

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Case #1769

March 22, 1961

C
O
P
Y

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Attention: Mr. L. O. Speer, Jr.

Re: 1961 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico.

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1961 Plan of Development for the Northeast Hogback 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.

Two approved copies of the plan is returned herewith.

Very truly yours,

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

ALP/JEK/ig

cc: Commissioner of Public Lands
Santa Fe, New Mexico

US Geological Survey
Roswell, New Mexico



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

1769

RECEIVED
1071 MAR 10 1961
P.O. Box 6721
Roswell, New Mexico

March 6, 1961

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Attention: Mr. L. O. Spear, Jr.

Gentlemen:

Your 1961 plan of development for the Northeast Hogback unit, San Juan County, New Mexico, proposing the commencement of secondary recovery operations and no additional drilling during the year 1961, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are attached.

Very truly yours,

EDWIN M. THOMASSON

Acting Regional Oil and Gas Supervisor

Copies: Washington (w/cy of plan)
Farmington (w/cy of plan)
EMOCC, Santa Fe (ltr. only)

March 10, 1961

**Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico**

**Re: Northeast Hogback Unit
San Juan County, New Mexico
1961 Plan of Development**

Attention: Mr. L. O. Spear, Jr.

Gentlemen:

**The Commissioner of Public Lands has approved your
1961 Plan of Development for the Northeast Hogback Unit,
San Juan County, New Mexico, as of March 10, 1961.**

**This Plan of Development proposes the commencement
of secondary recovery operations and no additional drilling
during the year 1961 and becomes effective as of January
1, 1961.**

One approved copy of the plan is enclosed.

Very truly yours,

**E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS**

**ESW/mmr/s
Encl. (1).
cc:**

**US Geological Survey
Roswell, New Mexico**

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

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico

December 27, 1960

File: E-942-416 100 11 22

Subject: 1961 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico

Director (6)
United States Geological Survey
c/o Oil and Gas Supervisor
P. O. Box 6721
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Land Office Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Land Office Building
Santa Fe, New Mexico

All Working Interest Owners
In Unit Area
(See Attached Addressee List)

Gentlemen:

Pursuant to Section 10 of the Unit Agreement for the Northeast Hogback Unit Area, San Juan County, New Mexico, dated July 1, 1959, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval the 1961 Plan of Development for this Unit.

History of Development: There have been 28 wells drilled and 1 well in the process of completion in the Northeast Hogback Unit. Of these wells, 25 are Gallup producers of which 19 wells are on leases committed to the Unit, two were dry holes in the Gallup, and four were dry holes in the Dakota. One of the latter wells was subsequently completed in the Gallup as a commercial well.

1961 Plan of Development: The participants in the Northeast Hogback Unit request the regulatory bodies consider the 1961 Plan of Development to consist of no additional drilling during the year 1961. It is the present plan to initiate secondary recovery in the Gallup formation within the Northeast Hogback Unit during 1961.

Further Development: This plan of development shall constitute the drilling obligations of the Unit Operator for the period ending December 31, 1961. It is understood that this plan may be modified during the year as appropriate to prevent drainage of unitized substances from the Unit Area or other demands as may be applicable.

The Oil & Gas Supervisor
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

-2-

December 27, 1960
File: E-942-416
Subject: 1961 Plan of Development
Northeast Hogback Unit
San Juan County, New Mex.

Effective Date: This plan of development will be effective
as of January 1, 1961.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION



L. O. Speer, Jr.
Area Superintendent

CKD:hh
Attach.

Approved _____ Date _____
Regional Oil and Gas Supervisor
United States Geological Survey

Approved _____ Date _____
Commissioner of Public Lands
State of New Mexico

Approved A. L. Porter, Jr. Date 3. 22. 61
Oil Conservation Commission
State of New Mexico

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

El Paso Natural Gas Company
P. O. Box 990
Farmington, New Mexico
Attn: Mr. Harry Gevertz

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

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

Northwest Production Corporation
520 Simms Building
Albuquerque, New Mexico

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

Gulf Oil Corporation (2)
P. O. Box 2097
Denver, Colorado



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O. Box 6721
Roswell, New Mexico

Case #1769

March 17, 1961

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Attention: Mr. J. B. Jenkins

Gentlemen:

Your application of January 10, 1961, for the second revision of the Gallup formation participating area for the Northeast Hugaback unit agreement, San Juan County, New Mexico, was approved March 8, 1961, by the Acting Director of the Geological Survey, effective as of November 1, 1960.

Enclosed are eight copies of the approved application. It is assumed that you will furnish the State of New Mexico and any other interested party with appropriate evidence of this approval.

