with Section 10 of the Huerfano Unit Agreement.

We are this date forwarding the approved copies of the participating area to the Commissioner of Public Lands of the State of New Mexico for his consideration.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/DSN/1r

cc: Commissioner of Public Lands, State of New Mexico  
Santa Fe, New Mexico

Regional Director, U. S. Geological Survey  
Roswell, New Mexico

**C - CONSERVATION COMMISSION**

**P. O. BOX 871  
SANTA FE, NEW MEXICO**

**July 28, 1959**

**El Paso Natural Gas Company  
Box 1492  
El Paso, Texas**

**Attention: Mr. Barry Berkson**

**Re: Huerfano Unit Area  
San Juan County, New Mexico  
Initial Participating Area  
for Gallup Formation and 1st,  
2nd, 3rd, and 4th Revisions  
Thereof.**

**Gentlemen:**

**This is to advise that the New Mexico Oil Conservation Commission has this date approved the Initial Participating Area for the Gallup Formation, Huerfano Unit Area, San Juan County, New Mexico, and the 1st, 2nd, 3rd, and 4th revisions thereof, as set forth in your letter of July 16, 1959. Approval of the subject participating area and expansions is granted subject to like approval being granted by the Commissioner of Public Lands of the State of New Mexico and by the United States Geological Survey.**

**Approval of the Initial and Revised Participating Area shall in no way be construed as meaning that the Commission believes that the included acreage has been proven productive only by the drilling of the wells currently completed, nor shall it be construed that the Commission necessarily feels that the existing wells are effectively draining all of the acreage included in the participating area. Instead the Commission is of the opinion that geological inference along a known productive trend**

**C \_ CONSERVATION COMMISSION**

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

C is, in this case, sufficient reason to believe the subject lands reasonably proved to be productive, in accordance with Section 10 of the Huerfano Unit Agreement.

We are this date forwarding the approved copies of the participating area to the Commissioner of Public Lands of the State of New Mexico for his consideration.

O Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

P ALP/DSN/ir

Y cc: Commissioner of Public Lands, State of New Mexico  
Santa Fe, New Mexico

Regional Director, U. S. Geological Survey  
Roswell, New Mexico

STANDARD OIL

STANDARD OIL

P. O. Box 6721  
Roswell, New Mexico

File  
195

July 17, 1959

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

ATTENTION: Mr. Sam Smith

Gentlemen:

Your plan of development dated April 15, 1959, for the Huerfano unit, San Juan County, New Mexico, for the calendar year 1959, providing for the drilling of five wells to the Dakota formation, has been approved on this date subject to like approval by the appropriate State of New Mexico officials.

Your attention is directed to the fact that the Huerfano unit agreement has been in effect since June 6, 1950; and, that of the 90 Federal leases embracing 51,514 acres committed to the unit agreement, 58 leases embracing 25,633 acres have no part of their acreage in a participating area and are extended by their commitment to a producing unit. The Huerfano agreement has no automatic elimination clause. It appears to us that timely exploration and development of the unit area as provided in section 9 of the unit agreement requires more drilling than has been done since the unit was formed.

The five Dakota wells proposed for 1959 is most certainly a minimum program. Unless circumstances different from those now existing are present in 1960, we feel that a program of at least ten Dakota wells, including three exploratory wells, should be submitted for that year, or steps be taken to contract the unit area.

The NW $\frac{1}{4}$  and SE $\frac{1}{4}$  sec. 30, T. 27 N., R. 10 W., appear to be subject to drainage by Pictured Cliffs wells on noncommitted acreage in the SW $\frac{1}{4}$  and NE $\frac{1}{4}$  sec. 30. We have heretofore discussed with you the offset situation in the Dakota-Gallup formations around sec. 34. T. 27 N., R. 10 W.

Two approved copies of the 1959 plan of development are returned herewith.

Very truly yours,

Copy to: Cons. Div. Wash (w/cy plan)  
Farmington "

Com. Pub. Land, Santa Fe (Ltr) JOHN A. ANDERSON  
OCC., Santa Fe (Ltr) Regional Oil and Gas Supervisor

Enclosure

MAIN OFFICE OCC

In reply refer to:  
Unit Division

1959 JUN 12 AM 8:30

June 12, 1959

FILE  
116

C  
O  
P  
Y  
  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: 1959 Plan of Development  
Huerfano Unit  
San Juan County, New Mexico

ATTENTION: Mr. Sam Smith

Gentlemen:

We are enclosing one copy of the 1959 Plan of Development for the Huerfano Unit Area, which is dated April 15, 1959. This was approved by the Commissioner of Public Lands June 12, 1959, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

It is our understanding that in addition to the five proposed Dakota wells, that you also intend to complete another dual well this year in the NW/4 of Section 17, Township 26 North, Range 10 West.

This well to be drilled to further verify the Gallup and Dakota Formation and if successful you will then drill a well in Section 16, Township 26-North, Range 10-West.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

EM/MER/a

OCC- Santa Fe  
USGS- Roswell

Mr. Harry Gevertz  
El Paso, Texas

*Index*

*File  
195*

May 19, 1959

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. Sam Smith

Re: Plan of Development  
January 1, 1959 to  
December 31, 1959  
Huerfano Unit San Juan  
County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Plan of Development for the period January 1, 1959 to December 31, 1959 for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

One approved copy of the application is returned herewith.

Very truly yours,

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

ALP/RLS/pj

Encl.

cc: State Land Office - Santa Fe, New Mexico  
United States Geological Survey - Roswell, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

April 15, 1959

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
PLAN OF DEVELOPMENT  
For Period January 1, 1959 -  
December 31, 1959

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, on August 15, 1958 filed a Plan of Development for the period July 1, 1958 - December 31, 1958 which proposed the drilling of three (3) Pictured Cliffs wells and five (5) Dakota wells. Two of these Dakota wells were carried over from the July 1, 1957 to July 1, 1958 Plan of Development.

One (1) of the three (3) approved Pictured Cliffs wells on the last Plan of Development was completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>
Huerfano Unit No. 100	SW/4 Sec. 22, T-26-N, R-9-W	Plugged and Abandoned 12-14-58

The remaining two (2) Pictured Cliffs tests, Huerfano Unit No. 101 and No. 102, which were to be located in the NW/4 of Section 19, and the NW/4 of Section 29, Township 27 North, Range 10 West, respectively, were not drilled because it was estimated that spotty production in the area and high location costs would prove the drilling of these wells economically unsound.

The two (2) Dakota wells on the July 1, 1957 to July 1, 1958 Plan of Development were completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 104	SE/4 Sec. 17, T-26-N, R-10-W	11-25-58	Gallup CV 442 MCF 288 BOPD Dakota AOF 6863 MCF CV 5417 MCF
Huerfano Unit No. 105	SE/4 Sec. 29, T-27-N, R-10-W	12-11-58	Gallup AOF 2126 MCF CV 1839 MCF 571.2 BOPD Dakota AOF 4864 MCF CV 4325 MCF

The remaining three (3) Dakota wells on the last Plan of Development were completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 103	NW/4 Sec. 3, T-26-N, R-10-W	11-22-58	Gallup AOF 5327 MCF CV 3342 MCF 19.6 BO 3 hr. test Dakota AOF 5303 MCF CV 4460 MCF
Huerfano Unit No. 106	SE/4 Sec. 33, T-27-N, R-10-W	3-6-59	Gallup AOF 9387 MCF CV 4368 MCF Dakota AOF 2872 MCF CV 2733 MCF
Huerfano Unit No. 107	NW/4 Sec. 35, T-27-N, R-10-W	1-28-59	Gallup CV 1188 MCF 287 BOPD Dakota AOF 8376 MCF CV 5992 MCF

El Paso Natural Gas Company, as Unit Operator, hereby submits for your approval a proposed Plan of Development for the period January 1, 1959 to December 31, 1959, consisting of five (5) wells to be drilled to the Dakota Formation.

The selected locations are as follows:

DAKOTA FORMATION LOCATIONS

- |                           |                            |
|---------------------------|----------------------------|
| (1) NW/4 Sec. 1, 26N, 10W | (4) NW/4 Sec. 20, 26N, 9W  |
| (2) SE/4 Sec. 2, 26N, 10W | (5) NW/4 Sec. 17, 26N, 10W |
| (3) SE/4 Sec. 3, 26N, 10W |                            |

All of the working interest owners have been contacted and this drilling program reflects their wishes and proposals for the drilling program for this period. The proposed Plan of Development protects all committed lands within the unit area from drainage from outside locations. The Plan of Development as above described will, upon approval by the appropriate regulatory bodies, constitute the remaining drilling obligations to be satisfied up to and including December 31, 1959.

El Paso Natural Gas Company, as Unit Operator, intends to drill the Dakota wells to the base of the Dakota Formation using rotary tools. Surface casing of 13 3/8" will be set to the depth of approximately 150' and an intermediate string of 9 5/8" will be run through the Pictured Cliffs Formation to a depth of approximately 3200', and then Operator will run a production string of either 5 1/2" or 7" casing to the base of the Dakota Formation. The casing in the Dakota Formation will then be perforated and the Dakota Formation subjected to a hydraulic fracturing process. Mud will be used in setting the intermediate string of casing and the hole below the intermediate string of casing will be drilled in with gas. Due care will be taken to protect all horizons.


In the event evidence of commercial production is encountered in a formation lying above the base of the deepest formation tested while drilling any of the wells under this plan, Unit Operator will attempt to dually complete such well.

If this Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter have been sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By   
Sam Smith, Manager  
Land Department

SS:BB:pc

Attachments

APPROVED: \_\_\_\_\_

Supervisor, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

Commissioner of Public Lands  
Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

*[Signature]*  
Oil Conservation Commission  
Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

DATE: 5-13-59

The foregoing approvals are for the Huerfano Unit Plan of Development  
for the period January 1, 1959 - December 31, 1959.

Huerfano Unit  
Working Interest Owners

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

New Mexico Western Oil and Gas Company  
Post Office Box 1492  
El Paso, Texas

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Mr. W. C. Barneburg  
Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

Cleary Petroleum, Inc.  
1374 First National Bldg.  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Bldg.  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742 - 35th Ave.  
San Francisco, California

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

Benson-Montin-Greer Drilling Corporation  
2808 First National Bldg.  
Oklahoma City, Oklahoma

Mr. J. Glenn Turner  
1900 Mercantile Dallas Bldg.  
Dallas 1, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Bldg.  
Dallas 1, Texas

Mr. C. F. Stringer  
208 East Navajo  
Farmington, New Mexico

Oroco Oil and Gas Company  
65 East Fourth, South  
Salt Lake City, Utah

Mr. R. N. Richey (2)  
Mr. M. J. Jordan (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. J. W. McConnell, Jr.  
Executor of the Estate of  
W. O. McConnell, Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

Mr. E. H. Pipkin  
Post Office Box 1174  
Roswell, New Mexico

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

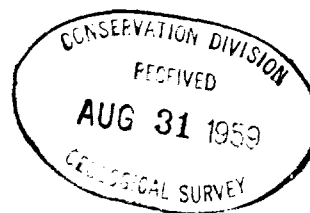
Mr. C. W. Murchison  
Post Office Box 4795  
Dallas, Texas

Bernice Jeffs  
Post Office Box 310  
Gorman, Texas

# El Paso Natural Gas Company

El Paso, Texas

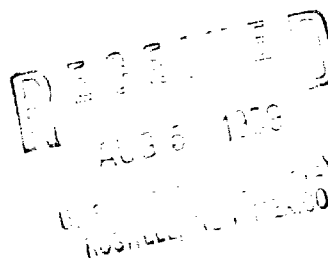
July 16, 1959



Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D. C.

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico



Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF INITIAL  
AND FIRST, SECOND AND THIRD REVISIONS  
OF THE PARTICIPATING AREA FOR THE  
DAKOTA FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Initial and First, Second and Third Revisions of the Participating Area for the Dakota Formation, to wit:

Initial Participating Area - Effective 27th day of June, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M: Sec. 7: All	648.21

This proposed Initial Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on March 2, 1958, of Huerfano Unit Well #92 (Dual, Gallup-Dakota) located in the SE/4 NW/4 of Section 7, Township 26 North, Range 9 West, with an initial production of 1652 mcf from the Dakota Formation at a depth of 6715' to 6910'. The effective date of this Initial Participating Area shall be June 27, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano Unit #92 Well.

First Revision - Effective 1st day of September, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Sec. 1: S/2	320.00
Sec. 2: All	638.52
Sec. 3: N/2	318.36
Sec. 12: N/2	320.00
T-27-N, R-10-W, N.M.P.M.	
Sec. 33: E/2	320.00
Sec. 34: All	640.00
Sec. 35: W/2	320.00

This proposed First Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on July 17, 1958 of Huerfano Unit Well #99 (Dual, Gallup-Dakota) located in the NW/4 NW/4 of Section 2, Township 26 North, Range 10 West, with an initial potential of 2327 mcf from the Dakota Formation at a depth of 6816' to 6908'. The effective date of this First Revision shall be September 1, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano Unit Well #99. This proposed First Revision is also predicated upon the knowledge and general information obtained from the Weaver-Brown-McAdams Wells Nos. 1, 2, 3 and 4, located in Section 34, Township 27 North, Range 10 West, which wells are discussed in Exhibit "A" included herewith.

Second Revision - Effective 1st day of January, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Sec. 4: NE/4	159.65
T-27-N, R-10-W, N.M.P.M.	
Sec. 29: E/2	320.00
Sec. 32: NE/4	160.00
Sec. 33: W/2	320.00

This proposed Second Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on November 22, 1958 of Huerfano Unit Well #103 (Dual, Gallup-Dakota) located 990' from the North line and 1650' from the West line of Section 3, Township 26 North, Range 10 West, with an initial potential of 4460 mcf from the Dakota Formation at a depth of 6880' to 7000'. This proposed Second Revision was also predicated on the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on December 11, 1958 of Huerfano Unit Well #105 (Dual, Gallup-Dakota) located 800' from the South line and 680' from the East line of Section 29, Township 27 North, Range 10 West, with an initial potential of 4325 mcf from the Dakota Formation at a depth of 6276' to 6406'. The effective date of the Second Revision shall be January 1, 1959, pursuant to Section 10 of the Unit Agreement, based upon the test dates of December 17, 1958 and December 30, 1958.

Third Revision - Effective 1st day of March, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Sec. 16: W/2	320.00
Sec. 17: E/2	320.00
Sec. 20: NE/4	160.00
Sec. 21: NW/4	160.00
T-27-N, R-10-W, N.M.P.M.	
Sec. 35: E/2	320.00

This proposed Third Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on November 25, 1958, of Huerfano Unit Well #104 (Dual, Gallup-Dakota) located 990' from the South line and 990' from the East line of Section 17, Township 26 North, Range 10 West, with an initial potential of 5417 mcf from the Dakota Formation at a depth of 6516' to 6636'. This proposed Third Revision is also predicated upon the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on January 28, 1959 of the Huerfano Unit Well #107 (Dual, Gallup-Dakota) located 1460' from the North line and 1180' from the West line of Section 35, Township 27 North, Range 10 West, with an initial potential of 5992 mcf from the Dakota Formation at a depth of 6934' to 7007'. The effective date of the Third Revision shall be March 1, 1959, based upon the test date of February 12, 1959.

The Huerfano Unit Well #106 (Dual, Gallup-Dakota) located 1562' from the South line and 1830' from the East line of Section 33, Township 27 North, Range 10 West, and completed on March 5, 1959, with an initial potential of 2733 mcf from the Dakota Formation at a depth of 5720' to 5756' did not prove up any additional acreage hereto.

In support of this application the following exhibits are made a part hereof:

EXHIBIT "A"

Geological Report in quadruplicate on the Initial and First, Second and Third Revisions of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "B"

Structural Contour Map.

EXHIBIT "C"

Ownership Map reflecting the boundaries of the Unit and the proposed Initial and First, Second and Third Revisions of the Dakota Participating Area.

Attached herewith are Schedules I through IV showing the lands entitled to participation in the unitized substances produced from the Dakota Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Initial and First, Second and Third Revisions of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:BKB:ch

APPROVED:

John C. Reel  
Director, United States Geological Survey  
Subject to like approval by the appropriate  
State officials.

DATE: SEP 15 1959

Acting

APPROVED:

W. M. B. B. B.  
Commissioner of Public Lands  
Subject to like approval by the United States Geological  
Survey and the Oil Conservation Commission.

DATE: August 3, 1959

APPROVED:

Oil Conservation Commission  
Subject to like approval by the United States Geological  
Survey and the Commissioner of Public Lands.

DATE: 7-17-59

The foregoing approvals are for the Initial and First, Second and Third Revisions of the Participating Area for the Dakota Formation, effective June 27, 1958, September 1, 1958, January 1, 1959 and March 1, 1959, respectively, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.



# El Paso Natural Gas Company

El Paso, Texas

July 16, 1959

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D.C.

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

RECEIVED  
AUG 5 1959  
OIL CONSERVATION COMMISSION

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
INITIAL AND FIRST, SECOND, THIRD  
AND FOURTH REVISIONS OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agree-  
ment, approved by the Director of the United States Geological Survey on June 6, 1950,  
by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949,  
and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949,  
pursuant to the provisions of Section 10 thereof, respectfully submits for your approval  
the following selection of lands to constitute the Initial and First, Second, Third and  
Fourth Revisions of the Participating Area for the Gallup Formation, to wit:

Initial Participating Area - Effective 20th day of June, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M. Sec. 7: N/2	324.05

This proposed Initial Participating Area for the Gallup Formation is predi-  
cated upon the knowledge and information first obtained upon the completion in paying  
quantities under the terms of the Huerfano Unit Agreement on March 2, 1958, of Huerfano  
Unit Well #92 (Dual, Gallup-Dakota) located in the SE/4 NW/4 of Section 7, Township 26  
North, Range 9 West, with an initial production of 1460 mcf from the Gallup Formation  
at a depth of 6114' to 6148'. The effective date of this Initial Participating Area  
shall be June 20, 1958, pursuant to Section 10 of the Unit Agreement, and such date is  
based upon the test date since a satisfactory gauge was not obtained on the completion  
date of the Huerfano Unit #92 Well.

**HUERFANO UNIT      GALLUP-DAKOTA FORMATIONS**  
**WORKING INTEREST OWNERS**

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Cleary Petroleum, Inc.  
1374 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corp.  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
P. O. Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. J. W. McConnell, Jr.  
Executor of Estate of  
W. O. McConnell, Deceased  
P. O. Box 102  
Lone Wolf, Oklahoma

Berenice Jeffs  
P. O. Box 51  
Gorman, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. Albert R. Greer  
405 $\frac{1}{2}$  West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. C. F. Stringer  
208 E. Navajo  
Farmington, New Mexico

Stekoll Petroleum Corporation  
P. O. Box 956  
Dallas, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Western Natural Gas Company  
1006 Main St.  
Houston 2, Texas

Mr. E. V. Hewitt  
Pan American Petroleum Corporation  
P. O. Box 1410  
Fort Worth, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	
Sec. 6: SW/4	163.93
T-26-N, R-10-W, N.M.P.M.	
Sec. 1: S/2, NW/4	479.61
Sec. 2: N/2	318.52
Sec. 3: N/2	318.36
T-27-N, R-10-W, N.M.P.M.	
Sec. 33: E/2	320.00
Sec. 34: All	640.00
Sec. 35: W/2, SE/4	480.00

This proposed First Revision of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on July 17, 1958, of Huerfano Unit Well #99 (Dual, Gallup-Dakota) located in the NW/4 NW/4 of Section 2, Township 26 North, Range 10 West, with an initial potential of 7563 mcf from the Gallup Formation at a depth of 6122' to 6146'. The effective date of this First Revision shall be September 1, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano Unit #99 Well. This proposed First Revision is also predicated upon the knowledge and general information obtained from the Weaver-Brown-McAdams Wells Nos. 1, 2, 3 and 4, located in Section 34, Township 27 North, Range 10 West, which wells are discussed in Exhibit "A" included herewith.

Second Revision - Effective 1st day of February, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Sec. 4: NE/4	159.65
T-27-N, R-10-W, N.M.P.M.	
Sec. 29: SE/4	160.00
Sec. 32: NE/4	160.00
Sec. 33: NW/4	160.00

This proposed Second Revision of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on November 22, 1958, of Huerfano Unit Well #103 (Dual, Gallup-Dakota) located 990' from the North line and 1650' from the West line of Section 3, Township 26 North, Range 10 West, with an initial potential of 3342 mcf from the Gallup Formation at a depth of 6241' to 6265', with 19.6 bbls. of oil on a three hour test. This Second Revision is also predicated upon the knowledge and information obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on December 11, 1958, of Huerfano Unit Well #105 (Dual, Gallup-Dakota) located 800' from the South line and 680' from the East line

of Section 29, Township 27 North, Range 10 West, with an initial potential of 1839 mcf from the Gallup Formation at a depth of 5614' to 5666' with 71.4 bbls. of oil on a three hour test. The effective date of this Second Revision shall be February 1, 1959, pursuant to Section 10 of the Unit Agreement based upon the test dates of January 8, 1959 and January 27, 1959, respectively.

Third Revision - Effective 1st day of March, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M. Sec. 17: SE/4	160.00

This proposed Third Revision of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on November 25, 1958 of Huerfano Unit Well #104 (Dual, Gallup-Dakota) located 990' from the South line and 990' from the East line of Section 17, Township 26 North, Range 10 West, with an initial production of 442 mcf from the Gallup Formation at a depth of 5580' to 5600', with 288 bbls. of oil on a 24 hour test. The effective date of this Third Revision shall be March 1, 1959, pursuant to Section 10 of the Unit Agreement, based upon a test date of February 19, 1959.

Fourth Revision - Effective 1st day of April, 1959

<u>Description of Lands</u>	<u>Acreage</u>
T-27-N, R-10-W, N.M.P.M. Sec. 33: SW/4	160.00

This proposed Fourth Revision of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on March 6, 1959, of Huerfano Unit Well #106 (Dual, Gallup-Dakota) located 1562' from the South line and 1830' from the East line of Section 33, Township 27 North, Range 10 West, with an initial potential of 4368 mcf at a depth of 5720' to 5756' from the Gallup Formation. The effective date of this Fourth Revision is April 1, 1959, pursuant to Section 10 of the Unit Agreement based upon a test date of March 13, 1959.

The completion of the Huerfano Unit Well #107 (Dual, Gallup-Dakota) located 1460' from the North line and 1180' from the West line of Section 35, Township 27 North, Range 10 West, on January 28, 1959, with an initial potential of 691 mcf and 287 bbls. of oil on a 24 hour test from the Gallup Formation did not prove up any additional acreage hereto.

In support of this application the following Exhibits are made a part hereof:

EXHIBIT "A"

Geological Report in quadruplicate on the Initial and First, Second, Third and Fourth Revisions of the Gallup Participating Area in the Huerfano Unit.

EXHIBIT "B"

Cross-Section Map of the Gallup Formation.

EXHIBIT "C"

Structural Contour Map.

EXHIBIT "D"

Ownership Map reflecting the boundaries of the Unit and the proposed Initial and First, Second, Third and Fourth Revisions of the Gallup Participating Area.

Attached to this application are Schedules I through V showing the lands entitled to participation in the unitized substances produced from the Gallup Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Initial and First, Second, Third and Fourth Revisions of the Gallup Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:BKB:ch

APPROVED: John C. Reed

DATE: SEP 15 1959

**Acting Director, United States Geological Survey**

Subject to like approval by the appropriate State Officials.

APPROVED: 

DATE: August 3, 1959

Commissioner of Public Lands

Subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

APPROVED: [Signature]  
Oil Conservation Commission

DATE: 7-12-57

Oil Conservation Commission

Subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

The foregoing approvals are for the Initial and First, Second, Third and Fourth Revisions of the Participating Area for the Gallup Formation, effective June 20, 1958, September 1, 1958, February 1, 1959, March 1, 1959, and April 1, 1959, respectively, under Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT      GALLUP-DAKOTA FORMATIONS  
WORKING INTEREST OWNERS

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Cleary Petroleum, Inc.  
1374 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corp.  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
P. O. Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. J. W. McConnell, Jr.  
Executor of Estate of  
W. O. McConnell, Deceased  
P. O. Box 102  
Lone Wolf, Oklahoma

Berenice Jeffs  
P. O. Box 51  
Gorman, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. Albert R. Greer  
405 $\frac{1}{2}$  West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. C. F. Stringer  
208 E. Navajo  
Farmington, New Mexico

Stekoll Petroleum Corporation  
P. O. Box 956  
Dallas, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Western Natural Gas Company  
1006 Main St.  
Houston 2, Texas

Mr. E. V. Hewitt  
Pan American Petroleum Corporation  
P. O. Box 1410  
Fort Worth, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas

# El Paso Natural Gas Company

El Paso, Texas

July 10, 1959

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area Tract #141  
Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

Gentlemen:

We are enclosing for your attention thirteen (13) sets of instruments described as follows:

- (1) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by El Paso Natural Gas Company as working interest owner.
- (2) Copy of Ratification and Joinder of Unit Accounting Agreement covering the subject tract executed by El Paso Natural Gas Company as working interest owner.
- (3) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by J. W. McConnell, Jr., as Executor of the Estate of W. O. McConnell, Deceased, as a carried working interest owner.
- (4) Copy of Ratification and Joinder of Unit Accounting Agreement covering the subject tract executed by J. W. McConnell, Jr., as Executor of the Estate of W. O. McConnell, Deceased, as a carried working interest owner.
- (5) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by Barbara Irene McConnell, a widow, as a carried working interest owner.

