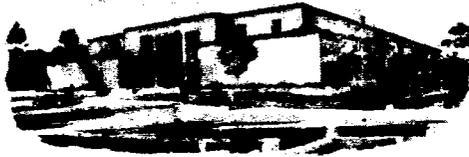


State of New Mexico

TELEPHONE  
505-827-2748



Commissioner of Public Lands

January 7, 1975

PHIL R. LUCERO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO 87501

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
REVISED THIRTEENTH, REVISED FOUR-  
TEENTH, FIFTEENTH AND SIXTEENTH  
REVISIONS OF THE PARTICIPATING AREA  
FOR THE GALLUP FORMATION, Effective  
August 1, 1973, September 1, 1973,  
October 1, 1973 and January 1, 1974,  
respectively

ATTENTION: Mr. James R. Permenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth revisions of the Participating Area for the Gallup Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two (2) copies to be returned to the Commissioner of Public Lands and one (1) copy should be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, Two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Division

FRL/EDG/s

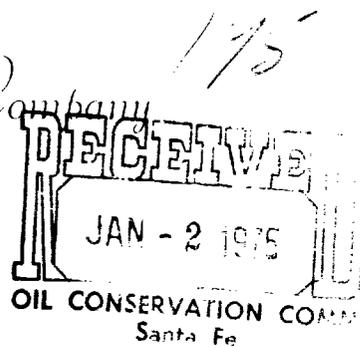
cc: UEGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico



El Paso Natural Gas Company

El Paso, Texas 79978

December 31, 1974



Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
REVISED THIRTEENTH, REVISED FOUR-  
TEENTH, FIFTEENTH AND SIXTEENTH  
REVISIONS OF THE PARTICIPATING AREA  
FOR THE GALLUP FORMATION, Effective  
August 1, 1973, September 1, 1973,  
October 1, 1973 and January 1, 1974,  
respectively

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth Revisions of the Participating Area for the Gallup Formation for the referenced unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:km  
Enclosures

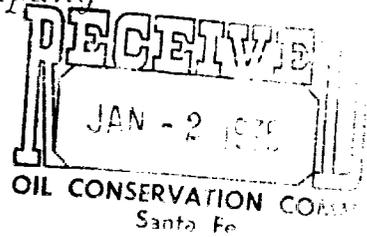
cc: Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission ✓  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

*El Paso Natural Gas Company*

*El Paso, Texas 79905*

December 31, 1974



Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FORTY-THIRD, FORTY-FOURTH AND  
FORTY-FIFTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION, Effective June 1, 1974,  
July 1, 1974 and August 1, 1974,  
respectively

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Forty-Third, Forty-Fourth and Forty-Fifth Revisions of the Participating Area for the Dakota Formation for the referenced unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:km  
Enclosures

cc: Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission ✓  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

State of New Mexico

TELEPHONE  
505-827-2748



**Commissioner of Public Lands**

December 27, 1974

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
1975 DRILLING PROGRAM

ATTENTION: Mr. D. M. Canfield

Gentlemen:

The Commissioner of Public Lands has this date approved your 1975 Drilling Program, for the Huerfano Unit, San Juan County, New Mexico, proposing the drilling of twelve Dakota wells. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/EDC/s  
encls.  
cc:

USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓

*El Paso Natural Gas Company* RECEIVED

*El Paso, Texas 79978*

December 26, 1974

JAN 2 10 35 AM '75  
STATE LAND OFFICE  
SANTA FE, N. M.

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
REVISED THIRTEENTH, REVISED FOUR-  
TEENTH, FIFTEENTH AND SIXTEENTH  
REVISIONS OF THE PARTICIPATING AREA  
FOR THE GALLUP FORMATION, Effective  
August 1, 1973, September 1, 1973,  
October 1, 1973 and January 1, 1974,  
respectively

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, previously filed for approval the Thirteenth and Fourteenth Revisions of the Huerfano Unit Gallup Participating Area, for which approval has been granted. However, two wells, the #237 and #242, which were previously determined non-commercial have been reevaluated and found to be commercial, thus necessitating revised applications for the Thirteenth and Fourteenth Revisions of the Gallup Participating Area to be filed. Pursuant to the provisions of Section 10 of the Huerfano Unit Agreement, El Paso Natural Gas Company respectfully submits for your approval the following selection of lands to constitute the Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth Revisions of the Participating Area for the Gallup Formation to wit:

Revised Thirteenth Revision - Effective August 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u>	
Section 5: Lots 1,2, S/2 NE/4, SE/4 (E/2)	321.82
<u>Township 26 North, Range 10 West, N.M.P.M.</u>	
Section 12: S/2	320.00
Section 13: N/2	320.00
	<u>961.82</u>

This proposed Revised Thirteenth 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 following Huerfano Unit wells:

The Huerfano Unit #233 Well, located 1500' from the South line and 850' from the East line of Section 5, Township 26 North, Range 9 West, N.M.P.M., was spudded on February 8, 1973 and completed on July 13, 1973 in the Gallup Formation at a total depth of 6072'. The Gallup Formation in the intervals between 5880'-5888', 5902'-5910', 5920'-5932', 5950'-5962', 5994'-6010', 5710'-5720', 5732'-5748', 5760'-5772', 5783'-5795' and 5836'-5844' was treated with a sand-water fracturing process on April 22, 1973. The well was shut-in on April 25, 1973, and after being shut-in for eighty-nine (89) days the well was tested on July 13, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 376 MCF/D through a 3/4" choke and 429 MCF/D by the calculated absolute open-flow method, with an SIPC of 992 psia and an SIPT of 455 psia. The spacing unit for this well is described as the E/2 of Section 5, Township 26 North, Range 9 West, containing 321.82 acres.

The Huerfano Unit #241 Well, located 1090' from the North line and 1800' from the West line of Section 13, Township 26 North, Range 10 West, N.M.P.M., was spudded on May 11, 1973 and completed on July 3, 1973 in the Gallup Formation at a total depth of 6072'. The Gallup Formation at the intervals 5268', 5644', 5650', 5688', 5694', 5728', 5766', 5781', 5787', 5846', 5852', 5900', 5906', 5950', 5968', 6006' and 6012' was treated with a sand-water fracturing process on May 28, 1973. The well was shut-in on May 31, 1973 and after being shut-in for thirty-three (33) days the well was tested on July 3, 1973 and following a three (3) hour blow-down period, the Gallup Formation gauged 999 MCF/D through a 3/4" choke and 1434 MCF/D by the calculated absolute open-flow method, with an SIPC of 747 psia and an SIPT of 732 psia. The spacing unit for this

well is described as the N/2 of Section 13, Township 26 North, Range 10 West, containing 320.00 acres.

The Huerfano Unit #242 Well, located 1025' from the South line and 1550' from the East line of Section 12, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 28, 1973 and completed on July 3, 1973 in the Gallup Formation at a total depth of 6128'. The Gallup Formation in the intervals between 5682'-5694', 5736'-5738', 5788'-5798', 5818'-5830', 5930'-5938', 5960'-5972', 5986'-5998', 6014'-6026' and 6058'-6070' was treated with a sand-water fracturing process on May 24, 1973. The well was shut-in on May 27, 1973 and after being shut-in for thirty-seven (37) days the well was tested on July 3, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 220 MCF/D through a 3/4" choke and 245 MCF/D by the calculated absolute open-flow method, with an SIPC of 1028 psia and an SIPT of 1026 psia. The spacing unit for this well is described as the S/2 of Section 12, Township 26 North, Range 10 West, containing 320.00 acres.

Revised Fourteenth Revision - Effective September 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 23: W/2	320.00

This proposed Revised Fourteenth Revision 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 following Huerfano Unit well:

The Huerfano Unit #240 Well, located 890' from the North line and 1800' from the West line of Section 23, Township 26 North, Range 9 West, N.M.P.M., was spudded on May 27, 1973 and completed on August 1, 1973 in the Gallup Formation at a total depth of 5932'. The Gallup Formation at the intervals 5586', 5592', 5622', 5624', 5660', 5662', 5706', 5708', 5748', 5750', 5772', 5778', 5816', 5818', 5870' and 5872' was treated with a sand-water fracturing process on July 10, 1973. The well was shut-in on July 13, 1973 and after being shut-in for eighteen (18) days the well was tested on August 1, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 709 MCF/D through a 3/4" choke and 748 MCF/D by the calculated absolute open-flow method, with an SIPC of 1276 psia and an SIPT of 1257 psia. The spacing unit for this well is described as the W/2 of Section 23, Township 26 North, Range 9 West, containing 320.00 acres.

Fifteenth Revision - Effective October 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 17: W/2	320.00

This proposed Fifteenth Revision 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 following Huerfano Unit well:

The Huerfano Unit #237 Well, located 1090' from the North line and 1550' from the West line of Section 17, Township 26 North, Range 9 West, N.M.P.M., was spudded on March 24, 1973 and completed on September 20, 1973 in the Gallup Formation at a total depth of 6037'. The Gallup Formation in the intervals between 5688'-5704', 5716'-5724', 5750'-5766', 5802'-5814', 5868'-5876', 5892'-5900', 5922'-5930' and 5962'-5978' was treated with a sand-water fracturing process on May 2, 1973. The well was shut-in on September 12, 1973 and after being shut-in for seven (7) days the well was tested on September 20, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 196 MCF/D through a 3/4" choke and 263 MCF/D by the calculated absolute open-flow method, with an SIPC of 649 psia and an SIPT of 459 psia. The spacing unit for this well is described as the W/2 of Section 17, Township 26 North, Range 9 West, containing 320.00 acres.

Sixteenth Revision - Effective January 1, 1974

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 18: Lots 1,2,3,4, E/2 W/2 (W/2)	328.20

This proposed Sixteenth Revision 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 following Huerfano Unit well:

The Huerfano Unit #239 Well, located 890' from the North line and 1750' from the West line of Section 18, Township 26 North, Range 9 West, N.M.P.M., was spudded on April 16, 1973 and completed on December 12, 1973 in the Gallup Formation at a total depth of 6031'. The Gallup Formation in the intervals between 5626'-5638', 5692'-5704', 5722'-5734', 5804'-5812', 5822'-5830', 5864'-5872', 5882'-5894', 5926'-5934' and 5966'-5978' was treated with a sand-water fracturing

process on May 9, 1973. The well was shut-in on December 4, 1973 and after being shut-in for seven (7) days the well was tested on December 12, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 395 MCF/D through a 3/4" choke and 423 MCF/D by the calculated absolute open-flow method, with an SIPC of 808 psia and an SIPT of 630 psia. The spacing unit for this well is described as the W/2 of Section 18, Township 26 North, Range 9 West, containing 328.20 acres.

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 Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth Expansions of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth Expansions of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

Attached to this application are Schedules XIV, XV, XVI and XVII 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.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Six

If the hereinabove selection of lands to constitute the Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth 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.

Yours very truly,



James R. Permenter *DW*  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:km  
Attachment  
Huerfano Unit, 4.4

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

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

APPROVED: Phil R. Lucas DATE: January 7, 1975  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey and  
the Oil Conservation Commission

APPROVED: A. L. Porter DATE: January 8, 1975  
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 Revised Thirteenth, Revised Fourteenth, Fifteenth and Sixteenth Revisions of the Participating Area for the Gallup Formation, effective August 1, 1973, September 1, 1973, October 1, 1973 and January 1, 1974, respectively, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT (GALLUP)  
Working Interest Owners

Amoco Production Company  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Mr. Robert L. Breedlove

Barbara Ann McConnell Bruss

Cenard Oil & Gas Company

Continental Oil Company

Mr. Thomas G. Cornish

Crown Central Petroleum Corporation

First National Bank in Albuquerque, Trustee

Mr. and Mrs. Forrest Gelbke

Mr. Albert R. Greer

Mrs. Charline K. Greer

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Elma R. Jones

Corinne Roy Kelly, Individually  
and as Executrix

La Plata Gathering System, Inc.

Mr. O. J. Lilly

Estate of Barbara Price Mayhew

Mr. K. E. McAfee

HUERFANO UNIT (GALLUP)  
Working Interest Owners - Page Two

Mr. William H. McCartney

Barbara Irene McConnell

Mr. J. W. McConnell, Jr.

Mrs. Laina Mabel Saari

Gladys Sketch

Mr. J. C. Smith

Tenneco Oil Company

Estate of Mr. and Mrs. Frank Toombs

David W. Walters, Executor

*El Paso Natural Gas Company*

*El Paso, Texas 79901*

December 26, 1974

RECEIVED  
JAN 2 10 34 AM '75  
STATE OF NEW MEXICO  
SANTA FE OFFICE

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FORTY-THIRD, FORTY-FOURTH AND  
FORTY-FIFTH REVISIONS OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION, Effective June 1, 1974,  
July 1, 1974 and August 1, 1974  
respectively

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 Forty-Third, Forty-Fourth and Forty-Fifth Revisions of the Participating Area for the Dakota Formation, to wit:

Forty-Third Revision - Effective June 1, 1974

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 11 West, N.M.P.M.</u> Section 12: E/2	320.00

the well was tested on June 26, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 1224 MCF/D through a 3/4" choke and 1325 MCF/D by the calculated absolute open-flow method, with an SIPC of 1882 psia and an SIPT of 992 psia. The spacing unit for this well is described as the E/2 of Section 7, Township 26 North, Range 10 West, containing 320.00 acres.

The Huerfano Unit #73 well, located 800' from the North line and 800' from the West line of Section 1, Township 26 North, Range 11 West, N.M.P.M., was spudded on March 20, 1974, and completed on June 21, 1974, in the Dakota formation at a total depth of 6697'. The Dakota formation at the intervals 6408', 6438', 6480', 6528', 6534' and 6554' was treated with a sand-water fracturing process on May 3, 1974. The well was shut-in on June 13, 1974, and after being shut-in for eight (8) days the well was tested on June 21, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 1523 MCF/D through a 3/4" choke and 1614 MCF/D by the calculated absolute open-flow method, with an SIPC of 1959 psia and an SIPT of 1662 psia. The spacing unit for this well is described as the W/2 of Section 1, Township 26 North, Range 11 West, containing 319.64 acres.

The Huerfano Unit #259 well, located 1180' from the North line and 1500' from the West line of Section 6, Township 26 North, Range 10 West, N.M.P.M., was spudded on March 6, 1974, and completed on June 6, 1974, in the Dakota formation at a total depth of 6815'. The Dakota formation at the intervals 6626', 6668', 6684', 6724', 6748', 6761' and 6776' was treated with a sand-water fracturing process on April 27, 1974. The well was shut-in on May 30, 1974, and after being shut-in for seven (7) days the well was tested on June 6, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 408 MCF/D through a 3/4" choke and 446 MCF/D by the calculated absolute open-flow method, with an SIPC of 1296 psia and an SIPT of 643 psia. The spacing unit for this well is described as the W/2 of Section 6, Township 26 North, Range 10 West, containing 317.11 acres.

The Huerfano Unit #263 well, located 1650' from the South line and 1800' from the West line of Section 32, Township 26 North, Range 10 West, N.M.P.M., was spudded on May 21, 1974, and completed on June 27, 1974, in the Dakota formation at a total depth of 6560'. The Dakota formation at the intervals 6350', 6362', 6408', 6420' and 6470' was treated with a sand-water fracturing process on June 3, 1974. The well was shut-in on June 6, 1974, and after being shut-in for fourteen (14) days

This proposed Forty-Third Expansion of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #264 well.

The Huerfano Unit #264 well, located 1650' from the North line and 800' from the East line of Section 12, Township 26 North, Range 11 West, N.M.P.M., was spudded on April 15, 1974, and completed on May 23, 1974, in the Dakota formation at a total depth of 6736'. The Dakota formation at the intervals 6494', 6544', 6550', 6586', 6592' and 6628' was treated with a sand-water fracturing process on May 6, 1974. The well was shut-in on May 8, 1974, and after being shut-in for fifteen (15) days the well was tested on May 23, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 1517 MCF/D through a 3/4" choke and 1699 MCF/D by the calculated absolute open-flow method, with an SIPC of 1641 psia and an SIPT of 1249 psia. The spacing unit for this well is described as the E/2 of Section 12, Township 26 North, Range 11 West, containing 320.00 acres.

Forty-Fourth Revision - Effective July 1, 1974

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u>	
Section 6: Lots 3,4,5,6,7, SE/4 NW/4, E/2 SW/4 (W/2)	317.11
Section 7: Lots 1,2,3,4, E/2 W/2, E/2 (A11)	638.08
Section 32: S/2	320.00
 <u>Township 26 North, Range 11 West, N.M.P.M.</u>	
Section 1: Lots 3,4, S/2 NW/4, SW/4 (W/2)	319.64
	<u>1594.83</u>

This proposed Forty-Fourth Expansion of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the following Huerfano Unit wells:

The Huerfano Unit #68 well, located 1700' from the North line and 1500' from the East line of Section 7, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 2, 1974, and completed on June 26, 1974, in the Dakota formation at a total depth of 6805'. The Dakota formation at the intervals 6576', 6616', 6634', 6696' and 6724' was treated with a sand-water fracturing process on May 9, 1974. The well was shut-in on June 10, 1974, and after being shut-in for sixteen (16) days

the well was tested on June 27, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 1317 MCF/D through a 3/4" choke and 1384 MCF/D by the calculated absolute open-flow method, with an SIPC of 1842 psia and an SIPT of 1452 psia. The spacing unit for this well is described as the S/2 of Section 32, Township 26 North, Range 10 West, containing 320.00 acres.

Forty-Fifth Revision - Effective August 1, 1974

<u>Description of Lands</u>	<u>Acres</u>
Township 26 North, Range 10 West, N.M.P.M.	
Section 19: Lots 1,2,3,4, E/2 W/2 (W/2)	318.24
Section 20: SW/4, S/2 NW/4, NW/4 NW/4	280.00
	<u>598.24</u>

This proposed Forty-Fifth Expansion of the Participating Area for the Dakota Formation is predicated upon the knowledge and information first obtained upon the completion in paying quantities of the following Huerfano Unit wells:

The Huerfano Unit #260 well, located 1700' from the North line and 1725' from the West line of Section 19, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 27, 1974, and completed on July 9, 1974, in the Dakota formation at a total depth of 6478'. The Dakota formation at the intervals 6264', 6296', 6332', 6350', 6390' and 6413' was treated with a sand-water fracturing process on May 12, 1974. The well was shut-in on May 14, 1974, and after being shut-in for twenty-five (25) days the well was tested on July 9, 1974, and following a three (3) hour blow-down period, the Dakota formation gauged 507 MCF/D through a 3/4" choke and 526 MCF/D by the calculated absolute open-flow method, with an SIPC of 1562 psia and an SIPT of 984 psia. The spacing unit for this well is described as the W/2 of Section 19, Township 26 North, Range 10 West, containing 318.24 acres.

The Huerfano Unit #261 well, located 990' from the South line and 1650' from the West line of Section 20, Township 26 North, Range 10 West, N.M.P.M., was spudded on May 9, 1974, and completed on July 11, 1974, in the Dakota formation at a total depth of 6576'. The Dakota formation at the intervals 6370', 6394', 6438', 6462', 6500' and 6528' was treated with a sand-water fracturing process on June 24, 1974. The well was shut-in on June 28, 1974, and after being shut-in for thirteen (13) days the well was tested on July 11, 1974, and

following a three (3) hour blow-down period, the Dakota formation gauged 260 MCF/D through a 3/4" choke and 317 MCF/D by the calculated absolute open-flow method, with an SIPC of 1367 psia and an SIPT of 788 psia. The spacing unit for this well is described as the W/2 of Section 20, Township 26 North, Range 10 West, containing 320.00 acres.

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 Forty-Third, Forty-Fourth and Forty-Fifth Expansions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report concerning the Forty-Third, Forty-Fourth and Forty-Fifth Expansions of the Dakota Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Dakota oil and gas production.

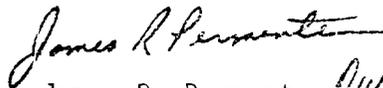
Attached to this application are Schedules XLV, XLVI and XLVII showing the lands entitled to participation in the unitized substances produced from the Dakota Formation with the percentage of participation of each lease or tract indicated thereon.

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

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Six

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

Yours very truly,



James R. Permenter *JRP*  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:km  
Attachments  
Huerfano Unit, 4.3

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

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

APPROVED: *J. H. ...* DATE: *January 3, 1975*  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey and  
the Oil Conservation Commission

APPROVED: *A. L. ...* DATE: *January 7, 1975*  
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 Forty-Third, Forty-Fourth and Forty-Fifth Revisions of the Participating Area for the Dakota Formation, effective June 1, 1974, July 1, 1974 and August 1, 1974, respectively, under the Huerfano Unit, 1 Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT (DAKOTA)  
Working Interest Owners

Amoco Production Company  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Mr. Robert L. Breedlove

Barbara Ann McConnell Bruss

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Mr. Thomas G. Cornish

Crown Central Petroleum Corporation

First National Bank in Albuquerque, Trustee

Mr. and Mrs. Forrest Gelbke

Mr. Albert R. Greer

Mrs. Charline K. Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Billie D. Hood

HUERFANO UNIT (DAKOTA)  
Working Interest Owners - Page Two

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix

La Plata Gathering System, Inc.

Mr. O. J. Lilly

Estate of Barbara Price Mayhew

Mr. K. E. McAfee

Mr. William H. McCartney

Barbara Irene McConnell

Mr. J. W. McConnell, Jr.

N-M Oil & Gas Venture

Mrs. Laina Mabel Saari

Gladys Sketch

Mr. J. C. Smith

Sunland Refining Corporation

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

David W. Walters, Executor

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79975

December 3, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF ADDITIONAL  
WELLS, Dakota Formation

Gentlemen:

Pursuant to Section 10 of the Huerfano Unit Agreement, I Sec. No. 731, El Paso Natural Gas Company, as Unit Operator, determined on the date set out below that one (1) additional well capable of producing unitized substances in commercial quantities has been completed upon acreage committed to the Unit. This well is as follows:

The Huerfano Unit Com #118 Well, located 1650' from the South line and 1650' from the East line of Section 30, T-27-N, R-10-W, was spudded on November 2, 1973, and completed on January 24, 1974 in the Dakota Formation at a total depth of 6344'. The Dakota Formation at the intervals 6124', 6150', 6210', 6262', 6264' and 6310' was treated with a sand-water fracturing process on January 13, 1974. The well was shut-in on January 15, 1974, and after being shut-in for gauge for eight (8) days, the well was tested on January 23, 1974, and following a three-hour blow-down period the Dakota Formation gauged 1092 MCF/D through a 3/4" choke and

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

1176 MCF/D by the absolute open-flow method, with an SIPC of 1892 psia and an SIPT of 972 psia. The spacing unit for this well is described as the E/2 of Section 30, T-27-N, R-10-W, containing 320.00 acres.

The above-described spacing unit was included in the Huerfano Unit Fourth and Tenth Expanded Participating Areas of the Dakota Formation effective August 1, 1959 and January 1, 1961, respectively, and the completion of this well does not warrant any further expansion of the Dakota Participating Area.