Very truly yours,

EDWIN M. THOMASSON

Acting Regional Oil and Gas Supervisor

Copy to: Washington (ltr. only)
Farmington (w/cy of approved appln.)
B.L.M., Santa Fe (w/cy approved appln.)
NMOCC, Santa Fe (ltr. only)
✓ [unclear] (w/cy of approved appln.)

PAN AMERICAN PETROLEUM CORPORATION

Post Office Box 480
Farmington, New Mexico
February 24, 1961

Call #1709

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
#359934

Re: APE - 21,242
Contract No. 41,001
Northeast Hogback Unit
San Juan County
New Mexico

Commissioner of Public Lands
State Land Office
Santa Fe, New Mexico

Gentlemen:

On November 3, 1960, Mr. L. O. Speer, Jr. advised you of the information concerning our Northeast Hogback Unit Wells Nos. 1, 2 and 3, along with other wells which he listed in connection with the 1960 Plan of Development for the Northeast Hogback Unit.

The Northeast Hogback Unit Well #4 is located 1850' PSL and 1850' FEL of Section 14, T-30N, R-16W, San Juan County, New Mexico. This well was spudded on November 12, 1960 and it was drilled to a total depth of 4390'. The Dakota formation was determined to be non-commercial, and on December 27, 1960 the well was completed at a plugged-back depth of 3662' in the Gallup Formation with an initial potential of 20 BOPD on pump.

Our Producing Department has furnished you with all required reports and forms concerning our Northeast Hogback Unit Wells Nos. 1, 2, 3 and 4 and, therefore, our 4-well obligation has been met. Please notify us if you have any questions in connection with our four obligation wells which were drilled to the Dakota Formation.

We are forwarding a copy of this letter to the Oil Conservation Commission and we ask that the OGC advise us if it has any questions in connection with our 4-obligation wells which have been drilled and completed in accordance with the terms of the Northeast Hogback Unit.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

Ben R. Kee
Ben R. Kee, District Landman.

RKR:eh

cc - Oil Conservation Commission
State of New Mexico
State Land Office Building
Santa Fe, New Mexico

COPY

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Case #1769

January 23, 1961

**Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico**

**Re: Application for approval of
Second Enlargement of the
Gallup Participating Area,
Northeast Hogback Unit, San
Juan County, New Mexico**

Attention: Mr. J. B. Jenkins

Gentlemen:

The Oil Conservation Commission prefers to withhold consideration of the subject application until action has been taken by the United States Geological Survey and the Commissioner of Public Lands.

All twelve 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/ig

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

In reply refer to:
Unit Division

January 16, 1961

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Re: Application for approval
of Second Enlargement of
the Gallup Participating
Area, Northeast Hogback Unit
San Juan County, New Mexico

Attention: Mr. J. B. Jenkins

Gentlemen:

We are forwarding to Mr. A. L. Porter, Jr. Director of the Oil Conservation Commission, all twelve copies of your above designated application for their consideration.

This office is withholding consideration of this application until action is taken by the US Geological Survey, due to the fact that the entire area is Federal Acreage.

The Director of the US Geological Survey has never refused, under the afore-mentioned circumstances, to take action prior to the Commissioner's approval.

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

BY:
Ted Bilberry, Supervisor
Oil and Gas Division

ESW/mmz/s

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Page (2.)

CC: Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Mr. John A. Anderson
U. S. Geological Survey
Roswell, New Mexico

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PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
January 11, 1961

1961 JAN 11 AM 11

Case #1769

File: E-29-416

Subject: Application for Approval of
Second Enlargement of the
Gallup Participating Area
Northeast Hogback Unit
San Juan County, New Mexico

Commissioner of Public Lands
State of New Mexico
State Land Office Building
Santa Fe, New Mexico

Attention: Unit Division

Dear Sir:

Attached are twelve copies of Pan American Petroleum Corporation's application for approval of the Second Enlargement of the Gallup Participating Area, Northeast Hogback Unit, San Juan County, New Mexico. We would appreciate your processing this application through the State Land Office and then forwarding all copies of the application to the New Mexico Oil Conservation Commission. By copy of this letter, we are requesting that the New Mexico Oil Conservation Commission process this application and forward all copies to the United States Geological Survey in Roswell for their processing. When approval of the application has been received from the United States Geological Survey, we will furnish the State Land Commission and the Oil Conservation Commission with fully executed copies of the application.