- (6) Copy of Ratification and Joinder of Unit Accounting Agreement covering the subject tract executed by Barbara Irene McConnell, a widow, as a carried working interest owner.
- (7) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by Barbara Ann McConnell Bruss as a carried working interest owner.
- (8) Copy of Ratification and Joinder of Unit Accounting Agreement covering the subject tract executed by Barbara Ann McConnell Bruss as a carried working interest owner.
- (9) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by Mercantile National Bank at Dallas, Trustee of the Elizabeth Jeanne Turner Trust, the James Glenn Turner, Jr., Trust, the Frederick Eugene Turner Trust, and the John Lee Turner Trust, as an overriding royalty interest owner.
- (10) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by James W. Woodard, et ux, as an overriding royalty interest owner.
- (11) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by O. J. Lilly, et ux, as an overriding royalty interest owner.
- (12) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by William G. Webb as an overriding royalty interest owner.
- (13) Copy of Ratification and Joinder of Unit Agreement covering the subject tract executed by Chester E. Thompson, et ux, as a royalty owner.

The above instruments are submitted in order to effectively commit the subject tract to the Huerfano Unit. The above Ratifications represent all interest owners in said tract and each instrument has been approved and consented to by El Paso Natural Gas Company as Unit Operator.

It is respectfully requested that you process the enclosed Ratifications in your usual way in order that the subject tract will be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement. Please ignore that part of the description

contained in William G. Webb's Ratification referring to the E/2 of Section 24 since this acreage is not within the Huerfano Unit Area.

Very truly yours,

Harry Gevertz  
Area Landman  
Land Department

HG:BB:n1  
Enclosures

NM 4111  
Huerfano 5.0

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which-ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

ADDRESS

Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

SIGNATURE

Date: March 30, 1959

EL PASO NATURAL GAS COMPANY

By: Ben F. Howell  
Attorney-in-Fact

Date: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_ President of \_\_\_\_\_ corporation, on behalf of said corporation.

Notary Public

My Commission expires:

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_

Notary Public

My Commission expires:

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this 30th day of March, 1959, by Ben R. Howell, as attorney-in-fact on behalf of El Paso Natural Gas Company.

ELUISE BUSSE  
Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1959

My Commission expires:

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

**This instrument is intended to cover the following described lands only:**

ADDRESS

Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

SIGNATURE

EL PASO NATURAL GAS COMPANY

BY: 

Attorney-in-Fact

Date: March 30, 1959

Date: \_\_\_\_\_

\_\_\_\_\_

Library Publicity is and is

100

ATTORNEY-IN-FACT ON BEHALF OF EL PASO NATURAL GAS COMPANY.

... ..

\_\_\_\_\_

My Commission expires: \_\_\_\_\_

On this

---

My Commission expires: \_\_\_\_\_

On this

---

My Commission expires: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal

On this day

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

<u>ADDRESS</u>	Township 26 North, Range 9 West	<u>SIGNATURE</u>
	Section 22: NE/4 SE/4	
	San Juan County, New Mexico	

Date: \_\_\_\_\_

\_\_\_\_\_  
ESTATE OF W. O. McCONNELL, DECEASED

BY: J. W. McConnell Jr.  
J. W. McCONNELL, JR., AS EXECUTOR OF  
THE ESTATE OF W. O. McCONNELL, DECEASED

Date: April 27, 1959

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By: [Signature]  
Attorney-in-fact

Unit Operator and Working  
Interest Owner

STATE OF  
COUNTY OF

NOTARY PUBLIC

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, President of \_\_\_\_\_ corporation, on behalf of said corporation.

Notary Public

My Commission expires:

STATE OF OKLAHOMA  
COUNTY OF KIOWA

NOTARY PUBLIC

The foregoing instrument was acknowledged before me this 24th day of \_\_\_\_\_, 1958, by J. W. McConnell, Jr., as Executor of the Estate of W. O. McConnell, Deceased.

Notary Public

My Commission expires:

March 6, 1963

STATE OF TEXAS  
COUNTY OF TARRANT

NOTARY PUBLIC

The foregoing instrument was acknowledged before me this 7th day of \_\_\_\_\_, 1958, by \_\_\_\_\_, attorney-in-fact on behalf of \_\_\_\_\_, as \_\_\_\_\_

Eloise Busse

My Commission expires:

ELOISE BUSSE

Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1961

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

**This instrument is intended to cover the following described lands only:**

ADDRESS

**Township 26 North, Range 9 West  
Section 12: NE/4 SE/4  
San Juan County, New Mexico**

SIGNATURE

ESTATE OF W. O. MCCONNELL, DECEASED

BY: J. W. McConnell, Jr.  
J. W. MCCONNELL, JR., AS EXECUTOR  
OF THE ESTATE OF W. O. MCCONNELL,  
DECEASED

Date: April 24, 1959

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By [Signature]  
Attorney-in-fact

**Unit Operator and Working  
Interest Owner**

~~3/9/5~~

James Buchanan

Office of W. O. McGowan, Jr.  
1959

( VANDIN 20 LINDCO  
 ( VANDVING 20 HILLS  
 (

Notary Public in and for \_\_\_\_\_  
State of \_\_\_\_\_  
County, \_\_\_\_\_

My Commission expires:

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

STATE OF  
COUNTY OF

Notary Public in and for  
State of \_\_\_\_\_  
County, \_\_\_\_\_

My Commission expires:

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me  
appeared \_\_\_\_\_ and \_\_\_\_\_  
to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.

STATE OF  
COUNTY OF

Notary Public in and for  
State of \_\_\_\_\_  
County, \_\_\_\_\_

My Commission expires:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

( STATE OF  
(  
( COUNTY OF

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which-ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

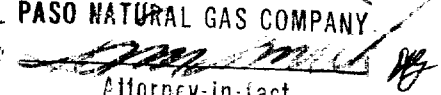
ADDRESS      Township 26 North, Range 9 West      SIGNATURE  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

Date: May 1, 1959

  
BARBARA IRENE McCONNELL, a widow

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By   
Attorney-in-fact  
Unit Operator and  
Working Interest Owner

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, President of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of said corporation.

Notary Public

My Commission expires:

STATE OF NEW MEXICO  
COUNTY OF SAN JUAN

The foregoing instrument was acknowledged before me this 1st day of May, 1959, by Barbara Irene McConnell, a widow

Notary Public

My Commission expires:

February 24, 1960

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this 12th day of \_\_\_\_\_, 1959, by Sam Smith, as attorney-in-fact on behalf of EL PASO NATURAL GAS COMPANY

My Commission expires:

ELOISE BUSSE

Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1961

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

This instrument is intended to cover the following described lands only:

ADDRESS

Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

SIGNATURE

  
BARBARA IRENE McCONNELL, a widow

Date: MAY - 1 1959

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By   
Attorney-in-fact

Unit Operator and Working  
Interest Owner

STATE OF )  
)  
) SS. )  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared

me duly sworn, did say that he is the \_\_\_\_\_, to me personally known, who, being by

President of \_\_\_\_\_

and that the seal affixed to said instrument is the corporate

seal of said corporation, and that said instrument was signed and sealed in behalf

of said corporation by authority of its board of directors, and said

acknowledged said instrument to be the free act and

deed of said corporation

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

Notary Public in and for \_\_\_\_\_

County, \_\_\_\_\_

State of \_\_\_\_\_

STATE OF )

) SS. )

COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me

appeared \_\_\_\_\_ and \_\_\_\_\_

his wife, to me known to be the persons described in and who executed the foregoing

instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

Notary Public in and for \_\_\_\_\_

County, \_\_\_\_\_

State of \_\_\_\_\_

STATE OF NEW MEXICO )

) SS. )

COUNTY OF SAN JUAN )

On this \_\_\_\_\_ 1st day of \_\_\_\_\_, 19 59, before me

personally appeared \_\_\_\_\_, a \_\_\_\_\_, \_\_\_\_\_ to me

known to be the person described in and who executed the foregoing instrument, and

acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

February 24, 1960

Notary Public in and for \_\_\_\_\_

County, \_\_\_\_\_

State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

ADDRESS

SIGNATURE

Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico

Detachment 14, 1st Air Postal  
Squadron, APO 929, San Francisco, Calif.

Date: 19 June 1959




BARBARA ANN McCONNELL BRUSS  
(formerly Barbara Ann McConnell)

**BRUSS**

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By   
Attorney in Fact  
Unit Operator and Working  
Interest Owner

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_ President of \_\_\_\_\_ corporation, on behalf of said corporation.

Notary Public

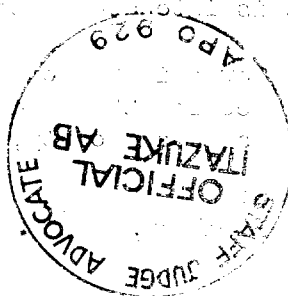
My Commission expires:

WITH THE UNITED STATES ARMED FORCES  
STATIONED  
AT APO 929, JAPAN  
EXPIRATION DATE

The foregoing instrument was acknowledged before me this 19th day of June, 1958 by Barbara Ann McConnell, a married woman as her sole and separate property.

MELVIN W. MATHEWS, 1st Lt, USAF  
Notary Public  
Judge Advocate

JUDGE ADVOCATE  
Granted General Powers of  
Notary Public Pursuant to PL  
506, 81st Cong, CH 169, Sect 1



My Commission expires: Indefinite

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_ attorney-in-fact on behalf of \_\_\_\_\_

My Commission expires:

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.


This instrument is intended to cover the following described lands only:

ADDRESS

Township 26 North, Range 9 West  
Section 12: NE/4 SE/4  
San Juan County, New Mexico

SIGNATURE

Detachment 14, 1st Air Postal  
Squadron, APO 929, San Francisco,  
California


  
BARBARA ANN MCCONNELL BRUSS  
(formerly Barbara Ann McConnell)

WITNESSES

Date: 19 June 1959

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By   
Attorney in Fact  
Unit Operator and Working  
Interest Owner

My Commission expires:

Notary Public

Attorney-in-Fact on behalf of

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day

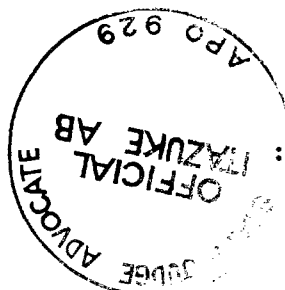
COUNTY OF )

STATE OF )

JUDGE ADVOCATE  
Granted General Powers of  
Notary Public Pursuant to  
506, 81st Code CH189, Sec 1

Notary Public

WILLIAM W. MATHEIS, 1st Lt, USAF, Judge Advocate



Indefinite

My Commission expires:

a married woman, as her sole and separate property

The foregoing instrument was acknowledged before me this 19th day of June, 19 59, by Barbara Ann McConnell Bruns.

WITH THE UNITED STATES ARMED  
FORCES AT APO 929, JAPAN  
COMMENCED

My Commission expires:

Notary Public

corporation, on behalf of said corporation.

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_, by \_\_\_\_\_, a \_\_\_\_\_ President of \_\_\_\_\_

COUNTY OF )

STATE OF )

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

ADDRESS

SIGNATURE

P. O. Box 5415

Dallas 22, Texas

Date: \_\_\_\_\_

ATTEST:

*Wm. Lawrence*  
Assistant Cashier

**MERCANTILE NATIONAL BANK AT DALLAS,  
Trustee of the Elizabeth Jeanne  
Turner Trust, the James Glenn  
Turner, Jr., Trust, the Frederick  
Eugene Turner Trust, and the John  
Lee Turner Trust (TAS-2312 a,b,c,d)  
By *Dean Smith*  
Trust Officer**

**This instrument is intended to cover the  
following described lands only:  
Township 26 North, Range 9 West  
Section 22: NE/4 SE/4  
San Juan County, New Mexico**

Date: August<sub>2</sub>, 1955

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By *Dean Smith*  
Attorney-in-fact

**Unit Operator and Working  
Interest Owner**

STATE OF **TEXAS** )  
COUNTY OF **DALLAS** ) SS.

On this 2 day of August, 1955, before me appeared Dean Smith, to me personally known, who, being by me duly sworn, did say that he is the Trust Officer of **MERCANTILE NATIONAL BANK AT DALLAS** and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said Dean Smith acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My commission expires:

My Commission Expires June 1, 1957

Rose Hejny ROSE HEJNY  
Notary Public in and for  
Dallas County,  
State of Texas

STATE OF )  
COUNTY OF ) SS.

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared \_\_\_\_\_ and \_\_\_\_\_, his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me that they executed the same as their free act and deed.

My commission expires:

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF )  
COUNTY OF ) SS.

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My commission expires:

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

	Township 26 North, Range 9 West	
	Section 22: NE/4 SE/4	
<u>ADDRESS</u>	San Juan County, New Mexico	<u>SIGNATURE</u>

[Signature]  
[Signature]

[Signature]  
James W. Woodward  
[Signature]  
Anna L. Woodward

Date: July 12, 1955

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By [Signature]  
Attorney-in-fact

Unit Operator and Working  
Interest Owner

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF NEW MEXICO    )  
                              ) SS.:  
COUNTY OF SAN JUAN    )

On this 12th day of July, 1955, before me appeared James W. Woodard and Anna L. Woodard his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

5-17-58

La Freda Joyce Evans  
Notary Public in and for \_\_\_\_\_  
San Juan County,  
State of New Mexico

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_



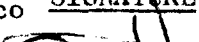

## RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

Box 135  
Farmington, New Mexico

Mexico SIGNATURE  
  
 O. J. Lilly  
  
 Julia B. Lilly

Date: Mar 27, 1955

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By [Signature]  
Attorney-in-fact

Unit Operator and Working  
Interest Owner

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

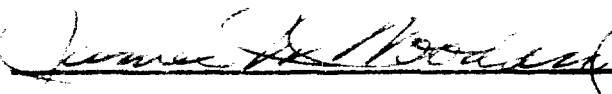
\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF New Mexico    )  
                              ) SS.:  
COUNTY OF San Juan    )

On this 27th day of June, 1955, before me appeared O. J. Lilly and Julia B. Lilly his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

March 15, 1958

  
\_\_\_\_\_  
Notary Public in and for San  
Juan County,  
State of New Mexico

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

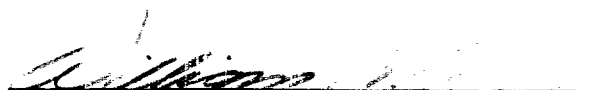
In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.


ADDRESS

SIGNATURE

Date: \_\_\_\_\_

  
William G. Webb  
**As to overriding royalty interest under the following lands only:**  
**Township 26 North, Range 9 West, N.M. P.M.**  
**Section 22: NE/4 SE/4**  
**Section 24: E/2**  
**containing 360 acres, more or less.**

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By   
Attorney-in-fact  
**Unit Operator and Working Interest Owner**

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
\_\_\_\_\_ and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF                    )  
                              ) SS.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_


STATE OF   **TEXAS**        )  
                              ) SS.:  
COUNTY OF **DALLAS**      )

On this 22nd day of June, 195 5, before me personally

appeared William G. Webb, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that ~~-----~~ he executed the same as ~~-- his --~~ free act and deed.

My Commission expires:

June 1, 1957

  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Dallas County,  
State of Texas

STATE OF  
COUNTY OF

SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF Colorado )  
COUNTY OF La Plata ) SS.:

On this 6th day of May, 1958, before me appeared

Chester F. Thompson and Eva C. Thompson  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires: October 19, 1961

*Hacklin*  
Notary Public in and for \_\_\_\_\_  
La Plata County,  
State of Colorado

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This instrument is intended to cover the following described lands only:

<u>ADDRESS</u>	<u>Township 26 North, Range 9 West</u>	<u>SIGNATURE</u>
	<u>Section 22: NE/4 SE/4</u>	
	<u>San Juan County, New Mexico</u>	

2330 Delwood Ave.,  
Durango, Colo.

[Signature]

Date: May 6 - 1958

\_\_\_\_\_

\_\_\_\_\_

2330 Delwood Ave.,  
Durango, Colo.

Eva G. Thompson

\_\_\_\_\_

Date: May 6 - 1958

\_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By [Signature]  
Attorney-in-fact

Unit Operator and Working  
Interest Owner

In reply refer to:  
Unit Division

June 5, 1959

File  
195

El Paso Natural Gas Company  
P.O. Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Initial and First Revised  
Dakota Participating Area,  
Huerfano Unit, San Juan  
County, New Mexico

Gentlemen:

We are enclosing six copies of the Initial and First Revised Participating Area, for the Dakota Formation, dated May 14, 1959.

These participating areas are approved by the Commissioner of Public Lands June 5, 1959, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc: OCC- Santa Fe  
USGS-Roswell

C  
O  
P  
Y

CLAIM OFFICE OCC

JUN 5 1959

In reply refer to:  
Unit Division

June 5, 1959

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Initial and First Revised  
Gallup Participating Area  
Huerfano Unit San Juan  
County, New Mexico.

Gentleman:

We are enclosing six copies of the Initial and First Revised Gallup Participating Area, Huerfano Unit, San Juan County, New Mexico, dated May 14, 1959.

These participating areas were approved by the Commissioner of Public Lands June 5, 1959, subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc:

OCC-Santa Fe  
USGS-Roswell

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ALL OFFICE OCC

100 JUN 10 1959

File 115

1 C. - CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

June 1, 1959

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

RE: Initial and First Revised  
Gallup Participating Area  
Huerfano Unit San Juan  
County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Initial and First Revised Gallup Participating Area for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Seven approved copies of the application have been forwarded to the State Land Office.

Very truly yours,

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

ALP/RLS:ig

cc: US Geological Survey - Roswell  
State Land Office - Santa Fe

File  
17

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2  
In reply refer to:  
Unit Division

May 25, 1959

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El Paso Natural Gas Company  
El Paso, Texas

Re: 1959 Plan of Development  
Huerfano Unit Area  
San Juan County, New Mexico

ATTENTION: Mr. Sam Smith

Gentlemen:

We have received your Plan of Development for the Huerfano Unit Area and wish to call your attention to Well No. 104, which is a dual Gallup Dakota in the SE/4 of Section 17, Township 26-North, Range 10-West and was completed November 1958.

What are your intentions concerning the drilling of the W/2 of Section 16, Township 26-North, Range 10-West during 1959.

Your 1959 Plan of Development does not propose any Pictured Cliff wells. May we have your reason for not drilling Pictured Cliff wells in Section 36, Township 26N, Range 10-West.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc: OCC- Santa Fe  
USGS- Roswell

# El Paso Natural Gas Company

El Paso, Texas

May 14, 1959

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D.C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

*File*

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
INITIAL AND FIRST REVISION OF THE  
PARTICIPATING AREA FOR THE GALLUP  
FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Initial and First Revision of the Participating Area for the Gallup Formation, to wit:

Initial Participating Area - Effective 20th day of June, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M. Section 7: N/2	324.05

This proposed Initial Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on March 2, 1958, of Huerfano Unit Well #92 (dual Gallup - Dakota), located in the SE/4 NW/4 of Section 7, Township 26 North, Range 9 West, with an initial production of 1460 m.c.f. from the Gallup Formation at a depth of 6114' to 6148'. The effective date of this Initial Participating Area shall be June 20, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not

obtained on the completion date of the Huerfano #92 Well.

First Revision - Effective 1st day of September, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Section 1: S/2	320.00
Section 2: N/2	318.52
T-27-N, R-10-W, N.M.P.M.	
Section 34: All	640.00
Section 35: S/2	320.00

This proposed First Revision of the Participating Area for the Gallup Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on July 17, 1958, of Huerfano Unit Well #99 (dual Gallup-Dakota), located in the NW/4 NW/4 of Section 2, Township 26 North, Range 10 West, with an initial potential of 7563 m.c.f. from the Gallup Formation at a depth of 6122' to 6146'. The effective date of this First Revision shall be September 1, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano #99 Well.

In support of this application the following exhibit is made a part hereof and will be forwarded under separate cover:

EXHIBIT "A"

Geological Report in quadruplicate on the Initial and the First Revision of the Gallup Participating Area in the Huerfano Unit.

Enclosed herewith and made a part of this application is an ownership map reflecting the boundaries of the Unit Area and the proposed Initial and First Revision of the Gallup Participating Area.

Also enclosed are schedules showing the lands entitled to participation in the unitized substances produced from the Gallup Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Initial and First Revision of the Gallup Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Yours very truly,

EL PASO NATURAL GAS COMPANY

By T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:BB:pc

cc: Attached Sheet

APPROVED: \_\_\_\_\_  
Director, United States Geological Survey  
Subject to like approval by the appropriate  
State Officials.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_  
Oil Conservation Commission  
Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

DATE: \_\_\_\_\_

The foregoing approvals are for the Initial and First Revision of the Participating Area for the Gallup Formation, effective June 20, 1958 and September 1, 1958, respectively, under Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

OIL CONSERVATION COMMISSION

P. O. BOX 871  
SANTA FE, NEW MEXICO

File  
195

June 1, 1959

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El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

ATTENTION: Mr. T. W. Bittick

Re: Initial and First Revised  
Dakota Participating Area,  
Huerfano Unit, San Juan  
County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Initial and First Revised Dakota Participating Area, for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Seven approved copies of the application have been forwarded to the State Land Office.

Very truly yours,

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

ALP/RLS/pj

cc: State Land Office - Santa Fe, New Mexico  
United States Geological Survey - Roswell, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

May 14, 1959

Director  
United States Geological Survey  
Department of the Interior  
Washington 25, D.C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
INITIAL AND FIRST REVISION OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, pursuant to the provisions of Section 10 thereof, respectfully submits for your approval the following selection of lands to constitute the Initial and First Revision of the Participating Area for the Dakota Formation, to wit:

Initial Participating Area - Effective 27th day of June, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M.P.M.	<u>648.21</u>
Section 7: All	648.21 Total Acres

This proposed Initial Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on March 2, 1958, of Huerfano Unit Well #92 (dual Gallup - Dakota), located in the SE/4 NW/4 of Section 7, Township 26 North, Range 9 West, with an initial production of 1652 m.c.f. from the Dakota Formation at a depth of 6715' to 6910'. The effective date of this Initial Participating Area shall be June 27, 1958, pursuant to Section 10 of the Unit Agreement,

If the hereinabove selection of lands to constitute the Initial and First Revision of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano #92 Well.

First Revision - Effective 1st day of September, 1958

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-10-W, N.M.P.M.	
Section 1: S/2	320.00
Section 2: All	638.52
Section 3: N/2	318.36
Section 12: N/2	320.00
T-27-N, R 10 W, N.M.P.M.	
Section 34: All	640.00
Section 35: W/2	320.00

This proposed First Revision of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Huerfano Unit Agreement on July 17, 1958 of Huerfano Unit Well #99 (dual, Gallup-Dakota), located in the NW/4 NW/4 of Section 2, Township 26 North, Range 10 West, with an initial potential of 2327 m.c.f. from the Dakota Formation at a depth of 6816' to 6908'. The effective date of this First Revision shall be September 1, 1958, pursuant to Section 10 of the Unit Agreement, and such date is based upon the test date since a satisfactory gauge was not obtained on the completion date of the Huerfano #99 Well.

In support of this application the following exhibits are made a part hereof and will be forwarded under separate cover:

EXHIBIT "A"

Geological Report in quadruplicate on the Initial and the First Revision of the Dakota Participating Area in the Huerfano Unit.

EXHIBIT "B"

Structural Contour Map of the Dakota Formation in the Huerfano Unit.

Enclosed herewith and made a part of this application is an ownership map reflecting the boundaries of the Unit Area and the proposed Initial and First Revision of the Dakota Participating Area.

Also enclosed are schedules showing the lands entitled to participation in the unitized substances produced from the Dakota Formation with the percentage of participation of each lease or tract indicated thereon.

If the hereinabove selection of lands to constitute the Initial and First Revision of the Dakota Participating Area meets with your approval, please indicate such approval in the space provided below and return an approved copy hereof for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By T. W. Bittick  
T. W. Bittick  
Assistant Manager  
Land Department

TWB:BB:pc

cc: Attached Sheet

APPROVED: \_\_\_\_\_  
Director, United States Geological Survey  
Subject to like approval by the appropriate  
State Officials.

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the United States  
Geological Survey and the Oil Conservation  
Commission.

DATE: \_\_\_\_\_

APPROVED: Oil Conservation Commission  
Oil Conservation Commission  
Subject to like approval by the United States  
Geological Survey and the Commissioner of  
Public Lands.

DATE: \_\_\_\_\_

The foregoing approvals are for the Initial and First Revision of the Participating Area for the Dakota Formation, effective June 27, 1958 and September 1, 1958, respectively, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT      GALLUP - DAKOTA FORMATIONS  
WORKING INTEREST OWNERS

New Mexico Western Natural Gas Company  
Post Office Box 1492  
El Paso, Texas

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth, South  
Salt Lake City, Utah

Cleary Petroleum, Inc.  
1374 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corp.  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
P. O. Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Berenice Jeffs  
P. O. Box 310  
Gorman, Texas

Pan American Petroleum Corporation  
P. O. Box 1714  
Albuquerque, New Mexico

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. C. F. Stringer  
208 E. Navajo  
Farmington, New Mexico

Stekoll Petroleum Corporation  
1100 Mercantile Continental Building  
Dallas, Texas

Mr. J. W. McConnell, Jr.  
Executor of the Estate of  
W. O. McConnell, Deceased  
P. O. Box 102  
Lone Wolf, Oklahoma

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
P. O. Box 1410  
Fort Worth, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

P. O. Box 6721  
Roswell, New Mexico

IN REPLY REFER TO:

F-1-6  
1958

October 21, 1958

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. Sam Smith

Gentlemen:

Your plan of development dated August 15, 1958, for the Huerfano unit area, I-Sec. No. 731, San Juan County, New Mexico, covering the period July 1, 1958 through December 31, 1958, has been approved on this date subject to like approval by appropriate officials of the State of New Mexico.

