

Show Unit Termination F I in Unit file  
The P.L. Case file

UNIT OFFICE OCC  
BUREAU - MI 9215

Handwritten initials

In reply refer to:  
Unit Division

August 11, 1959

C  
O  
P  
Y

Hervey, Dow & Hinkle  
P. O. Box 547  
Roswell, New Mexico

ATTENTION: Mr. Clarence E. Hinkle

Re: North Chaco Unit  
San Juan County,  
New Mexico

Dear Sir:

We are enclosing eight copies of a document entitled "Termination of Unit Agreement For The Development And Operation Of The North Chaco Unit Area, San Juan County, New Mexico".

The Commissioner of Public Lands has of this date approved the termination of the North Chaco also known as Chaco Unit.

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

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MMR/m  
cc:

OCC-SantaFe  
USGS- Roswell

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

January 16, 1956

Re: Chaco Unit Area  
No. 14-CB-001-2026  
San Juan County, New Mexico

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

THROUGH: Oil and Gas Supervisor  
United States Geological Survey  
Roswell, New Mexico

Gentlemen:

The unit agreement for the development and operation of the Chaco Unit Area, embracing lands in San Juan County, New Mexico, was approved by the United States Geological Survey on January 4, 1955.

Great Western Drilling Company became unit operator of the above unit on March 11, 1955 and has drilled a test well known as the Chaco Unit No. 1, located 1450 feet from the North line and 1660 feet from the West line of Section 14, T-23-E, R-9-W, to a total depth of 5,830 feet. Said well was plugged back to 4,770 feet on April 4, 1955 and completion attempts were made. This well was put on production May 17, 1955. Since that date re-working operations in attempting to re-complete said well have been carried on constantly, and as to this date a total cost of approximately \$98,440.80 has been spent on said well. The average daily production has been 10 barrels of oil per day. Five (5) drill stem tests were made and the following formation tops were determined:

Pictured Cliffs	1090'
Mesa Verde	1453'
Cliff House	2524'
Manefce	2621'

**ILLEGIBLE**

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

United States Geological Survey  
Re: Chaco Unit Area

January 16, 1956

- Page 2 -

Point Lookout	3532'
Mancos	3650'
Tocito	4630'
Sanagtee	5145'
Green Horn	5140'
Graneros	5501'
Dakota	5537'
Morrison	5828'

The Chaco Unit No. 2 well was drilled at a location 660 feet from the South line and 2,103 feet from the East line of Section 16, T-23-N, R-8-W, San Juan County, New Mexico, to a total depth of 6,098 feet. Said well was plugged back to a depth of 5,100 feet and completion attempts were made. This well was put on production June 5, 1955. Since that time re-working operations in attempting to re-complete said well have been carried on, the last attempt was August 7, 1955, and as to this date a total cost of \$113,149.71 has been spent on this well. The average daily production has been 9 barrels of oil. Eleven (11) drill stem tests were made, and the following formation tops were determined:

Ojo Alamo	240'
Kirtland-Fruitland	550'
Farmington	
Pictured Cliffs	1390'
Menefee	2905'
Point Lookout	3800'
Mancos	3913'
Dakota	5837'
Morrison	6094'

On August 29, 1955 Great Western Drilling Company spudded their No.1 Riddel well, which was located 777 feet from the North line and 681 feet from the East line of Section 12, T-23-N, R-8-W, San Juan County, New Mexico. This well was drilled to a total depth of 5,545 feet and was plugged and abandoned on November 2, 1955. A total of \$42,828.74 was spent in the drilling of this well, and the following formation tops were determined:

Fruitland	1616'
Pictured Cliffs	1888'
Mesa Verde	2293'
Cliff House	3387'
Menefee	3420'

**ILLEGIBLE**

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

United States Geological Survey  
Re; Chaco Unit Area

January 16, 1956

- Page 3 -

Point Lookout	4220'
Mancos	1341'
Hospah	532?'

In view of the geologic information which we have obtained by the drilling of these three (3) wells, we believe that further geological studies would be warranted to determine where our next well should be drilled. Seismograph work may be necessary; however as this area under study is an area of rugged terrain, reliable interpretation of seismographic work may be difficult. An extensive study will be required to reconcile this data into a regional stratigraphic relationship.

We are also in the process of unitizing T-22-N, R-0 and R-9-W, and in this unitization a four (4) well commitment has been made. We believe that after a test well has been drilled in either or both of these Townships, the information received will also enable us to better select a location in T-23-N.