In order that we may be kept current on the progress of this application, we would appreciate it if you would furnish us a copy of your letter transmitting the application to the Oil Conservation Commission, and also, if the Oil Conservation Commission would furnish us a copy of their letter transmitting the application to the United States Geological Survey. We would also appreciate it if the United States Geological Survey would furnish us with the date on which they transmit the application to their Washington Office.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

J. B. Jenkins
J. B. Jenkins
District Superintendent

RBB:en
Attachments

cc: Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
Santa Fe, New Mexico
Mr. John A. Anderson
U. S. Geological Survey
Roswell, New Mexico

COPY

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
December 23, 1960

File: E-935-416

Subject: Approval of 1960
Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico

Director (6)
United States Geological Survey
c/o Oil and Gas Supervisor
P. O. Box 6721
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Land Office Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Land Office Building
Santa Fe, New Mexico

All Working Interest Owners
In Unit Area
(See Attached Addressee List)

Gentlemen:

The 1960 Plan of Development for the Northeast Hogback Unit, dated November 3, 1960, has been approved by the United States Geological Survey, the Commissioner and the Commission on the following dates:

Director United States Geological Survey	November 30, 1960
Commissioner of Public Lands State of New Mexico	December 1, 1960
New Mexico Oil Conservation Commission	December 19, 1960

This plan of development shall have been effective January 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

CKD:en

P. S. Attached are copies of approvals for your file.

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

El Paso Natural Gas Company
P. O. Box 990
Farmington, New Mexico
Attn: Mr. Harry Gevertz

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

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

Northwest Production Corporation
520 Simms Building
Albuquerque, New Mexico

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

Gulf Oil Corporation (2)
P. O. Box 2097
Denver, Colorado

The Oil & Gas Supervisor
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

-2-

November 3, 1960
E-764-416

Offset Obligations: Appropriate and adequate measures will be taken to prevent drainage of unitized substances from lands subject to the Northeast Hogback Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided for by Section 17 of the aforementioned Unit Agreement.

Further Development: This plan of development shall constitute the drilling obligations of the Unit Operator under the terms of the Northeast Hogback Unit Agreement for the period ending December 31, 1960.

Effective Date: This plan of development shall have been effective as of January 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.

L. O. Speer, Jr.
Area Superintendent

FWF:en

Attach.

Approved *Edwin M. Thomason* Date 11-30-60
Acting Regional Oil and Gas Supervisor
United States Geological Survey

Approved _____ Date _____
Commissioner of Public Lands
State of New Mexico

Approved _____ Date _____
Oil Conservation Commission
State of New Mexico

The Oil & Gas Supervisor
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

-2-

November 3, 1960
E-764-416

Offset Obligations: Appropriate and adequate measures will be taken to prevent drainage of unitized substances from lands subject to the Northeast Hogback Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided for by Section 17 of the aforementioned Unit Agreement.

Further Development: This plan of development shall constitute the drilling obligations of the Unit Operator under the terms of the Northeast Hogback Unit Agreement for the period ending December 31, 1960.

Effective Date: This plan of development shall have been effective as of January 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
Area Superintendent

MF:en

Attach.

Approved _____ Date _____
Regional Oil and Gas Supervisor
United States Geological Survey

Approved [Signature] _____ Date _____
Commissioner of Public Lands
State of New Mexico

Approved _____ Date _____
Oil Conservation Commission
State of New Mexico

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Case # 1769

December 19, 1960

C
Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

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Attention: Mr. L. O. Speer, Jr.

Re: 1960 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico.

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Gentlemen:

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This is to advise that the New Mexico Oil Conservation Commission has this date approved the 1960 Plan of Development for the Northeast Hogback 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.

Two approved copies of the plan are returned herewith.

Very truly yours,

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

ALP/JEK/ig

cc: State Land Office - Santa Fe, New Mexico

US Geological Survey - Roswell, New Mexico



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR

MAIN OFFICE GEOLOGICAL SURVEY

P. O. Box 6721
Roswell, New Mexico
1960 DEC 1 AM 8 4 36

November 30, 1960

Pan American Petroleum Corporation
P. O. Box 488
Farmington, New Mexico

Attention: Mr. L. O. Spear, Jr.

Gentlemen:

Your 1960 plan of development dated November 3, 1960, for the Northeast Hogback unit area, San Juan County, New Mexico, proposing the drilling of four exploratory wells and six Gallup development wells, has been approved on this date subject to like approval by the appropriate State officials.

Three approved copies of the plan are enclosed.

Very truly yours,

ERWIN M. THOMASSON
Acting Oil and Gas Supervisor

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

7

In reply refer to:
Unit Division

MAIL ROOM 000
DEC 6 AM 9:20

December 5, 1960

C
O
P
Y

Pan American Petroleum Corporation
P. O. Box 480
Farmington, New Mexico

Re: 1960 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico

Attention: Mr. L. O. Speer, Jr.