Two approved copies of the plan of development are enclosed.

Very truly yours,

EDWIN M. THOMASSON  
Acting Oil and Gas Supervisor

Enclosures 2

Copy to: Washington (w/cy of plan)  
Farmington (w/cy of plan)  
NMOCC, Santa Fe (ltr only) ✓  
Comm. Public Lands, Santa Fe (ltr only)

# El Paso Natural Gas Company

El Paso, Texas

October 6, 1958

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area  
Tracts No. 58 and 140  
San Juan County, New Mexico

Gentlemen:

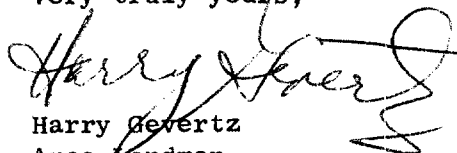
We are enclosing herewith for your attention three (3) sets of instruments described as follows:

- (1) One (1) copy of Ratification and Joinder of Unit Agreement covering Huerfano Unit Tracts #58 and #140, executed by Pan American Petroleum Corporation as working interest owner.
- (2) One (1) copy of Ratification and Joinder of Unit Agreement covering Huerfano Unit Tract #140, executed by Marguerite Frame, et vir, as royalty owners.
- (3) One (1) copy of Ratification and Joinder of Unit Agreement covering Huerfano Unit Tract #140, executed by R. Bruce Sullivan, et ux, as royalty owners.

These instruments were drawn by Pan American Petroleum Corporation in order to effectively commit the subject tracts to the Huerfano Unit. Said ratifications have been approved and consented to by El Paso Natural Gas Company as Unit Operator.

It is respectfully requested that you process the enclosed ratifications in your usual way in order that the aforementioned tracts will be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement.

Very truly yours,



Harry Gevertz  
Area Landman  
Land Department

HG:BB:jr  
Enclosures

cc: Mr. Ben R. Kee  
Pan American Petroleum Corporation

RATIFICATION AND JOINDER OF UNIT AGREEMENT  
AND UNIT ACCOUNTING AGREEMENT

In consideration of the execution of the Unit Agreement and the Unit Accounting Agreement for the Development and Operation of the Huerfano Unit Area, County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, and in consideration of the execution or ratification by other working interest owners of the contemporary Unit Operating Agreement which relates to said Unit Agreement, the undersigned owner of those certain oil and gas leases covering land located in San Juan County, New Mexico, as follows, to-wit:

Pan American Lease No. 170370:

Lessor:	United States of America
Lessee:	C. V. Lyman
Dated:	July 1, 1947
Serial Number:	Santa Fe 077981
Description:	N/2 NE/4 and SW/4 NE/4 Section 22, T-26-N, R-10-W, N.M.P.M.

Pan American Lease No. 170387-A:

Lessor:	R. Bruce Sullivan and wife, Opal H. Sullivan
Lessee:	Pan American Petroleum Corporation
Dated:	September 12, 1957
Recorded:	Book 351, page 85, Records of San Juan County, New Mexico
Description:	S/2 NE/4, N/2 SE/4, SE/4 SE/4 of Section 21; W/2 SW/4, SW/4 NW/4 Section 22, T-26-N, R-10-W, N.M.P.M.

Pan American Lease No. 170387-B:

Lessor:	Marguerite Frame and husband, Ross Frame
Lessee:	Pan American Petroleum Corporation
Dated:	September 12, 1957
Recorded:	Book 351, page 87, Records of San Juan County, New Mexico
Description:	S/2 NE/4, N/2 SE/4, SE/4 SE/4 of Section 21; W/2 SW/4, SW/4 NW/4 of Section 22, T-26-N, R-10-W, N.M.P.M.

hereby consents to the inclusion of said lands within the said Unit Agreement, approves and adopts the terms of said Unit Agreement and Unit Accounting Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative, agrees that the term of said leases are extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement and Unit Accounting Agreement, agrees that the drilling, development, and producing requirements of said leases and other contracts relating thereto shall be deemed fully performed by the performance of the provisions of said Unit Agreement and Unit Accounting Agreement, and agrees that payment for or delivery of oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the above described lands regardless of actual production therefrom shall constitute full performance of all such obligations to the undersigned existing under said leases.

For a like consideration, the undersigned does hereby expressly ratify, approve, adopt, confirm and join in said Unit Operating Agreement to the extent of the undersigned's leasehold interest in the above described lands, and agrees to be governed by all the terms and provisions thereof as a working interest owner, as fully to all intents and purposes as though the undersigned had originally executed said Unit Operating Agreement and all counterparts thereof.

This Ratification and Joinder of Unit Agreement and Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned and their assigns or successors in interest.

This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the undersigned.

EXECUTED this 18th day of September, 1958.

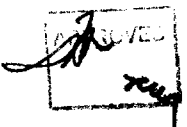
ATTEST:

[Signature]  
Assistant Secretary

PAN AMERICAN PETROLEUM CORPORATION

By

[Signature]  
Attorney-in-fact



APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By

[Signature]  
Attorney-in-fact

Unit Operator

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By \_\_\_\_\_  
Vice President

UNIT OPERATOR

THE STATE OF TEXAS )  
COUNTY OF TARRANT )

On this 18<sup>th</sup> day of Sept, 1958, before me appeared E. V. Hewitt, to me personally known, who, being by me duly sworn did say that he is the Attorney-in-fact for PAN AMERICAN PETROLEUM CORPORATION, and that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said E. V. Hewitt acknowledged said instrument to be the free act and deed of said corporation

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal on this, the day and year first above written.

My Commission Expires:

6-1-59

Donnelly E. Tiekamp  
Notary Public in and for Tarrant  
County, Texas

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the HUERFANO UNIT Area located within the County of San Juan, State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

**3/2 NE/4, N/2 SE/4, SE/4 SE/4 Section 21;  
W/2 SW/4, SW/4 NW/4 Section 22-all in 26N-10W**

ADDRESS

P. O. Box 1178

Durango, Colorado

Date: 205 1967

SIGNATURE

R. Bruce Sullivan

R. Bruce Sullivan

Opal H. Sullivan

Opal H. Sullivan

Date: \_\_\_\_\_

Attest to:

By [Signature]

ASSISTANT SECRETARY

PAN AMERICAN PETROLEUM CORPORATION

Approved and Consented to:

By [Signature]

ATTORNEY-IN-FACT

PAN AMERICAN PETROLEUM CORPORATION  
Working Interest Owner

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By [Signature]  
Attorney-in-fact

STATE OF <sup>TEXAS</sup> ~~Colorado~~ )  
COUNTY OF <sup>TARRANT</sup> ~~La Plata~~ ) SS.:

On this 5<sup>th</sup> day of July, 1958, before me appeared  
~~XXXXXXXXXXXXXXXXXXXX~~ E. W. HEWITT, to me personally known, who, being  
by me duly sworn, did say that he is the President of PAN AMERICAN PETROLEUM CORPORATION <sup>ATTORNEY IN FACT</sup> and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said E. W. HEWITT acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:  
6-1-59

Notary Public in and for  
TARRANT County,  
State of TEXAS

STATE OF ~~Colorado~~ )  
COUNTY OF ~~La Plata~~ ) SS.:

On this 1st day of September, 1958, before me appeared  
Grace Sullivan and Opal M. Sullivan  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:  
Feb. 3, 1958

Josephine M. Sporel  
Notary Public in and for  
La Plata County,  
State of Colorado

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally  
appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:  
\_\_\_\_\_

Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the MURFANO UNIT Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

**S/2 NE/4, N/2 SE/4, SE/4 SE/4 Section 21;  
W/2 SE/4, SE/4 NW/4 Section 22-all in 26N-10W**

ADDRESS

SIGNATURE

Hancos, Colorado

Marguerite Frame

Ross Frame

Date: 1/12/51

Date: \_\_\_\_\_

Attest to:

By [Signature]

ASSISTANT SECRETARY

PAN AMERICAN PETROLEUM CORPORATION

Approved and consented to:

By [Signature]

ATTORNEY-IN-FACT

PAN AMERICAN PETROLEUM CORPORATION  
Working Interest Owner

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By [Signature]

Attorney-in-fact

STATE OF TEXAS )  
COUNTY OF TARRANT ) SS.:

On this 5<sup>th</sup> day of July, 1957, before me appeared

E. W. NEWITT, to me personally known, who, being  
by me duly sworn, did say that he is the President of ATTORNEY IN FACT  
PAN AMERICAN PETROLEUM CORPORATION and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said E. W. NEWITT acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

6-1-59

Dorothy E. Tarrant  
Notary Public in and for  
TARRANT County,  
State of TEXAS

STATE OF COLORADO )  
COUNTY OF LA PLATA ) SS.:

On this 19 day of September, 1957, before me appeared

Marguerite Frane and Ross Frane  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

October 2, 1960

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_  
State of \_\_\_\_\_

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_  
State of \_\_\_\_\_

RECEIVED OCC  
SEP 26 1958

In reply refer to:  
Unit Division

September 26, 1958

*File  
195*

El Paso Natural Gas Company  
El Paso, Texas

Re: Huerfano Unit  
Plan of Development  
July 1, 1958-Dec. 31, 1958

ATTENTION: Mr. Sam Smith

Gentlemen:

We are enclosing one copy of the Plan of Development for the Huerfano Unit Area, for the period July 1, 1958 through December 31, 1958.

This Plan was approved by the Commissioner of Public Lands September 25, 1958.

This office is requesting that your 1959 program include some drilling on state acreage within the Huerfano Area.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc: OCC-Santa Fe ✓  
USGS- Roswell

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PLAN OFFICE OCC  
SEP 26 1958

In reply refer to:  
Unit Division

September 26, 1958

*File  
copy  
195*

El Paso Natural Gas Company  
El Paso, Texas

Re: Huerfano Unit  
Plan of Development  
July 1, 1958-Dec. 31, 1958

ATTENTION: Mr. Sam Smith

Gentlemen:

We are enclosing one copy of the Plan of Development for the Huerfano Unit Area, for the period July 1, 1958 through December 31, 1958.

This Plan was approved by the Commissioner of Public Lands September 25, 1958.

This office is requesting that your 1959 program include some drilling on state acreage within the Huerfano Area.

Very truly yours,  
MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m

cc: OCC-Santa Fe ✓  
USGS- Roswell

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

File  
1958

September 29, 1958

El Paso Natural Gas Company  
El Paso, Texas

ATTENTION: Mr. Sam Smith

Re: Plan of Development  
for period July 1, 1958  
to December 31, 1958  
Huerfano Unit, San Juan  
County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Plan of Development for the Period July 1, 1958 to December 31, 1958 for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

One approved copy of the application is returned herewith.

Very truly yours,

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

/19

cc: Land Office, Santa Fe, New Mexico  
USG Survey, Roswell, New Mexico

C  
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Y

# El Paso Natural Gas Company

El Paso, Texas

August 15, 1958

RECEIVED  
AUG 15 1958  
U.S. GEOLOGICAL SURVEY

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
**PLAN OF DEVELOPMENT**  
For Period July 1, 1958 -  
December 31, 1958

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, on September 4, 1957 filed a Plan of Development for the period July 1, 1957 - July 1, 1958 which proposed the drilling of eight (8) Pictured Cliffs wells and four (4) Dakota wells.

Seven (7) of the eight (8) approved Pictured Cliffs wells on the last Plan of Development have been completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 77	SE/4 Sec. 30, 27N, 10W	P&A	
Huerfano Unit No. 93	NW/4 Sec. 22, 26N, 9W	12-9-57	AOF 3829 MCF CV 3077 MCF
Huerfano Unit No. 94	SE/4 Sec. 22, 26N, 9W	12-22-57	AOF 1085 MCF CV 1060 MCF
Huerfano Unit No. 95	SE/4 Sec. 26, 26N, 9W	P&A	

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 96	SE/4 Sec. 33, 27N, 10W	P&A	
Huerfano Unit No. 97	NW/4 Sec. 16, 26N, 9W	12-15-57	AOF 4581 MCF CV 3512 MCF
Huerfano Unit No. 98	SE/4 Sec. 16, 26N, 9W	12-12-57	AOF 3084 MCF CV 2654 MCF

The remaining Pictured Cliffs location in the NW/4 of Section 30, Township 27 North, Range 10 West was not drilled because of the probability of a dry hole based upon the results obtained from drilling the Huerfano #77 Well; and it is the desire of the Unit Operator and working interest owners to delete this well from the program.

Two (2) of the four (4) Dakota wells on the last Plan of Development have been drilled as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>REMARKS</u>
Huerfano Unit No. 92	NW/4 Sec. 7, 26N, 9W	3-2-58	This well awaiting re-work before being shut-in for final gauge.
Huerfano Unit No. 99	NW/4 Sec. 2, 26N, 10W	7-18-58	This well is in the process of final test.

The remaining two (2) Dakota wells on the last Plan of Development were not drilled before this date because of the time required to re-work, test and evaluate the Huerfano #92 and #99 Wells, which wells are still awaiting additional re-work and final test. These two (2) Dakota wells will be commenced immediately upon the following locations:

SE/4 Sec. 29, 27N, 10W  
SE/4 Sec. 17, 26N, 10W

El Paso Natural Gas Company, as Unit Operator, hereby presents for your approval a proposed Plan of Development for the period July 1, 1958 to December 31, 1958, consisting of three (3) wells to be drilled to the Pictured Cliffs Formation and three (3) wells to be drilled to the Dakota Formation.

The selected locations are as follows:

PICTURED CLIFFS FORMATION LOCATIONS

- (1) NW/4 Sec. 19, 27N, 10W
- (2) NW/4 Sec. 29, 27N, 10W
- (3) SW/4 Sec. 22, 26N, 9W

DAKOTA FORMATION LOCATIONS

- (1) SE/4 Sec. 33, 27N, 10W
- (2) NW/4 Sec. 35, 27N, 10W
- (3) NW/4 Sec. 3, 26N, 10W

All of the working interest owners have been contacted and this drilling program reflects their wishes and proposals for the drilling program for this period. The proposed Plan of Development protects all committed lands within the unit area from drainage from outside locations. The Plan of Development as above described will, upon approval by the appropriate regulatory bodies, constitute the remaining drilling obligations to be satisfied up to and including December 31, 1958.

El Paso Natural Gas Company, as Unit Operator, intends to drill all the above listed Pictured Cliffs wells to the base of the Pictured Cliffs Formation using rotary and cable tools. Surface casing will be set to approximately 100' from the surface, and then a production string of 5½" casing will be set through the Pictured Cliffs Formation. Mud will be used in drilling through the Pictured Cliffs Formation and cable tools will be used for completion work. The entire Pictured Cliffs Formation will be subjected to a hydraulic fracturing process. Due care will be taken to protect all horizons.

El Paso Natural Gas Company, as Unit Operator, intends to drill the Dakota wells to the base of the Dakota Formation using rotary tools. Surface casing of 13 3/8" will be set to the depth of approximately 150' and an intermediate string of 9 5/8" will be run through the Pictured Cliffs Formation to a depth of approximately 3200', and then Operator will run a production string of either 5½" or 7" casing to the base of the Dakota Formation. The casing in the Dakota Formation will then be perforated and the Dakota Formation subjected to a hydraulic fracturing process. Mud will be used in setting the intermediate string of casing and the hole below the intermediate string of casing will be drilled in with gas. Due care will be taken to protect all horizons.


In the event evidence of commercial production is encountered in a formation lying above the base of the deepest formation tested while drilling any of the wells under this plan, Unit Operator will attempt to dually complete such well.

If this Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter have been sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By:   
Sam Smith  
Manager  
Land Department

SS:BB:jr  
Attachments

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Supervisor, United States Geological Survey  
Subject to like approval by the appropriate State officials.

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the United States Geological Survey and the  
Oil Conservation Commission.

APPROVED: *C. L. Porter* DATE: *Sept 29, 1958*  
Oil Conservation Commission  
Subject to like approval by the United States Geological Survey and the  
Commissioner of Public Lands.

The foregoing approvals are for the Huerfano Unit Plan of Development for  
the Period July 1, 1958 - December 31, 1958.

Huerfano Unit  
Working Interest Owners

New Mexico Western Oil and Gas Company  
P. O. Box 1492  
El Paso, Texas

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth South  
Salt Lake City, Utah

Slick Oil Corporation  
1030 Bank of the Southwest Building  
Houston 2, Texas

Montin-Benson Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Benson-Montin Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
P. O. Box 1410  
Fort Worth, Texas

Mr. R. E. Beamon  
346 Esperson Building  
Houston 2, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Mr. J. Glenn Turner  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. Albert R. Greer  
405 $\frac{1}{2}$  West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
1900 Mercantile Dallas Building  
Dallas 1, Texas

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Oroco Oil and Gas Company  
65 East Fourth South  
Salt Lake City, Utah

Anderson-Prichard Oil Corporation  
Liberty Bank Building  
Oklahoma City 2, Oklahoma

Mr. E. H. Pipkin  
P. O. Box 1174  
Roswell, New Mexico

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

Mr. C. W. Murchison  
P. O. Box 4795  
Dallas, Texas

Mr. R. N. Richey (2)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
P. O. Box 1526  
Salt Lake City 10, Utah

(continued)

Huerfano Unit

Working Interest Owners (cont'd.)

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

J. W. McConnell, Jr.  
Executor of the Estate of W. O. McConnell, Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

# El Paso Natural Gas Company

MAIN OFFICE 090  
El Paso, Texas  
August 25, 1958

File  
19

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area, Tract #17  
San Juan County, New Mexico

Gentlemen:

We are enclosing herewith one (1) copy of Ratification and Joinder of Unit Agreement executed by Alec Henry Bartlett and Emily Maria Bartlett, his wife.

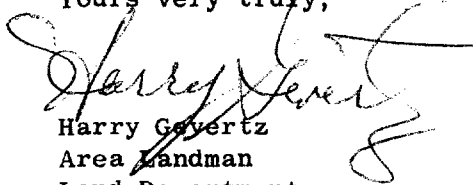
In our letter to you of April 17, 1958 we tendered for your approval Ratifications executed by Pan American Petroleum Corporation as working interest owner of Tract #17.

Pan American has requested that we submit for your approval the enclosed Ratification in order to expedite and insure the effective commitment of said tract to the Huerfano Unit.

You will note that said Ratification has been approved by Pan American as working interest owner and El Paso as unit operator.

It is respectfully requested that you process the enclosed Ratification in your usual way in order that the aforementioned tract will be effectively committed to the Huerfano Unit.

Yours very truly,

  
Harry Gayertz  
Area Landman  
Land Department

HG:BKB:pc  
Enclosure  
cc: Mr. Joe Durkee  
Pan American Petroleum Corp.  
P. O. Box 1714  
Albuquerque, New Mexico  
Huerfano 5.0  
Huerfano Tr. 17

~~MAIN OFFICE~~  
RATIFICATION AND JOINDER OF UNIT AGREEMENT

1958 AUG 25 PM 4:05

In consideration of the execution of the Unit Agreement for the Development and Operation of the HUERFANO UNIT Area located within the County of San Juan, State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

NE/4 Section 35-27N-10W, containing 160 acres, more or less *per*

ADDRESS

SIGNATURE

2468 Hearst Avenue

*Alco Henry Bartlett*  
Alco Henry Bartlett

Oakland 2, California

Date: \_\_\_\_\_

2468 Hearst Avenue

*Emily Maria Bartlett*  
Emily Maria Bartlett

Oakland 2, California

Date: \_\_\_\_\_

ACCEPTED AND CONSENTED TO this 23rd  
day of January, 1958.

PAN AMERICAN PETROLEUM CORPORATION,  
Working Interest Owner

By \_\_\_\_\_

*[Signature]*  
Attorney in Fact



APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By \_\_\_\_\_

*[Signature]*  
Attorney-in-Fact

UNIT OPERATOR

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
\_\_\_\_\_ and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF *California* )  
COUNTY OF *Alameda* ) SS.:

On this 13 day of November, 1957, before me appeared

Alec Henry Bartlett and Emily Maria Bartlett

his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

My Commission Expires Aug. 11, 1961

*Anna L. Regan*  
Notary Public in and for \_\_\_\_\_  
Alameda County,  
State of California

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 15, 1958

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. Harry Gevertz

Re: Plan of Development for the  
period July 1, 1957 - July 1,  
1958, Huerfano Unit San Juan  
County, New Mexico

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Plan of Development for the period July 1, 1957 - July 1, 1958 for the Huerfano Unit San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Three approved copies of the Plan are returned herewith.

Very truly yours,

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

ig

cc: U. S. Geological Survey, Roswell, New Mexico  
Commissioner of Public Lands, Santa Fe

# El Paso Natural Gas Company

El Paso, Texas

September 4, 1957

Mr. John A. Anderson  
United States Geological Survey  
Post Office Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
PLAN OF DEVELOPMENT  
For Period July 1, 1957-July 1, 1958

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program for the calendar year 1956 on June 7, 1956. This Drilling Program proposed the drilling of thirty-four (34) Pictured Cliffs wells in the Huerfano Unit. Nine (9) Pictured Cliffs wells of the thirty-four (34) wells were approved by the three (3) regulatory bodies. On September 18, 1956, an Amended Plan of Development was submitted proposing the drilling of twenty-five (25) Pictured Cliffs wells in the Huerfano Unit and constituted our drilling program for the remainder of the calendar year 1956. This Plan of Development was approved by the Commissioner of Public Lands on October 1, 1956, the Supervisor of the United States Geological Survey on October 1, 1956, and the Oil Conservation Commission on October 29, 1956.

The nine (9) wells on the 1956 Drilling Program which were approved have been completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 65	NW/4 Sec. 5, 26N, 10W	8-8-56	AOF-2961 MCF CV-2325 MCF
Huerfano Unit No. 66	SE/4 Sec. 6, 26N, 10W	8-4-56	AOF-382 MCF CV-380 MCF

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 67	NW/4 Sec. 6, 26N, 10W	7-31-56	AOF-5632 MCF CV-3567 MCF
Huerfano Unit No. 78	NW/4 Sec. 31, 27N, 10W	8-11-56	AOF-4080 MCF CV-2991 MCF
Huerfano Unit No. 79	SE/4 Sec. 31, 27N, 10W	8-21-56	AOF-365 MCF CV-364 MCF
Huerfano Unit No. 85	NE/4 Sec. 11, 26N, 10W	P & A	
Huerfano Unit No. 86	NE/4 Sec. 9, 25N, 10W	P & A	
Huerfano Unit No. 87	SE/4 Sec. 13, 26N, 10W	P & A	
Huerfano Unit No. 88	SE/4 Sec. 22, 26N, 10W	P & A	

Of the twenty-five (25) wells on the Amended Plan of Development, twenty-one (21) wells have been completed as follows:

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano Unit No. 51	NW/4 Sec. 12, 26N, 9W	11-13-56	AOF-241 MCF CV-241 MCF
Huerfano Unit No. 53	SE/4 Sec. 21, 26N, 9W	P & A	
Huerfano Unit No. 55	NE/4 Sec. 27, 26N, 9W	11-14-56	AOF-593 MCF CV-589 MCF
Huerfano Unit No. 57	SW/4 Sec. 26, 26N, 9W	11-7-56	AOF MCF CV-432 MCF
Huerfano Unit No. 58	NW/4 Sec. 26, 26N, 9W	11-7-56	AOF-1205 MCF CV-1152 MCF
Huerfano Unit No. 59	NE/4 Sec. 26, 26N, 9W	11-9-56	AOF-1663 MCF CV-1602 MCF
Huerfano Unit No. 61	NW/4 Sec. 3, 26N, 10W	P & A	
Huerfano Unit No. 62	SE/4 Sec. 4, 26N, 10W	11-29-56	AOF-2555 MCF CV-2388 MCF
Huerfano Unit No. 63	NW/4 Sec. 4, 26N, 10W	11-21-56	AOF-8390 MCF CV-4272 MCF
Huerfano Unit No. 64	SE/4 Sec. 5, 26N, 10W	12-18-56	AOF-179 MCF CV-179 MCF
Huerfano Unit No. 69	SE/4 Sec. 8, 26N, 10W	P & A	
Huerfano Unit No. 70	NW/4 Sec. 8, 26N, 10W	12-4-56	AOF-1688 MCF CV-1522 MCF
Huerfano Unit No. 71	NW/4 Sec. 9, 26N, 10W	12-11-56	AOF-2117 MCF CV-1895 MCF
Huerfano Unit No. 74	SW/4 Sec. 19, 27N, 10W	12-4-56	AOF-4823 MCF CV-3523 MCF
Huerfano Unit No. 75	SE/4 Sec. 29, 27N, 10W	1-3-57	AOF-119 MCF CV-118 MCF
Huerfano Unit No. 80	SE/4 Sec. 32, 27N, 10W	11-29-56	AOF-3693 MCF CV-2955 MCF
Huerfano Unit No. 81	NW/4 Sec. 32, 27N, 10W	11-21-56	AOF-2128 MCF CV-1917 MCF
Huerfano Unit No. 82	NW/4 Sec. 33, 27N, 10W	12-11-56	AOF-1250 MCF CV-1156 MCF
Huerfano Unit No. 84	SE/4 Sec. 36, 27N, 11W	12-11-56	AOF-2549 MCF CV-2194 MCF
Huerfano Unit No. 89	NE/4 Sec. 29, 27N, 10W	12-10-56	AOF-140 MCF CV-139 MCF
Huerfano Unit No. 90	NW/4 Sec. 35, 27N, 10W	11-29-56	AOF-842 MCF CV-818 MCF

The remaining four approved locations were not drilled, due either to title difficulties or the probability of a dry-hole based on the results obtained from the drilling of the Huerfano #69 Well

After completion of this 1956 drilling program a considerable time elapsed while the working interest owners of the Unit studied the results of the above wells and planned their 1957 plan of development. El Paso Natural Gas Company, as Unit Operator, hereby presents for your approval a proposed drilling program for the period July 1, 1957 to July 1, 1958, consisting of eight (8) wells to be drilled to the Pictured Cliffs Formation and four (4) wells to be drilled to the Dakota Formation. We have selected one Dakota Formation location and will arrive at our proposed determination of the three (3) remaining locations successively, each to be based on the information obtained from drilling the preceding Dakota well and the geophysical operations presently being conducted.