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

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:km  
Huerfano Unit 4.3.1

cc: Mr. Antonio Martinez

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased, and  
U/A dated July 15, 1969, of Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline K. Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Working Interest Owners - Pg. 2

Mr. G. W. Hannett  
Mrs. Beulah Irene Hanson  
Clarence E. Hinkle and Frank O. Elliott, Trustees  
Clarence E. Hinkle and Edna I. Hall, Trustees  
Mrs. Billie D. Hood  
Bernice Jeffs  
Elma R. Jones  
Corinne Roy Kelly, Individually and  
as Executrix of the Estate of  
Frank S. Kelly, Jr., Deceased  
La Plata Gathering System, Inc.  
O. J. Lilly  
Matagorda Oil Company  
Estate of Barbara Price Mayhew  
K. E. McAfee  
William H. McCartney  
Barbara Irene McConnell  
J. W. McConnell, Jr.  
N-M Oil and Gas Venture  
Northwest Pipeline Corporation  
Pearl O. Pipkin  
Laina Mabel Saari  
Gladys Sketch  
J. C. Smith  
Sunland Refining Corporation  
Sunshine Royalty Company  
Tenneco Oil Company  
Texas Pacific Oil Company, Inc.

Working Interest Owners - Pg. 3

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79978

September 12, 1974

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit Fourteenth Revision  
Gallup Participating Area  
Effective September 1, 1972

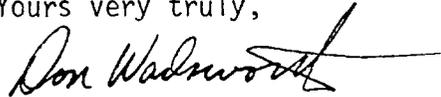
Gentlemen:

The referenced expansion of the Huerfano Unit Gallup Participating Area was approved by the Regulatory Agencies on the following dates:

United States Geological Survey	August 28, 1974
Commissioner of Public Lands	July 25, 1974
Oil Conservation Commission	July 29, 1974

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

Yours very truly,



Don Wadsworth  
Landman  
Land Department  
Energy Resource Development

DW:sn  
Huerfano 5.0



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

August 28, 1974

El Paso Natural Gas Company  
Attention: Mr. James R. Fermenter  
P.O. Box 1492  
El Paso, Texas 79999

Gentlemen:

Your application of July 22, 1974, requesting approval of the fourteenth revision of the Gallup participating area for the Huerfano unit agreement, San Juan County, New Mexico, I-Sec. No. 731 was approved on August 28, 1974, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of September 1, 1973.

The fourteenth revision adds 320 acres described as the W $\frac{1}{2}$  of sec. 23, T. 26 N., R. 9 W., N.M.P.M., and thereby enlarges the Gallup participating area to 8,510.23 acres. Such revision is based on information obtained by the completion and production data of unit well No. 240 located in the NE $\frac{1}{4}$  of section 23. Such well was completed on August 1, 1973, for a calculated absolute open flow potential of 748 MCFGPD from the Gallup interval 5,584 to 5,872 feet. From September 1973 through June 1974, 270 days of operation of this well has produced 102,941 MCF of gas and 984 barrels of condensate.

The participation schedule, Schedule XV, attached to your application appears to contain an error inasmuch as Tract 45 should describe land in Federal lease New Mexico 01368 rather than New Mexico 03168. Please note your records accordingly so that future reference to Tract 45 will be accurate.

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are returned herewith. You are requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIGINAL) [Signature]

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
BLM, Santa Fe (ltr only)  
NMOCC, Santa Fe (ltr only) Farmington (w/cy appln)  
Com. Pub. Lands, Santa Fe (ltr only) ARS+11.1.1

# El Paso Natural Gas Company

El Paso, Texas 79901

August 12, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit  
Thirteenth Expansion, Gallup  
Formation, San Juan County,  
New Mexico

Gentlemen:

This is to advise that the captioned Thirteenth Expansion of the Huerfano Unit was approved by the regulatory agencies on the dates indicated below:

United States Geological Survey - July 26, 1974  
Commissioner of Public Lands - July 8, 1974  
Oil Conservation Commission - July 9, 1974

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

Yours very truly,



Terry Srsen  
Landman, Land Department  
Energy Resource Development

TS:lj  
Huerfano Unit 3.0

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil and Gas Accounting Commission

# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

I. R. TRUJILLO  
CHAIRMAN  
LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER  
STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

July 29, 1974

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James B. Permenter

Re: Fourteenth 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 Fourteenth Revision of the Participating Area for the Gallup Formation for the Huerfano Unit, San Juan County, New Mexico, subject to like approval by the United States Geological Survey and the Commission of Public Lands of the State of New Mexico.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico and two approved copies are returned to the Commissioner of Public Lands, Santa Fe, New Mexico.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

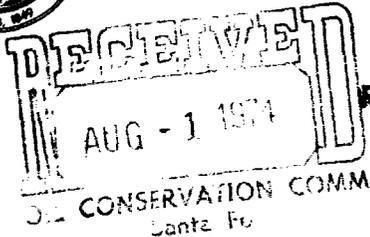
ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe  
U. S. Geological Survey - Roswell



# United States Department of the Interior

GEOLOGICAL SURVEY



Drawer 1857  
Roswell, New Mexico 88201

July 26, 1974

El Paso Natural Gas Company  
Attention: James R. Permenter  
P. O. Box 1492  
El Paso, Texas 79978

Gentlemen:

Your application of July 1, 1974, requesting approval of the thirteenth revision of the Gallup participating area for the Huerfano unit agreement, San Juan County, New Mexico, I-Sec. No. 731, was approved on July 22, 1974, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of August 1, 1978.

The thirteenth revision adds 641.82 acres described as the E $\frac{1}{2}$  of sec. 5, T. 26 N., R. 9 W., and the N $\frac{1}{2}$  of sec. 13, T. 26 N., R. 10 W., N.M.P.M., and thereby enlarges the Gallup participating area from 7,548.41 to 8,190.23 acres. Such revision is based on information obtained by the completion and production data of unit wells No. 233 located in the E $\frac{1}{2}$  of sec. 5, T. 26 N., R. 9 W., and No. 241 located in the N $\frac{1}{2}$  of sec. 13, T. 26 N., R. 10 W. Unit well No. 233 was completed on July 13, 1973, for a calculated absolute open flow potential of 429 MCFGPD from the Gallup interval 5,710 to 6,010 feet. Eight months operation of this well has produced 44,625 MCF of gas and 950 barrels of condensate. Unit well No. 241 was completed on July 3, 1973, for a calculated absolute open flow potential of 1,434 MCFGPD from the Gallup interval 5,268 to 6,012 feet. Eight months operation of this well has produced 405,528 MCF of gas and 1,761 barrels of condensate.

The participation schedule, SCHEDULE XIV, attached to the application appears to contain two errors. First, Tract 45 should describe land in Federal lease New Mexico 01368 rather than New Mexico 03168. Secondly, percent of participation for Tract 48-A should be changed from 3.474027 to 3.178711. Please note your records accordingly.

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are returned herewith. You are requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

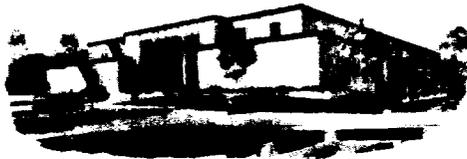
CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
BLM, Santa Fe (ltr. only) ✓  
NMOCC, Santa Fe (ltr. only) ✓  
Com. Pub. Lands, Santa Fe (ltr. only)  
Farmington (w/cy appln.)

ARStall:td

State of New Mexico

TELEPHONE  
505-827-2748



Commissioner of Public Lands

July 25, 1974

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FOURTEENTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION  
EFFECTIVE September 1, 1973

ATTENTION: Mr. James R. Fermenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Fourteenth Revision of the Participating Area for the Gallup Formation for the Huerfano Unit in San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two (2) copies to be returned to the Commission of Public Lands and one (1) copy should be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

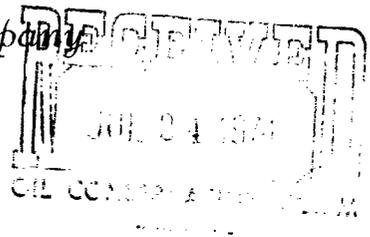
AJA/RDG/s

cc: OCC-Santa Fe, New Mexico (copy of letter & 8 copies of application) ✓  
UBOS-Roswell, New Mexico (copy of letter only)

145  
El Paso Natural Gas Company

El Paso, Texas 79978

July 22, 1974



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FOURTEENTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION  
Effective September 1, 1973

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Fourteenth Revision of the Participating Area, Gallup Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Penner  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:lj  
Enclosures  
Huerfano 4.4

cc: Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

✓ Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

COPY

# El Paso Natural Gas Company

El Paso, Texas 79978

July 22, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FOURTEENTH REVISION OF THE PARTI-  
CIPATING AREA FOR THE GALLUP  
FORMATION, Effective September 1,  
1973

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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 Fourteenth Revision of the Participating Area for the Gallup Formation, to wit:

Fourteenth Revision - Effective September 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 23: W/2	320.00

This proposed Fourteenth 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 #240 Well.

The Huerfano Unit #240 Well, located 890' from the North line and 1800' from the West line of Section 23, Township 26 North, Range 9 West, N.M.P.M., was spudded on May 27, 1973 and completed on August 1, 1973 in the Gallup Formation at a total depth of 5932'. The Gallup Formation in the intervals between 5586', 5592', 5622', 5624', 5660', 5662', 5706', 5708', 5748', 5750', 5772', 5778', 5816', 5818', 5870' and 5872' was treated with a sand-water fracturing process on July 10, 1973. The well was shut-in on July 13, 1973 and after being shut-in for eighteen (18) days the well was tested on August 1, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 709 MCF/D through a 3/4" choke and 748 MCF/D by the calculated absolute open-flow method, with an SIPC of 1276 psia and an SIPT of 1257 psia. The spacing unit for this well is described as the W/2 of Section 23, Township 26 North, Range 9 West, containing 320.00 acres.

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 Fourteenth Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Fourteenth Expansion of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

Attached to this application is Schedule XV 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.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

If the hereinabove selection of lands to constitute the Fourteenth Revision 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.

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:lj  
Attachment  
Huerfano Unit 4.4

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil and Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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

DATE: July 29, 1974

The foregoing approvals are for the Fourteenth Revision of the Participating Area for the Gallup Formation, effective September 1, 1973, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased, and  
U/A dated July 15, 1969, of Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Working Interest Owners - Pg. 2

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of  
Frank S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil and Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs ^

Working Interest Owners - Pg. 3

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

1492

July 9, 1974

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

Attention: Mr. James R. Permenter

Re: Thirteenth Revision 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 Thirteenth Revision of the Participating Area for the 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, and two approved copies returned to the Commissioner of Public Lands.

Very truly yours,

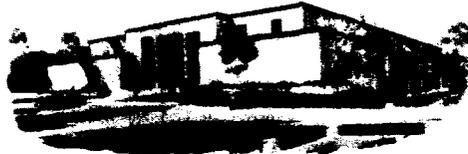
A. L. PORTER, Jr.  
Secretary-Director

ALP/JKK/og

cc: Commissioner of Public Lands - Santa Fe  
U. S. Geological Survey - Roswell

C  
O  
P  
Y

State of New Mexico



TELEPHONE  
505-827-2748

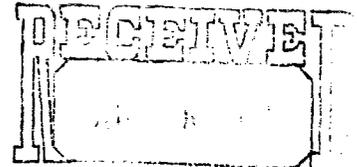
Commissioner of Public Lands

ALEX J. ARMIJO  
COMMISSIONER

July 8, 1974

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999



Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTEENTH REVISION OF THE PARTI-  
CIPATING AREA FOR THE GALLUP FORM-  
ATION, Effective August 1, 1973

Attention Mr. James R. Fermenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Thirteenth Revision of the Participating Area for the Gallup Formation for the Huerfano Unit in San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two (2) copies to be returned to the Commissioner of Public Lands and one (1) copy must be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, DIRECTOR  
OIL AND GAS DIVISION

AJA:RDG:rz

cc: OCC-Santa Fe, New Mexico (copy of letter & 8 copies of application)  
USGS-Roswell, New Mexico (copy of letter only)

El Paso Natural Gas Company

El Paso, Texas 79975

July 1, 1974



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Ruerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTEENTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION,  
Effective August 1, 1973

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Thirteenth Revision of the Participating Area for the Gallup Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:lj  
Enclosures

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

✓ Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

C O P Y

El Paso Natural Gas Company

El Paso, Texas 79978

July 1, 1974

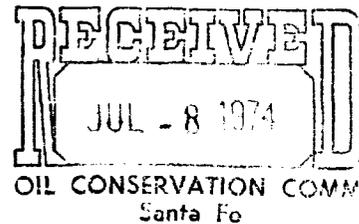
RECEIVED  
JUL 2 10 45 AM '74

STATE LAND OFFICE  
SANTA FE, N. M.

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501



Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTEENTH REVISION OF THE PAR-  
TICIPATING AREA FOR THE GALLUP  
FORMATION, Effective August 1,  
1973

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 Thirteenth Revision of the Participating Area for the Gallup Formation, to wit:

Thirteenth Revision - Effective August 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 5: E/2	320.00
<u>Township 26 North, Range 10 West, N.M.P.M.</u> Section 13: N/2	320.00

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

This proposed Thirteenth 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 following wells.

The Huerfano Unit #241 Well, located 1090' from the North line and 1800' from the West line of Section 13, Township 26 North, Range 10 West, N.M.P.M., was spudded on May 11, 1973 and completed on July 3, 1973 in the Gallup formation at a total depth of 6072'. The Gallup Formation in the intervals of 5268', 5644', 5650', 5688', 5694', 5728', 5766', 5781', 5787', 5846', 5852', 5900', 5906', 5950', 5968', 6006', and 6012' was treated with a sand-water fracturing process on May 28, 1973. The well was shut-in on May 31, 1973 and after being shut-in for thirty-three (33) days the well was tested on July 3, 1973 and following a three (3) hour blow-down period, the Gallup Formation gauged 999 MCF/D through a 3/4" choke and 1434 MCF/D by the calculated absolute open-flow method, with an SIPC of 747 psia and an SIPT of 732 psia. The spacing unit for this well is described as the N/2 of Section 13, Township 26 North, Range 10 West, containing 320.00 acres.

The Huerfano Unit #233 Well, located 1500' from the South line and 850' from the East line of Section 5, Township 26 North, Range 9 West, N.M.P.M., was spudded on February 8, 1973 and completed on July 13, 1973 in the Gallup Formation at a total depth of 6072'. The Gallup Formation in the intervals between 5880'-5888', 5902'-5910', 5920'-5932', 5950'-5962', 5994'-6010', 5710'-5720', 5732'-5748', 5760'-5772', 5783'-5795', and 5836'-5844' was treated with a sand-water fracturing process on April 22, 1973. The well was shut-in on April 25, 1973, and after being shut-in for eighty-nine (89) days the well was tested on July 13, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 376 MCF/D through a 3/4" choke and 429 MCF/D by the calculated absolute open-flow method, with an SIPC of 992 psia and an SIPT of 455 psia. The spacing unit for this well is described as the E/2 of Section 5, Township 26 North, Range 10 West, containing 320.00 acres.

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

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

EXHIBIT "A"

Ownership map reflecting the boundaries of the Unit and the proposed Thirteenth Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Thirteenth Expansion of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

Attached to this application is Schedule XIV 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 Thirteenth Revision 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:1j  
Attachment

cc: Mr. Antonio Martinez  
Executive Director, New Mexico Oil &  
Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

HUERFANO UNIT  
Working Interest Owners - Page Two

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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

APPROVED: Alex J. Hernandez  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation Commission

DATE: July 8, 1974

APPROVED: A. L. Peterson  
Oil Conservation Commission  
Subject to like approval by the  
United States Geological Survey  
and the Commissioner of Public Lands

DATE: July 9, 1974

The foregoing approvals are for the Thirteenth Revision of the Participating Area for the Gallup Formation, effective August 1, 1973, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Dec'd,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Wood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Magagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

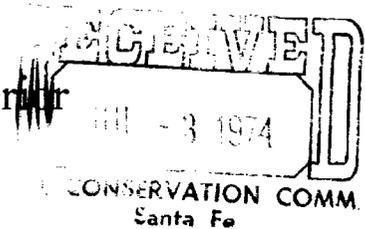
Sunshine Royalty Company

Tenneco Oil Company



United States Department of the Interior

GEOLOGICAL SURVEY  
Drawer 1857  
Roswell, New Mexico 88201



June 28, 1974

El Paso Natural Gas Company  
Attention: Mr. James R. Fermenter  
P.O. Box 1492  
El Paso, Texas 79978

195

Gentlemen:

The twelfth revision of the Gallup participating area of the Huerfano unit agreement, San Juan County, New Mexico, I Sec. No. 731, was approved on June 28, 1974, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of July 1, 1973.

The twelfth revision adds 964.16 acres described as lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$  of sec. 7, W $\frac{1}{2}$  of sec. 9, and E $\frac{1}{2}$  of sec. 18, T. 26 N., R. 9 W., N.M.P.M., thereby enlarging the participating area to 7,548.41 acres. Your application for revision has been corrected to show 324.16 acres in lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$  of sec. 7. The unit area expansion schedule attached to your application is correct as submitted. Please note your records accordingly.

The twelfth revision is based on the completion of unit wells No. 234 located in the S $\frac{1}{2}$  of sec. 7, No. 236 located in the W $\frac{1}{2}$  of sec. 9, and No. 238 located in the E $\frac{1}{2}$  of sec. 18. Although these wells had initial potentials of 348 MCFOPD, 457 MCFOPD, and 306 MCFOPD, respectively, seven months operation from September 1973 through March 1974 produced 16,395 MCF of gas and 889 barrels of oil, 32,626 MCF of gas and 1,160 barrels of oil, and 103,793 MCF of gas and 694 barrels of oil respectively.

Our records also show that unit well No. 237 located in the W $\frac{1}{2}$  of sec. 17, T. 26 N., R. 9 W., N.M.P.M., was completed September 20, 1973, in the Gallup interval 5,688 to 5,978 feet for an initial potential of 263 MCFOPD. The W $\frac{1}{2}$  of sec. 17 lies between participating area in the E $\frac{1}{2}$  of sec. 17 and the W $\frac{1}{2}$  of sec. 18, added by this revision. Therefore, upon obtaining sufficient test data, please furnish this office your formal determination as to whether said well is capable of producing in paying quantities from the Gallup formation, and if appropriate, submit application for additional revision of the Gallup participating area.

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are returned herewith. You are requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

cc: BLM, Santa Fe (ltr only)  
NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)  
Farmington (w/cy appln)

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

ARSra11.ds

*El Paso Natural Gas Company*

*El Paso, Texas* 79978

June 12, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Eleventh Expansion  
Huerfano Unit  
Gallup Participating Area

Gentlemen:

This is to advise that the Eleventh Expansion of the Gallup Formation of the Huerfano Unit was approved by the regulatory agencies on the following dates:

United States Geological Survey - June 7, 1974  
Commissioner of Public Lands - March 27, 1974  
Oil Conservation Commission - April 1, 1974

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

Yours very truly,

*Terry Srsen*

Terry Srsen  
Landman  
Land Department  
Energy Resource Development

TS:lj  
Huerfano Unit 3.0

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil and Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

IL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

195

June 6, 1974

*Jim*

C

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 7996

Attention: Mr. James R. Permenter

O

Re: Twelfth Division Gallup  
Participating Area,  
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 Twelfth Revision of the Participating Area for the 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.

Y

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico, and two approved copies are returned to the Commissioner of Public Lands.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands  
Santa Fe, New Mexico

United States Geological Survey  
Roswell, New Mexico

# El Paso Natural Gas Company

170

El Paso, Texas 79978

June 6, 1974

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

RECEIVED  
JUN 10 1974  
OIL CONSERVATION COMMISSION  
Santa Fe

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF NON-  
COMMERCIAL WELL, Gallup  
Formation

Gentlemen:

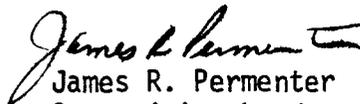
El Paso Natural Gas Company, as Unit Operator, has concluded that the following described well, which was drilled by El Paso, as Unit Operator, is not capable of producing unitized substances in paying quantities from the Gallup formation:

The Huerfano Unit #237 well, located 1090' from the North line and 1550' from the West line of Section 17, Township 29 North, Range 9 West, N.M.P.M., was spudded on March 24, 1973, and completed on September 20, 1973, in the Gallup formation at a total depth of 6037'. The Gallup formation in the intervals between 5868'-5876', 5692'-5900', 5922'-5930', 5962'-5978', 5688'-5704', 5716'-5724', 5750'-5766', and 5802'-5814', was treated with a sand-water fracturing process on May 2, 1973. The well was shut-in on September 12, 1973, and after being shut-in for seven (7) days the well was tested on September 20, 1973, and following a three (3) hour blow-down period, the Gallup formation gauged 196 MCF/D through a 3/4" choke and 263 MCF/D by the calculated absolute open-flow method, with an SIPC of 649 psia. The spacing unit for this well is described as the W/2 of Section 17, Township 26 North, Range 9 West, containing 320.00 acres.

United States Geological Survey  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

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

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:sn  
S.J. 27-5, 4.1

cc: Mr. Antonio Martinez  
New Mexico Oil & Gas  
Accounting Commission

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Dec'd,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Wood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Magagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

HUERFANO UNIT

Working Interest Owners - Page Two

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

*El Paso Natural Gas Company*

195

*El Paso, Texas* 79975  
June 3, 1974

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
TWELFTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMA-  
TION, Effective July 1, 1973

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Twelfth Expanded Participating Area of the Gallup Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

*James R. Permenter*

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:1j  
Enclosures

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

✓ Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

COPY

# El Paso Natural Gas Company

El Paso, Texas 79978

May 31, 1974

RECEIVED

JUN 4 8 31 AM '74

STATE LANDS  
SANTA FE, N.M.

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
TWELFTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP  
FORMATION, Effective July 1,  
1973

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 Twelfth Revision of the Participating Area for the Gallup Formation, to wit:

Twelfth Revision - Effective July 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u>	
Section 7: S/2	320.00
Section 9: W/2	320.00
Section 18: E/2	<u>320.00</u>
Total	960.00

This proposed Twelfth 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 following wells:

The Huerfano Unit #234 Well, located 1180' from the South line and 1750' from the East line of Section 7, Township 26 North, Range 9 West, N.M.P.M., was spudded on March 13, 1973 and completed on June 15, 1973 in the Gallup Formation at a total depth of 6113'. The Gallup Formation in the intervals between 5894'-5906', 5936'-5944', 5954'-5962', 5974'-5982', 6010'-6018', 6046'-6062', 5694'-5710', 5768'-5776', 5794'-5802', 5814'-5822', and 5846'-5858' was treated with a sand-water fracturing process on April 29, 1973. The well was shut-in on May 1, 1973 and after being shut-in for forty-six (46) days the well was tested on June 15, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 224 MCF/D through a 3/4" choke and 348 MCF/D by the calculated absolute open flow method, with an SIPC of 929 psia and an SIPT of 507 psia. The spacing unit for this well is described as the S/2 of Section 7, Township 26 North, Range 9 West, containing 320.00 acres.