Gentlemen:

The Commissioner of Public Lands has approved your 1960 Plan of Development dated November 3, 1960, as of December 1, 1960.

We are returning two approved copies and request we be furnished another copy when fully approved.

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

BY:
Marian M. Rhea, Supervisor
Unit Division

MEM/mmrx/s
cc:

Oil Conservation Commission
Santa Fe, New Mexico

United States Geological Survey
P. O. Box 6721
Roswell, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
November 3, 1960

File: E-764-416

Subject: 1960 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico

The Oil & Gas Supervisor (6)
United States Geological Survey
Roswell, New Mexico

Oil Conservation Commission (3)
State of New Mexico
Santa Fe, New Mexico

Commissioner of Public Lands (3)
State of New Mexico
Santa Fe, New Mexico

All Working Interest Owners
Northeast Hogback Unit
(See Attached Addressee List)

Gentlemen:

In compliance with Section 10 of the Unit Agreement for the Development and Operation of the Northeast Hogback Unit Area, San Juan County, New Mexico, dated July 1, 1959, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval the 1960 Plan of Development for this Unit.

History of Development: There have been 28 wells drilled to date in the Northeast Hogback Unit. Of these 28 wells, 25 are Gallup producers of which only 19 are committed to the Unit, two were dry holes in the Gallup, and three were dry holes in the Dakota, one of the latter which was subsequently completed in the Gallup as a commercial well.

1960 Plan of Development: The participants in the Northeast Hogback Unit respectfully ask the regulatory bodies consider that the 1960 Plan of Development consist of the drilling of four exploratory wells, as provided for by Section 9 of the Unit Agreement, and six Gallup development wells already drilled and completed during 1960. The fourth exploratory well, the Northeast Hogback Unit No. 4, is to be drilled in the NW/4 SE/4 Section 14, T-30-N, R-16-W, in the immediate future. Three of the exploratory wells, Northeast Hogback Unit Well Nos. 1, 2, and 3, have already been drilled and determined non-productive in the Dakota with Well No. 2 determined commercial and completed in the Gallup. Pertinent data on these wells is included by attachment to this letter.

Well Casing Program: The well casing program for the Northeast Hogback No. 4 will be generally that used on similar wells in San Juan County, including such surface casing and other casing as may be required by the Supervisor, the Commissioner, and the Commission, or is set forth in approvals of the applicable U. S. Geological Survey and State of New Mexico forms. The producing string of casing may be set and cemented on top, partially through, or completely through the producing zone or zones.

The Oil & Gas Supervisor
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

-2-

November 3, 1960
E-764-416

Offset Obligations: Appropriate and adequate measures will be taken to prevent drainage of unitized substances from lands subject to the Northeast Hogback Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided for by Section 17 of the aforementioned Unit Agreement.

Further Development: This plan of development shall constitute the drilling obligations of the Unit Operator under the terms of the Northeast Hogback Unit Agreement for the period ending December 31, 1960.

Effective Date: This plan of development shall have been effective as of January 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

FWF:en

Attach.

Approved _____ Date _____
Regional Oil and Gas Supervisor
United States Geological Survey

Approved _____ Date _____
Commissioner of Public Lands
State of New Mexico

Approved _____ Date _____
Oil Conservation Commission
State of New Mexico

NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO
WELLS DRILLED AND COMPLETED DURING
CALENDAR YEAR 1960
NOVEMBER 3, 1960

Northeast Hogback Unit No. 1 (Test Well)

Location: 790' FNL & 790' FWL
Section 36, T30N, R16W
Spudded: January 1, 1960
Total Depth: 4525'
Dakota and Gallup determined non-commercial. Well plugged and abandoned January 27, 1960.

Northeast Hogback Unit No. 2 (Test Well)

Location: 825' FNL & 875' FEL
Section 15, T30N, R16W
Date Spudded: May 3, 1960
Total Depth: 2623'
Plug Back Depth: 2058'
Dakota zone determined non-commercial.
Top Pay: Gallup 1820
Gallup Perforations: 1892-1900 &
1832-1862
Initial Potential (Gallup): Pumped
201 BOPD
Completed: May 23, 1960

Northeast Hogback Unit No. 3 (Test Well)

Location: 790' FNL & 950' FWL
Section 22, T30N, R16W
Date Spudded: April 22, 1960
Total Depth: 2486'
Plug Back Depth: 1823'
Dakota zone determined non-commercial;
recovered sulfur water on Drill Stem
Test in interval 2280-2365.
Gallup zone 1667-1693 perforated,
sand-oil fracked, and by testing
determined non-commercial.
Plugged and abandoned June 22, 1960.