The selected locations are as follows:

PICTURED CLIFFS FORMATION LOCATIONS

- |                           |                            |
|---------------------------|----------------------------|
| (1) NW/4 Sec. 16, 26N, 9W | (5) SE/4 Sec. 26, 26N, 9W  |
| (2) SE/4 Sec. 16, 26N, 9W | (6) NW/4 Sec. 30, 27N, 10W |
| (3) NW/4 Sec. 22, 26N, 9W | (7) SE/4 Sec. 30, 27N, 10W |
| (4) SE/4 Sec. 22, 26N, 9W | (8) SE/4 Sec. 33, 27N, 10W |

DAKOTA FORMATION LOCATIONS

- (1) SE/4 NE/4 Sec. 7, 26N, 9W

All of the working interest owners have been contacted and this drilling program reflects their wishes and proposals for the drilling program for this period. The proposed plan of development protects all committed lands within the unit area from drainage from outside locations. The plan of development as above described will, upon approval by the appropriate regulatory bodies, constitute the remaining drilling obligations to be satisfied up to and including July 1, 1958.

El Paso Natural Gas Company, as Unit Operator, intends to drill all the above listed Pictured Cliffs wells to the base of the Pictured Cliffs Formation using rotary and cable tools. Surface casing will be set to approximately 100' from the surface, and then a production string of 5½" casing will be set through the Pictured Cliffs Formation. Mud will be used in drilling through the Pictured Cliffs Formation and cable tools will be used for completion work. The entire Pictured Cliffs Formation will be subjected to a hydraulic fracturing process. Due care will be taken to protect all horizons.


El Paso Natural Gas Company, as Unit Operator, intends to drill the Dakota wells to the base of the Dakota Formation using rotary tools. Surface casing of 13 3/8" will be set to the depth of approximately 150' and an intermediate string of 9 5/8" will be run through the Pictured Cliffs Formation to a depth of approximately 3200' and then Operator will run a production string of either 5½" or 7" casing to the base of the Dakota Formation. The casing in the Dakota Formation will then be perforated and the Dakota Formation subjected to a hydraulic fracturing process. Mud will be used in setting the intermediate string of casing and the hole below the intermediate string of casing will be drilled in with gas. Due care will be taken to protect all horizons.

If this plan of development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Copies of this letter have been sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By:   
Samuel Smith  
Manager  
Land Department

SS:RDJ:cl  
Attachment

Approved: \_\_\_\_\_

Supervisor, United States Geological Survey

Subject to like approval by appropriate State officials.

Approved: \_\_\_\_\_

Commissioner of Public Lands

Subject to like approval of United States Geological Survey and Oil Conservation Commission.

Approved: \_\_\_\_\_

Oil Conservation Commission

Subject to like approval of United States Geological Survey and Commissioner of Public Lands.

The foregoing approvals are for the 1957 Plan of Development for the Huerfano Unit, San Juan County, New Mexico.

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil & Gas Company  
1201 Main Street  
Dallas 2, Texas

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 E. Fourth South  
Salt Lake City, Utah

Mr. G. A. Olsen  
Sunland Refining Corporation  
Post Office Box 1512  
Fresno, California

Brookhaven Oil Company  
Post Office Box 396  
Scottsdale, Arizona

Mr. C. V. Lyman  
Post Office Box 1141  
Midland, Texas

Mr. Neils C. Jensen  
Post Office Box 124  
Richfield, Utah

Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

Montin-Benson Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. C. F. Bedford (12)  
Pan American Petroleum Company  
Post Office Box 1410  
Fort Worth, Texas

Pan American Petroleum Company  
Post Office Box 1714  
Albuquerque, New Mexico

Dr. Sherman Wingerd  
1044 Stanford Drive, S.E.  
Albuquerque, New Mexico

Mr. R. E. Beamon  
346 Esperson Building  
Houston 2, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Mr. J. Glenn Turner  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Mr. Ralph A. Johnston  
1010 South Coast Life Bldg.  
Houston 2, Texas

(Continued)

**Huerfano Unit**  
**Working Interest Owners**

(Continued)

Mrs. Willie Johnston  
311 Grandview Avenue  
Clarksville, Arkansas

First National Bank of Fort Worth  
Trustee for Eula May Johnston  
Fort Worth, Texas

Mr. R. N. Richey (2)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City, 10, Utah

Mrs. Lillie Leona Rogers  
c/o Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mr. V. A. Johnston  
Ralls, Texas

Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mrs. Veva Jean Gibbard  
1229 West Tishomingo  
Sulphur, Oklahoma

MAIN OFFICE OCC

In reply refer to:  
Unit Division

1958 AUG 14 AM 8:27

August 12, 1958

*File  
case  
195*

El Paso Natural Gas Company  
El Paso, Texas

Re: Huerfano Unit Plan of Development  
for Period July 1, 1957 to July 1,  
1958

Gentlemen:

The Commissioner of Public Lands as of this date approved the above designated Plan of Development.

Under copy of this letter we are sending two copies of this Plan of Development to the New Mexico Oil Conservation Commission for their approval and transmittal to your office.

Very truly yours,

MURRAY E. MORGAN  
Commissioner of Public Lands

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/s

cc: Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

C  
O  
P  
Y

*El Paso Natural Gas Company*  
MAIN OFFICE OCC

1958 AUG 14 AM 8:30 El Paso, Texas

August 12, 1958

AIR MAIL

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

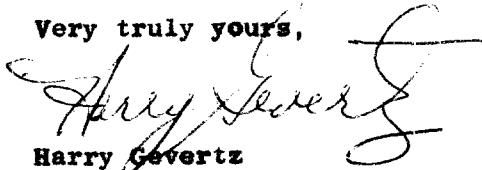
Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
**PLAN OF DEVELOPMENT**  
For Period July 1, 1957 - July 1, 1958

Gentlemen:

Please refer to our letter of August 5, 1958 requesting your early approval to our last Plan of Development.

We would appreciate your expeditious handling of this request in order that we may proceed with our new development program.

Very truly yours,



Harry Gevertz  
Area Landman  
Land Department

HG:BB:jr

Huerfano 3.0  
Huerfano 5.0

COPY

*El Paso Natural Gas Company*  
MAIN OFFICE OCC

1958 AUG 6 PM 1:22 *El Paso, Texas*

August 5, 1958

AIR MAIL

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
**PLAN OF DEVELOPMENT**  
For Period July 1, 1957-July 1, 1958

Gentlemen:

Reference is made to the Huerfano Unit Plan of Development for the period July 1, 1957 to July 1, 1958, submitted under date of September 4, 1957.

The Supervisor of the United States Geological Survey approved said Plan of Development on March 31, 1958, however, we cannot find like approval by the Commissioner of Public Lands and the Oil Conservation Commission.

We are presently preparing the Huerfano Plan of Development for the period July 1, 1958 to December 31, 1958, and before this plan is submitted, it is desirable that we have your approval of the past Plan of Development.

We would very much appreciate your approval of said drilling program at this time in order that we can proceed with the next Huerfano Plan of Development.

Thank you very much for your prompt reply.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

  
Harry Gevortz  
Area Landman  
Land Department

HG:BB:jb  
Huerfano Unit 3.0  
Huerfano Unit 5.0

COPY

# El Paso Natural Gas Company

El Paso, Texas

July 21, 1958

MAIN OFFICE OCC  
1958 JUL 21 AM 9:18

*File  
case  
195*

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: SF 078077  
Township 25 North, Range 10 West  
Section 12: W/2 SE/4, SW/4  
Section 14: N/2, SE/4, N/2 SW/4  
Huerfano Unit  
Tract 88  
San Juan County, New Mexico

Gentlemen:

Enclosed herewith for your attention are four (4) sets of instruments described as follows:

1. One (1) copy of Ratification and Joinder of the Unit Agreement executed by El Paso Natural Gas Company and Berenice Jeffs covering the above designated tract.
2. One (1) copy of Ratification and Joinder of the Unit Accounting Agreement executed by El Paso Natural Gas Company and Berenice Jeffs covering the above designated tract.
3. One (1) copy of Ratification and Joinder of the Unit Agreement executed by El Paso Natural Gas Company, E. H. Pipkin and Pearl O. Pipkin covering the above designated tract.
4. One (1) copy of Ratification and Joinder of the Unit Accounting Agreement executed by El Paso Natural Gas Company, E. H. Pipkin and Pearl O. Pipkin covering the above designated tract.

1. *Chlorophyll a* (Chl *a*)

As a result of the above, the authors have concluded that the use of the proposed model for the analysis of the data obtained from the tests of the specimens of the type of the investigated material is possible. The authors also have concluded that the proposed model is suitable for the analysis of the data obtained from the tests of the specimens of the type of the investigated material.

[illegible]


and the fact that the  $\mathcal{H}^1$ -norm of the function  $\mathcal{H}^1(\mathbb{R}^d)$  is not a norm on  $\mathcal{H}^1(\mathbb{R}^d)$  (see [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100]).

July 21, 1958

These instruments were approved by El Paso Natural Gas Company as Unit Operator, and Berenice Jeffs, E. H. Pipkin and Pearl O. Pipkin as lease owners, in order to effectively commit the above designated tract to the Huerfano Unit.

It is respectfully requested that you process the enclosed Ratifications in your usual way in order that the aforementioned tract will be effectively committed to the Huerfano Unit.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Harry Gevertz", with a long, sweeping horizontal line extending to the right.

Harry Gevertz  
Area Landman  
Land Department

HG:SM:cl  
Attachments

Huerfano Unit 5.0

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

W/2 SE/4, SW/4 of Section 12 and the N/2, SE/4, N/2 SW/4 of Section 14,  
Township 25 North, Range 10 West (Tract No. 88)

ADDRESS

Post Office Box 1174

Roswell, New Mexico

Date: July 16, 1958

Post Office Box 310

Gorman, Texas

Date: \_\_\_\_\_

SIGNATURE

E. H. Pipkin  
E. H. PIPKIN

Pearl O. Pipkin  
PEARL O. PIPKIN

\_\_\_\_\_  
BERNICE JEFFS, a single woman

APPROVED AND CONSENTED TO:  
EL PASO DISTRICT ATTORNEY  
By [Signature]  
Vice President [Signature]

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF NEW MEXICO )  
COUNTY OF CHAVES ) SS.:

On this 16th day of July, 1958, before me appeared

E. H. PIPKIN and PEARL O. PIPKIN  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

April 30, 1966

Madeline H. Thompson  
Notary Public in and for \_\_\_\_\_  
County,  
State of CHAVES  
NEW MEXICO

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 1958, before me personally

appeared BERNICE JEFFS, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ s he executed the same as \_\_\_\_\_ her \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.  
W/2 SE/4, SW/4 of Section 12 and the N/2, SE/4, N/2 SW/4 of Section 14, Township 25 North, Range 10 West (Tract 88)

ADDRESS

SIGNATURE

Post Office Box 1174

E. H. PIPKIN  
E. H. PIPKIN

Roswell, New Mexico

PEARL O. PIPKIN  
PEARL O. PIPKIN

Date: July 16, 1958

Post Office Box 310

BERNICE JEFFS, a single woman

Gorman, Texas

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO COUNTY  
By [Signature]  
Vice President  
UNIT OPERATOR [Signature]

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF NEW MEXICO )  
 ) SS.:  
COUNTY OF CHAVES )

On this 16th day of July, 19 58, before me appeared E. H. PIPKIN and PEARL O. PIPKIN, his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

April 30, 1960

Madelyn H. Muska  
Notary Public in and for \_\_\_\_\_  
Chaves County,  
State of New Mexico

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19 58, before me personally appeared BERNICE JEFFS, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that she executed the same as her free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

W/2 SE/4, SW/4 of Section 12 and the N/2, SE/4, N/2 SW/4 of Section 14, Township 25 North, Range 10 West (Tract 88)

ADDRESS

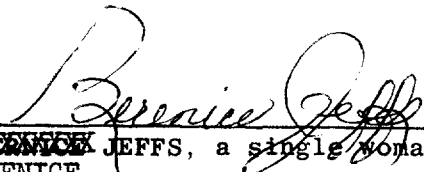
Post Office Box 310

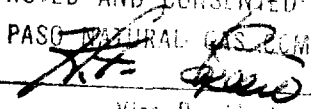
Gorman, Texas

Date: July 17, 1958

Date: \_\_\_\_\_

SIGNATURE

  
~~BERENICE~~ JEFFS, a single woman  
BERENICE

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By   
Vice President  
UNIT OPERATOR

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_ and \_\_\_\_\_, his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF Texas )  
 ) SS.:  
COUNTY OF Eastland )

On this 17 day of July, 19 58, before me personally appeared ~~BERNICE JEFFES~~ BERENICE JEFFES, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that she executed the same as her free act and deed.

My Commission expires:

Ben R. Townley -

Ben R. Townley  
Notary Public in and for Eastland  
County,  
State of Texas

6-1-'59

RATIFICATION AND JOINDER OF UNIT AGREEMENT

MAIN OFFICE OCC

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huenfancia Unit Area located within the County of San Juan, State of New Mexico, in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (which-ever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

W/2 SE/4, SW/4 of Section 12 and the N/2, SE/4, N/2 SW/4 of Section 14, Township 25 North, Range 10 West (Tract 88)

ADDRESS

Post Office Box 310

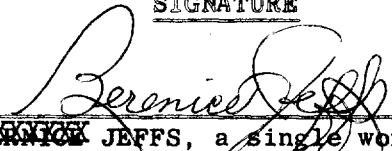
Gorman, Texas

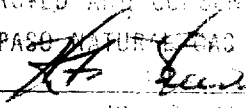
Date: July 17, 1958

Date: \_\_\_\_\_

Date: \_\_\_\_\_

SIGNATURE

  
BERENICE JEFFS, a single woman  
BERENICE

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By   
Vice President  
UNIT OPERATOR

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, President of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of said corporation.

Notary Public

My Commission expires:

\_\_\_\_\_

STATE OF Texas  
COUNTY OF Eastland

The foregoing instrument was acknowledged before me this 17 day of July, 1958, by ~~WILLIAM~~ JEFFES, a single woman  
BERENICE

*Ben R. Townley*  
Ben R. Townley Notary Public

My Commission expires:

6-1-'59

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by \_\_\_\_\_, as attorney-in-fact on behalf of \_\_\_\_\_.

My Commission expires:

\_\_\_\_\_

*El Paso Natural Gas Company*  
MAIN OFFICE OCC *El Paso, Texas*

1958 JUL 2 PM 1:29 June 2, 1958

Mr. John A. Anderson  
Regional Oil and Gas Supervisor  
United States Geological Survey  
P. O. Box 6721  
Roswell, New Mexico

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I-Sec. No. 731  
Notice of Selection of Second  
Dakota Test under Plan of  
Development for Period  
July 1, 1957 to July 1, 1958  
San Juan County, New Mexico

Gentlemen:

Reference is made to the Huerfano Unit Plan of Development for the period July 1, 1957 to July 1, 1958, submitted by El Paso Natural Gas Company by letter to you dated September 4, 1957.

Said Plan of Development provided for the drilling of four (4) Dakota Formation test wells. The first Dakota test was to be located in the NW/4 of Section 7, Township 26 North, Range 9 West, and the remaining three (3) locations were to be picked successively, each to be based on the information obtained from drilling the preceding Dakota test wells in the area.

The Huerfano Unit #92 Well, being the first Dakota test, was completed in the NW/4 of Section 7, Township 26 North, Range 9 West, on March 2, 1958 as a dual Gallup-Dakota Well and is presently shut in for final test.

Because of our obligation as Unit Operator to prevent drainage of unitized land by wells on lands not subject to the Unit Agreement pursuant to Section "15" of the Huerfano Unit Agreement, El Paso Natural Gas Company has selected for the next Dakota drillsite the NW/4 NW/4 of Section 2, Township 26 North, Range 10 West, to offset the W. R. Weaver-Brown-McAdams #1 Well located

United States Geological Survey  
Commissioner of Public Lands  
Oil Conservation Commission

-2-

June 2, 1958

in the NW/4 of Section 34, Township 27 North, Range 10 West, and the Weaver-McAdams #2 Well in the SE/4 of Section 34, Township 27 North, Range 10 West.

Copies of this letter have been sent to the working interest owners shown on the attached sheet.

Yours very truly,

A handwritten signature in dark ink, appearing to read "Harry Gevertz", with a stylized flourish at the end.

Harry Gevertz  
Area Landman  
Land Department

HG:BKB:pc

cc: Attached sheet

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil and Gas Company  
Post Office Box 1492  
El Paso, Texas

Mr. R. E. Beamon  
346 Esperson Bldg.  
Houston 2, Texas

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Mr. H. K. Riddle  
65 East Fourth South  
Salt Lake City, Utah

Mr. J. Glenn Turner  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Montin-Benson Corporation  
2808 First National Bldg.  
Oklahoma City, Oklahoma

Mr. William G. Webb  
17th Floor Mercantile Bank Building  
Dallas 1, Texas

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Mr. K. E. McAfee  
1316 Liberty Bank Bldg.  
Oklahoma City, Oklahoma

Oroco Oil and Gas Company  
65 East Fourth South  
Salt Lake City, Utah

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. R. N. Richey (2)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

J. W. McConnell, Jr.  
Executor of the Estate of W. O. McConnell,  
Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

E. H. Pipkin  
Post Office Box 1174  
Roswell, New Mexico

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Mr. C. W. Murchison  
Post Office Box 4795  
Dallas, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

May 9, 1958

*File*  
*Case 119*

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I-Sec. No. 731  
Twentieth through Twenty-Fourth  
Enlargements of the Pictured Cliffs  
Participating Area  
San Juan County, New Mexico

Gentlemen:

El Paso Natural Gas Company's Application, dated December 19, 1957, for the Twentieth through Twenty-Fourth Enlargements of the Pictured Cliffs Participating Area under the Huerfano Unit Agreement was approved as follows:

1. Acting Director, United States Geological Survey, April 29, 1958.
2. Commissioner of Public Lands of the State of New Mexico, January 21, 1958.
3. Oil Conservation Commission of the State of New Mexico, February 15, 1958.

The Working Interest Owners shown on the attached sheet have been advised as to the above information.

Very truly yours,



Harry Severtz  
Area Landman  
Land Department

HG:BB:jr  
Attachment

Huerfano Unit 5.0  
Huerfano Unit 4.1

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil and Gas Company  
Post Office Box 1492  
El Paso, Texas

Mr. R. E. Beamon  
346 Esperson Bldg.  
Houston 2, Texas

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Mr. H. K. Riddle  
65 East Fourth South  
Salt Lake City, Utah

Mr. J. Glenn Turner  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Montin-Benson Corporation  
2808 First National Bldg.  
Oklahoma City, Oklahoma

Mr. William G. Webb  
17th Floor Mercantile Bank Building  
Dallas 1, Texas

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Mr. K. E. McAfee  
1316 Liberty Bank Bldg.  
Oklahoma City, Oklahoma

Oroco Oil and Gas Company  
65 East Fourth South  
Salt Lake City, Utah

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. R. N. Richey (2)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

J. W. McConnell, Jr.  
Executor of the Estate of W. O. McConnell,  
Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

E. H. Pipkin  
Post Office Box 1174  
Roswell, New Mexico

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. E. V. Hewitt (12)  
Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Mr. Frank A. Schultz  
823 Corrigan Tower  
Dallas, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

Mr. C. W. Murchison  
Post Office Box 4795  
Dallas, Texas

# El Paso Natural Gas Company

El Paso, Texas  
April 17, 1958

File  
52  
1958

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area  
Tract #17, #44 and #102  
San Juan County, New Mexico

Gentlemen:

We are enclosing herewith for your attention five (5) sets of instruments described as follows:

1. One (1) copy of Ratification and Joinder of Unit Agreement executed by Pan American Petroleum Corporation covering Huerfano Unit Tracts #17 and #44.
2. One (1) copy of Ratification and Joinder of Unit Accounting Agreement executed by Pan American Petroleum Corporation covering Huerfano Unit Tracts #17 and #44.
3. One (1) copy of Ratification and Joinder of Unit Agreement executed by Pan American Petroleum Corporation covering Huerfano Unit Tract #102.
4. One (1) copy of Ratification and Joinder of Unit Accounting Agreement executed by Pan American Petroleum Corporation covering Huerfano Unit Tract #102.
5. One (1) copy of Ratification and Joinder of Unit Agreement executed by John W. Hjertstedt covering his interest in Huerfano Unit Tract #102.

Oil Conservation Commission  
of the State of New Mexico

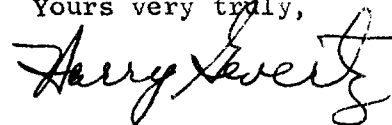
-2-

April 17, 1958

These instruments were drawn by Pan American Petroleum Corporation in order to effectively commit the subject tracts to the Huerfano Unit. Our records reflect Pan American Petroleum Corporation to be Working Interest Owner under each of said tracts. Said Joinders have been approved and consented to by El Paso Natural Gas Company as Unit Operator.

It is respectfully requested that you process the enclosed Ratifications in your usual way in order that the aforementioned tracts will be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement.

Yours very truly,



Harry Gevertz  
Area Landman  
Land Department

HG:BKB:pc  
Enclosures  
Huerfano 5.0  
Huerfano Trs. 17,44,102

cc: Pan American Petroleum Corp.  
P. O. Box 1714  
Albuquerque, New Mexico  
Attention: Mr. Ben R. Kee

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claim an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.  
E/2 NW/4, SW/4 NW/4, Section 12, Township 26 North, Range 10 West, containing 120.00 acres, more or less (Tract 44). NE/4 Section 35, Township 27 North, Range 10 West, containing 160.00 acres, more or less (Tract 17).

ADDRESS

P. O. Box 1410

Fort Worth, Texas

Date: March 26, 1958

Date: \_\_\_\_\_

SIGNATURE

PAN AMERICAN PETROLEUM CORPORATION

By: [Signature]  
Attorney In Fact

ATTEST: [Signature]  
Assistant Secretary



APPROVED AND CONSENTED TO:  
FL AND NATURAL GAS DIVISION  
BY [Signature]  
UNIT OPERATOR

STATE OF TEXAS  
COUNTY OF TARRANT

On this 26th day of March, 1958, before me appeared B. V. Young, to me personally known, who, being by me duly sworn, did say that he is the President of the American Petroleum Corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said B. V. Young acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires: 6-1-59.

Dorothy E. Johnson  
Notary Public in and for Tarrant  
County, State of Texas

STATE OF  
COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_ and \_\_\_\_\_, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County, State of \_\_\_\_\_

STATE OF  
COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County, State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement. E/2 NW/4, SW/4 NW/4, Section 12, Township 26 North, Range 10 West, containing 120.00 acres, more or less (Tract 44). NE/4 Section 35, Township 27 North, Range 10 West, containing 160.00 acres, more or less (Tract 17).

ADDRESS

P. O. Box 1410

Fort Worth, Texas

Date: March 20, 1958

Date: \_\_\_\_\_

SIGNATURE

PAN AMERICAN PETROLEUM CORPORATION

By: \_\_\_\_\_

Attorney In Fact

ATTEST:

Assistant Secretary

APPROVED AND CONSENTED TO:  
EL PASO DISTRICT GEOLOGICAL SURVEY

By: [Signature]

VIC. T. [Signature]

UNIT OPERATOR

My Commission expires:

STATE OF  
COUNTY OF  
)  
) SS.:  
)

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

Notary Public in and for \_\_\_\_\_  
State of \_\_\_\_\_  
County, \_\_\_\_\_

My Commission expires:

STATE OF  
COUNTY OF  
)  
) SS.:  
)

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_ and \_\_\_\_\_, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

Notary Public in and for \_\_\_\_\_  
State of \_\_\_\_\_  
County, \_\_\_\_\_

My Commission expires:

STATE OF **TEXAS**  
COUNTY OF **TARRANT**  
)  
) SS.:  
)

On this 26<sup>th</sup> day of March, 1928, before me appeared E. V. Stewart, did say that he is the President of THE AMERICAN PETROLEUM CORPORATION and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said E. V. Stewart acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public in and for \_\_\_\_\_  
State of **Texas**  
County, \_\_\_\_\_

6-1-59

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan, State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, and their assigns or successors in interest. The area intended to be covered by this Ratification and Joinder of Unit Agreement is the SW/4 of the NE/4 of Section 2, Township 26 North, Range 10 West, N.M.P.M., San Juan County, New Mexico.

ATTEST:

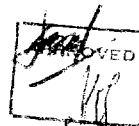
*[Signature]*  
Assistant Secretary

PAN AMERICAN PETROLEUM CORPORATION

By *[Signature]*  
Attorney in Fact

Address:

P. O. Box 1410  
Fort Worth, Texas  
Working Interest Owner



EXECUTED as of the 12th day of  
December, 1957.

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By *[Signature]*  
Vice President

UNIT OPERATOR

THE STATE OF TEXAS    )  
                                  )  
COUNTY OF TARRANT    )

On this 25<sup>th</sup> day of March, 1958, before me appeared E. V. Hewitt, to me personally known, who, being by me duly sworn did say that he is the Attorney in Fact of PAN AMERICAN PETROLEUM CORPORATION, a corporation, and that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said E. V. Hewitt acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal on this, the day and year first above written.