At this time we do not believe that we are prepared to intelligently select a location for the drilling of an additional well, and in view of the fact that we have already spent \$254,419.25 we request that we be granted an extension until September 1, 1956. During this period we will be able to complete our geological and possibly geophysical work and make the necessary studies of the results in order to reach a decision of the next test well. We believe that after this period of time we will be able to more intelligently decide on a location which will be profitable to all.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

*B. H. Snoddy*  
B. H. Snoddy  
Land Manager

SIS:mc

**ILLEGIBLE**

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

January 16, 1956

- Page 4 -

The foregoing is approved this

16th day of February, 1956.

~~Director of U.S.G.S., subject to approval  
of the Commissioner and the Commission~~

*Eswald*

Commissioner of Public Lands, subject to  
approval by the U.S.G.S. and the Commission

*W. B. Magee* FEB 16 1956

Oil Conservation Commission, subject to  
approval by the U.S.G.S. and the Commissioner

*3/7/56*

Date approved MARCH 7 1956

Extension is hereby approved for a period of time  
expiring September 1, 1956, within which to com-  
mence the 4th test well under the Chaco unit agree-  
ment, San Juan County, New Mexico.

*Arthur M. Baber*

Assistant Director, Geological Survey

**ILLEGIBLE**

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

February 16, 1956

*file*

Great Western Drilling Company  
Box 1659  
Midland, Texas

Attention: Mr. S. H. Snoddy

Re: ( Chaco Unit Area )  
San Juan County, New Mexico

Gentlemen:

Reference is made to your letter of January 16, 1956, in which you requested extension of time in which to commence the fourth test well in the subject unit area.

This is to advise that the New Mexico Oil Conservation Commission has this date approved extension of time to September 1, 1956, in which to commence an additional well, approval of said extension being subject to like approval by the United States Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

Very truly yours,

W. B. MACEY,  
Secretary-Director

WBM/ir

cc: U. S. G. S. - Roswell, New Mexico  
Commissioner of Public Lands - Santa Fe, New Mexico

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GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

RECEIVED  
OIL LAND OFFICE  
FEB 2 9 31 AM '56  
SANTA FE, N.M.

January 16, 1956

Re: Chaco Unit Area  
No. 14-08-001-2026  
San Juan County, New Mexico

TO: Oil Conservation Commission  
Santa Fe, New Mexico

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

Gentlemen:

The unit agreement for the development and operation of the Chaco Unit Area, embracing lands in San Juan County, New Mexico, was approved by the United States Geological Survey on January 4, 1955.

Great Western Drilling Company became unit operator of the above unit on March 11, 1955 and has drilled a test well known as the Chaco Unit No. 1, located 1450 feet from the North line and 1660 feet from the West line of Section 14, T-23-N, R-9-W, to a total depth of 5,830 feet. Said well was plugged back to 4,770 feet on April 4, 1955 and completion attempts were made. This well was put on production May 17, 1955. Since that date re-working operations in attempting to re-complete said well have been carried on constantly, and as to this date a total cost of approximately \$98,440.80 has been spent on said well. The average daily production has been 10 barrels of oil per day. Five (5) drill stem tests were made and the following formation tops were determined:

Pictured Cliffs	1090'
Mesa Verde	1453'
Cliff House	2524'
Manefee	2621'
Point Lookout	3532'
Mancos	3550'
Tecito	4630'

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

FEB 10 10 51 AM '56

Oil Conservation Commission  
Commissioner of Public Lands  
Re: Chaco Unit Area

January 16, 1956

- Page 2 -

Sanastee	5245'
Green Horn	5440'
Graneros	5501'
Dakota	5537'
Morrison	5828'

The Chaco Unit No. 2 well was drilled at a location 660 feet from the South line and 2,103 feet from the East line of Section 16, T-23-N, R-8-W, San Juan County, New Mexico, to a total depth of 6,096 feet. Said well was plugged back to a depth of 5,100 feet and completion attempts were made. This well was put on production June 5, 1955. Since that time re-working operations in attempting to re-complete said well have been carried on, the last attempt was August 7, 1955, and as to this date a total cost of \$113,149.71 has been spent on this well. The average daily production has been 9 barrels of oil. Eleven (11) drill stem tests were made, and the following formation tops were determined:

Ojo Alamo	240'
Kirtland-Fruitland	550'
Farmington	
Pictured Cliffs	1390'
Menefee	2905'
Point Lookout	3800'
Mancos	3919'
Dakota	5837'
Morrison	6094'