Northeast Hogback Unit No. 5 (Formerly
O. J. Hoover "E" No. 1)

Location: 820' FNL & 2170' FWL
Section 15, T30N, R16W
Date Spudded: April 17, 1960
Total Depth: 1747'
Plug Back Depth: 1706'
Gallup Perforations: 1509-1559
Initial Potential (Gallup): Pumped
166 BOPD

Date Completed: May 3, 1960

Northeast Hogback Unit No. 6 (Formerly
O. J. Hoover "E" No. 2)

Location: 650' FNL & 1910' FEL
Section 15, T30N, R16W
Date Spudded: April 24, 1960
Total Depth: 1750'
Plug Back Depth: 1714'
Gallup Perforations: 1681-1689 &
1620-1658
Initial Potential (Gallup): Pumped
384 BOPD
Date Completed: May 6, 1960

Northeast Hogback Unit No. 10 (Formerly
J. W. Aidlin "B" No. 4)

Location: 1970' FNL & 680' FWL
Section 14, T30N, R16W
Date Spudded: April 30, 1960
Total Depth: 2547'
Plug Back Depth: 2502'
Gallup Perforations: 2388-2400, 2410-
2422, & 2447-2453
Initial Potential (Gallup): Pumped 25
BO & 2
barrels
water/day
Date Completed: June 8, 1960

Northeast Hogback Unit No. 21 (Formerly
O. J. Hoover No. 3)

Location: 410' FNL X 910' FWL
Section 15, T30N, R16W
Date Spudded: May 13, 1960
Total Depth: 1537'
Plug Back Depth: 1490'
Gallup Perforations: 1393-1434 &
1457-1463
Initial Potential (Gallup): Pumped
104 BOPD
Completed: June 2, 1960

Northeast Hogback Unit No. 22 (Formerly
O. J. Hoover "E" No. 4)

Location: 1980' FNL X 2070' FEL
Section 15, T30N, R16W
Date Spudded: May 18, 1960
Total Depth: 1870'
Plugged Back Depth: 1794'
Gallup Perforations: 1781-1787 &
1718-1760
Initial Potential (Gallup): Pumped
21 BOPD
Completed: June 16, 1960

O. J. Hoover "E" No. 5

Location: 1980' FNL & 1980' FWL
Section 15, T30N, R16W
Date Spudded: May 24, 1960
Total Depth: 1750'
Plug Back Depth: 1703'
Gallup Perforations 1598-1640 & 1661-
1669:
Gallup perforations sand-oil fracked,
tested and determined non-commercial.
Date Plugged and Abandoned: July 14,
1960

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

El Paso Natural Gas Company
P. O. Box 990
Farmington, New Mexico
Att: Mr. Harry Gevertz

Pibco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

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

Gulf Oil Corporation (2)
P. O. Box 2097
Denver, Colorado

Northwest Production Corporation
520 Simms Building
Albuquerque, New Mexico

The Sidwell Corporation
P. O. Box 8443
Denver 10, Colorado

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
November 3, 1960

File: E-764-416

Subject: 1960 Plan of Development
Northeast Hogback Unit
San Juan County, New Mexico

The Oil & Gas Supervisor (6)
United States Geological Survey
Roswell, New Mexico

Oil Conservation Commission (3)
State of New Mexico
Santa Fe, New Mexico

Commissioner of Public Lands (3)
State of New Mexico
Santa Fe, New Mexico

All Working Interest Owners
Northeast Hogback Unit
(See Attached Addressee List)

Gentlemen:

In compliance with Section 10 of the Unit Agreement for the Development and Operation of the Northeast Hogback Unit Area, San Juan County, New Mexico, dated July 1, 1959, Pan American Petroleum Corporation, as Unit Operator, respectfully submits for your approval the 1960 Plan of Development for this Unit.

History of Development: There have been 28 wells drilled to date in the Northeast Hogback Unit. Of these 28 wells, 25 are Gallup producers of which only 19 are committed to the Unit, two were dry holes in the Gallup, and three were dry holes in the Dakota, one of the latter which was subsequently completed in the Gallup as a commercial well.