My Commission Expires:

6-1-59

Brother E. V. Hewitt  
Notary Public in and for  
Tarrant County, Texas

RATIFICATION AND JOINDER OF UNIT ACCOUNTING  
AGREEMENT UNDER UNIT AGREEMENT FOR THE  
DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN  
COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, and their successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement. The area intended to be covered by this Ratification and Joinder of Unit Accounting Agreement is the SW/4 of the NE/4 of Section 2, Township 26 North, Range 10 West, N.M.P.M., San Juan County, New Mexico.

ATTEST:

*[Signature]*  
Assistant Secretary

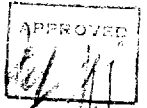
PAN AMERICAN PETROLEUM CORPORATION

By

*[Signature]*  
Attorney in Fact

Address:

P. O. Box 1410  
Fort Worth, Texas  
Working Interest Owner



APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By

*[Signature]*  
Vice President

UNIT OPERATOR

EXECUTED as of the 12th day of  
December, 1957.

THE STATE OF TEXAS )  
 )  
COUNTY OF TARRANT )

On this 25<sup>th</sup> day of March, 1958, before me appeared E. V. Hewitt, to me personally known, who, being by me duly sworn did say that he is the Attorney in Fact of PAN AMERICAN PETROLEUM CORPORATION, a corporation, and that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said E. V. Hewitt acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal on this, the day and year first above written.

My Commission Expires:

6-1-57

Dorothy E. [Signature]  
Notary Public in and for  
Tarrant County, Texas

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

ADDRESS

P. O. Box 326, Grand Central Station,  
New York City, New York

Date: DEC 12 1957

April 17, 1958

Date: \_\_\_\_\_

CONSENTED TO AND ACCEPTED THIS  
25th day of March, 1958.

PAN AMERICAN PETROLEUM CORPORATION  
Working Interest Owner

By \_\_\_\_\_

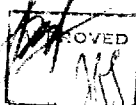
Attorney in Fact

SIGNATURE

John W. Hjertstedt, a single person

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By W. H. [Signature]  
Vice President  
UNIT OPERATOR

~~APPROVED AND CONSENTED TO~~  
~~EL PASO NATURAL GAS COMPANY~~  
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~  
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~  
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~



STATE OF TEXAS )  
COUNTY OF TARRANT ) SS.:

On this 25<sup>th</sup> day of March, 1958, before me appeared

E. V. HEWITT

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the President of PAN AMERICAN PETROLEUM CORPORATION ATTORNEY - IN - FACT and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said E. V. HEWITT acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

6-1-59

Donnelly E. Pickens  
Notary Public in and for TARRANT County,  
State of TEXAS

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

and

his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

~~STATE OF DENMARK~~ KINGDOM OF DENMARK  
~~CITY OF COPENHAGEN~~ CITY OF COPENHAGEN  
~~EMBASSY OF THE UNITED STATES OF AMERICA~~ EMBASSY OF THE UNITED STATES OF AMERICA } SS:

On this 12<sup>th</sup> day of December, 1957, before me personally

appeared John W. Hjertstedt, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as his free act and deed.

~~STATE OF DENMARK~~

Frances A. Usenik  
FRANCES A. USENIK  
Vice Consul of the United States in Denmark  
Denmark

SERVICE NO. 6549  
TARIFF ITEM NO. 46  
FEE PAID: US. \$ 2.50  
LOCAL CY. equiv. 17.50



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

P. O. Box 6721  
Roswell, New Mexico

March 31, 1938

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. Sam Smith

Gentlemen:

Your plan of development dated September 4, 1937, for the Huerfano Unit Area, New Mexico, for the period July 1, 1937, to July 1, 1938, has been approved on this date subject to like approval by the appropriate State of New Mexico officials.

It would be preferable that the plans of development be submitted on a calendar year basis. Perhaps the next plan of development can be for a six-month period.

It appears that consideration should be given to development of the Pictured Cliffs zone in the vicinity of sec. 36, T. 26 N., R. 10 W.

Two approved copies of the plan are enclosed.

Very truly yours,

JAMES A. KNAUF  
Acting Oil and Gas Supervisor

Copy to: Washington (w/copy of plan)  
Birmingham (w/copy of plan)  
Com. of Public Land, Santa Fe (letter only)  
Oil Cons. Com., Santa Fe (letter only)

OIL CONSERVATION COMMISSION  
P. O. BOX 871  
SANTA FE, NEW MEXICO

*File*

*C. L. Porter*

February 14, 1958

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. D. N. Canfield

Re: Huerfano Unit - San Juan  
County, New Mexico  
Twentieth through Twenty-fourth  
Enlargements of the Pictured  
Cliffs Participating Area

Gentlemen:

We hand you herewith six copies of the approved Twentieth through Twenty-fourth Expanded Participating Areas for the Pictured Cliffs Participating Area for the Huerfano Unit Area in San Juan County, New Mexico.

The approval of these expansions is granted subject to like approval being obtained from the U. S. Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

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

ALP/DSN/ir

cc: U. S. G. S. - Roswell, New Mexico  
Commissioner of Public Lands - Santa Fe, New Mexico

C  
O  
P  
Y

# El Paso Natural Gas Company

El Paso, Texas

December 19, 1957

Director  
United States Geological Survey  
Department of the Interior  
Washington, D.C.

Commissioner of Public Lands  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
TWENTIETH THROUGH TWENTY-FOURTH  
ENLARGEMENTS OF THE PICTURED CLIFFS  
PARTICIPATING AREA  
San Juan County, New Mexico

Gentlemen:

Pursuant to the provisions of Section 10 of the Huerfano Unit Agreement approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, El Paso Natural Gas Company, as Unit Operator for the Huerfano Unit, respectfully submits for your approval the following selection of lands to constitute the Twentieth, Twenty-First, Twenty-First Revised, Twenty-Second, Twenty-Third and Twenty-Fourth Expanded Participating Areas of the Pictured Cliffs Formation for the Huerfano Unit Agreement, to wit:

Twentieth Expansion - Effective January 1, 1956

<u>Description of Lands</u>	<u>Acreage</u>	<u>Well Name</u>	<u>Test Date</u>	<u>Initial Potential</u>
T-27N, R-10W				
Section 30: Lots 3,4, E/2 SW/4	167.64	4M Kutz	12-9-55	CV 3105 MCF
Section 30: SE/4	160.00			

Twentieth Expansion - Effective January 1, 1956 (continued)

<u>Description of Lands</u>	<u>Acreage</u>	<u>Well Name</u>	<u>Test Date</u>	<u>Initial Potential</u>	
<u>T-27N, R-11W</u>					
Section 25: S/2	320.00				
Section 36: NW/4	160.00	Scott #6	5-12-52	CV	700 MCF
Section 36: SW/4	160.00				
TOTAL	967.64				

Twenty-First Expansion - Effective March 1, 1956

<u>T-26N, R-9W</u>					
Section 23: SW/4	160.00	Huerfano No. 46	2-13-56	AOF	1994 MCF
Section 9: NE/4	160.00	Huerfano No. 47	2-24-56	CV	2204 MCF
Section 9: SW/4	160.00	Huerfano No. 48	2-16-56	AOF	373 MCF
Section 5: NE/4	161.82	Huerfano No. 49	2-29-56	CV	398 MCF
Section 22: NE/4	160.00	Huerfano No. 50	2-16-56	AOF	11362 MCF
Section 22: NW/4	160.00				
Section 16: NW/4, SE/4	320.00				
TOTAL	1281.82				

Twenty-First Expansion Revised - Effective May 1, 1956

The participating acreage of this expansion remains the same as the Twenty-First Expansion - Effective March 1, 1956; however, the participating percentages are changed due to the commitment of Tract #142.

Twenty-Second Expansion - Effective September 1, 1956

<u>T-27N, R-10W</u>					
Section 30: NE/4	160.00	Fairway Kutz #1	8-4-56	CV	352 MCF
Section 30: NW/4	167.40				
<u>T-27N, R-11W</u>					
Section 25: N/2	320.00				
TOTAL	647.40				

Twenty-Third Expansion - Effective December 1, 1956

<u>T-26N, R-9W</u>					
Section 27: NE/4	160.00	Huerfano No. 55	11-14-56	CV	489 MCF
Section 22: SE/4	160.00				
Section 26: SW/4	160.00	Huerfano No. 57	11-7-56	CV	432 MCF
Section 26: NW/4	160.00	Huerfano No. 58	11-7-56	CV	1152 MCF
Section 26: NE/4	160.00	Huerfano No. 59	11-9-56	CV	1602 MCF
<u>T-27N, R-10W</u>					
Section 35: NW/4	160.00	Huerfano No. 90	11-29-56	CV	818 MCF
TOTAL	960.00				

Twenty-Fourth Expansion - Effective January 1, 1957

<u>T-27N, R-10W</u>					
Section 33: NW/4	160.00	Huerfano No. 82	12-11-56	CV	1156 MCF
Section 19: SW/4	167.19	Huerfano No. 74	12-4-56	CV	3523 MCF
TOTAL	327.19				

In support of this application, the following Exhibits are made a part hereof and will be forwarded under separate cover:

EXHIBIT A:

Geological Report on the Twentieth through Twenty-Fourth Expansions of the Pictured Cliffs Participating Area in the Huerfano Unit.

EXHIBIT B:

Map reflecting the Pictured Cliffs productive fields of the Huerfano Unit.

EXHIBIT C:

Isopotential Map of the Huerfano Unit Pictured Cliffs fields.

EXHIBIT D:

Contour Map of the Pictured Cliffs Formation in the Huerfano Unit.

Enclosed herewith and made a part of this application please find an ownership map reflecting thereon the boundaries of the unit area, the present participating area for the Pictured Cliffs Formation and the proposed Twentieth through Twenty-Fourth Enlargements of the Participating Area.

Schedules showing the lands entitled to participation in the unitized substances produced from the Pictured Cliffs Formation with the percentage of participation of each lease or tract indicated thereon will be forwarded under separate cover immediately following your approval of this application.

If these Expanded Participating Areas, numbered Twenty through Twenty-Four, meet with your approval, please indicate such approval in the space provided below and return an approved copy for our files.

Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By



Sam Smith  
Manager  
Land Department

SS:BB:jr

cc: Attached sheet

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Supervisor, United States Geological Survey  
Subject to like approval by the appropriate State officials.

APPROVED: W. H. Morgan DATE: January 21, 1958  
Commissioner of Public Lands  
Subject to like approval by the United States Geological Survey and the  
Oil Conservation Commission.

APPROVED: A. L. Porter DATE: Feb 15, 1958  
Oil Conservation Commission  
Subject to like approval by the United States Geological Survey and the  
Commissioner of Public Lands.

The foregoing approvals are attached to and made a part of Application for the  
Twentieth through Twenty-Fourth Enlargements of the Pictured Cliffs Participating Area  
for the Huerfano Unit, San Juan County, New Mexico.

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil and Gas Co.  
1201 Main Street  
Dallas 2, Texas

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas 1, Texas

Mr. H. K. Riddle  
65 East Fourth South  
Salt Lake City, Utah

Mr. G. A. Olsen  
Sunland Refining Corporation  
Post Office Box 1512  
Fresno, California

Brookhaven Oil Company  
Post Office Box 396  
Scottsdale, Arizona

Mr. C. V. Lyman  
Post Office Box 1141  
Midland, Texas

Slick Oil Corporation  
1030 Bank of the Southwest Bldg.  
Houston 2, Texas

Montin-Benson Corporation  
2808 First National Bldg.  
Oklahoma City, Oklahoma

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. K. E. McAfee  
1316 Liberty Bank Bldg.  
Oklahoma City, Oklahoma

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. Harold Kogan  
742-35th Avenue  
San Francisco, California

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

E. V. Hewitt (12)  
Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Pan American Petroleum Corporation  
Post Office Box 1714  
Albuquerque, New Mexico

Dr. Sherman Wengerd  
1044 Stanford Drive, S.E.  
Albuquerque, New Mexico

Mr. R. E. Beamon  
346 Esperson Bldg.  
Houston 2, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Mr. J. Glenn Turner  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. William G. Webb  
17th Floor Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Oroco Oil & Gas Company  
65 E. Fourth South  
Salt Lake City, Utah

(Continued)

Mr. R. N. Richey (2)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City 10, Utah

Mr. Dudley Cornell  
First National Bank Building  
Albuquerque, New Mexico

Mr. C. A. McAdams  
2135 East Gold  
Albuquerque, New Mexico

Mr. John A. Daniel  
Rutledge Pike  
Knoxville, Tennessee

J. W. McConnell, Jr.  
Executor of the Estate of W. O. McConnell, Deceased  
Post Office Box 102  
Lone Wolf, Oklahoma

E. H. Pipkin  
Post Office Box 1174  
Roswell, New Mexico

# El Paso Natural Gas Company

El Paso, Texas

January 6, 1958

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Gentlemen:

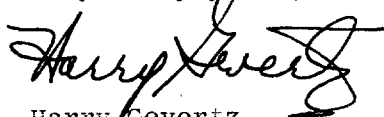
Enclosed for your attention please find eight (8) original copies of El Paso Natural Gas Company's application for the Twentieth through Twenty-Fourth Enlargements of the Pictured Cliffs Participating Area for the Huerfano Unit.

It is kindly requested that you process this application in your usual manner, and if same meets with your approval, it is further requested that you return seven (7) approved copies to this office, retaining one (1) copy for your files.

After your approval El Paso will submit said application to the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico for their subsequent approval.

We would like to thank you in advance for your kind cooperation.

Very truly yours,



Harry Gevertz  
Area Landman  
Land Department

HG:BB:jr  
Enclosures

Huerfano 5.0

# El Paso Natural Gas Company

El Paso, Texas

December 24, 1957

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area  
Tract No. 123  
State of New Mexico E-9393

Gentlemen:

Please find enclosed herewith one (1) copy each of Ratification and Joinder of Unit Agreement and Ratification and Joinder of Unit Accounting Agreement under Unit Agreement for the Development and Operation of the Huerfano Unit Area, San Juan County, New Mexico, executed by El Paso Natural Gas Company, whereby El Paso fully commits its interest under Tract 123 to the Huerfano Unit.

El Paso is the Working Interest Owner under said tract.

It is respectfully requested that you process these Ratifications in your usual way in order that the aforementioned tract be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement.

Very truly yours,



Harry Gevertz  
Area Landman  
Land Department

HG:BB:jr  
Enclosures

NM 4473

UNIT OFFICE COO  
MAY 19 1950

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

This Ratification is limited to and is binding upon El Paso Natural Gas Company only insofar as its leasehold interest covers the NW/4 SE/4 of Section 2, Township 25 North, Range 9 West, N.M.P.M., also known as Huerfano Tract 128.

ADDRESS

SIGNATURE

ATTEST:

EL PASO NATURAL GAS COMPANY

W. Marten  
Assistant Secretary

By: [Signature]  
Vice President

\_\_\_\_\_  
  
Date: \_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

STATE OF TEXAS )  
COUNTY OF EL PASO )  
SS.: )  
)  
On this 20 day of December, 1957, before me appeared  
H. F. STEEN, to me personally known, who, being  
by me duly sworn, did say that he is the Vice President of EL PASO NATURAL  
GAS COMPANY and that the seal affixed to said instrument is the  
corporate seal of said corporation, and that said instrument was signed and sealed in  
behalf of said corporation by authority of its board of directors, and said  
H. F. STEEN acknowledged said instrument to be the free act  
and deed of said corporation.  
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal  
the day and year in this certificate first above written.  
My commission expires:

H. F. STEEN  
Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1964  
M. B. WELBY  
Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1964  
State of Texas  
El Paso County,  
Notary Public in and for  
*M. B. WELBY*

STATE OF )  
COUNTY OF )  
SS.: )  
)  
On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared  
his wife, to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.  
My commission expires:

Notary Public in and for  
County,  
State of

STATE OF )  
COUNTY OF )  
SS.: )  
)  
On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me  
personally appeared \_\_\_\_\_, a single person, to  
me known to be the person described in and who executed the foregoing instrument,  
and acknowledged to me that \_\_\_\_\_ executed the same as  
free act and deed.  
My commission expires:

Notary Public in and for  
County,  
State of

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claim an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

This Ratification is limited to and is binding upon El Paso Natural Gas Company only insofar as its leasehold interest covers the NW/4 SE/4 of Section 2, Township 25 North, Range 9 West, N.M.P.M., also known as Huerfano Tract 128.

ADDRESS

SIGNATURE

ATTEST:

EL PASO NATURAL GAS COMPANY

W. March  
Assistant Secretary

By: [Signature]  
Vice President

\_\_\_\_\_  
  
Date: \_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

STATE OF TEXAS  
COUNTY OF EL PASO  
)  
) SS.:  
)  
On this 20 day of December, 1957, before me appeared

H. F. STEEN, to me personally known, who, being by me duly sworn, did say that he is the Vice President of EL PASO NATURAL GAS COMPANY and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said H. F. STEEN acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My commission expires:  
M. B. JURY  
Notary Public in and for El Paso County, Texas  
My Commission Expires June 1, 1962

Notary Public in and for  
El Paso  
State of Texas  
County, Texas

STATE OF  
COUNTY OF  
)  
) SS.:  
)  
On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My commission expires:

Notary Public in and for  
State of  
County,

STATE OF  
COUNTY OF  
)  
) SS.:  
)  
On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

My commission expires:

Notary Public in and for  
State of  
County,

# PACIFIC NORTHWEST PIPELINE CORPORATION

SALT LAKE CITY, UTAH

December 19, 1957

REPLY TO:  
P. O. Box 1526  
SALT LAKE CITY 10, UTAH

PC	
CP	
CH	
SH	
JH	
CO	

El Paso Natural Gas Company  
Post Office Box 1492  
El Paso, Texas

Attention: Harry Gevertz

Gentlemen:

Re: Huerfano Unit Area  
San Juan County, New Mexico  
Exhibit "B" Revised  
Effective November 1, 1957

Your letter of December 10, 1957, with attached Revised Exhibit "B" has been received.

We wish to advise you of the changes as set out below in Pacific's interest in various tracts in the subject Unit. As of November 1, 1957, Pacific had reassigned its interest in all of the following tracts:

19,	20,	21-A,	22,	23,	36,
37,	38, ✓	39, ✓	40, ✓	41,	42,
43,	45,	46,	48-A,	49,	51-A,
53, ✓	54,	55,	56,	57,	59,
60,	61,	62,	63,	65, ✓	66,
67,	68-A,	79, <i>O(anti)</i>	80-A,	81,	85-A,
86,	90,	91,	93,	94,	95,
98-B,	99,	101,	103, ✓	105,	110,
111,	112				

Also we have reassigned portions of the following tracts retaining that portion as described opposite each tract below:

## All of Tracts

24-A	except Section 8: S/2 N/2
25	except Section 3: W/2
30-A	except Section 6: Lots 3, 4, 5, 6, 7, SE/4 NW/4



MAIL OFFICE OCC

RECEIVED 15 AM 8:47

In reply refer to:  
Unit Division

December 13, 1957

*filed*  
*case 145*

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: Huerfano Unit Area,  
PLAN OF DEVELOPMENT  
for July 1, 1957 to July 1, 1958.

Gentlemen:

We have studied your proposed plan of Development for the period of July 1, 1957 to July 1, 1958.

We would like to call to your attention Section 36, 26N, 10W, our records reflect that there are two Pictured Cliffs wells located in the North half of Section 1, 25N, 10W and one well in the SE/4 of Section 25, 26N, 10W.

These wells would indicate that Section 36, 26N, 10W, should be included in your proposed plan of development as an offset obligation.

May we hear from you concerning this at your earliest convenience.

Very truly yours,

MURRAY E. MORGAN  
Commissioner of Public Lands

BY: Ted Bilberry, Supervisor  
Oil and Gas Department

MEM/MSA/a

cc: OCC-Santa Fe ✓  
USGS-Roswell

# El Paso Natural Gas Company

El Paso, Texas

November 25, 1957

RECEIVED OFFICE 11/26/57

1957 NOV 26 AM 8:30

Case 195

Oil Conservation Commission  
Of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit Area  
Tract No. 73  
SF 078124  
San Juan County, New Mexico

Gentlemen:

Please find enclosed herewith one (1) copy of Ratification of Unit Accounting Agreement executed by James L. Lundean, et ux, and E. H. Pipkin, et ux, whereby said parties consent to include their interests in the Huerfano Unit Area and ratify the Unit Accounting Agreement. This ratification has been approved and consented to by El Paso Natural Gas Company as Unit Operator.

Our records reflect that the aforesaid parties to the subject ratification own the working interest under Huerfano Unit Tract No. 73 (SF 078124).

It is respectfully requested that you process this ratification in your usual way in order that the aforementioned tract will be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement.

Very truly yours,

*Harry Gevertz*  
HUB

Harry Gevertz  
Area Landman  
Land Department

HG:BB:jr  
Enclosure

Huerfano Tr. 73

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

ADDRESS

SIGNATURE

TR 73

114 West 67th St

James L. Lundean  
JAMES L. LUNDEAN

114.23 New York

Marjorie D. Lundean  
MARJORIE D. LUNDEAN

Date: Nov. 17 1957

P.O. Box 1174, Roswell, N.M.

E. H. Pipkin  
~~EDWARD H. PIPKIN~~ E. H. PIPKIN

P.O. Box 1174  
Roswell, New Mexico

Pearl O. Pipkin  
Pearl O. Pipkin

Date: November 5, 1957

APPROVED AND CONCURRED  
EL PASO NATURAL GAS  
By [Signature]  
Vice President  
UNIT OPERATIONS

STATE OF  
(  
COUNTY OF

(  
SS.:  
(

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared

by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_, to me personally known, who, being and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My commission expires:

Notary Public in and for \_\_\_\_\_  
County, \_\_\_\_\_  
State of \_\_\_\_\_

STATE OF  
New York  
COUNTY OF  
New York  
(  
SS.:  
(

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared

JAMES L. LUNDEAN and MARJORIE D. LUNDEAN his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My commission expires:

RAYMOND H. DAIGLE  
NOTARY PUBLIC, State of New York  
No. 31-0842600  
Qualified in New York County  
Term Expires March 30, 1959

Notary Public in and for \_\_\_\_\_  
County, \_\_\_\_\_  
State of \_\_\_\_\_

STATE OF NEW MEXICO  
(  
COUNTY OF CHAVES  
(  
SS.:  
(

On this 5th day of November 1957, before me appeared E. H. PIPKIN and PEARL O. PIPKIN, his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My commission expires:

Oct 3, 1959

Notary Public in and for Chaves  
County, State of New Mexico

# El Paso Natural Gas Company

El Paso, Texas

June 17, 1957

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

*File*

Re: Huerfano Unit Area  
Tract No. 9 - Section 30:  
Lots 1,2, E/2 NW/4, SE/4  
Lease SF 077384

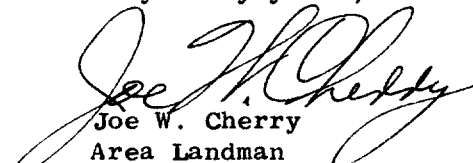
Gentlemen:

You will find enclosed one copy of a Consent that has been executed by Madeleine N. Galt whereby she consents to the inclusion of her interest under SF 077384 in the Huerfano Unit Area. This consents has been approved by the Working Interest Owners of the above captioned tract and by El Paso Natural Gas Company as Unit Operator and Working Interest Owner.

Our records indicate that a Ratification and Joinder by the Working Interest Owners was filed with your office during 1953. This ratification and joinder includes interest held under SF 077950 as well as interest held under SF 077384.

We respectfully request that you process this Consent in your usual way in order that the above captioned tract will be effectively committed to the Huerfano Unit Agreement and Huerfano Unit Accounting Agreement.

Very truly yours,

  
Joe W. Cherry  
Area Landman  
Lease Department

JWC:GWO:cr  
Enclosure

CONSENT

In consideration of the execution of the Unit Agreement for the development and operation of the Huerfano Unit Area, San Juan County, New Mexico, by Stanolind Oil & Gas Company in form approved by the Secretary of the Interior and the Commissioner of Public Lands of the State of New Mexico, the undersigned owners of lands or interests in lands or royalties or other interests in production of oil, gas and other hydrocarbon substances which may be produced from the land affected by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement as being applicable to said several lands and interests, agree that the term of any lease or other agreement given by the undersigned in which the undersigned claims an interest is extended or modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling and development requirements of all leases and other instruments in which their several rights and interests are created or defined shall be deemed fully performed by the performance of the provisions of said Unit Agreement, and agree that payment for unitized substances upon the basis of production allocated under said Unit Agreement to the particular lands to which their rights or interests apply, regardless of actual production therefrom, shall constitute full performance of any and all such obligations to the undersigned existing under such leases or other contracts. For the same consideration each of the undersigned warrants and agrees that the schedule attached as Exhibit "B" to said Unit Agreement correctly states his interest in the lands within the unit area as of the date of his execution of this consent.

The terms and provisions hereof shall extend to and be binding upon the heirs, personal representatives, successors and assigns of the undersigned and each of them.

IN WITNESS WHEREOF, the undersigned have caused this instrument to be effected and have set opposite their respective names the date of execution thereof.

ADDRESS

SIGNATURE

Box 1046

Madeleine N. Galt  
Madeleine N. Galt

Santa Fe, New Mexico

Date: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF NEW MEXICO )  
COUNTY OF Santa Fe ) SS.