The Huerfano Unit #236 Well, located 1500' from the North line and 890' from the West line of Section 9, Township 26 North, Range 9 West, N.M.P.M., was spudded on February 24, 1973 and completed on June 15, 1973 in the Gallup Formation at a total depth of 6058'. The Gallup Formation in the intervals between 5862'-5870', 5882'-5890', 5900'-5916', 5940'-5948', 5974'-5990', 5712'-5728', 5742'-5750', 5772'-5784', and 5824'-5836' was treated with a sand-water fracturing process on April 25, 1973. The well was shut-in on April 28, 1973 and after being shut-in for forty-eight (48) days the well was tested on June 15, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 419 MCF/D through a 3/4" choke and 457 MCF/D by the calculated absolute open-flow method, with an SIPC of 1064 psia and an SIPT of 722 psia. The spacing unit for this well is described as the W/2 of Section 9, Township 26 North, Range 9 West, containing 320.00 acres.

The Huerfano Unit #238 Well, located 1840' from the South line and 890' from the East line of Section 18, Township 26 North, Range 9 West, N.M.P.M., was spudded on April 5, 1973

and completed on June 13, 1973 in the Gallup Formation at a total depth of 5995'. The Gallup Formation in the intervals between 5638'-5650', 5702'-5714', 5752'-5764', 5816'-5828', 5846'-5854', and 5920'-5928' was treated with a sand-water fracturing process on May 5, 1973. The well was shut-in on May 8, 1973, and after being shut-in for thirty-six (36) days the well was tested on June 13, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 256 MCF/D through a 3/4" choke and 306 MCF/D by the calculated absolute open-flow method, with an SIPC of 834 psia and an SIPT of 726 psia. The spacing unit for this well is described as the E/2 of Section 18, Township 26 North, Range 9 West, containing 320.00 acres.

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 Twelfth Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Twelfth Expansion of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

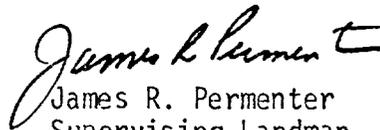
Attached to this application is Schedule XIII showing the lands entitled to participation in the unitized substances produced from the Gallup Formation with the percentage of participation of each lease or tract indicated thereon.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Four

If the hereinabove selection of lands to constitute the Twelfth Revision 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:lj  
Attachment  
Huerfano Unit 4.4

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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

APPROVED: Alfred L. Ramirez  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation Commission

DATE: June 5, 1974

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

DATE: June 6, 1974

The foregoing approvals are for the Twelfth Revision of the Participating Area for the Gallup formation, effective July 1, 1974, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mr. Vincent B. Hamilton
Amoco Production Company Farmington, New Mexico	Mr. G. W. Hannett
Atlantic Richfield Company (3)	Mrs. Beulah Irene Hanson
B & M Construction Corporation	Mrs. Billie D. Wood
Benson-Montin-Greer Drilling Corp.	Bernice Jeffs
Robert L. Breedlove	Elma R. Jones
Brookhaven Oil Company	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Barbara Ann McConnell Bruss	La Plata Gathering System, Inc.
CRA International, Ltd.	O. J. Lilly
Mrs. Ola E. Callahan	Magagorda Oil Company
Cenard Oil & Gas Company	Estate of Barbara Price Mayhew
Consolidated Oil & Gas, Inc.	K. E. McAfee
Continental Oil Company	William H. McCartney
Thomas G. Cornish	Barbara Irene McConnell
Crown Central Petroleum Corporation	J. W. McConnell, Jr.
Evko Development	N-M Oil & Gas Venture
First National Bank in Albuquerque, Trustee U/W of A. T. Hannett, Dec'd, and U/A dated July 15, 1969, of Louise Westfall Hannett	Northwest Pipeline Corporation
Mr. and Mrs. Forrest Gelbke	Pearl O. Pipkin
Albert R. Greer	Laina Mabel Saari
Mrs. Charline Greer	Gladys Sketch
Alfred Gross, Trustee	J. C. Smith
Peter Gross	Sunland Refining Corporation
Dr. and Mrs. James J. Hamilton, Jr.	Sunshine Royalty Company
	Tenneco Oil Company

HUERFANO UNIT  
Working Interest Owners - Page Two

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

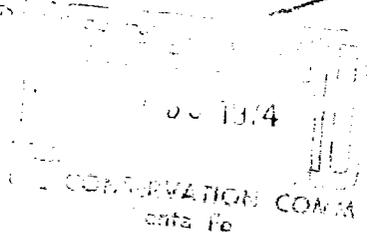
El Paso Natural Gas Company

175

El Paso, Texas 79958

May 24, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
1974 DRILLING PROGRAM

Gentlemen:

This is to advise that the captioned Drilling Program for the Huerfano Unit was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - May 22, 1974  
Commissioner of Public Lands - April 22, 1974  
Oil Conservation Commission - April 22, 1974

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

Yours very truly,

Terry Srsen  
Landman  
Land Department  
Energy Resource Development

TS:lj  
Huerfano Unit 3.0

cc: Mr. Antonio Martinez  
Executive Director, New Mexico Oil &  
Gas Accounting Commission



**Amoco Production Company**

Security Life Building  
Denver, Colorado 80202

P. J. Early  
Division Production  
Manager  
A. M. Roney  
Assistant Division  
Production Manager  
T. M. Curtis  
W. M. Jones  
District Superintendents

May 23, 1974

File: DGW-215-416

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

Re: Huerfano Unit Well No. 242  
Commercial Status Determination  
Gallup Formation  
San Juan County, New Mexico

By letter dated May 9, 1974, El Paso Natural Gas Company, Operator of the Huerfano Unit, submitted for your approval a determination that Huerfano Unit Well No. 242 is not capable of producing unitized substances from the Gallup formation.

Amoco Production Company does not agree with this determination and we respectfully request you withhold any decision regarding this matter until all facts concerning the completion and performance of this well can be reviewed with the Unit operator. Amoco contributed approximately 30% toward the cost of Well No. 242, owns 34% of the Gallup Participating Area and holds substantial interest in other lands within the Huerfano Unit. We are therefore vitally concerned with the continued successful development of the Gallup reserves within the unit boundary. Well No. 242 was one of the many step-out Gallup development wells which Amoco recommended to extend the area of proven Gallup production.

May 23, 1974  
File: DGW-215-416  
Page 2

An arbitrary determination of non-commercial status, when unsupported by engineering and geological evidence, could effectively discourage further development drilling.

A review of logs, completion methods and productive capacity of Well No. 242 in comparison with offsetting wells 92 and 241 leads to our conclusion that Well No. 242 has outstanding commercial potential, but that the productive Gallup zones encountered are not effectively opened to the wellbore with the necessary perforations and fracture stimulation to assure high capacity production. The attached tabulation compares completion and production of these three wells. The cumulative production from Well No. 92, 1.2 BCF and 10,000 bbls. condensate in the past 16 years, attests to the productive potential of lower Gallup sand member. The logs of these three wells show this sand to be approximately equally developed. Considering the probable potential of Well No. 242, we believe it is essential that the necessary flow tests pressure surveys, etc., be performed to accurately, determine the cause of this wells low productivity and the indicated repair operations initiated.

We are forwarding a copy of this letter to El Paso so they will be fully informed of our opinion and recommendation concerning the commercial determination of Well No. 242.

Yours very truly,

*C. M. Honey, ARE*

Attachment

cc: El Paso Natural Gas Co.  
El Paso, Texas 79978

GALLUP WELL COMPARISON  
 HUERFANO UNIT  
 SAN JUAN COUNTY, NEW MEXICO

Well No.	Location	Perforations	Stimulation	Feb. '74		Completion Test	
				Prod. MCFD/BCPD	136/0	MCFD	SICP
92	SENW 7-26N-9W	6114-6148 2spf	Sand-oil hydrafrac 25,000 gallons 26,000 pounds sand-out 45 BPM	136/0	1,460	1,325	
241	NENW 13-26N-10W	17 shots over 384' interval	Sand-water hydrafrac 101,000 gallons 100,000 pounds	1,445/6	1,434	747	
242	SWSE 12-26N-10W	20 shots over 388' interval	Sand-water hydrafrac 43,000 gallons 99,000 pounds	67/4	245	1,016	



United States Department of the Interior

GEOLOGICAL SURVEY  
Braver 1857  
Roswell, New Mexico 88201

1/2

May 22, 1974

El Paso Natural Gas Company  
Attention: Mr. D. N. Canfield  
P.O. Box 1492  
El Paso, Texas 79978

Gentlemen:

Three approved copies of your 1974 plan of development for the Huerfano unit area, San Juan County, New Mexico, are enclosed. Such plan, proposing the drilling of nine Gallup wells and eight Dakota wells was approved on this date subject to like approval by the appropriate official of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) N. O. FREDERICK

N. O. FREDERICK  
Area Oil and Gas Supervisor

cc:

✓ NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)  
Farmington (w/cy plan)

JAG:llham:ds

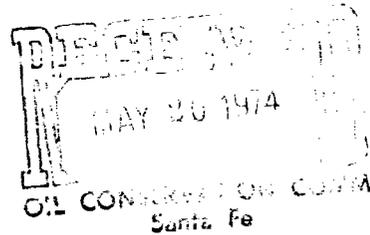
# El Paso Natural Gas Company

El Paso, Texas 79978

May 17, 1974

115

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit Tenth Expansion  
Gallup Formation, I Sec. 713  
San Juan County, New Mexico

Gentlemen:

This is to advise you that the Tenth Expansion of the Gallup Formation of the Huerfano Unit has been approved on the dates shown:

United States Geological Survey	May 14, 1974
Commissioner of Public Lands	December 12, 1973
Oil Conservation Commission	December 14, 1973

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

Yours very truly,

A handwritten signature in cursive script that reads "Terry Srsen".

Terry Srsen  
Landman  
Land Department  
Energy Resource Development

TS:sn  
Huerfano Unit 3.0



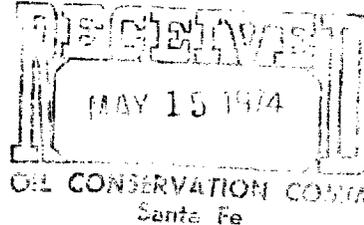
United States Department of the Interior

195

GEOLOGICAL SURVEY  
Drawer 1857  
Roswell, New Mexico 88201

May 14, 1974

El Paso Natural Gas Company  
P.O. Box 1492  
El Paso, Texas 79978



Gentlemen:

The tenth revision of the Gallup participating area for the Huerfano unit agreement, San Juan County, New Mexico, I Sec. No. 731, was approved on May 14, 1974, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of January 1, 1973. By such revision, the Gallup participating area is enlarged to 6,264.25 acres.

The tenth revision of the Gallup participating area proposes lots 1, 2, 3, 4, 5, ~~SE $\frac{1}{4}$~~ , ~~S $\frac{1}{2}$~~ , and ~~SE $\frac{1}{4}$~~  sec. 6, T. 26 N., R. 9 W., and lots 1, 2, and ~~S $\frac{1}{2}$~~  sec. 1, T. 26 N., R. 10 W., N.M.P.M., and is based on the completion of unit well No. 231 in the ~~NW $\frac{1}{4}$~~  sec. 6, as a paying well pursuant to the terms of the unit agreement. Unit well No. 231 was completed on December 19, 1972, for a calculated absolute open flow potential of 1,002 MCF/D from the Gallup interval 5,758 to 6,124 feet.

Copies of the approved applications are being distributed to the Federal offices involved, and three copies are returned herewith. You are requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
BLM, Santa Fe (ltr only)  
NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)  
Farmington (w/cy appln)

JAMonro:ds

*El Paso Natural Gas Company*

*El Paso, Texas* 79978

195

May 10, 1974

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF  
ADDITIONAL WELL, Gallup  
Formation

Gentlemen:

Pursuant to Section 10 of the Huerfano Unit Agreement, I Sec. No. 731, El Paso Natural Gas Company, as Unit Operator, determined on the dates set out below that one (1) additional well capable of producing unitized substances in commercial quantities has been completed upon acreage committed to the Unit. This well is as follows:

The Huerfano Unit #247 Well, located 850' from the South line and 1500' from the East line of Section 6, T-26-N, R-9-W, was spudded on June 10, 1973 and completed on August 3, 1973, in the Gallup Formation at a total depth of 6224'. The Gallup Formation in the intervals between 6054'-6070', 6088'-6096',

United States Geological Survey  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

6126'-6134', 6160'-6176', 5800'-5806', 5840'-5852', 5894'-5906', 5950'-5966', and 6000'-6016', was treated with a sand-water fracturing process on July 15, 1973. The well was shut-in on July 18, 1973, and after being shut-in for gauge for sixteen (16) days, the well was tested on August 3, 1973, and following a three-hour blow down period the Gallup Formation gauged 473 MCF/D through a 3/4" choke and 547 MCF/D by the absolute open-flow method, with an SIPC of 849 psia and an SIPT of 834 psia. The spacing unit for this well is described as Lots 6, 7, E/2 SW/4, SE/4 (S/2) of Section 6, T-26-N, R-9-W, containing 323.93 acres.

The above-described spacing unit was included in the Huerfano Unit Tenth Expanded Participating Area of the Gallup Formation effective January 1, 1973, and the completion of this well does not warrant any further expansion of the Gallup Participating Area.

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

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:sn  
Huerfano Unit 4.3.1

cc: Mr. Antonio Martinez  
New Mexico Oil & Gas  
Accounting Commission

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Dec'd,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Wood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Magagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

HUERFANO UNIT  
Working Interest Owners - Page Two

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79978

May 9, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico, NOTICE  
OF COMPLETION OF NON-COMMERCIAL WELL  
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, has determined that the following-described well is not capable of producing unitized substances in paying quantities from the Gallup Formation:

The Huerfano Unit #242 well, located 1025' from the South line and 1550' from the East line of Section 12, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 28, 1973, and completed on July 3, 1973, in the Gallup Formation at a total depth of 6128'. The Gallup Formation in the intervals between 5862'-5894', 5736'-5738', 5788'-5798', 5818'-5830', 5908'-5916', 5930'-5938', 5960'-5972', 5986'-5998', 6014'-6026', and 6058'-6070' was treated with a sand-water fracturing process on May 24, 1973. The well was shut-in on May 27, 1973, and after being shut-in for thirty-seven (37) days the well was tested on July 3, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 220 MCF through a 3/4" choke and 245 MCF by the calculated absolute open-flow method, with an SIPC of 1028 psia and an SIPT of 1026 psia. The spacing unit for this well is described as the S/2 of Section 12, Township 26 North, Range 10 West, containing 320.00 acres.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

If this determination 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.

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:TS:lj  
Enclosures  
Huerfano Unit 4.4, 4.4.1

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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 Non-commercial determination of the  
Huerfano Unit No. 242 Well, Gallup Formation.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Dec'd,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Wood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Magagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

HUERFANO UNIT  
Working Interest Owners - Page Two

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

State of New Mexico

195  
TELEPHONE  
505-827-2748



Commissioner of Public Lands

April 22, 1974

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
1974 DRILLING PROGRAM

ATTENTION: Mr. D. N. Garfield

Gentlemen:

The Commissioner of Public Lands has this date approved your 1974 Drilling Program, for the Huerfano Unit, San Juan County, New Mexico, proposing the drilling of nine Gallup wells and eight Dakota wells. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/RDS/s  
encl.

cc: USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓

**OIL CONSERVATION COMMISSION**

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

APR 22 1974  
April 22, 1974

C  
O  
P  
Y  
  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. D. N. Canfield

Re: 1974 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 Drilling Program providing for the drilling of nine Gallup wells and eight Dakota wells during the calendar year 1974 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 program is returned herewith.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe  
United States Geological Survey - Roswell

# El Paso Natural Gas Company

El Paso, Texas 79978

April 16, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
1974 Drilling Program

Gentlemen:

By letter dated April 27, 1973, El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program covering the captioned unit for the calendar year 1973. This program provided for the drilling of ten (10) Gallup and six (6) Dakota wells. Each of these wells has been timely drilled.

Dakota wells #72, #243, #244 and #245 were drilled on acreage outside the Dakota Participating Area and caused expansions of the Participating Area. The #243 and #245 wells occasioned the Forty-first Expansion; and the #72 and #244 wells occasioned the Forty-second Expansion. El Paso Natural Gas Company, as Unit Operator, also drilled the Com #118, #246, and #247 Dakota wells and #233, #234, #236, #237, #238, #239, #240, #241 and #242 Gallup wells in 1973 and is presently observing production from these wells to determine if they are capable of producing in paying quantities.

As of this date, the total number of wells drilled in the Huerfano Unit on acreage committed to the Unit or on acreage pooled and communitized with acreage committed to the Unit is as follows.

Regional Oil and Gas Supervisor  
 Commissioner of Public Lands  
 Oil Conservation Commission  
 Page Two

Pictured Cliffs, Commercial	48
Pictured Cliffs, Non-commercial (includes #220 well)	3
Pictured Cliffs, Plugged and Abandoned	33
Gallup, Commercial	12
Gallup, Commercial, Plugged back from Dakota	1
Gallup, Non-commercial, Plugged back from Dakota	2
Dakota, Commercial	106
Dakota, Non-Commercial	5
Dakota, Plugged and Abandoned	2
Dakota, Temporarily Abandoned	1
Gallup-Dakota, Commercial	11
Gallup-Dakota, Commercial in Gallup only	1
Gallup-Dakota, Commercial in Dakota only	3
	<u>228</u>

Pursuant to Section 9 of the Huerfano Unit Agreement, El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Drilling Program for the calendar year 1974 providing for the drilling of the following-described wells:

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
248	W/2 Sec. 5, T-26-N, R-9-W	Gallup
249	W/2 Sec. 8, T-26-N, R-9-W	Gallup
252	E/2 Sec. 1, T-26-N, R-10-W	Gallup
253	E/2 Sec. 11, T-26-N, R-10-W	Gallup
254	S/2 Sec. 13, T-26-N, R-10-W	Gallup
255	W/2 Sec. 31, T-27-N, R-9-W	Gallup
256	E/2 Sec. 31, T-27-N, R-9-W	Gallup
257	W/2 Sec. 36, T-27-N, R-10-W	Gallup
258	E/2 Sec. 36, T-27-N, R-10-W	Gallup
259	W/2 Sec. 6, T-26-N, R-10-W	Dakota
260	W/2 Sec. 19, T-26-N, R-10-W	Dakota
261	W/2 Sec. 20, T-26-N, R-10-W	Dakota
262	E/2 Sec. 31, T-26-N, R-10-W	Dakota
263	S/2 Sec. 32, T-26-N, R-10-W	Dakota
264	E/2 Sec. 12, T-26-N, R-11-W	Dakota
68	E/2 Sec. 7, T-26-N, R-10-W	Dakota
73	W/2 Sec. 1, T-26-N, R-11-W	Dakota

Gallup wells #248, #249, #253, #254, #255, #256, #257 and #258 will be drilled on spacing units presently outside the existing Gallup Participating Area in order to extend the limits of the Participating Area.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

Dakota wells #259, #260, #261, #263, #264, #68 and #73 will be drilled on spacing units presently outside the existing Dakota Participating Area in order to extend the limits of the Participating Area. Dakota well #262 and Gallup well #252 will be drilled within the existing Dakota and Gallup Participating Areas as development wells.

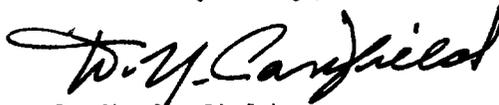
In addition to the above wells, El Paso Natural Gas Company, as Unit Operator, will drill any offset wells that may be required to prevent drainage of unitized substances and any other wells deemed necessary or desirable by the Unit Operator and the working interest owners.

All of the working interest owners have been contacted and this Drilling Program reflects, insofar as possible, their desires for additional drilling.

If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet 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.

Yours very truly,



D. N. Canfield  
Manager  
Land Department  
Energy Resource Development

DNC:DW:lj  
Attachments  
Huerfano 3.0

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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

DATE: *April 22, 1974*

The foregoing approvals are for the 1974 Drilling Program for the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT

Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mrs. Beulah Irene Hanson
Amoco Production Farmington, New Mexico	Mrs. Billie D. Hood
Atlantic Richfield Company (3)	Mrs. Marjorie Lundean Howlett
B & M Construction Corporation	Bernice Jeffs
Benson-Montin-Greer Drilling Corp.	Elma R. Jones
Robert L. Breedlove	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Brookhaven Oil Company	La Plata Gathering System, Inc.
Barbara Ann McConnell Bruss	O. J. Lilly
CRA International, Ltd.	Matagorda Oil Company
Mrs. Ola E. Callahan	K. E. McAfee
Cenard Oil & Gas Company	William H. McCartney
Consolidated Oil & Gas, Inc.	Barbara Irene McConnell, Jr.
Continental Oil Company	J. W. McConnell, Jr.
Thomas G. Cornish	N-M Oil & Gas Venture
Thomas G. Cornish, Executor of the Estate of A. T. Hannett, Deceased	Northwest Pipeline Corporation
Crown Central Petroleum Corporation	Pearl O. Pipkin
H. G. Hannett	Estate of Murrell Price, Deceased
Evko Development Company	Mr. and Mrs. Reino R. Saari
Mr. and Mrs. Forrest Gelbke	Gladys Sketch
Albert R. Greer	J. C. Smith
Mrs. Charline Greer	Sunland Refining Corporation
Alfred Gross, Trustee	Sunshine Royalty Company
Peter Gross	Tenneco Oil Company
Dr. and Mrs. James R. Hamilton, Jr.	Texas Pacific Oil Company, Inc.
Mr. Vincent B. Hamilton	Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners (continued)

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd

OIL CONSERVATION COMMISSION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

*Jim*  
*195*

April 1, 1974

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Permenter

Re: Eleventh Revision 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 Eleventh Revision of the Gallup Formation 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico, and two approved copies are returned to the Commissioner of Public Lands.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

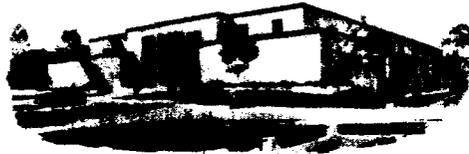
cc: Commissioner of Public Lands  
Santa Fe, New Mexico

U. S. Geological Survey - Roswell

C  
O  
P  
Y

State of New Mexico

TELEPHONE  
505-827-2748



Commissioner of Public Lands

March 27, 1974

P. O. BOX 1148  
SANTA FE, NEW MEXICO

ALEX J. ARMIJO  
COMMISSIONER

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
ELEVENTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION,  
Effective February 1, 1973

ATTENTION: Mr. James R. Permenter

Gentleman:

The Commissioner of Public Lands has this date approved the Eleventh Revision of the Participating Area for the Gallup Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two (2) copies to be returned to the Commissioner of Public Lands and one (1) copy must be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/RDG/s

cc: OCC-Santa Fe, New Mexico (cpy of ltr and 8 cpy's of application)  
USGS-Roswell, New Mexico (cpy of ltr only)

# El Paso Natural Gas Company

El Paso, Texas 79978

March 20, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

REC'D  
MAR 25 8 50 AM '74  
STATE LANDS  
SANTA FE, N. M.