1960 Plan of Development: The participants in the Northeast Hogback Unit respectfully ask the regulatory bodies consider that the 1960 Plan of Development consist of the drilling of four exploratory wells, as provided for by Section 9 of the Unit Agreement, and six Gallup development wells already drilled and completed during 1960. The fourth exploratory well, the Northeast Hogback Unit No. 4, is to be drilled in the NW/4 SE/4 Section 14, T-30-N, R-16-W, in the immediate future. Three of the exploratory wells, Northeast Hogback Unit Well Nos. 1, 2, and 3, have already been drilled and determined non-productive in the Dakota with Well No. 2 determined commercial and completed in the Gallup. Pertinent data on these wells is included by attachment to this letter.

Well Casing Program: The well casing program for the Northeast Hogback No. 4 will be generally that used on similar wells in San Juan County, including such surface casing and other casing as may be required by the Supervisor, the Commissioner, and the Commission, or is set forth in approvals of the applicable U. S. Geological Survey and State of New Mexico forms. The producing string of casing may be set and cemented on top, partially through, or completely through the producing zone or zones.

The Oil & Gas Supervisor
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

-2-

November 3, 1960
E-764-416

Offset Obligations: Appropriate and adequate measures will be taken to prevent drainage of unitized substances from lands subject to the Northeast Hogback Unit Agreement or, pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided for by Section 17 of the aforementioned Unit Agreement.

Further Development: This plan of development shall constitute the drilling obligations of the Unit Operator under the terms of the Northeast Hogback Unit Agreement for the period ending December 31, 1960.

Effective Date: This plan of development shall have been effective as of January 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
Lue

L. O. Speer, Jr.
Area Superintendent

FWF:en

Attach.

Approved _____ Date _____
Regional Oil and Gas Supervisor
United States Geological Survey

Approved _____ Date _____
Commissioner of Public Lands
State of New Mexico

Approved *A. L. Carter, Jr.* Date *12-19-60*
Oil Conservation Commission
State of New Mexico

NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO
WELLS DRILLED AND COMPLETED DURING
CALENDAR YEAR 1960
NOVEMBER 3, 1960

Northeast Hogback Unit No. 1 (Test Well)

Location: 790' FNL & 790' FWL
Section 36, T30N, R16W
Spudded: January 1, 1960
Total Depth: 4525'
Dakota and Gallup determined non-commercial. Well plugged and abandoned January 27, 1960.

Northeast Hogback Unit No. 2 (Test Well)

Location: 825' FNL & 875' FEL
Section 15, T30N, R16W
Date Spudded: May 3, 1960
Total Depth: 2623'
Plug Back Depth: 2058'
Dakota zone determined non-commercial.
Top Pay: Gallup 1820
Gallup Perforations: 1892-1900 &
1832-1862
Initial Potential (Gallup): Pumped
201 BOPD
Completed: May 23, 1960

Northeast Hogback Unit No. 3 (Test Well)

Location: 790' FNL & 950' FWL
Section 22, T30N, R16W
Date Spudded: April 22, 1960
Total Depth: 2486'
Plug Back Depth: 1823'
Dakota zone determined non-commercial;
recovered sulfur water on Drill Stem
Test in interval 2280-2365.
Gallup zone 1667-1693 perforated,
sand-oil fracked, and by testing
determined non-commercial.
Plugged and abandoned June 22, 1960.

Northeast Hogback Unit No. 5 (Formerly
O. J. Hoover "E" No. 1)

Location: 820' FNL & 2170' FWL
Section 15, T30N, R16W
Date Spudded: April 17, 1960
Total Depth: 1747'
Plug Back Depth: 1706'
Gallup Perforations: 1509-1559
Initial Potential (Gallup): Pumped
166 BOPD

Date Completed: May 3, 1960

Northeast Hogback Unit No. 6 (Formerly
O. J. Hoover "E" No. 2)

Location: 650' FNL & 1910' FEL
Section 15, T30N, R16W
Date Spudded: April 24, 1960
Total Depth: 1750'
Plug Back Depth: 1714'
Gallup Perforations: 1681-1689 &
1620-1658
Initial Potential (Gallup): Pumped
384 BOPD
Date Completed: May 6, 1960

Northeast Hogback Unit No. 10 (Formerly
J. W. Aidlin "B" No. 4)

Location: 1970' FNL & 680' FWL
Section 14, T30N, R16W
Date Spudded: April 30, 1960
Total Depth: 2547'
Plug Back Depth: 2502'
Gallup Perforations: 2388-2400, 2410-
2422, & 2447-2453
Initial Potential (Gallup): Pumped 25
BO & 2
barrels
water/day
Date Completed: June 8, 1960

Northeast Hogback Unit No. 21 (Formerly
O. J. Hoover No. 3)