On this 20<sup>th</sup> day of January, 1953, before me personally appeared MADELEINE N. GALT to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires: \_\_\_\_\_

Thomas Galt  
Notary Public

My Commission Expires February 21st, 1955

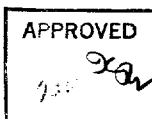
The foregoing Consent whereby Madeline N. Galt ratifies, approves and adopts the Huerfano Unit Agreement is hereby approved and consented to:

NEW MEXICO WESTERN OIL AND GAS COMPANY

By *George J. Mendenhall*  
Vice President

STANOLIND OIL AND GAS COMPANY

By *Frank J. Gendron*  
Vice-President Attorney-in-Fact



PACIFIC NORTHWEST PIPELINE CORPORATION

By *Allen B. Smith*  
Vice President

*W. H. Miller*  
*RK*

Dorothy Dillon Sapp

WESTERN NATURAL GAS COMPANY

By *J. P. Davis*  
Vice President

*W. H. Miller*

SLICK OIL CORPORATION

By *James E. Sims*  
Vice President

THREE STATES NATURAL GAS COMPANY

By *E. A. Jenkins*  
Vice President

*Frank A. Schultz*  
Frank A. Schultz

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By *W. H. Miller*  
Vice President  
UNIT OPERATOR & WORKING INTEREST OWNER

*W. H. Miller*

*C. W. Murchison*  
C. W. Murchison

*J. Glenn Turner*  
J. Glenn Turner

*William G. Webb*  
William G. Webb

WORKING INTEREST OWNERS

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES AND ARE LOANED TO YOU BY THE NATIONAL ARCHIVES. THEY ARE NOT TO BE REPRODUCED OR DISTRIBUTED OUTSIDE THE NATIONAL ARCHIVES.

DATE OF ACQUISITION: 1964-1965

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

1A6

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

1A6  
1A6  
1A6

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

*[Signature]*  
JAMES EARL RAY

APPROVED AND FORWARDED FOR  
THE BOARD NATIONAL ARCHIVES  
DATE: 10/1/65  
BY: [Signature]  
JAMES EARL RAY

*[Signature]*  
JAMES EARL RAY

DATE OF ACQUISITION: 1964-1965

*[Signature]*  
JAMES EARL RAY

*[Signature]*  
JAMES EARL RAY

CONSENT

In consideration of the execution of the Unit Agreement for the development and operation of the Huerfano Unit Area, San Juan County, New Mexico, by Stanolind Oil & Gas Company in form approved by the Secretary of the Interior and the Commissioner of Public Lands of the State of New Mexico, the undersigned owners of lands or interests in lands or royalties or other interests in production of oil, gas and other hydrocarbon substances which may be produced from the land affected by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement as being applicable to said several lands and interests, agree that the term of any lease or other agreement given by the undersigned in which the undersigned claims an interest is extended or modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling and development requirements of all leases and other instruments in which their several rights and interests are created or defined shall be deemed fully performed by the performance of the provisions of said Unit Agreement, and agree that payment for unitized substances upon the basis of production allocated under said Unit Agreement to the particular lands to which their rights or interests apply, regardless of actual production therefrom, shall constitute full performance of any and all such obligations to the undersigned existing under such leases or other contracts. For the same consideration each of the undersigned warrants and agrees that the schedule attached as Exhibit "B" to said Unit Agreement correctly states his interest in the lands within the unit area as of the date of his execution of this consent.

The terms and provisions hereof shall extend to and be binding upon the heirs, personal representatives, successors and assigns of the undersigned and each of them.

IN WITNESS WHEREOF, the undersigned have caused this instrument to be effected and have set opposite their respective names the date of execution thereof.

ADDRESS

SIGNATURE

Box 1046

Santa Fe, New Mexico

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Madeleine N. Galt  
Madeleine N. Galt

STATE OF NEW MEXICO )  
COUNTY OF Santa Fe ) SS.

On this 20<sup>th</sup> day of January, 1953, before me personally appeared MADELEINE N. GALT to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My commission expires: \_\_\_\_\_

Shirley Galt  
Notary Public

My Commission Expires February 21st, 1956

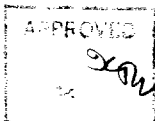
The foregoing Consent whereby Madeline N. Galt ratifies, approves and adopts the Huerfano Unit Agreement is hereby approved and consented to:

NEW MEXICO WESTERN OIL AND GAS COMPANY

By *George H. McCord Jr.*  
Vice President

STANOLIND OIL AND GAS COMPANY

By *Frank S. ...*  
Vice-President Attorney-in-Fact



PACIFIC NORTHWEST PIPELINE CORPORATION

By *Alfred B. ...*  
Vice President

*WMM*  
*WMM*  
*RL*

Dorothy Dillon Sapp

WESTERN NATURAL GAS COMPANY

By *W. H. ...*  
Vice President

*W. H.*

SLICK OIL CORPORATION

By *James B. ...*  
Vice President

THREE STATES NATURAL GAS COMPANY

By *E. O. Jenkins*  
Vice President

*Frank A. Schultz*  
Frank A. Schultz

APPROVED AND CONSENTED TO;  
EL PASO NATURAL GAS COMPANY  
By *W. F. ...*  
Vice President  
UNIT OPERATOR & WORKING INTEREST OWNER

*C. W. Murchison*  
C. W. Murchison

*J. Glenn Turner*  
J. Glenn Turner

*William G. Webb*  
William G. Webb

WORKING INTEREST OWNERS

142  
El Paso Natural Gas Company

El Paso, Texas

February 11, 1957

Director  
United States Geological Survey  
Department of the Interior  
Washington, D. C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

*file*

Re: Huerfano Unit Area  
San Juan County, New Mexico  
Schedule XIX  
EIGHTEENTH EXPANDED PARTICIPATING AREA  
FOR THE PICTURED CLIFFS FORMATION

Gentlemen:

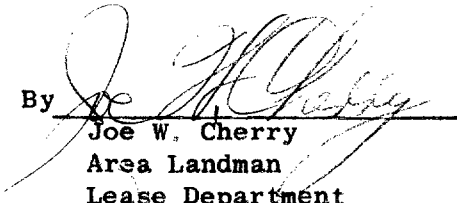
We call your attention to a typographical error on Page four (4) of the above captioned Schedule. Tract #27, which is shown, should read Tract #47. We will appreciate your making the change on your copy of the above mentioned schedule. Thank you for your cooperation in this matter.

Copies of this letter are being sent to each of the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

  
Joe W. Cherry  
Area Landman  
Lease Department

JWC:GWO:nn  
Attachment

1957  
*El Paso Natural Gas Company*

*El Paso, Texas*

December 20, 1956

Director  
United States Geological Survey  
Department of the Interior  
Washington, D. C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

*file*

Re. Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
AMENDED PLAN OF DEVELOPMENT  
for CALENDAR YEAR 1956.

Gentlemen:

This is to advise you that the Amended Plan of Development for 1956 for the Huerfano Unit, dated September 18, 1956, was approved by the proper State and Federal Authorities as follows:

1. Regional Supervisor, United States Geological Survey,  
approved October 1, 1956.
2. Commissioner of Public Lands of the State of New Mexico,  
approved October 1, 1956.
3. Oil Conservation Commission of the State of New Mexico,  
approved October 29, 1956.

A copy of this letter is being sent to each of the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

*Joe W. Cherry*  
\_\_\_\_\_  
Joe W. Cherry  
Area Landman  
Lease Department

JWC:GWO:nb  
Attachment

# El Paso Natural Gas Company

El Paso, Texas

December 20, 1956

Director  
United States Geological Survey  
Department of the Interior  
Washington, D. C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: (Huerfano Unit Area)  
San Juan County, New Mexico  
I Sec. No. 731  
TENTH THROUGH NINETEENTH ENLARGEMENTS  
OF THE PICTURED CLIFFS PARTICIPAING  
AREA.

Gentlemen:

This is to advise that the Tenth through Nineteenth Expansions of the Pictured Cliffs Participating Area under the Huerfano Unit Agreement I Sec. No. 731 have been approved as follows:

1. Approved by the United States Geological Survey on September 19, 1956.
2. Approved by the Commissioner of Public Lands of the State of New Mexico on June 27, 1956.
3. Approved by the Oil Conservation Commission of the State of New Mexico on June 29, 1956.

You will find enclosed, schedules setting out the percentages of ownership of the Pictured Cliffs Participating Area for the Tenth through Nineteenth Expansions. The effective date of each expansion is as follows:

<u>Expansion No.</u>	<u>Effective Date</u>
10	November 1, 1953
11	January 1, 1954
12	June 1, 1954
13	July 1, 1954
14	September 1, 1954
15	October 1, 1954
16	November 1, 1954
17	January 1, 1955
18	February 1, 1955
19	September 1, 1955

We are in the process of revising the "Exhibit "B" of the Huerfano Unit and distribution will be made just as soon as this revision is completed.

Copies of this letter and schedules setting out the percentage of ownership of the Pictured Cliffs Participating Area as reflected by each of the Tenth through Nineteenth Expansions are being sent to each of the Working Interest Owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By

  
Joe W. Cherry  
Area Landman  
Lease Department

JWC:GWO:nb

Attachment

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil & Gas Company  
1201 Main Street  
Dallas 2, Texas

Mr. Harold Kogan  
345 15th Avenue  
San Francisco, California

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. H. K. Riddle  
2 North 8th Street  
Payette, Idaho

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. G. A. Olsen  
Sunland Refining Corporation  
Post Office Box 1512  
Fresno, California

Mr. C. F. Bedford  
Stanolind Oil and Gas Company  
Post Office Box 1410  
Fort Worth, Texas

Brookhaven Oil Company  
Post Office Box 396  
Scottsdale, Arizona

Stanolind Oil and Gas Company  
Post Office Box 1714  
Albuquerque, New Mexico

Mr. C. V. Lyman  
Post Office Box 1141  
Midland, Texas

Dr. Sherman Wingerd  
1044 Stanford Drive, S.E.  
Albuquerque, New Mexico

Mr. Niels C. Jensen  
Post Office Box 124  
Richfield, Utah

Mr. R. E. Beamon  
346 Esperson Building  
Houston 2, Texas

Slick Oil Company, Ltd.  
516 Melrose Building  
Houston, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Montin-Benson Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. J. Glenn Turner  
17th Floor, Mercantile Bank Bldg.  
Dallas 1, Texas

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. Albert R. Greer  
405½ West Broadway  
Farmington, New Mexico

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. William G. Webb  
17th Floor, Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Mr. Ralph A. Johnston  
1010 South Coast Life Building  
Houston 2, Texas

Mrs. Willie Johnston  
311 Grandview Avenue  
Clarksville, Arkansas

First National Bank of Fort Worth  
Trustee for Eula May Johnston  
Fort Worth, Texas

Mr. R. N. Richey (4)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City, Utah

Mrs. Lillie Leona Rogers  
c/o Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mr. V. A. Johnston  
Ralls, Texas

Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mrs. Veva Jean Gibbard  
1229 West Tishomingo  
Sulphur, Oklahoma

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

*file*

October 29, 1956

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Re: (Huerfano Unit Area)  
San Juan County, New Mexico  
Amended Plan of Development,  
1956.

Attention: Mr. R. L. Hamblin

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the amended plan of development, dated September 18, 1956, for the subject unit area, subject to like approval by the United States Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

One approved copy of the amended plan is returned herewith.

Very truly yours,

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

ALP:DSN:ir

*6cc USGS  
Comm Puc Leds*

C  
O  
P  
Y

In reply refer to:  
Unit Division

October 1, 1956

El Paso Natural Gas Co.  
El Paso, Texas

Attention: Mr. R. L. Hamblin  
Manager, Lease Department

Re: Huerfano Unit -  
Amended Plan of Development  
for Calendar Year 1956,  
San Juan County, New Mexico

Gentlemen:

We are enclosing one copy of the Amended Plan  
of Development for Calendar Year 1956 for the  
Huerfano Unit, which was approved by the Commissioner  
of Public Lands October 1, 1956.

Very truly yours,

E. S. WALKER  
Commissioner of Public Lands

MMR/m  
enc: 1

cc: USGS-Roswell  
OCC-Santa Fe



IN REPLY REFER TO:

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

October 1, 1956

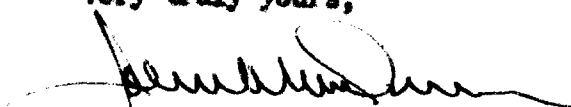
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Gentlemen:

The amended plan of development dated September 18, 1956, for the Huerfano unit area, New Mexico, I-Sec. No. 731, has been approved on this date, subject to like approval by the appropriate State officials.

One approved copy of said plan is returned herewith.

Very truly yours,

  
JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

Copy to: Cons. Div., Wash. (w/1 copy of plan)  
Farmington (w/1 copy of plan)  
RMOCC, Santa Fe (ltr only)

# El Paso Natural Gas Company

El Paso, Texas

September 28, 1956

*file not for file*

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit  
Amended 1956 Drilling Program

Gentlemen:

When we submitted the Amended 1956 Drilling Program for the Huerfano Unit to you for approval, we submitted only one copy. You will find enclosed an additional copy for your files.

We are sorry for any inconvenience that this may have caused you.

Very truly yours,

*Joe W. Cherry*  
Joe W. Cherry  
Area Landman  
Lease Department

JWC:GWO:cr  
Enclosure

# El Paso Natural Gas Company

El Paso, Texas

September 18, 1956

Mr. John A. Anderson  
Regional Supervisor  
United States Geological Survey  
P. O. Box 6721  
Roswell, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
AMENDED PLAN OF DEVELOPMENT  
FOR CALENDAR YEAR 1956

Gentlemen:

El Paso Natural Gas Company, as unit operator of the Huerfano Unit, filed a Drilling Program for the calendar year 1956 on June 7, 1956. This Drilling Program proposed the drilling of thirty four (34) Pictured Cliffs wells in the Huerfano Unit. Nine (9) Pictured Cliffs wells of the thirty four (34) wells were approved by the Supervisor of the United States Geological Survey on June 21, 1956, and by the Oil Conservation Commission on June 29, 1956. The Commission of Public Lands approved the entire thirty four (34) wells on June 13, 1956, subject to like approval by the Oil Conservation Commission and the United States Geological Survey. The nine (9) wells on the 1956 Drilling Program which were approved have been completed as follows:

<u>Well Name</u>	<u>Location</u>	<u>Completion Date</u>	<u>Initial Potential</u>
Huerfano Unit No. 65	NW/4 Sec. 5 - 26N-10W	8-8-56	A.O.F. 2961 MCF Choke Vol. 2325 MCF
Huerfano Unit No. 66	SE/4 Sec. 6 - 26N-10W	8-4-56	A.O.F. 382 MCF Choke Vol. 380 MCF
Huerfano Unit No. 67	NW/4 Sec. 6 - 26N-10W	7-31-56	A.O.F. 5632 MCF Choke Vol. 3567 MCF

continued

Well Name

Huerfano Unit No. 78	NW/4 Sec. 31 - 27N-10W	8-11-56	A.O.F. 4080 MCF Choke Vol. 2991 MCF
Huerfano Unit No. 79	SE/4 Sec. 31 - 27N-10W	8-21-56	A.O.F. 365 MCF Choke Vol. 364 MCF
Huerfano Unit No. 85	NE/4 Sec. 11 - 26N-10W	P & A	
Huerfano Unit No. 86	NE/4 Sec. 9 - 25N-10W ✓	<u>P &amp; A</u> ? 9-25-9	
Huerfano Unit No. 87	SE/4 Sec. 13 - 26N-10W	P & A	
Huerfano Unit No. 88	SE/4 Sec. 22 - 26N-10W	P & A	

Huerfano Unit wells Nos. 85, 86, 87, 88, the four step-out wells to be drilled prior to our submitting an amended plan of development, have all been plugged and abandoned. Therefore having drilled the foregoing nine (9) wells and in view of the fact that the four step-out wells have been plugged and abandoned, El Paso Natural Gas Company, as unit operator, hereby presents for your approval a Proposed Amended Drilling Program for the balance of the 1956 calendar year consisting of twenty five (25) wells to be drilled to the Pictured Cliffs formation on the following locations.

(1) NW/4 Sec. 21 - 26N-9W	(13) SE/4 Sec. 8 - 26N-10W
(2) SE/4 Sec. 21 - 26N-9W	(14) NW/4 Sec. 9 - 26N-10W
(3) NE/4 Sec. 26 - 26N-9W	(15) SW/4 Sec. 19 - 27N-10W
(4) NW/4 Sec. 26 - 26N-9W	(16) NE/4 Sec. 29 - 27N-10W
(5) SW/4 Sec. 26 - 26N-9W	(17) SE/4 Sec. 29 - 27N-10W
(6) NE/4 Sec. 27 - 26N-9W	(18) SE/4 Sec. 30 - 27N-10W
(7) NW/4 Sec. 3 - 26N-10W	(19) NW/4 Sec. 32 - 27N-10W
(8) NW/4 Sec. 4 - 26N-10W	(20) SE/4 Sec. 32 - 27N-10W
(9) SE/4 Sec. 4 - 26N-10W	(21) NW/4 Sec. 33 - 27N-10W
(10) SE/4 Sec. 5 - 26N-10W	(22) NW/4 Sec. 35 - 27N-10W
(11) NE/4 Sec. 7 - 26N-10W	(23) NW/4 Sec. 1 - 26N-11W
(12) NW/4 Sec. 8 - 26N-10W	(24) SE/4 Sec. 1 - 26N-11W
(25) SE/4 Sec. 36 - 27N-11W	

All of the working interest owners have been contacted and this Amended Drilling Program reflects their wishes and proposals for the Amended Drilling Program for the year of 1956. The Proposed Amended Drilling Program protects all committed lands within the unit area from drainage from outside locations. There are several offset producing wells outside the unit boundary which have not been met for the reason that the offsetting acreage within the unit boundary is not committed to the Huerfano Unit and therefore, the unit is not being drained.

El Paso Natural Gas Company, as unit operator, intends to drill all wells to the base of the Pictured Cliffs Formation. Rotary tools will be used in drilling the pay section. Approximately 100 feet of 9-5/8" surface casing will be set and then a production string of 5-1/2" casing will be run down to the top of the Pictured Cliffs Formation. The Pictured Cliffs Formation will be treated with a hydro-frac process. Due care will be taken to protect all horizons.

Inasmuch as we should commence drilling as soon as possible, if we are going to be able to complete the twenty five (25) wells within the calendar year, we would like to have immediate oral approval to commence the drilling of the following five (5) wells which are part of the above twenty five (25) locations.

- (1) NW/4 Sec. 21 - 26N-9W
- (2) SE/4 Sec 21 - 26N-9W
- (3) NW/4 Sec. 26 - 26N-9W
- (4) NE/4 Sec. 26 - 26N-9W
- (5) NE/4 Sec. 27 - 26N-9W

If this Amended Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided and return an approved copy to El Paso Natural Gas Company.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

EL PASO NATURAL GAS COMPANY

By



E. L. Hamblin  
Manager  
Lease Department

JWC:GWO:cr  
Attachment

APPROVED: \_\_\_\_\_ Date: \_\_\_\_\_  
Supervisor, United States Geological Survey

Subject to like approval by the appropriate State officials.

APPROVED: \_\_\_\_\_ Date: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the U.S.G.S. and Oil Conservation Commission.

APPROVED:  \_\_\_\_\_ Date: OCT 29 1956  
Oil Conservation Commission

Subject to like approval by the U.S.G.S. and Commissioner of Public Lands.

Huerfano Unit  
Working Interest Owners

Copies of the foregoing letter have been sent to the following Working Interest Owners:

New Mexico Western Oil & Gas Company  
1201 Main Street  
Dallas 2, Texas

Mr. Harold Kogan  
345 15th Avenue  
San Francisco, California

Three States Natural Gas Company  
17th Floor, Corrigan Tower  
Dallas 1, Texas

Western Natural Gas Company  
1006 Main Street  
Houston 2, Texas

Mr. H. K. Riddle  
2 North 8th Street  
Payette, Idaho

Mr. James L. Lundean  
One West 67th Street  
New York 23, New York

Mr. G. A. Olsen  
Sunland Refining Corporation  
Post Office Box 1512  
Fresno, California

Mr. C. F. Bedford  
Stanolind Oil and Gas Company  
Post Office Box 1410  
Fort Worth, Texas

Brookhaven Oil Company  
Post Office Box 396  
Scottsdale, Arizona

Stanolind Oil and Gas Company  
Post Office Box 1714  
Albuquerque, New Mexico

Mr. C. V. Lyman  
Post Office Box 1141  
Midland, Texas

Dr. Sherman Wingerd  
1044 Stanford Drive, S.E.  
Albuquerque, New Mexico

Mr. Niels C. Jensen  
Post Office Box 124  
Richfield, Utah

Mr. R. E. Beamon  
346 Esperson Building  
Houston 2, Texas

Slick Oil Company, Ltd.  
516 Melrose Building  
Houston, Texas

Texas National Petroleum Company  
902 South Coast Life Building  
Houston 2, Texas

Montin-Benson Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. J. Glenn Turner  
17th Floor, Mercantile Bank Bldg.  
Dallas 1, Texas

Benson-Montin-Greer Drilling Corporation  
2808 First National Building  
Oklahoma City, Oklahoma

Mr. Albert R. Greer  
405 $\frac{1}{2}$  West Broadway  
Farmington, New Mexico

Mr. K. E. McAfee  
1316 Liberty Bank Building  
Oklahoma City, Oklahoma

Mr. William G. Webb  
17th Floor, Mercantile Bank Bldg.  
Dallas 1, Texas

Mr. O. J. Lilly  
Post Office Box 185  
Farmington, New Mexico

Mr. C. F. Stringer  
Post Office Box 542  
Farmington, New Mexico

Mr. Ralph A. Johnston  
1010 South Coast Life Building  
Houston 2, Texas

Mrs. Willie Johnston  
311 Grandview Avenue  
Clarksville, Arkansas

First National Bank of Fort Worth  
Trustee for Eula May Johnston  
Fort Worth, Texas

Mr. R. N. Richey (4)  
Mr. M. A. Ehrlich (1)  
Pacific Northwest Pipeline Corporation  
Post Office Box 1526  
Salt Lake City, Utah

Mrs. Lillie Leona Rogers  
c/o Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mr. V. A. Johnston  
Ralls, Texas

Mr. Orville C. Rogers  
3835 Beechwood Lane  
Dallas, Texas

Mrs. Veva Jean Gibbard  
1229 West Tishomingo  
Sulphur, Oklahoma

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 31, 1956

*file  
Huerfano Unit  
Jhu*

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. R. L. Hamblin

Re: Initial Participating Area and  
First Nine Expansions Thereof,  
Pictured Cliffs Formation,  
Huerfano Unit  
San Juan County, New Mexico

Gentlemen:

This is to advise that the Initial Participating Area and the first nine enlargements thereof, Pictured Cliffs Formation, Huerfano Unit, submitted to this Commission by Stanolind Oil and Gas Company March 18, 1953, and effective as follows:

Initial Participating Area effective December 1, 1951.  
First Expansion effective September 1, 1952.  
Second Expansion effective October 1, 1952.  
Third Expansion effective October 1, 1952.  
Fourth Expansion effective October 1, 1952.  
Fifth Expansion effective November 1, 1952.  
Sixth Expansion effective November 1, 1952.  
Seventh Expansion effective December 1, 1952.  
Eighth Expansion effective January 1, 1953.  
Ninth Expansion effective January 1, 1953.

has been approved by the New Mexico Oil Conservation Commission, said approval being subject to like approval by the United States Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

A. L. Porter, Jr.  
Secretary-Director

ALP:jh

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Y

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

June 29, 1956

Case  
195  
C  
O  
P  
Y  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. R. L. Hamblin

Re: (Huerfano Unit - San Juan  
County, New Mexico. 10th  
through 19th Expansions,  
Pictured Cliffs Participating  
Area.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth and Nineteenth enlargements of the Pictured Cliffs Participating Area, dated June 20, 1956, and effective November 1, 1953, January 1, 1954, June 1, 1954, July 1, 1954, September 1, 1954, October 1, 1954, November 1, 1954, January 1, 1955, February 1, 1955, and September 1, 1955, respectively.

This approval is granted subject to like approval being obtained from the United States Geological Survey and the Commissioner of Public Lands of the State of New Mexico.

Two approved copies of the enlargements are returned herewith.

Very truly yours,

  
A. L. PORTER, JR.,  
Secretary - Director

ALP:DSN:ds

cc: U. S. Geological Survey - Roswell

Commissioner of Public Lands - Santa Fe

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

*Case  
195*

*file*

June 29, 1956

C  
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P  
Y

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas

Attention: Mr. R. L. Hamblin

Re: (Huerfano Unit) San Juan  
County, New Mexico.  
1956 Drilling Program

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved that portion of the 1956 Drilling Program for the above-captioned Unit, dated June 7, 1956, which pertains to the drilling of wells in the Pictured Cliffs Formation in the NW/4 and SE/4 of Section 31, Township 27 North, Range 10 West, the NW/4 and SE/4 of Section 6, Township 26 North, Range 10 West, and the NW/4 of Section 5, Township 26 North, Range 10 West.

As to the remainder of the wells proposed in the subject drilling program, we concur with Mr. John A. Anderson, Regional Supervisor, United States Geological Survey, in that the exploratory wells in Sections 11, 13, and 22, Township 26 North, Range 10 West and in Section 9, Township 25 North, Range 9 West, be drilled next with the view in mind of submitting an amended plan later on calling for additional wells in the vicinity of the exploratory wells if they prove satisfactory.