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL  
OF THE ELEVENTH REVISION  
OF THE PARTICIPATING AREA  
FOR THE GALLUP FORMATION,  
Effective February 1, 1973

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 Eleventh Revision of the Participating Area for the Gallup Formation, to wit:

ELEVENTH REVISION - Effective February 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N. M. P. M.</u> Section 8: E/2	320.00

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

This proposed Eleventh 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 #232 Well.

The Huerfano Unit #232 well, located 970' from the South line and 1150' from the East line of Section 8, Township 26 North, Range 9 West, N. M. P. M. , was spudded on December 5, 1972 and completed on January 8, 1973 in the Gallup Formation at a total depth of 6100'. The Gallup Formation in the intervals between 5654'-5666', 5746'-5758', 5778'-5786', 5800'-5808', 5846'-5858', 5934'-5942' and 6008'-6020' was treated with a sand-water fracturing process on December 17, 1972. The well was shut-in on December 20, 1972 and after being shut-in for nineteen (19) days the well was tested on January 8, 1973, and following a three (3) hour blow-down period, the Gallup Formation gauged 275 MCF/D through a 3/4" choke and 294 MCF/D by the calculated absolute open-flow method, with an SIPC of 994 psia and an SIPT of 972 psia. The spacing unit for this well is described as the E/2 of Section 8, Township 26 North, Range 9 West, containing 320.00 acres.

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 Eleventh Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Eleventh Expansion of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

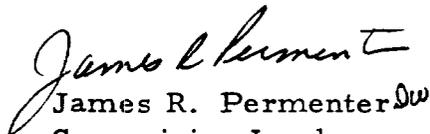
Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

Attached to this application is Schedule XII 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 Eleventh Revision 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.

Yours very truly,



James R. Permenter *JP*  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:lj  
Attachment

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

Regional Oil & Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Four

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

APPROVED: Alex J. Amigo DATE: March 27, 1974  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation  
Commission

APPROVED: A. S. Peterson DATE: April 1, 1974  
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 Eleventh Revision of the Participating Area for the Gallup formation, effective February 1, 1973, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Gallup Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B&M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Barbara Ann McConnell Bruss

Cenard Oil & Gas Company

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Dec'd,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Elma R. Jones

Corinne Roy Kelly, Individually  
and as Executrix of the Estate of  
Frank S. Kelly, Jr., Dec'd.

La Plata Gathering System,  
Inc.

O. J. Lilly

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

Laina Mabel Saari

Gladys Sketch

J. C. Smith

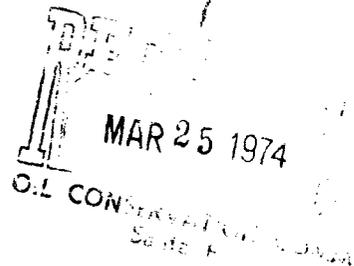
Tenneco Oil Company

Estate of Mr. and Mrs.  
Frank Toombs

Frances Walters

El Paso Natural Gas Company

El Paso, Texas 79974  
March 21, 1974



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
ELEVENTH REVISION OF THE PARTICI-  
PATING AREA FOR THE GALLUP FORMATION,  
Effective February 1, 1973

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Eleventh Revision of the Participating Area for the Gallup Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:lj  
Enclosure

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

COPY

# El Paso Natural Gas Company

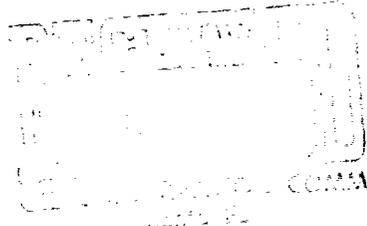
El Paso, Texas 79975

February 1, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
P. O. Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501



195

Re: Huerfano Unit  
Exhibit "B"

Gentlemen:

Please find enclosed herewith a copy of the Huerfano Unit Exhibit "B" which has been revised effective November 1, 1973.

This Exhibit "B" was mailed to the working interest owners of the Huerfano Unit under date of December 4, 1973, and the owners were advised that if they should have any corrections or changes they should notify El Paso within thirty (30) days. We have received certain corrections and the same have been incorporated in the attached Exhibit "B", which is now presumed to reflect the correct interest of each working interest owner.

Very truly yours,

Don Wadsworth  
Landman  
Land Department  
Energy Resource Development

DM:mcv  
Enclosure  
Huerfano Unit 5.0

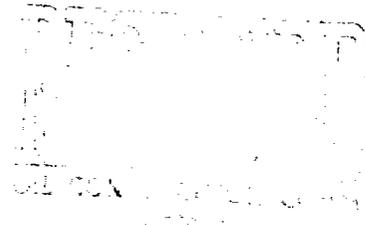
cc: District Engineer  
United States Geological Survey  
P. O. Box 1170  
Rock Springs, Wyoming 82901

COPY

El Paso Natural Gas Company

El Paso, Texas 79978

January 22, 1974



Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit Forty-first and  
Forty-second Revisions of the  
Participating Area for the  
Dakota Formation

Gentlemen:

The referenced expansions were approved by the Regulatory Agencies on the dates set out below:

United States Geological Survey - January 18, 1974  
Commissioner of Public Lands - November 13, 1973  
Oil Conservation Commission - November 26, 1973

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

Yours very truly,

Don Wadsworth  
Landman, Land Department  
Energy Resource Development

DW:lj  
Huerfano Unit 4.3

cc: Mr. Antonio Martinez  
Executive Director, New Mexico  
Oil and Gas Accounting Commission



# United States Department of the Interior

GEOLOGICAL SURVEY

*Mr. Nutter*

Drawer 1857  
Roswell, New Mexico 88201

January 18, 1974

El Paso Natural Gas Company  
Attention: Mr. James R. Permenter  
P.O. Box 1492  
El Paso, Texas 79978

*1975*

Gentlemen:

Your application of November 5, 1973, requesting approval of the forty-first and forty-second revisions of the Dakota participating area for the Huerfano unit agreement, San Juan County, New Mexico, I-Sec. No. 731, was approved on January 18, 1974, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of July 1, 1973, and September 1, 1973, respectively.

The forty-first revision adds 957.68 acres described as lots 1, 2, 3, 4 and the E $\frac{1}{2}$  and the E $\frac{1}{4}$  of sec. 31, and the N $\frac{1}{4}$  of sec. 32, all in T. 26 N., R. 10 W., N.M.P.M., which enlarges the Dakota participating area to 43,912.35 acres. Such revision is based on the information contributed by the following two unit wells:

Well No.	Location	Dakota Interval	Calculated Potential, MCFGPD
243	T. 26 N., R. 10 W. NW $\frac{1}{4}$ sec. 31	6,228-6,388	1,451
245	NW $\frac{1}{4}$ sec. 32	6,390-6,553	2,224

The forty-second revision adds 639.88 acres described as the E $\frac{1}{2}$  sec. 19, T. 26 N., R. 10 W., and lots 1, 2 and the S $\frac{1}{2}$  and the SE $\frac{1}{4}$  of sec. 1, T. 26 N., R. 11 W., N.M.P.M., thereby enlarging the Dakota participating area to 44,552.23 acres. This revision is based on the information contributed by the two unit wells described below:

Well No.	Location	Dakota Interval	Calculated Potential, MCFGPD
72	SE $\frac{1}{4}$ sec. 1, T. 26 N., R. 11 W.	6,522-6,656	1,571
244	SE $\frac{1}{4}$ sec. 19, T. 26 N., R. 10 W.	6,352-6,496	4,197

Copies of the approved applications are being distributed to the appropriate Federal offices and one approved copy is returned herewith.

**You are requested to furnish the State of New Mexico and all other interested parties with appropriate evidence of this approval.**

**Sincerely yours,**

(ORIG)

**CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor**

cc:

BLM, Santa Fe (ltr only)  
✓ NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)  
Farmington (w/cy appln)

JAGillham:ds



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

January 8, 1974

I. R. TRUJILLO  
CHAIRMAN

LAND COMMISSIONER  
PHIL R. LUCERO  
MEMBER

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

1975

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Attention: Mr. D. Canfield

Re: 1975 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 Drilling Program for the calendar year 1975 providing for the drilling of twelve Dakota wells 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/og

cc: Commissioner of Public Lands  
Santa Fe, New Mexico

United States Geological Survey  
Roswell, New Mexico

# El Paso Natural Gas Company

El Paso, Texas 79978

December 19, 1974

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
1975 DRILLING PROGRAM

Gentlemen:

By letter dated April 15, 1974, El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program covering the captioned unit for the calendar year 1974. This program provided for the drilling of nine (9) Gallup and eight (8) Dakota wells.

Dakota wells numbers 259, 260, 261, 263, 264, 68 and 73 were drilled on acreage outside the Dakota Participating Area and will cause expansions of the Participating Area. The #264 well will occasion the Forty-Third Expansion; the numbers 259, 263, 68 and 73 wells will occasion the Forty-Fourth Expansion; and the numbers 260 and 261 wells will occasion the Forty-Fifth Expansion. El Paso Natural Gas Company, as Unit Operator, also drilled the numbers 248, 249, 252, 253, 254, 255, 256, 257, and 258 Gallup wells in 1974 and is presently observing production from these wells to determine if they are capable of producing in paying quantities. Dakota well #262 is scheduled to be commenced prior to the end of 1974.

As of this date, the total number of wells drilled in the Huerfano Unit on acreage committed to the Unit or on acreage pooled or communitized with acreage committed to the Unit is as follows.

Regional Oil and Gas Supervisor  
 Commissioner of Public Lands  
 Oil Conservation Commission  
 Page Two

Pictured Cliffs, Commercial	48
Pictured Cliffs, Non-Commercial (includes #220 well)	3
Pictured Cliffs, Plugged and Abandoned	33
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Gallup, Commercial, Plugged back from Dakota	1
Gallup, Non-Commercial, Plugged back from Dakota	2
Dakota, Commercial	105
Dakota, Non-Commercial	12
Dakota, Plugged and Abandoned	2
Dakota, Temporarily Abandoned	1
Gallup-Dakota, Commercial	11
Gallup-Dakota, Commercial in Gallup only	1
Gallup-Dakota, Commercial in Dakota only	3
Gallup, Commercial Status not determined	9
	<u>245</u>

Pursuant to Section 9 of the Huerfano Unit Agreement, El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Drilling Program for the calendar year 1975 providing for the drilling of the following-described wells:

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
266	W/2 Sec. 34, T-26-N, R-9-W	Dakota
267	W/2 Sec. 35, T-26-N, R-9-W	Dakota
268	N/2 Sec. 5, T-26-N, R-10-W	Dakota
269	E/2 Sec. 6, T-26-N, R-10-W	Dakota
270	W/2 Sec. 7, T-26-N, R-10-W	Dakota
271	W/2 Sec. 18, T-26-N, R-10-W	Dakota
272	E/2 Sec. 18, T-26-N, R-10-W	Dakota
273	S/2 Sec. 33, T-26-N, R-10-W	Dakota
274	W/2 Sec. 31, T-27-N, R-10-W	Dakota
275	E/2 Sec. 36, T-27-N, R-11-W	Dakota
280	S/2 Sec. 2, T-25-N, R-9-W	Dakota
Com #91	W/2 Sec. 30, T-27-N, R-10-W	Dakota

Dakota wells numbers 266, 267, 268, 269, 271, 272, 273, 274, 275 and 280 will be drilled on spacing units presently outside the existing Dakota Participating Area in order to extend the limits of the Participating Area. Dakota wells Com #91 and #270 will be drilled within the existing Dakota Participating Area as development wells.

In addition to the above wells, El Paso Natural Gas Company, as Unit Operator, will drill any offset wells that may be required to prevent drainage of unitized substances and any other wells deemed necessary or desirable by the Unit Operator and the working interest owners.

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

All of the working interest owners have been contacted and this Drilling Program reflects, insofar as possible, their desires for additional drilling.

If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet 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.

Yours very truly,

A handwritten signature in black ink, appearing to read "D. N. Canfield". The signature is written in a cursive style with a large, looping initial "D".

D. N. Canfield  
Director of Land  
Energy Resource Development

DNC:DW:km  
Attachments  
Huerfano Unit, 3.0

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

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

APPROVED: *A. L. Carter* DATE: *January 8, 1975*  
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 1975 Drilling Program for the  
Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

CRA International, Ltd.

Crown Central Petroleum Corporation

Evko Development Company

First National Bank In Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased,  
and U/A dated July 15, 1969 of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline K. Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James J. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Clarence E. Hinkle and  
Edna I. Hall, Trustees

Clarence E. Hinkle and  
Frank O. Elliott, Trustees

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

Mrs. Frances Langmore Kerrigan

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Northwest Pipeline Corporation

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

HUERFANO UNIT

Working Interest Owners - Page Three

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

David W. Walters, Executor for the  
Estate of Frances Walters, Deceased

Dr. Sherman Wengerd

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE NEW MEXICO 87501

*Jim*

195

January 7, 1974

C  
O  
P  
Y

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Re: Revised Forty-Third, Forty-Fourth and Forty-Fifth Expanded 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 Forty Third, Forty-Fourth, and Forty-Fifth Revisions 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico, and two copies are returned to the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey  
Roswell, New Mexico

Commissioner of Public Lands  
Santa Fe, New Mexico

**Tenneco Oil**  
A Tenneco Company

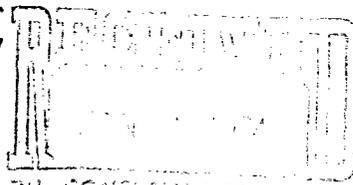
Suite 1200  
Lincoln Tower Building  
Denver, Colorado 80203  
(303) 292-9920



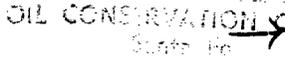
December 19, 1973

195

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201



Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico



Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for Approval of the  
Tenth Revision of the Participating  
Area for the Gallup Formation  
Huerfano Unit  
San Juan County, New Mexico

Gentlemen:

Tenneco Oil Company as a working interest owner in the Gallup participating area of the Huerfano Unit, San Juan County, New Mexico, wishes to inform you of our objection to the captioned revision.

The basis for the objection is the fact that the Huerfano Unit No. 247 (SE/4, Section 6, T 26 N, R 9 W) is located on the acreage included in the Tenth Revision. This well was completed in the Gallup interval and was tested on August 3, 1973 for a calculated absolute open flow of 547 MCF/D. Attached for your information is a copy of the Open Flow Test Data form. It appears that the Huerfano Unit No. 247 is not a commercial well and that acreage dedicated to this well should not be included in the Gallup participating area.

Yours very truly,

TENNECO OIL COMPANY

D. D. Myers  
Assistant Division  
Production Manager

SJR/sy

*Approved*

*Comm. Pub. Lands*

*12/12/73*

Attachment

*OCC*

*12/14/73*

cc: Mr. Keith Johnson - Conoco  
Mr. James R. Permenter - EPNG

FWB

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

RECEIVED  
JAN 2 1974  
CONSERVATION COMM  
Santa Fe

DATE AUGUST 3, 1973

Operator EL PASO NATURAL GAS COMPANY		Lease HUERFANO UNIT 247	
Location 850/S, 1500/E, SEC. 6, T-26-N, R-9-W		County SAN JUAN	State NEW MEXICO
Formation GALLUP		Pool ANGEL PEAK	
Casing: Diameter 4 1/2	Set An: Foot 6224	Tubing: Diameter 2 3/8	Set An: Foot
Depth Zone: From 5800	To 6134	Total Depth: 6224	Shot In 7-18-73
Isolation No. SWF		Flow Through Casing	Flow Through Tubing XX

Orifice Size, Inches OR 4"	Orifice 2.500	Orifice Constant C 32.64	WELL TESTED THRU 38/64 CHECK			
Shut-In Pressure, Casing, PSIG 837	+ 12 = PSIA 849	Days Shut-In 16	Shut-In Pressure, Tubing, PSIG 622	+ 12 = PSIA 834		
Working Pressure: P <sub>w</sub> , PSIG MR 6	+ 12 = PSIA WH 49	MR 18	Working Pressure: P <sub>w</sub> , PSIG 344	+ 12 = PSIA 356		
Temperature SG °F	F <sub>g</sub> = .9759	n = .75	F <sub>gv</sub> (From Tables) 1.003	Gravity 720 °S = .9120		

ORIFICE VOLUME = Q = C x P<sub>c</sub> x F<sub>g</sub> x F<sub>s</sub> x F<sub>gv</sub>

Q = CALCULATED FROM METER READINGS

= 473 MCF/D

$$OPEN FLOW = Aof = Q \left( \frac{P_c^2}{P_c P_w} \right)^n$$

NOTE: Well produced 19 bbl of 34.2 Gravity Oil.

$$Aof = Q \left( \frac{720801}{594065} \right)^n = 473 (1.2133)^{.75} = 473 (1.1561)$$

Aof = 547 MCF/D

TESTED BY DROUGHTON

APPROVED BY \_\_\_\_\_

*William D. Welch*  
WILLIAM D. WELCH, Well Test Engineer



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

December 14, 1973

GOVERNOR  
BRUCE KING  
CHAIRMAN  
LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER  
STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Permenter

Re: Tenth Revision - 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 Tenth Revision of the Participating Area for the 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico, and two copies are being returned to the Commissioner of Public Lands.

Very truly yours,

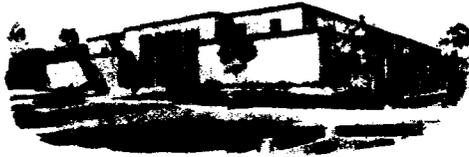
A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe  
U. S. Geological Survey - Roswell

State of New Mexico

TELEPHONE  
505-827-2748



145

Commissioner of Public Lands

December 12, 1973

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Re: Mesquero Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF  
THE TENTH REVISION OF THE  
PARTICIPATING AREA FOR THE  
GALLUP FORMATION, EFFECTIVE  
January 1, 1973

ATTENTION: Mr. James R. Forrester

Gentlemen:

The Commissioner of Public Lands has this date approved the Tenth Revision of the Participating Area for the Gallup Formation, for the Mesquero Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two copies to be returned to the Commissioner of Public Lands and one copy should be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Division

AJA/RDS/s

cc: USGS-Roswell, New Mexico  
GCC- Santa Fe, New Mexico

# El Paso Natural Gas Company

El Paso, Texas 79978

December 6, 1973

RECEIVED

DEC 11 11 29 AM '73

STATE LAND OFFICE  
SANTA FE, N.M.

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF  
THE TENTH REVISION OF THE  
PARTICIPATING AREA FOR THE  
GALLUP FORMATION, Effective  
January 1, 1973

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 Tenth Revision of the Participating Area for the Gallup Formation, to wit:

Tenth Revision - Effective January 1, 1973

<u>Description of Lands</u>	<u>Acres</u>
<u>Township 26 North, Range 9 West, N.M.P.M.</u> Section 6: Lots 1,2,3,4,5, SE/4 NW/4, S/2 NE/4, SE/4	
<u>Township 26 North, Range 10 West, N.M.P.M.</u> Section 1: Lots 1,2, S/2 NE/4	646.05

Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Two

This proposed Tenth 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 #231 Well.

The Huerfano Unit #231 Well, located 1050' from the North line and 800' from the West line of Section 6, Township 26 North, Range 9 West, N.M.P.M., was spudded on November 20, 1972 and completed on December 19, 1972 in the Gallup formation at a total depth of 6189'. The Gallup formation in the intervals between 5758'-5766', 5838'-5854', 5926'-5934', 5950'-5966', 5994'-6002', 6030'-6046', 6076'-6084', 6108'-6124' was treated with a sand-water fracturing process on December 2, 1972. The well was shut-in on December 5, 1972, and after being shut-in for fourteen (14) days the well was tested on December 19, 1972, and following a three (3) hour blow-down period, the Gallup formation gauged 84 BMCF through a 3/4" choke and 1002 MCF by the calculated absolute open-flow method, with an SIPC of 692 psia and an SIPT of 432 psia. The spacing unit for this well is described as the N/2 of Section 6, Township 26 North, Range 9 West, containing 320.00 acres.

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 Tenth Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geological Report concerning the Tenth Expansion of the Gallup Formation in the Huerfano Unit.

EXHIBIT "C"

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

EXHIBIT "D"

Schedule of Gallup oil and gas production.

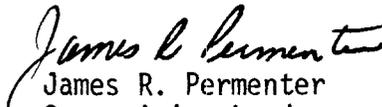
Regional Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

Attached to this application is Schedule XI 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 Tenth Revision 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.

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:lj  
Attachment

cc: Mr. Antonio Martinez  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

Regional Oil & Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Four

APPROVED: \_\_\_\_\_  
Regional Oil and Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands  
and the Oil Conservation Commis-  
sion

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

APPROVED: Alf J. Amigo  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation Commis-  
sion

DATE: December 12, 1973

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

DATE: Dec. 14, 1973

The foregoing approvals are for the Tenth Revision of the Participating Area for the Gallup formation, effective January 1, 1973, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B&M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually  
and as Executrix of the Estate of  
Frank S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Page 2

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

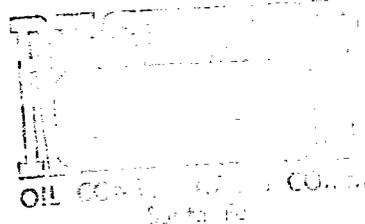
Frances Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company

El Paso, Texas 79975

December 6, 1973



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF  
THE TENTH REVISION OF THE  
PARTICIPATING AREA FOR THE  
GALLUP FORMATION, ALBUQUERQUE  
January 1, 1973

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Tenth Revision of the Participating Area for the Gallup Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:lj  
Enclosures

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico

Mr. R. F. Lemon  
Mr. John Ahlm

COPY

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 26, 1973

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978'

Attention: Mr. James R. Permenter

Re: Forty-First and Forty-Second Expansions  
of 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 Forty-First and Forty-Second Revisions 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell and two approved copies are being returned to the Commissioner of Public Lands.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK

cc: United States Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe

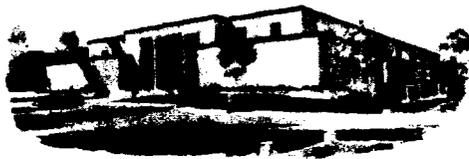
195

C  
O  
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Y

see

State of New Mexico

TELEPHONE  
505-827-2743



Commissioner of Public Lands  
November 13, 1973

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FORTY-FIRST AND FORTY-SECOND  
REVISIONS OF THE PARTICIPATING  
AREA OF THE DAKOTA FORMATION

ATTENTION: Mr. James R. Permenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Forty-First and Forty-Second Revision of the Participating Area for the Dakota Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two copies to be returned to the Commissioner of Public Lands and one copy should be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Division

AJA/RDG/s

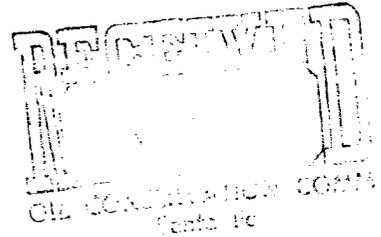
cc:

USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓

# El Paso Natural Gas Company

El Paso, Texas 79975

November 5, 1973



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico

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

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Forty-first and Forty-second Expanded Participating Area of the Dakota Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:lj  
Enclosures  
Huerfano 4.3

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

# El Paso Natural Gas Company

El Paso, Texas 79978

RECEIVED  
Nov 7 9 45 AM '73  
STATE LAND OFFICE  
SANTA FE, N.M.