Location: 410' FNL X 910' FWL
Section 15, T30N, R16W
Date Spudded: May 13, 1960
Total Depth: 1537'
Plug Back Depth: 1490'
Gallup Perforations: 1393-1434 &
1457-1463
Initial Potential (Gallup): Pumped
104 BOPD
Completed: June 2, 1960

Northeast Hogback Unit No. 22 (Formerly
O. J. Hoover "E" No. 4)

Location: 1980' FNL X 2070' FEL
Section 15, T30N, R16W
Date Spudded: May 18, 1960
Total Depth: 1870'
Plugged Back Depth: 1794'
Gallup Perforations: 1781-1787 &
1718-1760
Initial Potential (Gallup): Pumped
21 BOPD
Completed: June 16, 1960

O. J. Hoover "E" No. 5

Location: 1980' FNL & 1980' FWL
Section 15, T30N, R16W
Date Spudded: May 24, 1960
Total Depth: 1750'
Plug Back Depth: 1703'
Gallup Perforations 1598-1640 & 1661-
1669:
Gallup perforations sand-oil fracked,
tested and determined non-commercial.
Date Plugged and Abandoned: July 14,
1960

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

El Paso Natural Gas Company
P. O. Box 990
Farmington, New Mexico
Att: Mr. Harry Gevertz

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

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

Gulf Oil Corporation (2)
P. O. Box 2097
Denver, Colorado

Northwest Production Corporation
520 Simms Building
Albuquerque, New Mexico

The Sidwell Corporation
P. O. Box 8443
Denver 10, Colorado

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico

130 OCT 11 AM 8 04

October 10, 1960

File: E-694-993

Subject: First Enlargement
Gallup Participating Area
Northeast Hogback Unit
San Juan County, New Mexico

Director
United States Geological Survey
c/o Oil and Gas Supervisor
P. O. Box 6721
Roswell, New Mexico

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

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

All Working Interest Owners
in Unit Area
(See Attached Addressee List)

Gentlemen:

Application for approval of the First Enlargement for the Gallup Formation, Northeast Hogback Unit, dated August 23, 1960, has been executed by the U. S. Geological Survey, Commissioner and Commission on the following dates:

Director
United States Geological Survey: September 26, 1960

Commissioner of Public Lands
State of New Mexico: August 30, 1960

New Mexico
Oil Conservation Commission: August 30, 1960

The First Enlargement of the Gallup Participating Area becomes effective June 1, 1960.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION



L. O. Speer, Jr. *LSJ*
Area Superintendent

CKD:en
Attach.

Oil Conservation Commission: Attached fully executed copy for your file.

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

El Paso Natural Gas Company
P. O. Box 990
Farmington, New Mexico
Att: Mr. Harry Gevertz

Pubco Petroleum Corporation
P. O. Box 1419
Albuquerque, New Mexico

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

Gulf Oil Corporation (2)
P. O. Box 2097
Denver, Colorado

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520 Simms Building
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The Sidwell Corporation
P. O. Box 8443
Denver 10, Colorado

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
August 23, 1960

SEP - 2 1960

File: E-533-416

U. S. GEOLOGICAL SURVEY

Subject: Application for Approval of
First Enlargement to the
Initial Participating Area
Gallup Formation
Northeast Hogback Unit
San Juan County, New Mexico

Director (6)
United States Geological Survey
c/o Oil and Gas Supervisor
P. O. Box 6721
Roswell, New Mexico

Commissioner of Public Lands (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

Oil Conservation Commission of (3)
The State of New Mexico
Capitol Annex Building
Santa Fe, New Mexico

All Working Interest Owners
In Unit Area
(See Attached Addressee List)

Gentlemen:

Pursuant to Section 11 of the Northeast Hogback Unit Agreement approved December 18, 1959, Pan American Petroleum Corporation, as Unit Operator, has determined; subject to the approval of the Director, the Commissioner, and the Commission, that the Initial Gallup Participating Area should be enlarged to include additional lands which have been found to be capable of producing unitized substances in paying quantities. The proposed First Enlargement to the Initial Gallup Participating Area contains 80 acres and is described as follows:

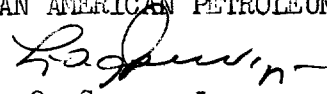
NW/4 NW/4 Section 15, T-30-N, R-16-W
SW/4 NE/4 Section 15, T-30-N, R-16-W

Attached is a schedule reflecting the ownership and describing the acreage in the First Enlargement to the Initial Gallup Participating Area. The effective date for the First Enlargement is determined as June 1, 1960, since both wells upon which the enlargement is predicated were completed during the month of June, 1960. On the map attached, Exhibit "A", is shown the First Enlargement to the Gallup Participating Area. Also attached in support of this First Enlargement is a Geological and Engineering Report.