Very truly yours,

ALP:DSN:ds

A. L. PORTER, JR.,  
Secretary - Director

cc: U. S. Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe



IN REPLY REFER TO:

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

June 21, 1956

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. Roland Hamblin

Gentlemen:

Your plan of development for 1956 for the Huerfano Unit, I-Sec. No. 731, San Juan County, New Mexico, proposes the drilling of thirty-four Pictured Cliffs wells.

On June 12, we informally advised you that we have no objection to your starting work on Pictured Cliffs wells in the NW $\frac{1}{4}$  and SE $\frac{1}{4}$  sec. 31, T. 27 N., R. 10 W., the NW $\frac{1}{4}$  and SE $\frac{1}{4}$  sec. 6, T. 26 N., R. 10 W., and the NW $\frac{1}{4}$  sec. 5, T. 26 N., R. 10 W., all of which you desire to drill without delay.

As to the remainder of the drilling program, we request that you consider drilling next in order the exploratory wells in secs. 11, 13, and 22, T. 26 N., R. 10 W., and in sec. 9, T. 25 N., R. 9 W., with the view of drilling more wells in the vicinity of any successful exploratory wells rather than drilling all of the fourteen infill wells you propose in the present participating area. We believe that such procedure will be more helpful in determining the productive limits of the Pictured Cliffs in the unit area, with consequent greater expansion of the participating area than might be possible under your proposed plan.

If you concur in this suggestion, we are prepared to approve the plan of development subject to the condition that an amended plan of development be submitted after the four exploratory wells are drilled and before the remaining infill wells are drilled.

Very truly yours,

Copy to: Oil Cons., Comm. (Santa Fe)

(Orig. Sgd.) JOHN A. ANDERSON  
JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

El Paso Natural Gas Company

El Paso, Texas

El Paso, Texas

June 7, 1956

Mr. John A. Anderson  
Regional Supervisor  
United States Geological Survey  
Department of the Interior  
Post Office Box 6721  
Roswell, New Mexico

Mr. E. S. Walker  
Commissioner of Public Lands  
State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Mr. A. L. Porter, Jr.  
Acting Director  
Oil Conservation Commission  
State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit  
I Sec. No. 731  
San Juan County, New Mexico  
Drilling Program for the  
Calendar Year 1956

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a drilling program for the remainder of the calendar year 1955 on September 12, 1955. This drilling program proposed the drilling of five Pictured Cliffs wells in the Huerfano Unit and constituted our drilling program for the calendar year 1955. This drilling program was approved by the Supervisor of the United States Geological Survey on October 19, 1955, by the Commissioner of Public Lands on October 26, 1955, and by the Oil Conservation Commission on October 27, 1955. The five wells on the 1955 drilling program have been completed as follows:

<u>Well Name</u>	<u>Location</u>	<u>Completion Date</u>	<u>Initial Potential</u>
Huerfano Unit #45	SW/4 Sec. 10-26N-10W	P&A	
Huerfano Unit #46	SW/4 Sec. 23-26N- 9W	1-28-56	1994 Mcf
Huerfano Unit #47	NE/4 Sec. 9-26N- 9W	1-24-56	2331 Mcf
Huerfano Unit #48	SW/4 Sec. 9-26N- 9W	2-16-56	373 Mcf
Huerfano Unit #49	NE/4 Sec. 5-26N- 9W	2-29-56	399 Mcf

In addition to these five wells, the Huerfano Unit #50 well, located in the NE/4 of Section 22, 26N, 9W, was drilled and completed with an initial potential of 11,362 Mcf.

After completion of this 1955 drilling program a considerable period of time elapsed while the working interest owners of the Unit studied the results of the above wells and planned their 1956 drilling program. El Paso Natural Gas Company, as Unit Operator, hereby presents for your approval a proposed drilling program for the calendar year 1956 consisting of 34 wells to be drilled to the Pictured Cliffs formation on the following locations:

- |                          |               |                           |
|--------------------------|---------------|---------------------------|
| (1) NE/4 Sec. 9-25N- 9W  | ← EXPLORATORY | (18) NW/4 Sec. 9-26N-10W  |
| (2) NW/4 Sec. 21-26N- 9W |               | (19) NE/4 Sec. 11-26N-10W |
| (3) SE/4 Sec. 21-26N- 9W |               | (20) SE/4 Sec. 13-26N-10W |
| (4) NE/4 Sec. 26-26N- 9W |               | (21) SE/4 Sec. 22-26N-10W |
| (5) NW/4 Sec. 26-26N- 9W |               | (22) SW/4 Sec. 19-27N-10W |
| (6) SW/4 Sec. 26-26N- 9W |               | (23) NE/4 Sec. 29-27N-10W |
| (7) NE/4 Sec. 27-26N- 9W |               | (24) SE/4 Sec. 29-27N-10W |
| (8) NW/4 Sec. 3-26N-10W  |               | (25) SE/4 Sec. 30-27N-10W |
| (9) NW/4 Sec. 4-26N-10W  |               | (26) NW/4 Sec. 31-27N-10W |
| (10) SE/4 Sec. 4-26N-10W |               | (27) SE/4 Sec. 31-27N-10W |
| (11) NW/4 Sec. 5-26N-10W | IN FILL       | (28) NW/4 Sec. 32-27N-10W |
| (12) SE/4 Sec. 5-26N-10W |               | (29) SE/4 Sec. 32-27N-10W |
| (13) NW/4 Sec. 6-26N-10W |               | (30) NW/4 Sec. 33-27N-10W |
| (14) SE/4 Sec. 6-26N-10W |               | (31) NW/4 Sec. 35-27N-10W |
| (15) NE/4 Sec. 7-26N-10W |               | (32) NW/4 Sec. 1-26N-11W  |
| (16) NW/4 Sec. 8-26N-10W |               | (33) SE/4 Sec. 1-26N-11W  |
| (17) SE/4 Sec. 8-26N-10W |               | (34) SE/4 Sec. 36-27N-11W |

All of the working interest owners have been contacted and this drilling program reflects their wishes and proposals for the drilling program for this year. This represents a considerable increase in the drilling activity in the Huerfano Unit and contains a number of stepout wells. The proposed drilling program protects all committed lands within the Unit Area from drainage from outside locations. There are several offset producing wells outside of the unit boundary which have not been met for the reason that the offsetting acreage within the unit boundary is not committed to the Huerfano Unit and therefore the unit is not being drained.

El Paso Natural Gas Company, as Unit Operator, intends to drill all wells to the base of the Pictured Cliffs formation. Rotary tools will be used in drilling the pay section. Approximately 100 feet of 9-5/8" surface casing will be set and then a production string of 5 1/2" casing will be run down to the top of the Pictured Cliffs formation. The Pictured Cliffs formation will be treated with a hydra-frac process. Due care will be taken to protect all horizons.

Inasmuch as we should commence drilling as soon as possible if we are going to be able to complete the 34 wells within the calendar year, we would like to have immediate or oral approval to commence the drilling of the following five wells which are part of the above 34 locations:

- ~~(1)~~ NW/4 Sec. 31-27N-10W
- ~~(2)~~ SE/4 Sec. 31-27N-10W
- ~~(3)~~ NW/4 Sec. 6-26N-10W
- ~~(4)~~ SE/4 Sec. 6-26N-10W
- ~~(5)~~ NW/4 Sec. 5-26N-10W

If this drilling program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided, and return an approved copy to El Paso Natural Gas Company.

Yours very truly,

EL PASO NATURAL GAS COMPANY

By R. L. Hamblin  
R. L. Hamblin, Manager  
Lease Department

RLH:ms

APPROVED: \_\_\_\_\_ Date: \_\_\_\_\_  
Supervisor, United States Geological  
Survey

Subject to like approval by the appropriate State officials.

APPROVED: \_\_\_\_\_ Date: \_\_\_\_\_  
Commissioner of Public Lands

Subject to like approval by the U.S.G.S. and Oil Conservation  
Commission.

APPROVED: [Signature] Date: \_\_\_\_\_  
Oil Conservation Commission

Subject to like approval by the U.S.G.S. and Commissioner of  
Public Lands.

case 195  
MAIN OFFICE OCC

RECEIVED JUN 27 AM 8:10

June 27, 1956

In reply refer to:  
Unit Division

El Paso Natural Gas Co.  
El Paso, Texas

Re: (Huerfano Unit -  
San Juan County, N. Mex.  
Tenth through Nineteenth  
Enlargement of the  
Pictured Cliff Participating Area

Attention: Mr. R. L. Hamblin  
Manager, Lease Department

Gentlemen:

We are enclosing two approved copies of the Tenth through the Nineteenth Enlargements of the Pictured Cliff Participating Area, which has been approved by the Commissioner of Public Lands as of June 27, 1956.

Very truly yours,

E. S. WALKER  
Commissioner of Public Lands

MMR/m  
enc: 2

cc: USGS-Roswell  
OCC-Santa Fe

# *El Paso Natural Gas Company*

*El Paso, Texas*

June 20, 1956

Director  
United States Geological Survey  
Department of the Interior  
Washington, D. C.

Commissioner of Public Lands  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: Huerfano Unit  
San Juan County, New Mexico  
TENTH through NINETEENTH  
ENLARGEMENTS OF THE PICTURED  
CLIFFS PARTICIPATING AREA

Gentlemen:

On September 14, 1955, El Paso Natural Gas Company was approved as Unit Operator of the Huerfano Unit.

Pursuant to the provisions of Section 10 of the Huerfano Unit Agreement, approved by the Director of the United States Geological Survey on June 6, 1950, by the Commissioner of Public Lands of the State of New Mexico on September 26, 1949, and by the Oil Conservation Commission of the State of New Mexico on September 20, 1949, El Paso Natural Gas Company, as Unit Operator, hereby submits for your approval a selection of lands to constitute the Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth and Nineteenth Expanded Participating Areas of the Pictured Cliffs Formation for the above Unit Agreement.

We feel that since the approval on April 27, 1953 of the Ninth Enlargement of this Participating Area, the following wells have proven up the following acreage which is listed below under the appropriate Enlargement and should be included in the Pictured Cliffs Participating Area:

TENTH ENLARGEMENT

Effective Date: November 1, 1953

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
* Huerfano Unit #1-2 (formerly Earl Ader, Jr. No. 1)	SE $\frac{1}{4}$ 25, 26N-10W	10/21/50	428 MCF	T-26-N, R-10-W Sec. 25: SE $\frac{1}{4}$ Sec. 36: S $\frac{1}{2}$ T-25-N, R-10-W Sec. 1: Lots 1,2,3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$
Pipkin #1-A	NW $\frac{1}{4}$ 1, 25N-10W	10/30/53	261 MCF	
Pipkin #2-A	NE $\frac{1}{4}$ 1, 25N-10W	10/30/53	1571 MCF	

\* At the time of completion of the Huerfano #1-2 well, apparently no determination was made as to whether or not it was a commercial well, and based on present conditions and the increased price of gas, Unit Operator now determines the Huerfano #1-2 well to be a commercial well, effective November 1, 1953.

ELEVENTH ENLARGEMENT

Effective Date: January 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
** Greer #1	NE $\frac{1}{4}$ 16, 26N-9W	12/11/53	1120 MCF	T-26-N, R-9-W Sec. 16: NE $\frac{1}{4}$

TWELFTH ENLARGEMENT

Effective Date: June 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
** Ballard #1-15	NW $\frac{1}{4}$ 15, 26N-9W	5/14/54	2237 MCF	T-26-N, R-9-W Sec. 15: NW $\frac{1}{4}$

THIRTEENTH ENLARGEMENT

Effective Date: July 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
** Ballard #4-15	SW $\frac{1}{4}$ 15, 26N-9W	6/1/54	565 MCF	T-26-N, R-9-W Sec. 15: SW $\frac{1}{4}$

FOURTEENTH ENLARGEMENT

Effective Date: September 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
** Ballard #2-15	NE $\frac{1}{4}$ 15, 26N-9W	8/18/54	2640 MCF	T-26-N, R-9-W Sec. 15: E $\frac{1}{2}$
** Ballard #3-15	SE $\frac{1}{4}$ 15, 26N-9W	8/18/54	2039 MCF	

FIFTEENTH ENLARGEMENT

Effective Date: October 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
Huerfano #27	NE/4 23, 26N-9W	9/20/54	1808 MCF	T-26-N, R-9-W Sec. 9: SE/4 Sec. 23: NE/4
Huerfano #28	SE/4 9, 26N-9W	9/29/54	3300 MCF	

SIXTEENTH ENLARGEMENT

Effective Date: November 1, 1954

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
Huerfano #29	NW/4 9, 26N-9W	10/18/54	264 MCF	T-26-N, R-9-W Sec. 9: NW/4

SEVENTEENTH ENLARGEMENT

Effective Date: January 1, 1955

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
Huerfano #35	NE/4 21, 26N-9W	12/24/54	1115 MCF	T-26-N, R-9-W Sec. 21: NE/4
Huerfano #36	NW/4 23, 26N-9W	12/17/54	4938 MCF	Sec. 23: NW/4

EIGHTEENTH ENLARGEMENT

Effective Date: February 1, 1955

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
Huerfano #32-A	SE/4 23, 26N-9W	1/4/55	3060 MCF	T-26-N, R-9-W Sec. 23: SE/4

NINETEENTH ENLARGEMENT

Effective Date: September 1, 1955

<u>WELL NAME</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>	<u>PROVEN ACREAGE</u>
** C.A. McAdams #2	SW/4 34, 27N-10W	8/10/55	250 MCF	T-27-N, R-10-W Sec. 33: SE/4 Sec. 34: SW/4
** Greer #2	SW/4 16, 26N-9W	8/6/55	585 MCF	T-26-N, R-9-W Sec. 16: SW/4

\*\* These wells located on acreage within boundaries of Unit Agreement, but not committed to the Huerfano Unit.

In support of this application, the applicant attaches hereto and hereby makes a part of this application the following exhibits:

EXHIBIT A: A map showing the Huerfano Unit, the Present Participating Area for the Pictured Cliffs Formation and the Proposed Tenth through Nineteenth Enlargements of the Area.

EXHIBIT B: A schedule of wells in the proposed Tenth through Nineteenth Enlargements of the Participating Area.

EXHIBIT D: Initial pressure data on wells in the Huerfano Unit.

EXHIBIT J: A statement by Roy Allen, formerly Senior Geologist, San Juan Division, at Farmington, New Mexico, and now Superintendent of the Midland Division.

The following Exhibits were forwarded to you on December 21, 1955, along with our Proposed Tenth Expansion of the Pictured Cliffs Formation for the Huerfano Unit; therefore since there has been no change in these Exhibits they are not being included with this present application:

EXHIBIT C: A map of the Huerfano Unit showing contours on the top of the Pictured Cliffs formation, and also showing where cross sections marked E,F,G and H were taken.

EXHIBIT E: A cross section of the Pictured Cliffs sands in the Huerfano Unit.

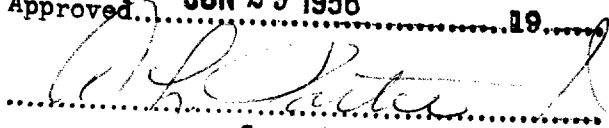
EXHIBIT F: A cross section of the Pictured Cliffs sands in the Huerfano Unit.

EXHIBIT G: A cross section of the Pictured Cliffs sands in the Huerfano Unit.

EXHIBIT H: A cross section of the Pictured Cliffs sands in the Huerfano Unit.

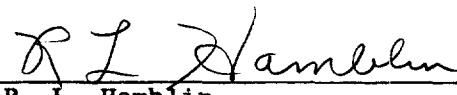
EXHIBIT I: A map of the Huerfano Unit showing the Present Pictured Cliffs pools as delineated by the Oil Conservation Commission of the State of New Mexico.

As soon as the Proposed Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth and Nineteenth Enlargements of the Pictured Cliffs Participating Area are approved, we will submit immediately new schedules of participation based on the exact acreage and ownership in the Enlarged Participating Area.

Approved **JUN 29 1956**  
.....19.....  
  
.....  
Secretary-Director

Very truly yours,

EL PASO NATURAL GAS COMPANY

By   
R. L. Hamblin  
Manager  
Lease Department

NEW MEXICO OIL CONSERVATION COMMISSION  
THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL  
BEING GRANTED BY THE UNITED STATES GEOLOGICAL  
SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS  
OF THE STATE OF NEW MEXICO.

RLH:GWO:rb  
cc: Attached list

EXHIBIT "B"

<u>WELL</u>	<u>LOCATION</u>	<u>COMPLETION DATE</u>	<u>INITIAL POTENTIAL</u>
Huerfano No. 1-2 (formerly Earl Ader, Jr. No. 1)	SE/4 Section 25, T-26-N, R-10-W	10/21/50	428 MCFGPD
Pipkin No. 1-A	NW/4 Section 1, T-25-N, R-10-W	10/30/53	261 MCFGPD
Pipkin No. 2-A	NE/4 Section 1, T-25-N, R-10-W	10/30/53	1571 MCFGPD
Huerfano No. 28	SE/4 Section 9, T-26-N, R-9-W	9/29/54	3300 MCFGPD
Huerfano No. 29	NW/4 Section 9, T-26-N, R-9-W	10/18/54	264 MCFGPD
Huerfano No. 35	NE/4 Section 21, T-26-N, R-9-W	12/24/54	1115 MCFGPD
Huerfano No. 36	NW/4 Section 23, T-26-N, R-9-W	12/17/54	4938 MCFGPD
Huerfano No. 27	NE/4 Section 23, T-26-N, R-9-W	9/20/54	1808 MCFGPD
Huerfano No. 32-A	SE/4 Section 23, T-26-N, R-9-W	1/4/55	3060 MCFGPD
C. A. McAdams No. 2	SW/4 Section 34, T-27-N, R-10-W	8/10/55	250 MCFGPD
Greer No. 1	NE/4 Section 16, T-26-N, R-9-W	12/11/53	1120 MCFGPD
Greer No. 2	SW/4 Section 16, T-26-N, R-9-W	8/6/55	585 MCFGPD
Ballard No. 1-15	NW/4 Section 15, T-26-N, R-9-W	5/14/54	2237 MCFGPD
Ballard No. 2-15	NE/4 Section 15, T-26-N, R-9-W	8/18/54	2640 MCFGPD
Ballard No. 3-15	SE/4 Section 15, T-26-N, R-9-W	8/18/54	2039 MCFGPD
Ballard No. 4-15	SW/4 Section 15, T-26-N, R-9-W	6/1/54	565 MCFGPD

EXHIBIT "D"

## ORIGINAL COMPLETION METHOD AND POTENTIALS

[illegible]

<u>OPERATOR</u>	<u>WELL NO.</u>	<u>FARM</u>	<u>SPOT</u>	<u>S-T-R</u>	<u>COMP DATE</u>	<u>IP</u>	<u>HRS.</u>	<u>SI/PC</u>	<u>DAYS</u>	<u>SHOT</u>	<u>SOE</u>	<u>REMARKS</u>
Stanclind O & G	41	Huerfano										Not Drilled
"	42	"										Not Drilled
"	43	"										Not Drilled
"	44	"	NE	4-26-10	1-17-55	194	3	450	7			Not
"	1	Ader	SE	25-26-10	10-24-50	428	24	585		X		
"	1	McNaughton	NW	24-26-10	8-30-51	271		2025	72 hrs.			Dakota Comp.
Skelly Oil Co.	1	McAdams	NW	34-27-10	3-4-53					X		D & A
J. P. Wiedemer	2	McAdams	SW	34-27-10	8-10-55	250	3	470	7		X	
Woodriver Oil	1	Greer	NE	16-26-9	12-11-53	1120	3	625	12	X		
"	2	"	SW	16-26-9	8-6-55	585	3	610	7		X	
Fiorance Oil	1	Hudson	NW	10-26-10	12-1-47					X		P & A
Frontier O & R	1	Everman	SE	19-27-10	5-26-51	139	3	480	72 hrs.	X		
Kutz	4M	Kutz	SW	30-27-10							X	STC-Est 3500 MCF
British American O	5	Scott	NW	25-27-11	3-19-52							Abd Location
"	6	"	NW	36-27-11	5-12-52	700	3	440	6 days			Natural
EPNG	1A	Pipkin	NW	1-25-10	10-30-53	261	3	573	8	X		
"	2A	"	NE	1-25-10	10-30-53	1571	3	539	7			Natural
"	3A	"	SW	1-25-10	1-3-55						X	P & A
"	1-15	Ballard	NW	15-26-9	5-14-54	816	3	661	7	X		
"	2-15	"	NE	15-26-9	8-18-54	2640	3	645	18		X	Ro-gage 2237 MCF
"	3-15	"	SE	15-26-9	8-18-54	2039	3	647	7		X	
"	4-15	"	SW	15-26-9	6-1-54	565	3	662	10	X		

## EXHIBIT "J"

### Geological Investigation of the Pictured Cliffs Sandstone under the Huerfano Unit

#### Purpose of Report

This study of the Pictured Cliffs sandstone formation was done at the request of Mr. J. A. Anderson of the United States Geological Survey, Roswell, New Mexico. The report was undertaken to determine whether or not, from a geological standpoint, the Pictured Cliffs sandstone under the Huerfano Unit was a common reservoir.

#### Scope of Report

The limits of this study lie two miles from the outer boundaries of the Huerfano Unit, San Juan County, New Mexico.

#### Methods of Investigation

To properly approach a situation of this kind in the Cretaceous System of the San Juan Basin adequate time-rock control must be had. The most reliable time-rock marker has been found to be the base of the Greenhorn limestone also of Cretaceous age. Unfortunately the area under study had but 5 wells which had been drilled deep enough to penetrate the Greenhorn, therefore, it was felt that this was not a sufficient amount of control upon which to base a report of this nature.

A series of cross sections (Exhibits E, F, G & H) were constructed across the area using available Electric, Gamma Ray-Induction and Gamma Ray-Neutron Logs. Upon these Logs were plotted the lithologic interpretations using information derived from ditch sample and core samples. The lithology was shown by using graphic rather than color symbols. The cross-section datum was the top of the Pictured Cliffs Sandstone.

Using these cross-sections an attempt to delineate sands within the formation limits was found to be an impossibility. There were not enough distinct sand characteristics to do so. In the future, with detail lithologic descriptions via the petrographic microscope, grain size analysis, clay analysis, etc., it might be possible to "break-down" the Pictured Cliffs into correlative, component parts but it is highly doubtful.

### Conclusions

The Pictured Cliffs sandstone in this area cannot be separated into separate reservoirs. This statement is based upon the following facts:

1. There are not enough sand characteristics to delineate individual sand bodies within the total formation thickness.
2. In a sandstone deposit such as the Pictured Cliffs an absolute end to sandstone deposition by the parent sea even in its most active regression stages seems very unlikely.

  
R. W. Allen

Case 195

# El Paso Natural Gas Company

El Paso, Texas

April 23, 1956

file

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

Re: (Huerfano Unit Area)  
Tract 142  
San Juan County, New Mexico

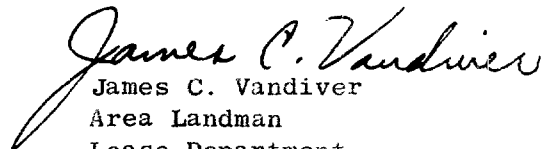
Gentlemen:

Enclosed herewith is one (1) copy of Ratification and Joinder of Unit Agreement which has been executed by O. J. Lilly and wife, Julia B. Lilly committing their overriding royalty interest in Tract 142 to the Huerfano Unit, and approved by the Working Interest Owners in said tract.

Also enclosed are one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by Montin-Benson Corporation and Albert R. Greer and wife, Charline Greer; one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by Benson-Montin-Greer Drilling Corp. and C. F. Stringer and wife, Nancy Stringer; one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by J. Glenn Turner and wife, Sue Reeder Turner and William G. Webb, a single man; and one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by O. J. Lilly and wife, Julia B. Lilly and K. E. McAfee and wife, Z. M. McAfee by which the above listed Working Interest Owners commit their working interest in Tract 142 to the Huerfano Unit.

We respectfully ask that you process these Ratification and Joinders of the Unit Agreement and the Unit Accounting Agreement in the usual manner.

Very truly yours,

  
James C. Vandiver  
Area Landman  
Lease Department

JCV:GWO:rb  
Enclosures

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

T-26-N, R-9-W, N.M.P.M.  
Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

Date: \_\_\_\_\_

APPROVED AND CONSENTED TO:

J. Glenn Turner  
J. Glenn Turner

William G. Webb  
William G. Webb

Albert R. Greer  
Albert R. Greer

R. E. McAfee  
R. E. McAfee

WORKING INTEREST OWNERS

O. J. Lilly  
O. J. Lilly

Julia B. Lilly, his wife  
Julia B. Lilly, his wife

APPROVED AND CONSENTED TO:

BENSON-MONTIN-GREER DRILLING CORP.

By: Carl A. Benson  
Vice President

MONTIN-BENSON CORPORATION

By: Carl A. Benson  
Vice President

C. F. Stringer  
C. F. Stringer

WORKING INTEREST OWNERS

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By: [Signature]  
Vice President

UNIT OPERATOR

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
\_\_\_\_\_ and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF New Mexico )  
 ) SS.:  
COUNTY OF San Juan )

On this 6<sup>th</sup> day of February, 1956, before me appeared

O. J. Lilly and Julia B. Lilly  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

8-20-1958

Nancy Elaine Jones  
Notary Public in and for \_\_\_\_\_  
San Juan County,  
State of New Mexico

STATE OF New Mexico )  
 ) SS.:  
COUNTY OF San Juan )

On this 16<sup>th</sup> day of April, 1956, before me personally

appeared C. F. Stringer, ~~a single person~~, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that he he executed the same as his free act and deed.