November 5, 1973

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501



Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico,  
APPLICATION FOR APPROVAL OF THE  
FORTY-FIRST AND FORTY-SECOND  
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 Forty-first and Forty-second Revisions of the Participating Area for the Dakota Formation, to wit:

Forty-first Revision - Effective July 1, 1973

<u>Description of Lands</u>	<u>Acreege</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u>	
Section 31: Lots 1,2,3,4, E/2 W/2, E/2	637.68
Section 32: N/2	320.00
	<u>957.68</u>

November 5, 1973

Forty-second Revision - Effective September 1, 1973

<u>Description of Lands</u>	<u>Acreage</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u> Section 19: E/2	320.00
<u>Township 26 North, Range 11 West, N.M.P.M.</u> Section 1: Lots 1,2, S/2 NE/4, SE/4 (E/2)	319.88 <u>639.88</u>

The proposed Forty-first Revision of the Participating Area for the Dakota Formation is predicated on the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #243 and #245 wells.

The Huerfano Unit #243 well, located 1500' from the North line and 850' from the West line of Section 31, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 10, 1973, and completed on June 27, 1973 in the Dakota Formation at a total depth of 6479'. The Dakota Formation in the intervals between 6228', 6231', 6234', 6251' 6254', 6286', 6290', 6294', 6298', 6316', 6320', 6353', 6356', 6369', 6372', 6385' and 6388' was treated with a sand-water fracturing process on May 15, 1973. The well was shut-in on May 18, 1973, and after being shut-in for forty (40) days the well was tested on June 27, 1973, and following a three (3) hour blow down period, the Dakota Formation gauged 1285 MCF through a 3/4" choke and 1451 MCF by the calculated absolute open-flow method, with an SIPC of 1776 psia and an SIPT of 1474 psia. The spacing unit for this well is described as Lots 1,2,3,4, E/2 W/2 of Section 31, Township 26 North, Range 10 West, containing 317.92 acres.

The Huerfano Unit #245 well, located 870' from the North line and 1750' from the West line of Section 32, Township 26 North, Range 10 West, N.M.P.M., was spudded on April 24, 1973, and completed on June 27, 1973 in the Dakota Formation at a total depth of 6605'. The Dakota Formation in the intervals between 6390'-6400', 6412'-6422', 6450'-6470', and 6543'-6553' was treated with a sand-water fracturing process on May 19, 1973. The well was shut-in on May 22, 1973, and after being shut-in for thirty-five (35) days the well was tested on June 27, 1973, and following a three (3) hour blow-down period, the Dakota Formation gauged 2068 MCF through a

November 5, 1973

3/4" choke and 2224 MCF by the calculated absolute open-flow method, with an SIPC of 1846 psia and an SIPT of 1587 psia. The spacing unit for this well is described as the N/2 of Section 32, Township 26 North, Range 10 West, containing 320.00 acres.

The proposed Forty-second Revision of the Participating Area for the Dakota Formation is predicated on the knowledge and information first obtained upon completion in paying quantities of the Huerfano Unit #72 and #244 wells.

The Huerfano Unit #72 well, located 890' from the South line and 800' from the East line of Section 1, Township 26 North, Range 11 West, N.M.P.M., was spudded on June 22, 1973, and completed on August 23, 1973 in the Dakota Formation at a total depth of 6755'. The Dakota Formation in the intervals between 6522'-6528', 6574'-6586', 6618'-6630' and 6644'-6656' was treated with a sand-water fracturing process on July 19, 1973. The well was shut-in on July 21, 1973, and after being shut-in for thirty-two (32) days the well was tested on August 23, 1973, and following a three (3) hour blow-down period, the Dakota Formation gauged 1459 MCF through a 3/4" choke and 1571 MCF by the calculated absolute open-flow method, with an SIPC of 2051 psia and an SIPT of 1933 psia. The spacing unit for this well is described as Lots 1, 2, S/2 NE/4, SE/4 (E/2) of Section 1, Township 26 North, Range 11 West, containing 319.88 acres.

The Huerfano Unit #244 well, located 1000' from the South line and 890' from the East line of Section 19, Township 26 North, Range 10 West, N.M.P.M., was spudded on March 27, 1973, and completed on August 16, 1973 in the Dakota Formation at a total depth of 6558'. The Dakota Formation in the intervals between 6352'-6358', 6390'-6400', 6410'-6420', 6454'-6458' and 6492'-6496' was treated with a sand-water fracturing process on May 13, 1973. The well was shut-in on May 14, 1973, and after being shut-in for ninety-three (93) days the well was tested on August 16, 1973, and following a three (3) hour blow-down period, the Dakota Formation gauged 3571 MCF through a 3/4" choke and 4197 MCF by the calculated absolute open-flow method, with an SIPC of 1595 psia and an SIPT of 1307 psia. The spacing unit for this well is described as the E/2 of Section 19, Township 26 North, Range 10 West, containing 320.00 acres.

November 5, 1973

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 Forty-first and Forty-second Revisions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report concerning the Forty-first and Forty-second Revisions of the Dakota Formation in the Huerfano Unit.

EXHIBIT "C"

Figure No. 1: Structure Map on top of Graneros Shale.  
Figure No. 2: Isopach Map.

EXHIBIT "D"

Schedule of Dakota Gas Production.

Attached to this application are Schedules XLIV and XLIII 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 thereof.

If the hereinabove selection of lands to constitute the Forty-first and Forty-second Revisions of the Dakota 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DW:lj  
Huerfano 4.3

cc: Mr. Antonio Martinez  
Executive Director,  
New Mexico Oil & Gas Accounting Commission

APPROVED: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

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

APPROVED: Alef J. Amigo  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation Commission

DATE: November 13, 1973

APPROVED: A. R. Porter J.  
Oil Conservation Commission  
Subject to like approval by the  
United States Geological Survey  
and the Commissioner of Public Lands

DATE: Nov 26, 1973

The foregoing approvals are for the Forty-first and Forty-second Revisions of the Participating Area for the Dakota formation, Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mr. G. W. Hannett
Amoco Production Company Farmington, New Mexico	Mrs. Beulah Irene Hanson
Atlantic Richfield Company (3)	Mrs. Billie D. Hood
B & M Construction Corporation	Bernice Jeffs
Benson-Montin-Greer Drilling Corp.	Elma R. Jones
Robert L. Breedlove	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Brookhaven Oil Company	La Plata Gathering System, Inc.
Barbara Ann McConnell Bruss	O. J. Lilly
CRA International, Ltd.	Matagorda Oil Company
Mrs. Ola E. Callahan	Estate of Barbara Price Mayhew
Cenard Oil & Gas Company	K. E. McAfee
Consolidated Oil & Gas, Inc.	William H. McCartney
Continental Oil Company	Barbara Irene McConnell
Thomas G. Cornish	J. W. McConnell
Crown Central Petroleum Corporation	N-M Oil & Gas Venture
Evko Development Company	Pearl O. Pipkin
First National Bank in Albuquerque, Trustee U/W of A. T. Hannett, Deceased, and U/A dated July 15, 1969, of Louise Westfall Hannett	Laina Mabel Saari
Mr. and Mrs. Forrest Gelbke	Gladys Sketch
Albert R. Greer	J. C. Smith
Mrs. Charline Greer	Sunland Refining Corporation
Alfred Gross, Trustee	Sunshine Royalty Company
Peter Gross	Tenneco Oil Company
Dr. and Mrs. James R. Hamilton, Jr.	Texas Pacific Oil Company, Inc.
Mr. Vincent B. Hamilton	Estate of Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners  
Page Two

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

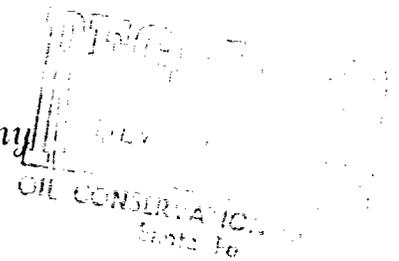
Frances Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company

El Paso, Texas 79973

May 23, 1973



172

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I-Sec. No. 731  
San Juan County, New Mexico  
1973 DRILLING PROGRAM

Gentlemen:

The 1973 Drilling Program for the Huerfano Unit dated April 27, 1973 was approved by the Regulatory Bodies on the following dates:

United States Geological Survey	-	May 18, 1973
Commissioner of Public Lands	-	May 7, 1973
Oil Conservation Commission	-	May 4, 1973

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

Yours very truly,

A handwritten signature in cursive script that reads "Larry A. Pridgeon".

Larry A. Pridgeon  
Landman, Land Department  
Energy Resource Development

LAP:dkc  
Huerfano 3.0



United States Department of the Interior

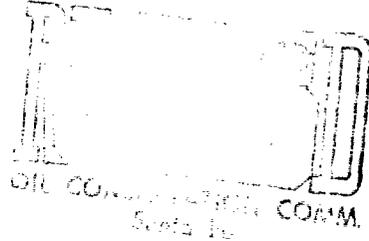
GEOLOGICAL SURVEY

Number 1857  
Roswell, New Mexico 88201

175  
May 18, 1973

In Reply Refer To:  
Gillham/Engr.

El Paso Natural Gas Company  
Attention: Mr. D. N. Canfield  
P.O. Box 1492  
El Paso, Texas 79978



Gentlemen:

Two approved copies of your 1973 plan of development for the Huerfano unit area, San Juan County, New Mexico, proposing the drilling of ten Gallup wells and six Bakota wells, are enclosed. Such plan was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SEC) CARL C. TRAYWICK

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
Washington (thru Denver) (w/cy plan)  
Farmington (w/cy plan)  
NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)

JAGillham:ds

# El Paso Natural Gas Company

El Paso, Texas 79978

May 9, 1973

195

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501



Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
FORTIETH REVISION OF THE PARTICI-  
PATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

The captioned Revision was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - May 4, 1973  
Commissioner of Public Lands - March 22, 1973  
Oil Conservation Commission - March 23, 1973

Copies of this letter are being sent to the working interest owners of the above described unit.

Yours very truly,

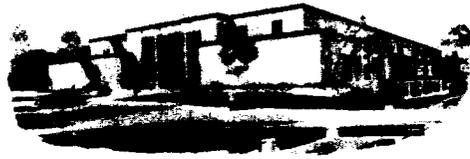
A handwritten signature in cursive script that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resources Development

DI:mm  
Huerfano, 4.3

cc: Mrs. Petita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission

State of New Mexico

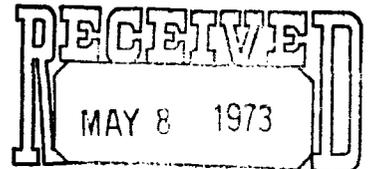


Commissioner of Public Lands

May 7, 1973

ALEX J. ARMIJO  
COMMISSIONER

~~TELEPHONE~~  
505-827-2748



OIL CONSERVATION COMM  
Santa Fe

P. O. BOX 1148  
SANTA FE, NEW MEXICO

195

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
1973 DRILLING PROGRAM  
San Juan County, New Mexico

ATTENTION: Mr. D. H. Ganfield

Gentlemen:

The Commissioner of Public Lands has this date approved your 1973 Drilling Program, for the Huerfano Unit, San Juan County, New Mexico, proposing the drilling of ten Gallup and six Dakota wells. This approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/EDS/s  
encl.  
cc:

USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓

**OIL CONSERVATION COMMISSION**

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

May 4, 1973

195

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

**Attention: Mr. D. N. Canfield**

Re: 1973 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 1973 Drilling Program providing for the drilling of ten Gallup wells and six Dakota wells 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 program is returned herewith.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: Commissioner of Public Lands - Santa Fe  
United States Geological Survey - Roswell

C  
C  
P  
Y

El Paso Natural Gas Company

El Paso, Texas 79978

April 27, 1973



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I-Sec. No. 731  
San Juan County, New Mexico  
1973 DRILLING PROGRAM

Gentlemen:

By letter dated March 8, 1972, El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program covering the captioned unit for the calendar year 1972. This program provided for the drilling of one (1) Pictured Cliffs and nine (9) Dakota wells. By letter dated April 19, 1972, El Paso Natural Gas Company filed a Supplemental Drilling Program providing for the drilling of two (2) additional Dakota wells. Each of these wells was timely drilled.

Pictured Cliffs well #220 was drilled within the existing Pictured Cliffs Participating Area and is at this time shut-in. Dakota wells #221 and #224 were drilled within the Dakota Participating Area and consequently did not cause an expansion of the Participating Area. Dakota wells #222, #223, #225, #226, #227, #228, and #230 were drilled on acreage outside the Dakota Participating Area and caused expansions of the Participating Area. The #222 well occasioned the Thirty-Seventh Expansion; the #223, #225, and #227 wells occasioned the Thirty-Eighth Expansion; the #226 and #228 wells occasioned the Thirty-Ninth Expansion; and the #230 well occasioned the Fortieth Expansion of the Dakota Participating Area. Dakota wells #216 and #229

April 27, 1973

were determined Non-Commercial for Unit purposes. The #138 well, which was originally drilled and completed in the Dakota Formation, was recompleted in the Gallup Formation and occasioned the Ninth Expansion of the Gallup Participating Area. El Paso Natural Gas Company, as Unit Operator, also drilled the #231 and #232 Gallup wells in 1972 and is presently observing production from these wells to determine if they are capable of producing in paying quantities.

As of this date, the total number of wells drilled in the Huerfano Unit on acreage committed to the Unit or on acreage pooled and communitized with acreage committed to the Unit is as follows:

Pictured Cliffs, Commercial	48
Pictured Cliffs, Non-Commercial (includes #220 well)	3
Pictured Cliffs, Plugged & Abandoned	33
Gallup, Commercial	2
Gallup, Commercial, Plugged back from Dakota	1
Gallup, Non-Commercial, Plugged back from Dakota	2
Dakota, Commercial	100
Dakota, Non-Commercial	5
Dakota, Plugged and Abandoned	2
Dakota, Temporarily Abandoned	1
Gallup-Dakota, Commercial	11
Gallup-Dakota, Commercial in Gallup only	1
Gallup-Dakota, Commercial in Dakota only	3
	<u>212</u>

Pursuant to Section 9 of the Huerfano Unit Agreement, El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Drilling Program for the calendar year 1973 providing for the drilling of the following-described wells:

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
233	E/2 Sec. 5, T-26-N, R-9-W	Gallup
234	S/2 Sec. 7, T-26-N, R-9-W	Gallup
236	W/2 Sec. 9, T-26-N, R-9-W	Gallup
237	W/2 Sec. 17, T-26-N, R-9-W	Gallup
238	E/2 Sec. 18, T-26-N, R-9-W	Gallup
239	W/2 Sec. 18, T-26-N, R-9-W	Gallup
240	W/2 Sec. 23, T-26-N, R-9-W	Gallup
241	N/2 Sec. 13, T-26-N, R-10-W	Gallup

April 27, 1973

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
242	S/2 Sec. 12, T-26-N, R-10-W	Gallup
243	W/2 Sec. 31, T-26-N, R-10-W	Dakota
244	E/2 Sec. 19, T-26-N, R-10-W	Dakota
245	N/2 Sec. 32, T-26-N, R-10-W	Dakota
246	E/2 Sec. 14, T-25-N, R-10-W	Dakota
247	S/2 Sec. 6, T-26-N, R-9-W	Gallup
Com 118	E/2 Sec. 30, T-27-N, R-10-W	Dakota
72	E/2 Sec. 1, T-26-N, R-11-W	Dakota

Gallup wells #233, #234, #236, #237, #238, #239, #240, #241, #242, and #247 will be drilled on spacing units presently outside the existing Gallup Participating Area in order to extend the limits of the Participating Area. Dakota wells #243, #244, #245, #246, and #72 will be drilled on spacing units presently outside the existing Dakota Participating Area in order to extend the limits of the Participating Area. Dakota well Com #118 will be drilled within the existing Dakota Participating Area as a development well. Since only 50% of the acreage included in the spacing unit for the Com #118 well is committed to the Huerfano Unit, the committed acreage will be communitized with non-committed acreage to complete the spacing unit.

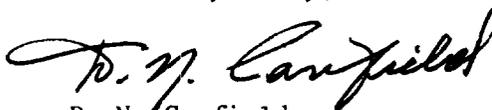
In addition to the above wells, El Paso Natural Gas Company, as Unit Operator, will drill any offset wells that may be required to prevent drainage of unitized substances and any other wells deemed necessary or desirable by the Unit Operator and the working interest owners.

All of the working interest owners have been contacted and this Drilling Program reflects, insofar as possible, their desires for additional drilling.

If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet 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.

Yours very truly,



D. N. Canfield  
Manager, Land Department  
Energy Resource Development

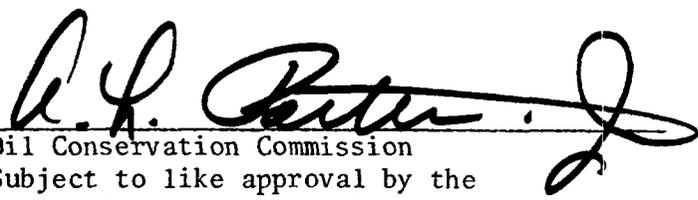
DNC:LAP:sv  
Attachments  
Huerfano 3.0

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

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: May 4, 1973

The foregoing approvals are for the 1973 Drilling Program for the Huerfano Unit,  
I-Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT

Working Interest Owners

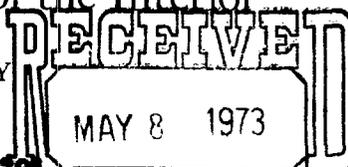
Amoco Production Company (3) Denver, Colorado	Mrs. Billie D. Hood
Amoco Production Company Farmington, New Mexico	Bernice Jeffs
Atlantic Richfield Company (3)	Elma R. Jones
B & M Construction Corporation	Corinne Roy Kelly, Individually, and Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Benson-Montin-Greer Drilling Corp.	La Plata Gathering System, Inc.
Mr. Robert L. Breedlove	Mr. O. J. Lilly
Brookhaven Oil Company	Matagorda Oil Company
Barbara Ann McConnell Bruss	Estate of Barbara Price Mayhew
CRA International, Ltd.	Mr. K. E. McAfee
Mrs. Ola E. Callahan	Mr. William H. McCartney
Cenard Oil & Gas Company	Barbara Irene McConnell
Consolidated Oil & Gas Inc.	Mr. J. W. McConnell, Jr.
Continental Oil Company	N-M Oil & Gas Venture
Mr. Thomas G. Cornish	Pearl O. Pipkin
Crown Central Petroleum Corp.	Mrs. Laina Mabel Saari
Evko Development Company	Gladys Sketch
First National Bank in Albuquerque, Trustee U/W of A. T. Hannett, Deceased	Mr. J. C. Smith
Mr. and Mrs. Forrest Gelbke	Sunland Refining Corporation
Mr. Albert R. Greer	Sunshine Royalty Company
Mrs. Charline K. Greer	Tenneco Oil Company
Alfred Gross, Trustee	Texas Pacific Oil Company, Inc. (2)
Peter Gross	Estate of Mr. and Mrs. Frank Toombs
Dr. and Mrs. James J. Hamilton, Jr.	Union Texas Petroleum Denver, Colorado
Mr. Vincent B. Hamilton	Union Texas Petroleum Houston, Texas
Mr. G. W. Hannett	Frances Walters
Mrs. Beulah Irene Hanson	Dr. Sherman Wengerd



United States Department of the Interior

GEOLOGICAL SURVEY

Denver 1857  
Roswell, New Mexico 88201



OIL CONSERVATION COMM.

Santa Fe  
May 4, 1973

In Reply Refer To:  
Monro/Engr.

El Paso Natural Gas Company  
Attention: Mr. James R. Fermenter  
P.O. Box 1492  
El Paso, Texas 79978

195

Gentlemen:

The fortieth revision of the Dakota participating area for the Huerfano unit agreement, San Juan County, New Mexico, No. I-Sec-731, was approved on May 4, 1973, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of August 1, 1972. By such revision, the Dakota participating area is enlarged to 42,954.67 acres.

The fortieth revision of the Dakota participating area proposes the W $\frac{1}{4}$  sec. 8, T. 26 N., R. 10 W., N.M.P.M., and is based on the completion of unit well No. 230 in the NW $\frac{1}{4}$  of sec. 8 as a paying well pursuant to the terms of the unit agreement. Unit well No. 230 was completed on July 21, 1972, for a calculated absolute open flow potential of 754 MCFGPD from the Dakota 6,608 to 6,772 feet.

Copies of the approved application are being distributed to the Federal offices involved, and two copies are returned herewith. You are requested to furnish the State of New Mexico and all interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
BLM, Santa Fe (ltr only)  
Washington (w/cy appln) (thru Denver)  
Farmington (w/cy appln)  
✓ NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)

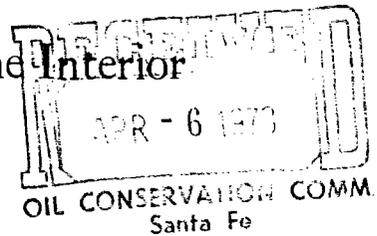
JMonro:ds



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857  
Roswell, New Mexico 88201



In Reply Refer To:  
Monro/Engr.

April 5, 1973

El Paso Natural Gas Company  
Attention: Mr. James R. Permenter  
P. O. Box 1492  
El Paso, Texas 79978

Re: Fortieth revision Dakota participating area, Huerfano unit  
agreement No. I-Sec.-731

Gentlemen:

Your application dated March 22 states that El Paso Natural Gas Company, as operator of the Huerfano unit area, has determined that the unit well No. 230 located in NW¼ sec. 8, T. 26 N., R. 10 W., N.M.P.M., is capable of producing unitized substances in paying quantities from the Dakota formation. The information contributed by the completion of said well is the basis upon which the land proposed for inclusion in the Dakota formation participating area by the fortieth revision, was selected.

In view of the above, the following information for unit well No. 230 is needed to supplement the information contained in the application:

1. Data necessary for reservoir calculations; including gas gravity, porosity, water saturation, bottomhole pressure and temperature, drainage area, abandonment pressure, and net pay thickness.
2. Economics involved; including well cost, monthly operating expense, and estimated life of well.
3. An estimate of the recoverable reservoir from the Dakota formation.

Upon receipt of the above requested information, your application will be given prompt consideration.

RECEIVED  
OIL & GAS  
DIVISION  
SANTA FE

Sincerely yours,

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
Washington  
Farmington  
Com. Pub. Lands, Santa Fe  
MOCC, Santa Fe ✓

Monro:lh

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

March 23, 1973

175

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. James R. Permenter

Re: Fortieth Revision 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 Fortieth Revision of the Dakota Formation 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, and two approved copies are being returned to the Commissioner of Public Lands.