Your approval of the proposed First Enlargement to the Initial Gallup Participating Area in the Northeast Hogback Unit is respectfully requested.

Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION



L. O. Speer, Jr.
Area Superintendent

Director - U.S. Geological Survey -2-
Oil Conservation Commission
Commissioner of Public Lands
All Working Interest Owners

August 23, 1960
File: E-533-416
Subject: Application for
Approval of First
Enlargement to the Initial
Participating Area, Gallup
Formation, Northeast
Hogback Unit, San Juan
County, New Mexico,
Consisting of NW/4 NW/4 and
SW/4 NE/4 Section 15, T-30-N
R-16-W

Approved


Acting



Director, United States Geological Survey
(Subject to like approval by appropriate
State Officials)

Date SEP 26 1960

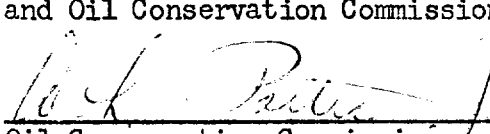
Approved



Commissioner of Public Lands
(Subject to like approval by U.S.G.S.
and Oil Conservation Commission)

Date Aug. 30, 1960

Approved



Oil Conservation Commission
(Subject to like approval by U.S.G.S.
and Commissioner of Public Lands)

Date 8-30-60

MAILING LIST OF WORKING INTEREST OWNERS
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO

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SEP - 2 1960
U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

El Paso Natural Gas Company (2)
P. O. Box 1492
El Paso, Texas

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P. O. Box 990
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Att: Mr. Harry Gevertz

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The Sidwell Corporation
P. O. Box 8443
Denver 10, Colorado

Southern Petroleum Exploration, Inc. (2)
Sistersville, West Virginia

Mr. R. L. Harper
Waterflow, New Mexico

RECEIVED

SEP - 2 1960

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

OWNERSHIP SCHEDULE
FIRST ENLARGEMENT TO THE GALTUP PARTICIPATING AREA
NORTHEAST HOGBACK UNIT
SAN JUAN COUNTY, NEW MEXICO
EFFECTIVE JUNE 1, 1960

Tract No.	Description of Land	Serial No. & Date of Lease	Basic Royalty Owner % of 8/8	Overrides & Production Owner of Record Payments %	Working Interest Owner % of Lease	Acres	Percent Participation
6	NW/4 Sec. 14, T-30N, R-16W	NM-04407 7-1-52	USA 12.50	Pan American Petroleum Corporation 5.00	Pan American Petroleum Corporation 100	160	13.34935
7	N/2 SW/4 and SE/4 Sec. 14, T-30N, R-16W	NM-04407-A 7-1-52	USA 12.50	Pan American Petroleum Corporation 4.00	Pan American Petroleum Corporation 100	240	20.02403
7	N/2 NW/4 Sec. 24, T-30-N, R-16-W	NM-04407-A 7-1-52	USA 12.50	Pan American Petroleum Corporation 4.00	Pan American Petroleum Corporation 100	80	6.67468
11	Lot 1, SW/4 NE/4, NE/4 NE/4 NW/4, NW/4 NE/4 Sec. 15, T-30N, R-16W	NM-04443 1-1-52	USA 12.50	Pan American Petroleum Corporation 5.00	Pan American Petroleum Corporation 100	158.56	13.22921
13	NE/4 NE/4 Sec. 23, T-30N, R-16-W	NM-04443-B 1-1-52	USA 12.50	Pan American Petroleum Corporation 5.00	Pan American Petroleum Corporation 100	40	3.33734
13	NW/4 NE/4 Sec. 24, T-30N, R-16W	NM-04443-B 1-1-52	USA 12.50	Pan American Petroleum Corporation 5.00	Pan American Petroleum Corporation 100	40	3.33734
15	W/2 NE/4 Sec. 14, T-30N, R-16W	NM-04444 4-1-52	USA 12.50	J. R. Abraham 3.00	J. R. Abraham 100	80	0.00000
16	S/2 SW/4 Sec. 13, T-30N, R-16W	NM-05859 8-1-51	USA 12.50	Pan American Petroleum Corporation 3.00	Pan American Petroleum Corporation 100	80	6.67468

OWNERSHIP SCHEDULE (CONT'D)

Page 2

[illegible]

R E C A P I T U L A T I O N

<u>Type of</u> <u>Acreage</u>	<u>Committed</u> <u>Acres</u>	<u>Uncommitted</u> <u>Acres</u>	<u>Total</u> <u>Acres</u>
Federal	1198.56	360.00	1558.56