My Commission expires:

8-20-1958

Nancy Elaine Jones  
Notary Public in and for \_\_\_\_\_  
San Juan County,  
State of New Mexico

RATIFICATION AND JOINDER OF UNIT AGREEMENT

NEW NOTICE 003  
113.177  
M 1:02

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

T-26-N, R-9-W, N.M.P.M.  
Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

ATTEST:

MONTIN-BENSON CORPORATION

Lucinda Stevenson  
Assistant Secretary

BY: Carl A. Benson  
Vice President

Date: Mar 1st 1956

William C. Greer, Jr.

Albert R. Greer

\_\_\_\_\_

Charline Greer  
Charline Greer, his wife

Date: 25 56

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By [Signature] RTH  
Vice President  
UNIT OPERATOR

STATE OF Oklahoma }  
COUNTY OF Oklahoma } SS.:

On this 1<sup>st</sup> day of March, 1956, before me appeared  
Earl A. Benson, to me personally known, who, being  
by me duly sworn, did say that he is the Vice President of  
MONTIN-BENSON CORPORATION and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said Earl A. Benson acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

My Commission Expires Apr. 24, 1958

Loretta S. Butler  
Notary Public in and for  
Oklahoma County,  
State of Oklahoma

STATE OF }  
COUNTY OF } SS.:

On this 20<sup>th</sup> day of January, 1958, before me appeared

Albert R. Greer and Charline Greer  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

8-20-1958

Nancy Elaine Jones  
Notary Public in and for  
San Juan County,  
State of New Mexico

STATE OF }  
COUNTY OF } SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally  
appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

T-26-N, R-9-W, N.M.P.M.

Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

ATTEST: \_\_\_\_\_

MONTIN-BENSON CORPORATION

Lucile Stevenson  
Assistant Secretary

By: Carl A Benson  
Vice President

Date: Mar 1st 1956

Warrington, W. Mer.

Albert R. Greer  
Albert R. Greer

Charline Greer  
Charline Greer, his wife

Date: 1-28-56

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

Notary Public in and for the County of \_\_\_\_\_

State of \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By: [Signature] RJA  
Vice President

UNIT OPERATOR

STATE OF Oklahoma )  
 ) SS.:  
COUNTY OF Oklahoma )

On this 1<sup>st</sup> day of March, 1956, before me appeared Earl A. Benson, to me personally known, who being by me duly sworn, did say that he is the Vice President of Montin-Benson Corporation and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said Earl A. Benson acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

My Commission Expires Apr. 24, 1956

Loretta S. Lutter  
Notary Public in and for Oklahoma County, State of Oklahoma

STATE OF New Mexico )  
 ) SS.:  
COUNTY OF San Juan )

On this 28<sup>th</sup> day of January, 1956, before me appeared Albert R. Greer and Charline Greer his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

8-20-1958

Nancy Elaine Jones  
Notary Public in and for San Juan County, State of New Mexico

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me personally appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_ County, State of \_\_\_\_\_

MAIN OFFICE 603  
1993 APR 11 PM 1:22

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

T-26-N, R-9-W, N.M.P.M.  
Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

ATTEST: \_\_\_\_\_

BENSON-MONTIN-GREER DRILLING CORP.

Nancy Elaine Jones  
Assistant Secretary

By: Charles J. Greer  
Vice President

Date: \_\_\_\_\_

\_\_\_\_\_

C. F. Stringer  
C. F. Stringer

Nancy Stringer  
Nancy Stringer, his wife

Date: \_\_\_\_\_

\_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By: W. F. Greer R.H.  
Vice President  
UNIT OPERATOR

STATE OF Oklahoma }  
COUNTY OF Oklahoma } SS.:

On this 27<sup>th</sup> day of February, 1956, before me appeared  
Robert R. Greer, to me personally known, who, being  
by me duly sworn, did say that he is the Vice President of  
BENSON-MONTIN-GREER DRILLING CORP. and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said Robert R. Greer acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

My Commission Expires Apr. 24, 1956

Lotta S. Lutter  
Notary Public in and for \_\_\_\_\_  
Oklahoma County,  
State of Oklahoma

STATE OF New Mexico }  
COUNTY OF San Juan } SS.:

On this 27<sup>th</sup> day of January, 1956, before me appeared  
C. F. Stringer and Nancy Stringer  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

8-20-1958

Nancy Elaine Jones  
Notary Public in and for \_\_\_\_\_  
San Juan County,  
State of New Mexico

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ } SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally  
appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

T-26-N, R-9-W, N.M.P.M.

Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

ATTEST: \_\_\_\_\_

BENSON-MONTIN-GREER DRILLING CORP.

Nancy Elaine Jones  
Assistant Secretary

By: Albert H. Greer  
Vice President

Date: \_\_\_\_\_

C. F. Stringer  
C. F. Stringer

Nancy Stringer  
Nancy Stringer, his wife

Date: \_\_\_\_\_

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

Notary Public in and for the County of \_\_\_\_\_

State of \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By: Ray H. Jones R.H.  
Vice President

UNIT OPERATOR

STATE OF Klahoma )  
 ) SS.:  
COUNTY OF Klahoma )

On this 27<sup>th</sup> day of February, 1956, before me appeared

Albert R. Greer, to me personally known, who being by me  
duly sworn, did say that he is the Vice President of  
BENSON-MONTIN-GREER DRILLING CORP. and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed and  
sealed in behalf of said corporation by authority of its board of directors, and said  
Albert R. Greer acknowledged said instrument to be the free act  
and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

My Commission Expires Apr. 24, 1956

Loretta S. Lutter

Notary Public in and for  
Klahoma County, State of  
Klahoma

STATE OF New Mexico )  
 ) SS.:  
COUNTY OF San Juan )

On this 27<sup>th</sup> day of January, 1956, before me appeared

C. F. Stringer and Nancy Stringer  
his wife, to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

8 - 20 - 1958

Nancy Elaine Jones

Notary Public in and for  
San Juan County, State  
of New Mexico

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me per-

sonally appeared \_\_\_\_\_, a single person, to me known to  
be the person described in and who executed the foregoing instrument, and acknow-  
ledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act  
and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County, State  
of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

MAIN OFFICE 800  
1955 JUN 18 PM 1:22

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

T-26-N, R-9-W, N.M.P.M.  
Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

100 Mercantile Bank Building  
Albuquerque, New Mexico

J. Glenn Turner  
J. Glenn Turner  
Sue Reeder Turner  
Sue Reeder Turner, his wife

Date: January 18, 1956

100 Mercantile Bank Building  
Albuquerque, New Mexico

William G. Webb  
William G. Webb, a single man

Date: January 18, 1956

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By H. F. Brown RTH  
Vice President  
UNIT OPERATOR

STATE OF }  
COUNTY OF } SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County,  
State of \_\_\_\_\_

STATE OF TEXAS }  
COUNTY OF Dallas } SS.:

On this 14th day of January, 1956, before me appeared

J. Glenn Turner and Sue Reeder Turner

his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

June 1, 1957

Ellen Donihoo  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Dallas County,  
State of Texas

STATE OF TEXAS }  
COUNTY OF Dallas } SS.:

On this 12th day of January, 1956, before me personally

appeared William G. Webb, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as his free act and deed.

My Commission expires:

June 1, 1957

Ellen Donihoo  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Dallas County,  
State of Texas

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

T-26-N, R-9-W, N.M.P.M.

Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

Wm. G. Webb, a single man

J. Glenn Turner

Sue Reeder Turner, his wife

Sue Reeder Turner  
Sue Reeder Turner, his wife

Date: January 18, 1956

Wm. G. Webb, a single man

William G. Webb, a single man

Sue Reeder Turner, his wife

Date: January 18, 1956

STATE OF

COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires:

Notary Public in and for the County of \_\_\_\_\_  
State of \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By A. F. DeW R. H.  
Vice President  
UNIT OPERATOR

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me appeared \_\_\_\_\_, to me personally known, who being by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_ and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County, State of \_\_\_\_\_

STATE OF TEXAS )  
 ) SS.:  
COUNTY OF Sevier

On this 15th day of January, 1956, before me appeared J. Glenn Turner and Sue Reeder Turner his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

January 9 1957  
\_\_\_\_\_  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Sevier County, State  
of Texas

STATE OF TEXAS )  
 ) SS.:  
COUNTY OF )

On this 18th day of January, 1956, before me personally appeared William G. Webb, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as his free act and deed.

My Commission expires:

Jan 9 1957  
\_\_\_\_\_  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Sevier County, State  
of Texas

MAIN OFFICE 000  
1953 APR 11 PM 1:22

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

T-26-N, R-9-W, N.M.P.M.  
Sec. 22: SE/4 NW/4, S/2 NE/4

ADDRESS

SIGNATURE

O. J. Lilly

Julia E. Lilly, his wife

Date: \_\_\_\_\_

K. E. McAfee

E. M. McAfee, his wife

Date: 7/7/56

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By [Signature] RTH  
Vice President  
UNIT OPERATOR

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me appeared

\_\_\_\_\_, to me personally known, who, being  
by me duly sworn, did say that he is the \_\_\_\_\_ President of \_\_\_\_\_  
\_\_\_\_\_ and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said \_\_\_\_\_ acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me appeared

\_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF Okla )  
COUNTY OF Okla )

On this 8 day of February, 1956, before me  
appeared O. J. Lilly and Julia B. Lilly  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

My Commission Expires Apr. 24, 1956

Loretta S. Lutter  
Notary Public in and for  
County, State of Okla.

STATE OF Okla. )  
COUNTY OF Okla. )

On this 7<sup>th</sup> day of Feb., 1956, before me  
appeared K. E. McAfee and Z. M. McAfee  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

June 4, 1957.

Marabelle Anderson  
Notary Public in and for Okla.  
County, State of Okla.

STATE OF )  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me  
appeared \_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

\_\_\_\_\_  
Notary Public in and for  
County, State of \_\_\_\_\_

STATE OF )  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me  
appeared \_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

\_\_\_\_\_  
Notary Public in and for  
County, State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.


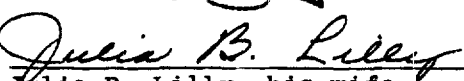
T-26-N, R-9-W, N.M.P.M.

Sec. 22: SE/4 NW/4, S/2 NE/4

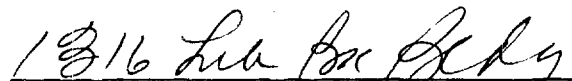
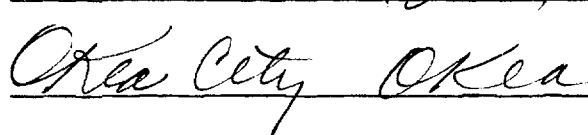
ADDRESS

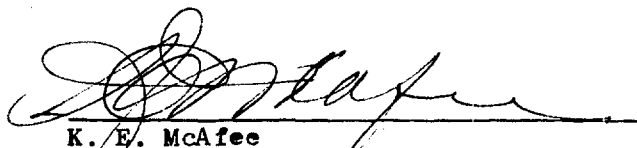
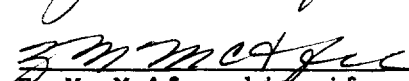
SIGNATURE

\_\_\_\_\_  
\_\_\_\_\_

  
O. J. Lilly  
  
Julia B. Lilly, his wife

Date: \_\_\_\_\_

  
  
Okea City Okea

  
K. E. McAfee  
  
Z. M. McAfee, his wife

Date: \_\_\_\_\_

STATE OF

COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

Notary Public in and for the County of

State of \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By  R. H. Dean  
Vice President

UNIT OPERATOR

STATE OF Okla )  
COUNTY OF Okla )

On this 8 day of February, 1956, before me  
appeared O. J. Lilly and Julia B. Lilly  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

My Commission Expires Apr. 24, 1956

Loretta J. Lutter  
Notary Public in and for  
County, State of Okla

STATE OF Okla )  
COUNTY OF Okla )

On this 7<sup>th</sup> day of Feb., 1956, before me  
appeared K. E. McAfee and Z. M. McAfee  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

June 30, 1957.

Carahel Anderson  
Notary Public in and for  
County, State of Okla

STATE OF )  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, before me  
appeared \_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
County, State of \_\_\_\_\_

STATE OF )  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, before me  
appeared \_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
County, State of \_\_\_\_\_

# El Paso Natural Gas Company

El Paso, Texas

January 5, 1956

Oil Conservation Commission  
of the State of New Mexico  
Capitol Annex Building  
Santa Fe, New Mexico

*file*

Re: ( Huerfano Unit Area )  
San Juan County, New Mexico

Gentlemen:

Enclosed herewith are one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by Pacific Northwest Pipeline Corporation; one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by Slick Oil Company, Ltd.; and one (1) copy of Ratification and Joinder of Unit Agreement and one (1) copy of Ratification and Joinder of Unit Accounting Agreement which have been executed by New Mexico Western Oil and Gas Company.

These Ratification and Joinders are being filed in order to eliminate any question that all of the interests owned by Pacific Northwest Pipeline Corporation, Slick Oil Company, Ltd. and New Mexico Western Oil and Gas Company in the Huerfano Unit Area are effectively committed to the Huerfano Unit Agreement and the Huerfano Unit Accounting Agreement.

We respectfully ask that you process these Ratification and Joinders of the Unit Agreement and the Unit Accounting Agreement in the usual manner.

Very truly yours,

*James C. Vandiver*  
James C. Vandiver  
Office Landman  
Lease Department

JCV:GWO:pb  
Enclosures

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located with the County of San Juan, State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

ADDRESS

SIGNATURE

WITNESS

W. E. Barnburg  
713 Houston Club Building  
Houston, Texas

SLICK OIL COMPANY, LTD.

By H. K. Clarkson  
General Partner

Date: November 25, 1955

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By H. T. Dowd R.S.D.  
Vice President

UNIT OPERATOR

Date: \_\_\_\_\_

STATE OF TEXAS

COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 25th day of November, 1955, by H. K. Clarkson, General Partner, ~~partnership~~ on behalf of Slick Oil Company, Ltd., a partnership.

My Commission expires:

6-1-57

Charlotte Kohrs  
Notary Public in and for  
Harris County, State of  
Texas

CHARLOTTE KOHRS  
NOTARY PUBLIC IN AND FOR HARRIS COUNTY, TEXAS  
MY COMMISSION EXPIRES JUNE 1, 1957

2025 6.1.2.1

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

ADDRESS

SIGNATURE

WITNESS:

W. C. Bamberg  
133 Houston Club Building  
Houston, Texas

SLICK OIL COMPANY, LTD.

By

W. K. Clarkson

General Partner

Date:

November 29, 1955

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY

By

W. F. Jones  
Vice President

R. S. D.

UNIT OPERATOR

Date:

STATE OF TEXAS

COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 29th day of November, 1955, by W. K. Clarkson, General Partner, partner(s) on behalf of Slick Oil Company, Ltd., a partnership.

My commission expires:

June 1, 1957

Charlotte Kohrs  
Notary Public in and for

Harris

County, State of

Texas

CHARLOTTE KOHRS  
NOTARY PUBLIC IN AND FOR HARRIS COUNTY, TEXAS  
MY COMMISSION EXPIRES JUNE 1, 1957

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

ADDRESS

SIGNATURE

ATTEST: \_\_\_\_\_

PACIFIC NORTHWEST PIPELINE CORPORATION

*W. R. Rogers*  
Assistant Secretary

By *J. M. Clark*  
Vice President *Clark*

Date: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By *A. F. Jones*  
Vice President

*R. L. H.*

UNIT OPERATOR

STATE OF New Mexico }  
COUNTY OF Bernalillo } SS.:

On this 14th day of November, 1955, before me appeared

J. M. Clark, to me personally known, who, being  
by me duly sworn, did say that he is the Vice President of Pacific Northwest Pipeline Corp. and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed  
and sealed in behalf of said corporation by authority of its board of directors,  
and said J. M. Clark acknowledged said instrument to be  
the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:  
July 15, 1959

Lorenz Lophourow  
Notary Public in and for \_\_\_\_\_  
Bernalillo County,  
State of New Mexico

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ } SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the fore-  
going instrument, and acknowledged to me they executed the same as their free act  
and deed.

My Commission expires:  
\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ } SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be  
the person described in and who executed the foregoing instrument, and acknowledged  
to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:  
\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

ADDRESS

SIGNATURE

ATTEST: \_\_\_\_\_

PACIFIC NORTHWEST PIPELINE CORPORATION

*W. C. Roy*  
Assistant Secretary

By *J. M. Clark* Vice President *RCM*

Date: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

STATE OF

COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

Notary Public in and for the County of \_\_\_\_\_  
State of \_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By *[Signature]* Vice President *RAH*  
UNIT OPERATOR

STATE OF New Mexico )  
COUNTY OF Bernalillo ) SS.:

On this 14th day of November, 1954, before me appeared

M. Clark, to me personally known, who being by me  
duly sworn, did say that he is the True President of Superior  
Corporation and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed and  
sealed in behalf of said corporation by authority of its board of directors, and said  
M. Clark acknowledged said instrument to be the free act  
and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

1-1-59

Luzena Tard  
Notary Public in and for  
Bernalillo County, State of  
New Mexico

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_ and  
his wife, to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_

Notary Public in and for \_\_\_\_\_  
County, State  
of \_\_\_\_\_

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me per-

sonally appeared \_\_\_\_\_, a single person, to me known to  
be the person described in and who executed the foregoing instrument, and acknow-  
ledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act  
and deed.

My Commission expires:

\_\_\_\_\_

Notary Public in and for \_\_\_\_\_  
County, State  
of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Huerfano Unit Area located within the County of San Juan State of New Mexico in form approved on behalf of the Secretary of the Interior, the undersigned owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his or her particular ownership or interest, as may appear, consent to the inclusion of said lands within the Unit Area therein defined, ratify, approve and adopt the terms of said Unit Agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interests, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the terms of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her assigns or successors in interest.

ADDRESS

SIGNATURE

ATTEST:

W. B. Hartsfield III  
Assistant Secretary

NEW MEXICO WESTERN OIL AND GAS COMPANY

By J. Glenn Turner  
President

Date: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

APPROVED AND CONSENTED TO:  
EL PASO NATURAL GAS COMPANY  
By H. F. Dean R. R. H.  
Vice President

UNIT OPERATOR

STATE OF TEXAS )  
COUNTY OF DALLAS ) SS.:


On this 10th day of November, 1955, before me appeared

J. GLENN TURNER, to me personally known, who, being by me duly sworn, did say that he is the President of New Mexico Western Oil and Gas Company and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said J. Glenn Turner acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires:

June 1, 1957

  
ELLEN DONIHOO  
Notary Public in and for \_\_\_\_\_  
Dallas County,  
State of Texas

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me appeared

\_\_\_\_\_ and \_\_\_\_\_  
his wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

STATE OF )  
COUNTY OF ) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 195\_\_\_\_, before me personally

appeared \_\_\_\_\_, a single person, to me known to be the person described in and who executed the foregoing instrument, and acknowledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County,  
State of \_\_\_\_\_

RATIFICATION AND JOINDER OF UNIT ACCOUNTING AGREEMENT UNDER  
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE  
HUERFANO UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the Unit Accounting Agreement under Unit Agreement for the Development and Operation of the said Huerfano Unit Area, in form approved by the Secretary of the Interior, the undersigned owners of lands or leases or interests therein presently held or which may arise under existing option agreements or other interests in production covered by said Unit Accounting Agreement, each to the extent of his or her particular ownership or interest, as may appear, have consented to the inclusion of said lands within the Unit Area therein defined, and do hereby approve, adopt and ratify the said Unit Accounting Agreement in the form and as submitted to the United States Geological Survey in connection with the submission of Unit Agreement for the Development and Operation of the said Unit Area.

This Ratification and Joinder of Unit Accounting Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his or her successors or assigns, subject to all the terms, provisions and conditions of said Unit Accounting Agreement.

ADDRESS

SIGNATURE

ATTEST:

NEW MEXICO WESTERN OIL AND GAS COMPANY

W. B. Hartman III  
Assistant Secretary

By J. Glenn Turner  
President

Date: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

STATE OF

COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_  
by \_\_\_\_\_.

My Commission expires:

\_\_\_\_\_

Notary Public in and for the County of

State of \_\_\_\_\_

APPROVED AND CONSENTED TO:

EL PASO NATURAL GAS COMPANY

By A. F. Davis RFD  
Vice President

UNIT OPERATOR

STATE OF TEXAS )  
 ) SS.:  
COUNTY OF DALLAS )


On this 10th day of November, 195 5, before me appeared

J. GLENN TURNER, to me personally known, who being by me  
duly sworn, did say that he is the President of New Mexico  
Western Oil and Gas Company and that the seal affixed to said instrument  
is the corporate seal of said corporation, and that said instrument was signed and  
sealed in behalf of said corporation by authority of its board of directors, and said  
J. Glenn Turner acknowledged said instrument to be the free act  
and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official  
seal the day and year in this certificate first above written.

My Commission expires:

June 1, 1957

  
ELLEN DONIHOO  
Notary Public in and for  
Dallas County, State of  
Texas

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195 \_\_\_\_\_, before me appeared

and

his wife, to me known to be the persons described in and who executed the foregoing  
instrument, and acknowledged to me they executed the same as their free act and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County, State  
of \_\_\_\_\_

STATE OF )  
 ) SS.:  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, 195 \_\_\_\_\_, before me per-

sonally appeared \_\_\_\_\_, a single person, to me known to  
be the person described in and who executed the foregoing instrument, and acknow-  
ledged to me that \_\_\_\_\_ he executed the same as \_\_\_\_\_ free act  
and deed.

My Commission expires:

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
\_\_\_\_\_ County, State  
of \_\_\_\_\_

EXHIBIT "B"

HUERFANO UNIT

SAN JUAN COUNTY, NEW MEXICO

INITIAL PARTICIPATING AREA  
PICTURED CLIFFS ZONE

Lessee: Dudley Cornell  
Serial Number: Santa Fe 078422  
Lease Description: All of Section 31,  
Township 27 North,  
Range 10 West  
Amount of Acreage: 656.08  
Percentage of Participation: 45.10%

OVERRIDING ROYALTIES

<u>Owners</u>	<u>Percent</u>
Dudley Cornell and Mary Lee Cornell, his wife	2.50
Total	2.50

The operating rights on the above described  
lease, or portion thereof, are held as  
follows:

Stanolind Oil and Gas Company . . . 33.94%  
Slick-Moorman Oil Company . . . . . 66.06%

Lessee: Victor B. Van Hook  
Serial Number: Santa Fe 080425A  
Lease Description: NW/4, Section 6,  
Township 26 North,  
Range 10 West  
Amount of Acreage: 158.47  
Percentage of Participation: 10.89%

OVERRIDING ROYALTIES

<u>Owners</u>	<u>Percent</u>
Victor B. Van Hook and Grace E. Van Hook, his wife	3.125
Total	3.125

The operating rights on the above described  
lease, or portion thereof, are held as follows:

Stanolind Oil and Gas Company . . . 33.94%  
Slick-Moorman Oil Company . . . . . 66.06%

Lessee: Annie E. Johnson  
Serial Number: Santa Fe 077936  
Lease Description: NE/4 of Section 6,  
Township 26 North,  
Range 10 West  
Amount of Acreage: 160.24  
Percentage of Participation: 11.02%

There are no overriding royalty interests  
involved in the above described leases or  
portions of leases.

The operating rights on the above described  
lease, or portion thereof, are held as follows:

Stanolind Oil and Gas Company . . . 33.94%  
Slick-Moorman Oil Company . . . . 66.06%

Lessee: Emory Nielsen  
Serial Number: New Mexico 01074  
Lease Description: NE/4, Section 1,  
Township 26 North,  
Range 11 West, and  
E/2 Section 36,  
Township 27 North,  
Range 11 West  
Amount of Acreage: 479.88  
Percentage of Participation: 32.99%

OVERRIDING ROYALTY

<u>Owners</u>	<u>Percent</u>
Dacross Corporation	1.69%
Brookhaven Oil	1.31%

The operating rights on the above described  
lease, or portion thereof, are held as follows:

Slick-Moorman Oil Company . . . 100%

GEOLOGICAL MEMORANDUM  
Formation of a Participating Area for  
Pictured Cliffs Zone in Huerfano Unit,  
San Juan County, New Mexico

The necessity for the designation of a participating area within the Huerfano Unit was occasioned by the recently completed Stanolind No. 6 Huerfano Pictured Cliffs gas well. The initial potential of this well was officially gauged at 2,830 MCFGPD after being shot with 270 quarts of SNG from 2200' to 2095'.

Regionally the Huerfano area is located on the southwest flank of the northwest-southeast trending San Juan Basin with very little evidence of important local structure. Low poorly defined terraces occur along the basin flanks, but appear to have only minor effect on gas accumulation. Huerfano and other nearby fields appear to be areas of increased effective porosity and permeability in wide-spread sand bodies and may or may not be associated with local structural anomalies.

The attached northwest-southeast electric log cross-section and structural contoured index map show both the structural position and stratigraphic development of the Pictured Cliffs sandstone. The initial potentials of each well are also shown on the cross-section. It is apparent that structural position does not determine individual well productivity.

Electric log and core analyses indicate that the more important factor affecting or controlling the production from individual wells are the porosity, permeability and percentage of water saturation of the sand at that place. These factors, as well as actual difference of sand thickness, cause considerable variations in effective net pay from well to well.

Due to this areal variation of effective pay, it would appear that development outward from each successful exploratory test would result in the drilling of a minimum number of poor or dry development wells.

The recommended participating area for the Stanolind No. 6 Huerfano Unit well, outlined in red on the attached index map, includes the minimum acreage believed assignable to this well. This area will be subject to gradual enlargement as drilling continues.

*Thos. A. Hendricks*  
\_\_\_\_\_  
Thomas A. Hendricks

WLA:brw