Very truly yours,

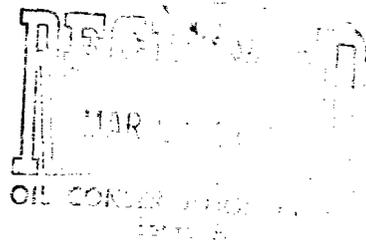
A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe

*El Paso Natural Gas Company*

*El Paso, Texas 79999*



175

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE FORTIETH  
REVISION OF THE PARTICIPATING AREA FOR  
THE DAKOTA FORMATION

Dear Sir:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Fortieth Expanded Participating Area of the Dakota Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

Original Signed By:  
JAMES R. PERMENTER

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:LAP:dks  
Enclosures  
Huerfano 4.3

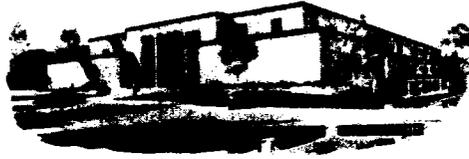
cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

COPY

State of New Mexico

TELEPHONE  
505-827-2748



Commissioner of Public Lands

March 22, 1973

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE FORTIETH  
REVISION OF THE PARTICIPATING AREA FOR  
THE DAKOTA FORMATION

ATTENTION: Mr. James R. Permenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Fortieth Revision of the Participating Area for the Dakota Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two copies to be returned to the Commissioner of Public Lands and one copy should be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/RDG/s  
cc:

USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico

# El Paso Natural Gas Company

El Paso, Texas 79978

March 22, 1973

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

RECEIVED  
MAR 22 10 46 AM '73  
STATE OF NEW MEXICO  
LANDS DEPARTMENT

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE FORTIETH  
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 Fortieth Revision of the Participating Area for the Dakota Formation, to wit:

Fortieth Revision - Effective August 1, 1972

<u>Description of Lands</u>	<u>Acreage</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u> Section 8: W/2	320.00

The proposed Fortieth Revision of the Participating Area for the Dakota Formation is predicated on the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #230 well.

The Huerfano Unit #230 well, located 900' from the North line and 1840' from the West line of Section 8, T-26-N, R-10-W, was spudded on April 30, 1972, and completed on May 15, 1972 in the Dakota Formation at a total depth of 6825'. The Dakota Formation in the intervals between 6608'-6616', 6650'-6654', 6664'-6668', 6706'-6718', 6730'-6734', 6764'-6772' was treated with a sand-water fracturing process on May 14, 1972. The well was shut-in on July 11, 1972, and after being shut-in for gauge for ten (10) days, the well was tested on July 21, 1972, and following a three-hour blow-down period the Dakota Formation gauged 628 MCF/D through a 3/4" choke and 754 MCF/D by the calculated absolute open-flow method, with an SIPC of 1546 psia and an SIPT of 1578 psia. The spacing unit for this well is described as the W/2 of Section 8, T-26-N, R-10-W, containing 320.00 acres.

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 Fortieth Revision of the Dakota Participating Area.

EXHIBIT "B"

Geological Report concerning the Fortieth Revision of the Dakota Formation in the Huerfano Unit.

EXHIBIT "C"

Figure No. 1: Structure Map on top of Graneros Shale.  
Figure No. 2: Isopach Map.

EXHIBIT "D"

Schedule of Dakota Gas Production.

Attached to this application is Schedule XLII 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.

United States Geological Survey  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

If the hereinabove selection of lands to constitute the Fortieth Revision of the Dakota 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:LAP:dks  
Enclosures  
Huerfano 4.3

cc: Mrs. Pepita O. Jeffus  
Executive Director, New Mexico  
Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

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

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

APPROVED: Alfred J. Amigo  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey  
and the Oil Conservation Commission

DATE: March 22, 1973

APPROVED: A. H. Porter, Jr.  
Oil Conservation Commission  
Subject to like approval by the  
United States Geological Survey  
and the Commissioner of Public  
Lands

DATE: March 23, 1973

The foregoing approvals are for the Fortieth Revision of the Participating Area for the Dakota Formation, Huerfano Unit, 1 Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased,  
and U/A dated July 15, 1969, of Louise  
Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank  
S. Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Estate of Mr. and Mrs. Frank Toombs

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

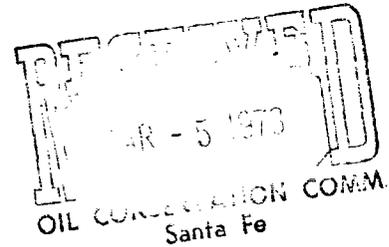
Frances Walters

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79978

February 28, 1973



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

~~Oil~~ Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico,  
NOTICE OF COMPLETION OF ADDITIONAL  
WELLS, Dakota Formation

Gentlemen:

Pursuant to Section 10 of the Huerfano Unit Agreement, I Sec. No. 731, El Paso Natural Gas Company, as Unit Operator, determined on the dates set out below that two (2) additional wells capable of producing unitized substances in commercial quantities have been completed upon acreage committed to the Unit. These wells are as follows:

The Huerfano Unit #221 Well, located 1550' from the South line and 1510' from the West line of Section 13, T-25-N, R-10-W, was spudded on March 29, 1972, and completed on April 14, 1972, in the Dakota Formation at a total depth of 6721'. The Dakota Formation in the intervals between 6514'-6526', 6550'-6556', 6572'-6584', 6592'-6596', 6636'-6642', was treated with a sand-water fracturing process on April 13, 1972. The well was shut-in on April 15, 1972, and after being shut-in for gauge for nine (9) days, the well was tested on April 24, 1972, and following a three-hour

February 28, 1973

blow down period the Dakota Formation gauged 4088 MCF/D through a 3/4" choke and 4956 MCF/D by the absolute open-flow method, with an SIPC of 1936 psia and an SIPT of 1936 psia. The spacing unit for this well is described as the S/2 of Section 13, T-25-N, R-10-W, containing 320.00 acres.

The above-described spacing unit was included in the Huerfano Unit Twenty-Sixth Expanded Participating Area of the Dakota Formation effective May 1, 1965, and the completion of this well does not warrant any further expansion of the Dakota Participating Area.

The Huerfano Unit Com #224 Well, located 1650' from the South line and 990' from the East line of Section 4, T-26-N, R-10-W, was spudded on February 6, 1972, and completed on February 21, 1972, in the Dakota Formation at a total depth of 7025'. The Dakota Formation in the intervals between 6776'-6782', 6812'-6818', 6854'-6860', 6866'-6872', 6914'-6930', was treated with a sand-water fracturing process on February 20, 1972. The well was shut-in on February 22, 1972, and after being shut-in for gauge for seven (7) days, the well was tested on February 29, 1972, and following a three-hour blow down period the Dakota Formation gauged 371 MCF/D through a 3/4" choke and 390 MCF/D by the calculated absolute open-flow method, with an SIPC of 1612 psia and an SIPT of 1597 psia. The well was shut-in for gauge again on March 10, 1972 and after being shut-in for seven (7) days the well was retested on March 17, 1972 and following a three-hour blow down period the Dakota Formation gauged 388 MCF/D through a 3/4" choke and 407 MCF/D by the calculated absolute open-flow method, with an SIPC of 1643 psia and an SIPT of 1662 psia. The spacing unit for this well is described as the E/2 of Section 4, T-26-N, R-10-W, containing 319.65 acres.

The NE/4 of the above-described spacing unit was included in the Huerfano Unit Second Expanded Participating Area of the Dakota Formation effective January 1, 1959, and the SE/4 of the above-described spacing unit was included in the Huerfano Unit Thirty-Fifth Expanded Participating Area of the Dakota Formation effective August 1, 1971, and the completion of this well does not warrant any further expansion of the Dakota Participating Area.

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

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:dks  
Huerfano Unit 4.3.1

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
 Denver, Colorado

Amoco Production Company  
 Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
 Trustee U/W of A. T. Hannett, Deceased,  
 and U/A dated July 15, 1969, of  
 Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
 as Executrix of the Estate of Frank S.  
 Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Laina Mabel Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

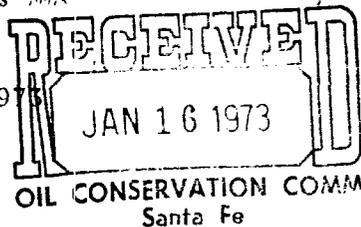
Frances Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company

El Paso, Texas 79978

January 12, 1973



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPROVAL OF THE THIRTY-EIGHTH AND  
THIRTY-NINTH REVISIONS OF THE PAR-  
TICIPATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

This is to advise that the captioned Expansion for the Huerfano Unit was approved by the Regulatory Agencies on the following dates:

United States Geological Survey - January 9, 1973  
Oil Conservation Commission - December 6, 1972  
Commissioner of Public Lands - December 4, 1972

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

Yours very truly,

A handwritten signature in cursive script that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

DI:lj

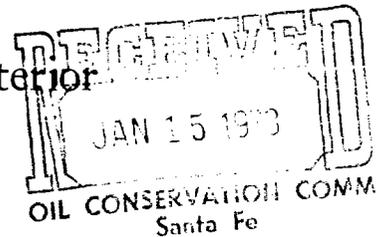
cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857  
Roswell, New Mexico 88201



January 12, 1973

Mr. James R. Permenter  
El Paso Natural Gas Company  
El Paso, Texas 79978

195

Dear Mr. Permenter:

Your notice of January 4, 1973, advises that as operator of the Herfano unit, San Juan County, New Mexico, you have determined that unit well No. 216 in the NW $\frac{1}{4}$  sec. 30, T. 26 N., R. 10 W., N.M.P.M., lease New Mexico 02890, is not capable of producing unitized substances in paying quantities from the Dakota formation.

Well No. 216 was tested March 8, 1972, for a calculated absolute open flow potential of 531 MCF per day from the Dakota interval 6,315 to 6,450 feet. Further, a deliverability of 83 MCF per day was only sustained for 38 days with a total production of 3,156 MCF.

This office concurs with your determination that said well is not capable of producing unitized substances in paying quantities. The description of the spacing unit for the subject well shown in the last sentence of the first page of the notice as the E $\frac{1}{4}$  has been corrected to the W $\frac{1}{4}$  on all copies. You are requested to note your records accordingly and furnish all interested parties with appropriate evidence of this approval. Two surplus copies of the notice are returned herewith.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

CARL C. TRAYWICK  
Acting Area Oil and Gas Supervisor

cc:  
Washington (w/cy notice)  
Farmington (w/cy notice)  
BLM, Santa Fe (ltr. only)  
NMOCC, Santa Fe (ltr. only) ✓  
Com. of Pub. Lands, Santa Fe (ltr. only)

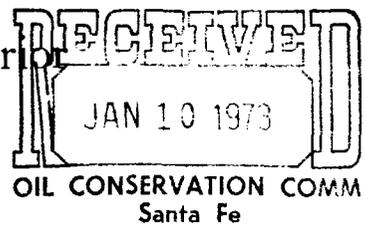
JAGillham:lh



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857  
Roswell, New Mexico 88201



January 9, 1973

James R. Permenter  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

145

Dear Mr. Permenter:

Your application of November 24, 1972, requesting approval of the thirty-eighth and thirty-ninth revisions of the Sabota participating area for the Mesquite unit agreement, San Juan County, New Mexico, I-Sec. No. 731, was approved on January 9, 1973, by the Acting Area Oil and Gas Supervisor, U. S. Geological Survey, effective as of April 1, 1972, and May 1, 1972, respectively.

The thirty-eighth revision adds 800.31 acres described as the NW $\frac{1}{4}$  sec. 4, E $\frac{1}{4}$  sec. 30, T. 26 N., R. 10 W., and the SE $\frac{1}{4}$  sec. 32, T. 27 N., R. 10 W., N.M.P.M., which enlarges the Sabota participating area to 41,994.67 acres. Such revision is based upon the information contributed by the following unit wells:

<u>Well No.</u>	<u>Location</u>	<u>Completion Date</u>	<u>Calculated Potential, MCFD</u>
223	NW $\frac{1}{4}$ sec. 4, T. 26 N., R. 10 W.	3-14-72	1,575
225	SE $\frac{1}{4}$ sec. 30, T. 26 N., R. 10 W.	3-21-72	11,214
227	SE $\frac{1}{4}$ sec. 32, T. 27 N., R. 10 W.	3-27-72	1,897

The thirty-ninth revision adds 640 acres described as the NW $\frac{1}{4}$  sec. 33, T. 26 N., R. 10 W., and the NW $\frac{1}{4}$  sec. 32, T. 27 N., R. 10 W., N.M.P.M., thereby enlarging the Sabota participating area to 42,634.67 acres. This revision is based upon the information contributed by the two unit wells described below.

<u>Well No.</u>	<u>Location</u>	<u>Completion Date</u>	<u>Calculated Potential, MCFD</u>
226	NW $\frac{1}{4}$ sec. 33, T. 26 N., R. 10 W.	4-5-72	753
228	NW $\frac{1}{4}$ sec. 32, T. 27 N., R. 10 W.	4-11-72	1,146

Copies of the approved application are being distributed to the appropriate Federal offices and two approved copies are being returned herewith. The delineation of acreage involved in the thirty-ninth revision was corrected with yellow pencil on Exhibit "G" Figure No. 2 on all copies to conform with the application and it is requested that your records be noted accordingly. You are also requested to furnish the State of New Mexico and all other interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) CARL C. TRAYWICK

**CARL C. TRAYWICK**  
Acting Area Oil and Gas Supervisor

cc:

Washington (w/cy appln.)  
Farmington (w/cy appln.)  
BLM, Santa Fe (w/cy appln.)  
BMOCC, Santa Fe (ltr. only) ✓  
Com. Pub. Lands, Santa Fe (ltr. only)

JAGillham:lh

195

**OIL CONSERVATION COMMISSION**  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

December 6, 1972

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas

Attention: Mr. James R. Permenter

Re: Thirty-Eighth and Thirty-Ninth  
Revisions - 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 Thirty-Eighth and Thirty-Ninth Revisions of the Participating Area for the Dakota 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico, and two approved copies are returned to the Commissioner of Public Lands.

Very truly yours,

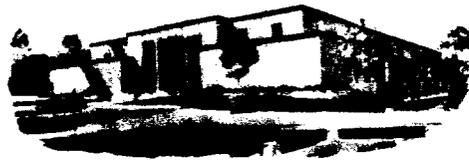
A. L. PORTER, Jr.  
Secretary-Director

ALP/JER/og

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

Commissioner of Public Lands  
Santa Fe, New Mexico

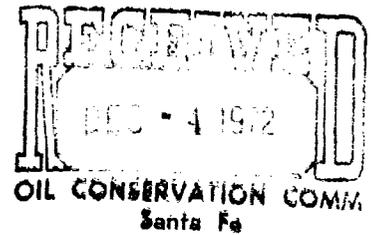
State of New Mexico



Commissioner of Public Lands

December 4, 1972

ALEX J. ARMIJO  
COMMISSIONER



P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTY-EIGHTH AND THIRTY-NINTH  
REVISIONS OF THE PARTICIPATING  
AREA FOR THE DAKOTA FORMATION

ATTENTION: Mr. James R. Permenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Thirty-Eighth and Thirty-Ninth Revisions of the Participating area for the Dakota Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) Copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their consideration. Two copies to be returned to the Commissioner of Public Lands and one copy must be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

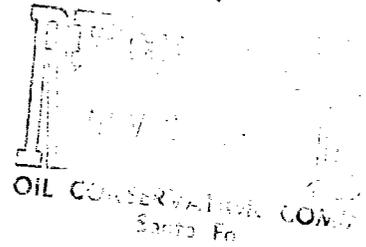
AJA/RDG/s

cc: OCC-Santa Fe, New Mexico (cpy of ltr and 8 cyps of application)  
USGS-Roswell, New Mexico (cpy of ltr only)

El Paso Natural Gas Company

El Paso, Texas 79999

November 24, 1972



Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTY-EIGHTH AND THIRTY-NINTH  
REVISIONS OF THE PARTICIPATING  
AREA FOR THE DAKOTA FORMATION

Dear Sir:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Thirty-Eighth and Thirty-Ninth Revisions of the Participating Area for the Dakota Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

Original Signed By:  
JAMES R. PERMENTER

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:nja  
Enclosures  
Huerfano 4.3

cc: United States Geological Survey  
Roswell, New Mexico 88201

✓ Oil Conservation Commission  
Santa Fe, New Mexico 87501

# El Paso Natural Gas Company

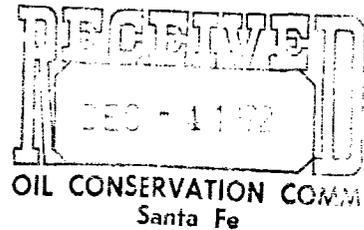
El Paso, Texas 79999

November 24, 1972

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501



Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTY-EIGHTH AND THIRTY-NINTH  
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 Thirty-Eighth and Thirty-Ninth Revisions of the Participating Area for the Dakota Formation, to wit:

<u>Thirty-Eighth Revision - Effective April 1, 1972</u>	
<u>Description of Lands</u>	<u>Acreage</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u>	
Section 4: W/2	320.31
Section 30: E/2	320.00
<u>Township 27 North, Range 10 West, N.M.P.M.</u>	
Section 32: SE/4	160.00
	<u>800.31</u>

November 24, 1972

<u>Thirty-Ninth Revision - Effective May 1, 1972</u>	
<u>Description of Lands</u>	<u>Acreage</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u>	
Section 33: N/2	320.00
<u>Township 27 North, Range 10 West, N.M.P.M.</u>	
Section 32: W/2	320.00
	<u>640.00</u>

The proposed Thirty-Eighth Revision of the Participating Area for the Dakota Formation is predicated on the knowledge and information first obtained upon the completion in paying quantities of the Huerfano Unit #223, #225 and #227 wells.

The Huerfano Unit #223 well, located 1850' from the North line and 1840' from the West line of Section 4, T-26-N, R-10-W, was spudded on February 21, 1972, and completed on March 6, 1972 in the Dakota Formation at a total depth of 7072'. The Dakota Formation in the intervals between 6806'-6812', 6839'-6845', 6880'-6886', 6896'-6902', 6948'-6960', 6990'-7002' was treated with a sand-water fracturing process on March 5, 1972. The well was shut-in on March 7, 1972, and after being shut-in for gauge for seven days, the well was tested on March 14, 1972, and following a three-hour blow-down period the Dakota Formation gauged 1460 MCF/D through a 3/4" choke and 1575 MCF/D by the calculated absolute open-flow method, with an SIPC of 2009 psia and an SIPT of 1169 psia. The spacing unit for this well is described as the W/2 of Section 4, T-26-N, R-10-W, containing 320.31 acres.

The Huerfano Unit #225 well, located 1650' from the South line and 990' from the East line of Section 30, T-26-N, R-10-W, was spudded on March 1, 1972, and completed on March 14, 1972 in the Dakota Formation at a total depth of 6545'. The Dakota Formation in the intervals between 6348'-6360', 6370'-6376', 6414'-6426', 6436'-6442', 6472'-6478', 6493'-6499', 6514'-6526' was treated with a sand-water fracturing process on March 13, 1972. The well was shut-in on March 14, 1972, and after being shut in for gauge for seven days, the well was tested on March 21, 1972, and following a three-hour blow-down period the Dakota Formation gauged 6612 MCF/D through a 3/4" choke and 11,214 MCF/D by the calculated absolute open-flow method, with an SIPC of 1817 psia

November 24, 1972

and an SIPT of 1345 psia. The spacing unit for this well is described as the E/2 of Section 30, T-26-N, R-10-W, containing 320.00 acres.

The Huerfano Unit #227 well, located 1070' from the South line and 1840' from the East line of Section 32, T-27-N, R-10-W, was spudded on March 7, 1972, and completed on March 20, 1972, in the Dakota Formation at a total depth of 6558'. The Dakota Formation in the intervals between 6272'-6282', 6308'-6318', 6360'-6370', 6414'-6430', 6442'-6452' was treated with a sand-water fracturing process on March 20, 1972. The well was shut-in on March 20, 1972, and after being shut-in for gauge for seven days, the well was tested on March 27, 1972, and following a three-hour blow-down period the Dakota Formation gauged 1705 MCF/D through a 3/4" choke, and 1897 MCF/D by the calculated absolute open-flow method, with an SIPC of 1789 psia and an SIPT of 1706 psia. The spacing unit for this well is described as the E/2 of Section 32, T-27-N, R-10-W, containing 320.00 acres.

The proposed Thirty-Ninth Revision of the Participating Area for the Dakota Formation is predicated on the knowledge and information first obtained upon completion in paying quantities of the Huerfano Unit #226 and #228 wells.

The Huerfano Unit #226 well, located 990' from the North line and 1650' from the West line of Section 33, T-26-N, R-10-W, was spudded on March 14, 1972, and completed on March 29, 1972, in the Dakota Formation at a total depth of 6715'. The Dakota Formation in the intervals between 6506'-6514', 6528'-6534', 6564'-6576', 6636'-6644', 6654'-6660', 6670'-6680' was treated with a sand-water fracturing process on March 28, 1972. The well was shut-in on March 29, 1972, and after being shut-in for gauge for seven days, the well was tested on April 5, 1972, and following a three-hour blow-down period the Dakota Formation gauged 748 MCF/D through a 3/4" choke and 753 MCF/D by the calculated absolute open-flow method, with an SIPC of 1676 psia and an SIPT of 1692 psia. The spacing unit for this well is described as the N/2 of Section 33, T-26-N, R-10-W, containing 320.00 acres.

November 24, 1972

The Huerfano Unit #228 well, located 840' from the North line and 1750' from the West line of Section 32, T-27-N, R-10-W, was spudded on March 21, 1972, and completed on April 4, 1972, in the Dakota Formation at a total depth of 6544'. The Dakota Formation in the intervals between 6266'-6272', 6298'-6304', 6356'-6368', 6408'-6420', 6458'-6470' was treated with a sand-water fracturing process on April 3, 1972. The well was shut-in on April 4, 1972, and after being shut-in for gauge for seven days, the well was tested on April 11, 1972, and following a three-hour blow-down period the Dakota Formation gauged 1038 MCF/D through a 3/4" choke and 1146 MCF/D by the calculated absolute open-flow method, with an SIPC of 1652 psia and an SIPT of 1239 psia. The spacing unit for this well is described as the W/2 of Section 32, T-27-N, R-10-W, containing 320.00 acres.

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 Thirty-Eighth and Thirty-Ninth Revisions of the Dakota Participating Area.

EXHIBIT "B"

Geological Report concerning the Thirty-Eighth and Thirty-Ninth Revisions of the Dakota Formation in the Huerfano Unit.

EXHIBIT "C"

Figure No. 1: Structure Map on top of Graneros Shale.  
Figure No. 2: Isopach Map

EXHIBIT "D"

Schedule of Dakota Gas Production.

Attached to this application are Schedules XL and XLI 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.

November 24, 1972

If the hereinabove selection of lands to constitute the Thirty-Eighth and Thirty-Ninth Revisions of the Dakota 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:nja  
Enclosures  
Huerfano 4.3

cc: Mrs. Pepita O. Jeffus  
Executive Director, New Mexico  
Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

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

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

APPROVED: *Alvin J. ...*  
Commissioner of Public Lands  
Subject to like approval by the  
United States Geological Survey and  
the Oil Conservation Commission

DATE: December 4, 1972

APPROVED: *A. B. ...*  
Oil Conservation Commission  
Subject to like approval by the  
United States Geological Survey and  
the Commissioner of Public Lands

DATE: December 6, 1972

The foregoing approvals are for the Thirty-Eighth and Thirty-Ninth Revisions of the Participating Area for the Dakota Formation, Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

## HUERFANO UNIT

Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Crown Central Petroleum Corporation

Evko Development Company

First National Bank in Albuquerque,  
Trustee U/W of A. T. Hannett, Deceased,  
and U/A dated July 15, 1969, of  
Louise Westfall Hannett

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank S.  
Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Estate of Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Mr. and Mrs. Reino R. Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners

Union Texas Petroleum  
Denver, Colorado

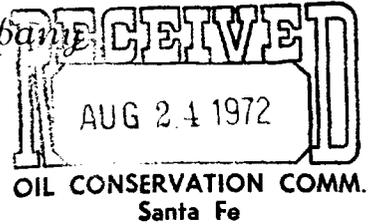
Union Texas Petroleum  
Houston, Texas

Frances Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company

El Paso, Texas 79978



August 21, 1972

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
APPROVAL OF THE NINTH REVISION OF  
THE PARTICIPATING AREA FOR THE  
GALLUP FORMATION

Gentlemen:

This is to advise that the captioned Expansion of the Huerfano Unit was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - August 18, 1972  
Commissioner of Public Lands - August 9, 1972  
Oil Conservation Commission - August 9, 1972

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

Yours very truly,

A handwritten signature in cursive script that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

DI:lj  
Huerfano Unit 3.0

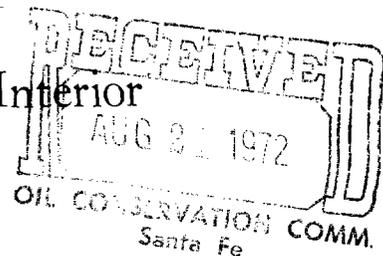
cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico



United States Department of the Interior

GEOLOGICAL SURVEY

Draiser 1857  
Roswell, New Mexico 88201



August 18, 1972

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Fermenter

Gentlemen:

Your application of August 2, 1972, requesting approval of the ninth revision of the Gallup participating area for the Huerfano unit agreement, San Juan County, New Mexico, I Sec. No. 731, was approved on August 18, 1972, by the Oil and Gas Supervisor, U. S. Geological Survey, effective as of February 1, 1972.

The ninth revision adds 320 acres described as the N $\frac{1}{4}$  sec. 22, T. 26 N., R. 9 W., N.M.P.M., which increases the Gallup participating area to 5,618.20 acres. Such revision is based on the information obtained by the completion and production data of unit well No. 138 located in the NW $\frac{1}{4}$  of said sec. 22. Although well No. 138 was completed January 10, 1972, for an initial restricted potential of 155 MCFPD from the Gallup interval 5,665 to 5,838 feet, six months operation has produced 45,950 MCF gas and 188 barrels of condensate with the monthly production data showing a significant continuing improvement in deliverability from the initial rate of 208 MCFPD in January, 1972, to 330 MCFPD in June, 1972.

Copies of the approved application are being distributed to the appropriate Federal offices and two approved copies are returned herewith. The effective date shown in the sentence at the bottom of the approval page as November 1, 1970, has been corrected to February 1, 1972, on all copies and it is requested that your records be noted accordingly. You are also requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

cc:

Washington (w/cy appln.)  
Farmington (w/cy appln.)  
BIM, Santa Fe (ltr. only)  
NMOCC, Santa Fe (ltr. only) ✓  
Com. of Pub. Lands, Santa Fe (ltr. only)

N. O. FREDERICK  
Area Oil and Gas Supervisor

JAG:llham:lh

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

*Jim*

August 9, 1972

175

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Permenter

Re: Ninth Revision of the  
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 Ninth Revision of the Participating Area for the 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, and two copies are being returned to the Commissioner of Public Lands.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

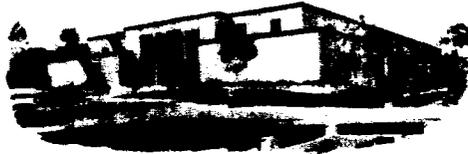
cc: United States Geological Survey  
Roswell, New Mexico

Commissioner of Public Lands  
Santa Fe, New Mexico

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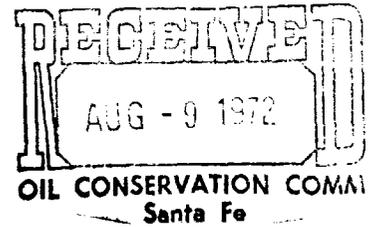
State of New Mexico

TELEPHONE  
505-827-2748



Commissioner of Public Lands

August 9, 1972



P. O. BOX 1148  
SANTA FE, NEW MEXICO

ALEX J. ARMIJO  
COMMISSIONER

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: HUERFANO UNIT  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
NINTH REVISION OF THE PARTICIPATING  
AREA FOR THE GALLUP FORMATION,  
Effective February 1, 1972

ATTENTION: Mr. James R. Parmenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Ninth Revision of the Participating Area for the Gallup Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing eight (8) copies of the application to the Oil Conservation Commission requesting them to forward five (5) copies to the United States Geological Survey at Roswell, New Mexico for their Consideration. Two copies to be returned to the Commissioner of Public Lands and one copy must be retained by the Oil Conservation Commission. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso Natural Gas Company.

Very truly yours,

RAY D. GRAMM, Director  
Oil and Gas Department

AJA/RDG/s

cc: OCC-Santa Fe, New Mexico (copy of ltr and 8 copies of application)  
USGS-Roswell, New Mexico (copy of ltr only)

# El Paso Natural Gas Company

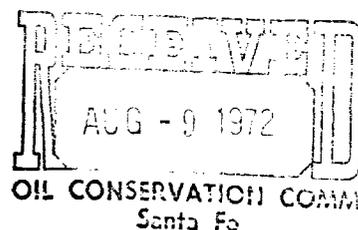
El Paso, Texas 79978

August 2, 1972

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501



Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF  
THE NINTH REVISION OF THE PAR-  
TICIPATING AREA FOR THE GALLUP  
FORMATION

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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 Ninth Revision of the Participating Area for the Gallup Formation, to wit:

Ninth Revision - Effective February 1, 1972

<u>Description of Lands</u>	<u>Acreage</u>
T-26-N, R-9-W, N.M. P. M. Section 22: N/2	320.00

August 2, 1972

This proposed Ninth 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 #138 Well.

The Huerfano Unit #138 Well, located in the NW/4 of Section 22, Township 26 North, Range 9 West, N. M. P. M. , was originally drilled and completed in the Dakota Formation. On October 16, 1971, the Dakota Formation was plugged and abandoned and operations were commenced to recomplete the well in the Gallup Formation. The Gallup Formation in the intervals between 5665'-5674', 5746'-5754', 5778'-5784', 5829'-5838' was treated with a sand-water fracturing process on October 19, 1971 and was shut-in for gauge on October 22, 1971. The well was tested on January 10, 1972 and gauged 155 MCF/d and 4.0 barrels of oil. Since testing the well has apparently cleaned up and has increased its deliverability each month. The well produced 208 MCF/d during January, 228 MCF/d during February, 235 MCF/d during March, 305 MCF/d during April, 327 MCF/d during May, and 330 MCF/d during June. In view of the performance characteristics of this well, El Paso Natural Gas Company has determined that the well is capable of producing unitized substances in paying quantities from the Gallup Formation.

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 Expansion of the Gallup Participating Area.

EXHIBIT "B"

Geologic Report concerning the Ninth Expansion of the Gallup Formation in the Huerfano Unit.

August 2, 1972

EXHIBIT "C"

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

EXHIBIT "D"

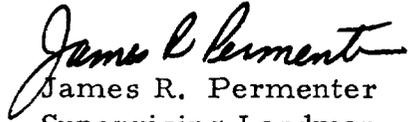
Schedule of Gallup oil and gas production.

Attached to this application is Schedule X 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 Ninth Revision 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:lj  
Attachment

cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

August 2, 1972

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

APPROVED: *Al Adams* DATE: *August 9, 1972*  
Commissioner of Public Lands  
Subject to Like approval by the  
United States Geological Survey  
and the Oil Conservation  
Commission

APPROVED: *A. L. Porter* DATE: *August 9, 1972*  
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 Ninth Revision of the Participating Area for the Gallup Formation, effective November 1, 1970, under the Huerfano Unit, I Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)  
 Denver, Colorado

Amoco Production Company  
 Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Breedlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Thomas G. Cornish, Executor of the  
 Estate of A. T. Hannett, Deceased

Crown Central Petroleum Corporation

Evko Development Company

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Mrs. Marjorie Lundean Howlett

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
 as Executrix of the Estate of Frank S.  
 Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Barbara Price Mayhew

K. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Mr. and Mrs. Reino R. Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

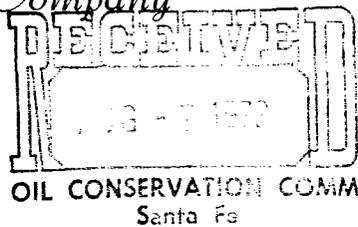
Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company

El Paso, Texas 79999

August 3, 1972



Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
NINTH REVISION OF THE PARTICIPATING  
AREA FOR THE GALLUP FORMATION,  
Effective February 1, 1972

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Ninth Expanded Participating Area of the Gallup Formation for the referenced unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

*James R. Permenter*  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:lj  
Enclosures

cc: Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Oil Conservation Commission ✓  
State of New Mexico  
P. O. Box 2688  
Santa Fe, New Mexico 87501

Mr. R. F. Lemon  
Mr. Charles Higgins

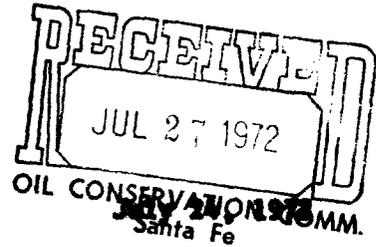
COPY



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857  
Roswell, New Mexico 88201



El Paso Natural Gas Company  
P.O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Foyenster

Gentlemen:

Your notice of July 12, 1972, advises that as operator of the Moorhano unit, San Juan County, New Mexico, you have determined that unit well No. 229 in the SE $\frac{1}{4}$  sec. 5, T. 26 N., R. 10 W., N.M.P.M., lease Santa Fe 080895, is not capable of producing unitized substances in paying quantities from the Dakota Formation.

Well No. 229 was tested June 16, 1972, for a calculated absolute open flow potential of 1,033 MCF/D from the Dakota interval 6,714 to 6,882 feet.

This office concurs with your determination that said well is not capable of producing unitized substances in paying quantities under existing conditions. Two surplus copies of your notice are returned herewith.

Sincerely yours,

(ORIG. SGB) N. O. FREDERICK

N. O. FREDERICK  
Area Oil and Gas Supervisor

cc:  
Washington (w/cy notice)  
Farmington (w/cy notice)  
Gen. Pub. Lands, Santa Fe (ltr only)  
✓ MDC, Santa Fe (ltr only)  
Accounts

JAGillham:ds

# El Paso Natural Gas Company

El Paso, Texas 79978.

July 12, 1972

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF NON-  
COMMERCIAL WELL in the Dakota  
Formation

Dear Sir:

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 hereof, has determined that the following-described well is not capable of producing unitized substances in paying quantities from the Dakota Formation:

The Huerfano Unit #229 Well, located 900' from the South line and 990' from the East line of Section 5, T-26-N, R-10-W, was spudded on 4-15-72, and completed on 4-30-72, in the Dakota Formation at a total depth of 6944'. The Dakota Formation in the intervals between 6714'-6720', 6752'-6758', 6768'-6776', 6816'-6828', 6876'-6882' was treated with a sand-water fracturing process on 4-28-72. The well was shut-in on 4-30-72, and after being shut-in for gauge for forty-seven days, the well was tested on 6-16-72, and following a three (3) hour blow-down period the Dakota Formation gauged 986 MCF/D through a 3/4" choke, and 1033 MCF/D by the calculated absolute open-flow method with an SIPC of 1977 psia and an SIPT of 1691 psia. The spacing unit for this well is described as the S/2 of Section 5, T-26-N, R-10-W, containing 320.00 acres.

July 12, 1972

If this determination 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 Commissioner of Public Lands and the Oil Conservation Commission of the State of New Mexico, and the working interest owners shown on the attached sheet.

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:sv  
Enclosures  
Huerfano 4.4, 4.4.1

cc: Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

✓Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas  
Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey

For non-commercial determination of the Huerfano Unit No. 212 Well,  
Dakota Formation.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mrs. Beulah Irene Hanson
Amoco Production Company Farmington, New Mexico	Mrs. Billie D. Hood
Atlantic Richfield Company (3)	Mrs. Marjorie Lundean Howlett
B & M Construction Corporation	Bernice Jeffs
Benson-Montin-Greer Drilling Corp.	Elma R. Jones
Robert L. Breedlove	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Brookhaven Oil Company	La Plata Gathering System, Inc.
Barbara Ann McConnell Bruss	O. J. Lilly
CRA International, Ltd.	Matagorda Oil Company
Mrs. Ola E. Callahan	Barbara Price Mayhew
Cenard Oil & Gas Company	K. E. McAfee
Consolidated Oil & Gas, Inc.	William H. McCartney
Continental Oil Company	Barbara Irene McConnell
Thomas G. Cornish	J. W. McConnell, Jr.
Thomas G. Cornish, Executor of the Estate of A. T. Hannett, Deceased	N-M Oil & Gas Venture
Crown Central Petroleum Corporation	Pearl O. Pipkin
Evko Development Company	Mr. and Mrs. Reino R. Saari
Mr. and Mrs. Forrest Gelbke	Gladys Sketch
Albert R. Greer	J. C. Smith
Mrs. Charline Greer	Sunland Refining Corporation
Alfred Gross, Trustee	Sunshine Royalty Company
Peter Gross	Tenneco Oil Company
Dr. and Mrs. James R. Hamilton, Jr.	Texas Pacific Oil Company, Inc.
Mr. Vincent B. Hamilton	Mr. and Mrs. Frank Toombs
Mr. G. W. Hannett	

HUERFANO UNIT

Working Interest Owners

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

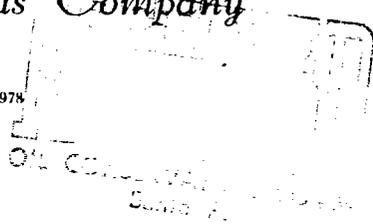
Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79978

June 30, 1972



195

Regional Oil and Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL  
OF THE THIRTY-SEVENTH  
EXPANSION OF THE PARTICI-  
PATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

This is to advise that the captioned Expansion for the Huerfano Unit was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - June 26, 1972  
Commissioner of Public Lands - June 12, 1972  
Oil Conservation Commission - June 19, 1972

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

Yours very truly,

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

DI:lj  
Huerfano, 4.3

cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission

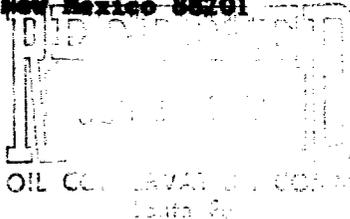


# United States Department of the Interior

## GEOLOGICAL SURVEY

Drawer 1857

Roswell, New Mexico 88201



June 26, 1972

El Paso Natural Gas Company  
P.O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Permenter

Gentlemen:

Your application of June 5, 1972, requesting approval of the thirty-seventh revision of the Dakota participating area for the Huerfano unit agreement, San Juan County, New Mexico, I-Sec. No. 731, was approved on June 26, 1972, by the Regional Oil and Gas Supervisor, U. S. Geological Survey, effective as of March 1, 1972.

The thirty-seventh revision adds 320 acres described as the E $\frac{1}{4}$  sec. 8, T. 26 N., R. 10 W., N.M.P.M., which enlarges the Dakota participating area to 41,194.36 acres, and is based on the information contributed by unit well No. 222 located in the SE $\frac{1}{4}$  of sec. 8. Well No. 222 was completed February 15, 1972, for a calculated open flow potential of 16,323 MCFGPD from the Dakota interval 6,652 to 6,731 feet.

Copies of the approved application are being distributed to the appropriate Federal offices and two approved copies are returned herewith. You are requested to furnish all interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG COPY) N. O. FREDERICK

N. O. FREDERICK  
Regional Oil and Gas Supervisor

cc:  
Washington (w/cy appln)  
Farmington (w/cy appln)  
✓ NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)

JGillham:ds

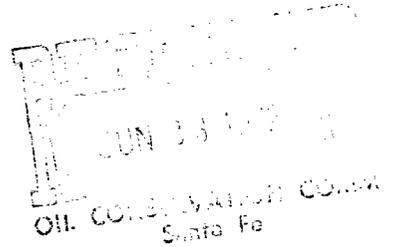
# El Paso Natural Gas Company

El Paso, Texas 79978

June 21, 1972

115

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201



Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit  
San Juan County, New  
Mexico, 1972 SUPPLEMENTAL  
DRILLING PROGRAM

Gentlemen:

The 1972 Supplemental Drilling Program for the Huerfano Unit was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - June 13, 1972  
Commissioner of Public Lands - April 27, 1972  
Oil Conservation Commission - May 8, 1972

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

Yours very truly,

A handwritten signature in cursive script that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

DI:dks  
Huerfano 3.0



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

June 19, 1972

GOVERNOR  
BRUCE KING  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER

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

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Attention: Mr. James R. Permenter

Re: Thirty-Seventh Expansion  
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 Thirty-Seventh Expansion of the Participating Area for the Dakota 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe

# El Paso Natural Gas Company

El Paso, Texas 79978

June 5, 1972

JUN 1 10 26 1972

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico,  
APPLICATION FOR APPROVAL OF THE  
THIRTY-SEVENTH EXPANSION 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 Thirty-Seventh Expansion of the Participating Area for the Dakota formation, to wit:

THIRTY-SEVENTH EXPANSION - Effective March 1, 1972

<u>Description of Lands</u>	<u>Acreage</u>
<u>Township 26 North, Range 10 West, N.M.P.M.</u> Section 8: E/2	320.00

This proposed Thirty-seventh Expansion of the Participating Area for the Dakota formation is predicated upon the knowledge and information

June 5, 1972

first obtained upon the completion in paying quantities of the Huerfano Unit #222 Well, located in the SE/4 of Section 8, Township 26 North, Range 10 West, N.M.P.M.

The Huerfano Unit #222 Well, located 1650' from the South line and 890' from the East line of Section 8, T-26-N, R-10-W, was spudded on January 22, 1972, and completed on February 5, 1972, in the Dakota Formation at a total depth of 6840'. The Dakota Formation in the intervals between 6652' - 6658', 6692' - 6698', 6708' - 6714', 6752' - 6731' was treated with a sand-water fracturing process on February 4, 1972. The well was shut-in on February 7, 1972, and after being shut-in for guage for eight days, the well was tested on February 15, 1972, and following a three (3) hour blow-down period the Dakota Formation gauged 7752 MCF/D through a 3/4" choke, and 16,323 MCF/D by the calculated absolute open-flow method with an SIPC of 1929 psia and an SIPT of 1329 psia. The spacing unit for this well is described as the E/2 of Section 8, T-26-N, R-10-W, containing 320.00 acres.

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 Thirty-seventh Expansion of the Dakota Participating Area.

EXHIBIT "B"

Geological Report concerning the Thirty-seventh Expansion of the Dakota formation in the Huerfano Unit.

EXHIBIT "C"

Plate No. 1: Structure Map on top of Graneros Shale.  
Plate No. 2: Isopach Map.

EXHIBIT "D"

Schedule of Dakota Gas Production.

Attached to this application is Schedule XXXIX showing the lands entitled to participation in the unitized substances produced

Regional Oil & Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

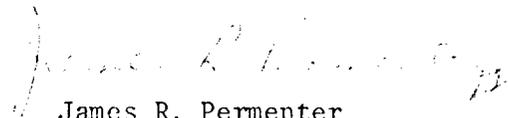
June 5, 1972

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 Thirty-seventh Expansion of the Dakota 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.

Yours very truly,



James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JPR:DI:dks  
Enclosures  
Huerfano, 4.3

cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission  
Post Office Box 2308  
Santa Fe, New Mexico 87501

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

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

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

DATE: 6-12-72

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

DATE: June 19, 1972

The foregoing approvals are for the Thirty-seventh Expansion of the  
Dakota Participating Area for the Huerfano Unit, I Sec. No. 731, San  
Juan County, New Mexico.

## HUERFANO UNIT

Working Interest Owners

Amoco Production Company (3)  
Denver, Colorado

Amoco Production Company  
Farmington, New Mexico

Atlantic Richfield Company (3)

B & M Construction Corporation

Benson-Montin-Greer Drilling Corp.

Robert L. Bredlove

Brookhaven Oil Company

Barbara Ann McConnell Bruss

CRA International, Ltd.

Mrs. Ola E. Callahan

Cenard Oil & Gas Company

Consolidated Oil & Gas, Inc.

Continental Oil Company

Thomas G. Cornish

Thomas G. Cornish, Executor of the  
Estate of A. T. Hannett, Deceased

Crown Central Petroleum Corporation

Evko Development Company

Mr. and Mrs. Forrest Gelbke

Albert R. Greer

Mrs. Charline Greer

Alfred Gross, Trustee

Peter Gross

Dr. and Mrs. James R. Hamilton, Jr.

Mr. Vincent B. Hamilton

Mr. G. W. Hannett

Mrs. Beulah Irene Hanson

Mrs. Billie D. Hood

Mrs. Marjorie Lundean Howlett

Bernice Jeffs

Elma R. Jones

Corinne Roy Kelly, Individually and  
as Executrix of the Estate of Frank S.  
Kelly, Jr., Deceased

La Plata Gathering System, Inc.

O. J. Lilly

Matagorda Oil Company

Barbara Price Mayhew

H. E. McAfee

William H. McCartney

Barbara Irene McConnell

J. W. McConnell, Jr.

N-M Oil & Gas Venture

Pearl O. Pipkin

Mr. and Mrs. Reino R. Saari

Gladys Sketch

J. C. Smith

Sunland Refining Corporation

Sunshine Royalty Company

Tenneco Oil Company

Texas Pacific Oil Company, Inc.

Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd



United States Department of the Interior

GEOLOGICAL SURVEY

Dresser 1857  
Roswell, New Mexico 88201

195

June 13, 1972

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. D. N. Canfield

Gentlemen:

On this date, your supplemental plan of development for 1972, dated April 19, 1972, for the Mesafans unit area, San Juan County, New Mexico, wherein you propose to drill two Dakota wells, was approved. Such approval is subject to like approval by the appropriate officials of the State of New Mexico.

Two approved copies of the supplemental plan are enclosed.

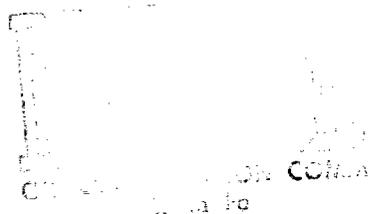
Sincerely yours,

(ORIG. SCD.) M. O. F. R. I. C. K.

M. O. FREDERICK  
Regional Oil and Gas Supervisor

cc:  
Washington (w/cy plan)  
Farmington (w/cy plan)  
NMOCC, Santa Fe (ltr. only) ✓  
Com. of Pub. Lands, Santa Fe (ltr. only)

JAG:llham:lh:



Drawer 1857  
Roswell, New Mexico 88201

June 7, 1972

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Furwater

Gentlemen:

Your notice of June 2, 1972, advises that as unit operator of the  
Nearface unit, San Juan County, New Mexico, you have determined that  
unit well No. 212 in the NE¼ sec. 20, T. 26 N., R. 10 W., N.M.P.M.,  
lease Santa Fe 077933-A, is not capable of producing unitized substances  
in paying quantities from the Dakota formation.

Well No. 212 was completed during February 1971 from the Dakota interval  
6,439 to 6,508 feet. Such well is not capable of sustaining production  
to the atmosphere which precludes the securing of a potential test.  
Your efforts to sustain production with the aid of a piston plunger have  
also been unsuccessful.

This office concurs with your determination that the well is not capable  
of producing unitized substances in paying quantities from the Dakota.  
Two copies of your notice are returned herewith.

Sincerely yours,

(ORIG. SGD.) N. O. FREDERICK

N. O. FREDERICK  
Regional Oil and Gas Supervisor

cc:  
Washington (w/cy notice)  
Farmington (w/cy notice)  
Com. of Pub. Lands, Santa Fe (ltr. only)  
NMOCC, Santa Fe (ltr. only)✓  
Accounts

JAG:llhm:lh

# El Paso Natural Gas Company

El Paso, Texas 79978

June 5, 1972

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico,  
APPLICATION FOR APPROVAL OF THE  
THIRTY-SEVENTH EXPANSION OF THE  
PARTICIPATING AREA FOR THE DAKOTA  
FORMATION

Gentlemen:

We are enclosing for your approval eight (8) copies of an Application for Approval of the Thirty-seventh Expanded Participating Areas of the Dakota Formation for the referenced Unit.

If this Application meets with your approval, please execute all copies and forward them to the Oil Conservation Commission for its approval and execution. After this Application has been signed by the Commissioner of Public Lands and the Oil Conservation Commission, the Commissioner of Public Lands should retain two (2) copies for his file and the Oil Conservation Commission should retain one (1) copy for its file, and five (5) copies should be forwarded to the United States Geological Survey in Roswell, New Mexico, for its approval and further handling. After this Application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Yours very truly,

Original Signed By

Dick Isaacks

James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:dks  
Enclosure  
Huerfano, 4.3

cc: Regional Oil & Gas Supervisor      Oil Conservation Commission  
United States Geological Survey      State of New Mexico  
Drawer 1857      P. O. Box 2088  
Roswell, New Mexico 88201      Santa Fe, New Mexico 87501

# El Paso Natural Gas Company

El Paso, Texas 79978

June 2, 1972



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Re: Huerfano Unit, I Sec. No. 731  
San Juan County, New Mexico  
NOTICE OF COMPLETION OF NON-  
COMMERCIAL WELL in the Dakota  
Formation

Dear Sir:

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 hereof, has determined that the following-described well is not capable of producing unitized substances in paying quantities from the Dakota Formation:

The Huerfano Unit #212 Well, located 800' from the North line and 1500' from the West line of Section 20, T-26-N, R-10-W, was spudded on January 25, 1971, and completed on February 8, 1971, in the Dakota Formation at a total depth of 6613'. The Dakota Formation in the intervals between 6439'-6445', 6478'-6484', 6492'-6498', 6532'-6538', 6562'-6588', was treated with a sand-water fracturing process on February 7, 1971. The well was shut-in on February 9, 1971. The well is incapable of sustained production to the atmosphere and a potential test cannot be conducted. The well was piston pumped on casing pressure differential and produced approximately 15 BOPD and 92 MCF/d; however, continuous production cannot be maintained because of the low volume of gas available.

June 2, 1972

If this determination 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 Commissioner of Public Lands and the Oil Conservation Commission of the State of New Mexico, and the working interest owners shown on the attached sheet.

Yours very truly,

  
James R. Permenter  
Supervising Landman  
Land Department  
Energy Resource Development

JRP:DI:lj  
Enclosures  
Huerfano 4.4, 4.4.1

cc: Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas  
Accounting Commission  
P. O. Box 2308  
Santa Fe, New Mexico 87501

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Regional Oil & Gas Supervisor  
United States Geological Survey

For non-commercial determination of the Huerfano Unit No. 212 Well,  
Dakota Formation.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mrs. Beulah Irene Hanson
Amoco Production Company Farmington, New Mexico	Mrs. Billie D. Hood
Atlantic Richfield Company (3)	Mrs. Marjorie Lundean Howlett
B & M Construction Corporation	Bernice Jeffs
Benson-Montin-Greer Drilling Corp.	Elma R. Jones
Robert L. Breedlove	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Brookhaven Oil Company	La Plata Gathering System, Inc.
Barbara Ann McConnell Bruss	O. J. Lilly
CRA International, Ltd.	Matagroda Oil Company
Mrs. Ola E. Callahan	Barbara Price Mayhew
Cenard Oil & Gas Company	K. E. McAfee
Consolidated Oil & Gas, Inc.	William H. McCartney
Continental Oil Company	Barbara Irene McConnell
Thomas G. Cornish	J. W. McConnell, Jr.
Thomas G. Cornish, Executor of the Estate of A. T. Hannett, Deceased	N-M Oil & Gas Venture
Crown Central Petroleum Corporation	Pearl O. Pipkin
Evko Development Company	Mr. and Mrs. Reino R. Saari
Mr. and Mrs. Forrest Gelbke	Gladys Sketch
Albert R. Greer	J. C. Smith
Mrs. Charline Greer	Sunland Refining Corporation
Alfred Gross, Trustee	Sunshine Royalty Company
Peter Gross	Tenneco Oil Company
Dr. and Mrs. James R. Hamilton, Jr.	Texas Pacific Oil Company, Inc.
Mr. Vincent B. Hamilton	Mr. and Mrs. Frank Toombs
Mr. G. W. Hannett	

HUERFANO UNIT

Working Interest Owners (continued)

Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

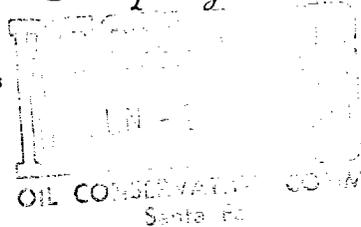
Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd

# El Paso Natural Gas Company

El Paso, Texas 79978

May 29, 1972



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, I Sec. No. 731,  
San Juan County, New Mexico  
APPLICATION FOR APPROVAL OF THE  
THIRTY-FIFTH AND THIRTY-SIXTH  
EXPANSIONS OF THE PARTICIPATING  
AREA FOR THE DAKOTA FORMATION

Gentlemen:

The captioned Application for the Huerfano Unit was approved by the regulatory bodies on the following dates:

United States Geological Survey	-	May 24, 1972
Commissioner of Public Lands	-	March 6, 1972
Oil Conservation Commission	-	March 8, 1972

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

Yours very truly,

A handwritten signature in black ink that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

DI:nja  
Huerfano 4.3

cc: Mrs. Pepita O. Jeffus  
Executive Director  
New Mexico Oil & Gas Accounting Commission

**OIL CONSERVATION COMMISSION**

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

May 8, 1972

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Attention: Mr. D. N. Canfield

Re: 1972 Supplemental 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 Supplemental Drilling Program for the calendar year 1972 providing for the drilling of two Dakota wells 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 program is returned herewith.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

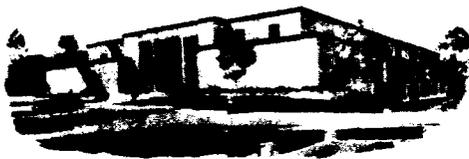
ALP/JEK/og

cc: United States Geological Survey  
Roswell, New Mexico

Commissioner of Public Lands  
Santa Fe, New Mexico

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State of New Mexico



Commissioner of Public Lands

April 27, 1972

ALEX J. ARMIJO  
COMMISSIONER

P. O. BOX 1148  
SANTA FE, NEW MEXICO

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico  
1972 SUPPLEMENTAL DRILLING  
PROGRAM

ATTENTION: Mr. D. W. Canfield

Gentlemen:

The Commissioner of Public Lands has this date approved your Supplemental Drilling Program for the year 1972, for the Huerfano Unit, San Juan County, New Mexico, proposing the drilling of two additional Dakota wells. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

One approved copy of the plan is enclosed herewith.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/RDC/s

encls.

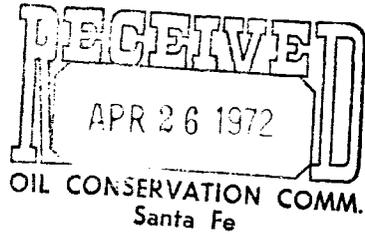
cc:

USGS-Roswell, New Mexico  
OCC-Santa Fe, New Mexico ✓

# El Paso Natural Gas Company

El Paso, Texas 79978

April 19, 1972



Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, Sec. No. 731  
San Juan County, New Mexico  
1972 SUPPLEMENTAL DRILLING  
PROGRAM

Gentlemen:

By letter dated March 8, 1972 El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program covering the captioned Unit for the calendar year 1972. This Drilling Program has been approved and the wells provided for are presently being drilled.

Pursuant to Section 9 of the Huerfano Unit Agreement, El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Supplemental Drilling Program for the calendar year 1972 providing for the drilling of the following-described wells:

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
229	S/2 Sec. 5, T-26-N, R-10-W	Dakota
230	W/2 Sec. 8, T-26-N, R-10-W	Dakota

All of the working interest owners have been contacted and this Drilling Program reflects, insofar as possible, their desires for additional drilling.

March 19, 1972

In addition to the above wells, El Paso Natural Gas Company, as Unit Operator, will drill any offset wells required to prevent drainage of unitized substances, and any other wells deemed necessary or desirable by the Unit Operator and the working interest owners.

If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the spaces provided on the attached sheet 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.

Yours very truly,



D. N. Canfield  
Manager  
Land Department  
Energy Resource Development

DNC:DI:dks  
Attachments  
Huerfano 3.0

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

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: May 1, 1972

The foregoing approvals are for the 1972 Drilling Program for the Huerfano Unit,  
Sec. No. 731, San Juan County, New Mexico.

## HUBBARD UNIT

Working Interest Owners

Amoco Production Company (3) Denver, Colorado	Mrs. Beulah Irene Hanson
Amoco Production Company Farmington, New Mexico	Mrs. Billie D. Hood
Atlantic Richfield Company (3)	Mrs. Marjorie Lundean Howlett
B & M Construction Corporation	Bernice Jeffs
Benson-Montin-Greer Drilling Corp. Robert L. Breedlove	Elma R. Jones
Brookhaven Oil Company	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Barbara Ann McConnell Bruss	La Plata Gathering System, Inc.
CRA International, Ltd.	O. J. Lilly
Mrs. Ola E. Callahan	Matagorda Oil Company
Cenard Oil & Gas Company	K. E. McAfee
Consolidated Oil & Gas, Inc.	William H. McCartney
Continental Oil Company	Barbara Irene McConnell
Thomas G. Cornish	J. W. McConnell, Jr.
Thomas G. Cornish, Executor of the Estate of A. T. Hannett, Deceased	N-M Oil & Gas Venture
Crown Central Petroleum Corporation	Pearl O. Pipkin
Evko Development Company	Estate of Murrell Price, Deceased
Mr. and Mrs. Forrest Gelbke	Mr. and Mrs. Reino R. Saari
Albert R. Greer	Gladys Sketch
Mrs. Charline Greer	J. C. Smith
Alfred Gross, Trustee	Sunland Refining Corporation
Peter Gross	Sunshine Royalty Company
Dr. and Mrs. James R. Hamilton, Jr.	Tenneco Oil Company
Mr. Vincent B. Hamilton	Texas Pacific Oil Company, Inc.
Mr. G. W. Hannett	Mr. and Mrs. Frank Toombs

HUERFANO UNIT  
Working Interest Owners

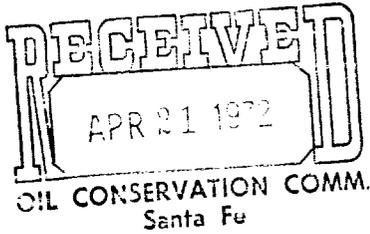
Union Texas Petroleum  
Denver, Colorado

Union Texas Petroleum  
Houston, Texas

Frances Walters and the  
Estate of Bert Walters

Dr. Sherman Wengerd

El Paso Natural Gas Company



El Paso, Texas 79978

April 18, 1972

115

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
Post Office Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, Sec. No. 731  
San Juan County, New Mexico  
1972 Drilling Program

Gentlemen:

The 1972 Drilling Program for the Huerfano Unit was approved by the Regulatory Bodies on the following dates:

United States Geological Survey - April 14, 1972  
Commissioner of Public Lands - March 22, 1972  
Oil Conservation Commission - March 27, 1972

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

Yours very truly,

A handwritten signature in cursive script that reads "Dick Isaacks".

Dick Isaacks  
Senior Landman  
Land Department  
Energy Resource Development

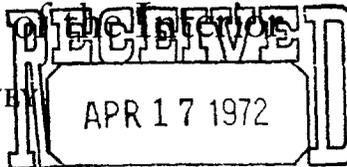
DI:dks  
Huerfano 3.0



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857  
Roswell, New Mexico 88201 CONSERVATION COMM.  
Santa Fe



April 17, 1972

El Paso Natural Gas Company  
P.O. Box 1492  
El Paso, Texas 79978

Attention: Mr. T. W. Bittiek

Gentlemen:

Your 1972 plan of development for the Huerfano unit area, San Juan County, New Mexico, proposing the drilling of one Pictured Cliffs well and nine 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.

Sincerely yours,

TRAYWICK  
CARL C. TRAYWICK  
Acting Oil and Gas Supervisor

cc:  
Washington (w/cy plan)  
Farmington (w/cy plan)  
✓ NMOCC, Santa Fe (ltr only)  
Com. Pub. Lands, Santa Fe (ltr only)

JWillock:ds

195

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

March 27, 1972

195

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Attention: Mr. T. W. Bittick

Re: 1972 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 Drilling Program providing for the drilling of ten wells during the calendar year 1972 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 program is returned herewith.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey - Roswell  
Commissioner of Public Lands - Santa Fe

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**RECEIVED**  
**MAR 23 1972**  
-CONSERVATION COMMISSION  
-SANTA FE

**March 22, 1972**

**El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999**

**Re: Huerfano Unit  
San Juan County, New Mexico  
1972 DRILLING PROGRAM**

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

**Gentlemen:**

**The Commissioner of Public Lands has this date approved your 1972 Drilling Program for the Huerfano Unit, San Juan County, New Mexico, proposing the drilling of ten additional wells. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.**

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

**Please remit a Three (\$3.00) Dollar filing fee.**

**Very truly yours,**

**RAY D. GRAHAM, Director  
Oil and Gas Department**

**AJA/RDS/s  
encl.**

**cc: USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓**

# El Paso Natural Gas Company

El Paso, Texas 79978

March 8, 1972

RECEIVED

MAR 20 1972

CONSERVATION COMM:  
SANTA FE

Regional Oil & Gas Supervisor  
United States Geological Survey  
Drawer 1857  
Roswell, New Mexico 88201

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Huerfano Unit, Sec. No. 731  
San Juan County, New Mexico  
1972 DRILLING PROGRAM

Gentlemen:

El Paso Natural Gas Company, as Unit Operator of the Huerfano Unit, filed a Drilling Program covering the captioned Unit on January 20, 1971, for the calendar year 1971, consisting of twelve (12) Dakota wells. Wells Com #91 and Com #118 were not drilled because the owners of the non-committed acreage in the spacing units did not desire to participate in drilling the wells. Wells #209, #210, #211, #213 and #217 were drilled within the Dakota Participating Area and did not cause expansions. Well #218 caused the Thirty-Third Expansion; Well #131 caused the Thirty-Fourth Expansion; and Well #215 caused the Thirty-Fifth Expansion. Well #214 resulted in a dry hole, and it is presently temporarily abandoned pending a determination as to whether or not a Gallup completion should be attempted. We are presently observing production from Well #212 to see if the well is commercial. In addition to the wells set out in the January 20, 1971, letter El Paso, as Unit Operator, drilled Well #219 in the S/2 of Section 29, T-26-N, R-10-W, which caused the Thirty-Sixth Dakota Expansion.

March 8, 1972

As of this date, the total number of wells drilled in the Huerfano Unit on acreage committed to the Unit or on acreage pooled and communitized with committed acreage is as follows:

Pictured Cliffs, Commercial	49
Pictured Cliffs, Non-Commercial	2
Pictured Cliffs, Plugged and Abandoned	33
Gallup-Dakota, Commercial	11
Gallup-Dakota, Commercial in Gallup only	1
Gallup-Dakota, Commercial in Dakota only	3
Gallup, Non-Commercial	2
Dakota, Commercial	93
Dakota, Non-Commercial (includes Well #212)	4
Dakota, Plugged and Abandoned	7
Dakota, Temporarily Abandoned	<u>1</u>
	206

Pursuant to Section 9 of the Huerfano Unit Agreement, El Paso Natural Gas Company, as Unit Operator, hereby respectfully requests the approval of a Drilling Program for the calendar year 1972 providing for the drilling of the following-described wells:

<u>Well No.</u>	<u>Spacing Unit</u>	<u>Formation</u>
220	NW/4 Sec. 30, T-27-N, R-10-W	Pictured Cliffs
221	S/2 Sec. 13, T-25-N, R-10-W	Dakota
222	E/2 Sec. 8, T-26-N, R-10-W	Dakota
223	W/2 Sec. 4, T-26-N, R-10-W	Dakota
224	E/2 Sec. 4, T-26-N, R-10-W	Dakota
216	W/2 Sec. 30, T-26-N, R-10-W	Dakota
225	E/2 Sec. 30, T-26-N, R-10-W	Dakota
226	N/2 Sec. 33, T-26-N, R-10-W	Dakota
227	E/2 Sec. 32, T-27-N, R-10-W	Dakota
228	W/2 Sec. 32, T-27-N, R-10-W	Dakota

All of the working interest owners have been contacted and this Drilling Program reflects, insofar as possible, their desires for additional drilling.

In addition to the above wells, El Paso Natural Gas Company, as Unit Operator, will drill any offset wells required to prevent drainage of unitized substances, and any other wells deemed necessary or desirable by the Unit Operator and the working interest owners.

United States Geological Survey  
Commissioner of Public Lands  
Oil Conservation Commission  
Page Three

March 8, 1972

If this Drilling Program is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the spaces provided on the attached sheet 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.

Yours very truly,



T. W. Bittick  
Director of Exploration  
Energy Resource Development

TWB:DI:nja  
Attachments  
Huerfano 3.0

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

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

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

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

APPROVED: *A. H. Carter, Jr.*  
Oil Conservation Commission  
Subject to like approval by the  
United States Geological Survey and  
the Commissioner of Public Lands

DATE: *March 27, 1972*

The foregoing approvals are for the 1972 Drilling Program for the Huerfano Unit,  
Sec. No. 731, San Juan County, New Mexico.

HUERFANO UNIT  
Working Interest Owners

Amoco Production Company (3)	Mrs. Marjorie Lundean Howlett
Atlantic Richfield Company (3)	Bernice Jeffs
B & M Construction Corporation	Elma R. Jones
Benson-Montin-Greer Drilling Corp.	Corinne Roy Kelly, Individually and as Executrix of the Estate of Frank S. Kelly, Jr., Deceased
Robert L. Breedlove	
Brookhaven Oil Company	Harold Kogan, Agent
Barbara Ann McConnell Bruss	La Plata Gathering System, Inc.
CRA International, Ltd.	O. J. Lilly
Mrs. Ola E. Callahan	Matagorda Oil Company
Cenard Oil & Gas Company	K. E. McAfee
Consolidated Oil & Gas, Inc.	William H. McCartney
Continental Oil Company	Barbara Irene McConnell
Thomas G. Cornish	J. W. McConnell, Jr.
Thomas G. Cornish, Executor of the Estate of A. T. Hannett, Deceased	N-M Oil & Gas Venture
Crown Central Petroleum Corporation	Lucille H. Pipkin
Evko Development Company	Pearl O. Pipkin
Mr. and Mrs. Forrest Gelbke	Estate of Murrell Price, Deceased
Albert R. Greer	Mr. and Mrs. Reino R. Saari
Mrs. Charline Greer	Gladys Sketch
Alfred Gross, Trustee	J. C. Smith
Peter Gross	Sunland Refining Corporation
Dr. and Mrs. James R. Hamilton, Jr.	Sunshine Royalty Company
Mr. Vincent B. Hamilton	Tenneco Oil Company
Mr. G. W. Hannett	Texas Pacific Oil Company, Inc.
Mrs. Beulah Irene Hanson	Mr. and Mrs. Frank Toombs
Mrs. Billie D. Hood	Union Texas Petroleum Denver, Colorado

HUERFANO UNIT  
Working Interest Owners

Union Texas Petroleum  
Houston, Texas

Mr. and Mrs. Bert Walters

Dr. Sherman Wengerd

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

March 8, 1972

195

El Paso Natural Gas Company  
Box 1492  
El Paso, Texas 79978

Attention: Mr. James R. Permenter

Re: Thirty-Fifth and Thirty-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 Thirty-fifth and Thirty-Sixth Expansions of the Dakota Formation 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.

Five approved copies of the application are being forwarded to the United States Geological Survey, Roswell, New Mexico.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/JEK/cg

cc: Commissioner of Public Lands - Santa Fe  
United States Geological Survey - Roswell

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March 6, 1972

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MAR-8 1972

CONSERVATION COMM.  
SANTA FE

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79999

Re: Huerfano Unit  
San Juan County, New Mexico,  
APPLICATION FOR APPROVAL OF THE  
THIRTY-FIFTH AND THIRTY-SIXTH  
EXPANSIONS OF THE PARTICIPATING  
AREA FOR THE DAKOTA FORMATION,  
Effective August 1, 1971 and  
September 1, 1971

ATTENTION: Mr. James R. Permenter

Gentlemen:

The Commissioner of Public Lands has this date approved the Thirty-Fifth and Thirty-Sixth Expanded Participating Areas for the Dakota Formation, for the Huerfano Unit, San Juan County, New Mexico. This approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

We are handing six copies of the application to the Oil Conservation Commission requesting them to forward five copies to the United States Geological Survey at Roswell, New Mexico for their consideration. After this application has been approved and signed by the United States Geological Survey, two (2) copies should be returned to El Paso.

Very truly yours,

RAY D. GRAHAM, Director  
Oil and Gas Department

AJA/RDG/s

cc: USGS-Roswell, New Mexico  
OCC- Santa Fe, New Mexico ✓