On August 29, 1955 Great Western Drilling Company spudded their No. 1 Reddel well, which was located 777 feet from the North line and 681 feet from the East line of Section 12, T-23-N, R-8-W, San Juan County, New Mexico. This well was drilled to a total depth of 5,545 feet and was plugged and abandoned on November 2, 1955. A total of \$42,826.74 was spent in the drilling of this well, and the following formation tops were determined:

Fruitland	1616'
Pictured Cliffs	1888'
Mesa Verde	2293'
Cliff House	3387'
Menefee	3420'

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

FEB 2 9 30 AM '56

DATE: 1/16/56

Oil Conservation Commission  
Commissioner of Public Lands  
Re: Chaco Unit Area

January 16, 1956

- Page 3 -

Point Lookout	4220'
Mancos	4341'
Hospah	5323'

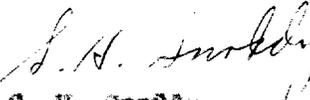
In view of the geologic information which we have obtained by the drilling of these three (3) wells, we believe that further geological studies would be warranted to determine where our next well should be drilled. Seismograph work may be necessary; however, as this area under study is an area of rugged terrain, reliable interpretation of seismographic work may be difficult. An extensive study will be required to reconcile this data into a regional stratigraphic relationship.

We are also in the process of unitizing T-22-N, R-8 and R-9-W, and in this unitization a four (4) well commitment has been made. We believe that after a test well has been drilled in either or both of these Townships, the information received will also enable us to better select a location in T-23-N.

At this time we do not believe that we are prepared to intelligently select a location for the drilling of an additional well, and in view of the fact that we have already spent \$254,419.25 we request that we be granted an extension until September 1, 1956. During this period we will be able to complete our geological and possibly geophysical work and make the necessary studies of the results in order to reach a decision of the next test well. We believe that after this period of time, we will be able to more intelligently decide on a location which will be profitable to all.

Yours very truly,

GREAT WESTERN DRILLING COMPANY



S. H. Snoddy  
Land Manager

SES:mc

cc: United States Geological Survey  
Roswell, New Mexico

COPY

RECEIVED  
PUBLIC LAND OFFICE

COPY

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

FEB 2 9 31 AM '56  
SANTA FE, N.M.

January 16, 1956

- Page 4 -

The foregoing is approved this 16th day of February,  
1956.

Director of U.S.G.S., subject to approval  
of the Commissioner and the Commission

*E. Seewalker*

Commissioner of Public Lands, subject to  
approval by the U.S.G.S. and the Commission

*W. E. Thayer*

FEB 16 1956

Oil Conservation Commission, subject to  
approval by the U.S.G.S. and the Commission

In reply refer to:  
Unit Division

May 26, 1958

Davis Oil Company  
802 Midland Savings Bldg.  
Denver 2, Colorado

Re: Chaco Unit Agreement  
San Juan County, New Mexico

ATTENTION: Mr. Paul Messinger

Gentlemen:

The Commissioner of Public Lands has today approved your request for an extension of thirty days to July 10, 1958 within which to commence the second obligation well called for under the terms of the extension of the Chaco Unit.

We are retaining one copy and mailing the original and five copies to the United States Geological Survey office in Roswell, New Mexico, attention, Mr. John Anderson, Director, as you requested. Upon approval by the United States Geological Survey, may we have one fully executed copy for our files.

Our sincere thanks for your prompt attention to our letter of May 19, 1958.

Very truly yours,

MURRAY E. MORGAN,  
Commissioner of Public Lands

BY:

Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MGR/s  
cc:

OCC-Santa Fe  
U.S.G.S.-Roswell

*File  
case  
444*

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

April 5, 1957

*File*

Re: Chaco Unit  
#14-08-001-2026

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

✓ Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

We wish to advise that our application for a 90-day extension covering the above unit was approved March 15, 1957 by the Director of the United States Geological Survey.

Yours very truly,

GREAT WESTERN DRILLING COMPANY



S. H. Snoddy  
Land Manager

SNS:mc

cc: Commissioner of Public Lands  
Unit Division  
Santa Fe, New Mexico

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

March 5, 1957

*File*

Great Western Drilling Company  
Midland, Texas

ATTENTION: S. H. Sneddy

Re: Chaco Unit Area

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved your request for a ninety-day extension of time to June 12th in which to commence the fourth test well on the subject unit, subject to like approval by the U. S. Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

Six approved copies of the request dated March 1st, 1957, are enclosed herewith.

Yours very truly,

A. L. Porter, Jr.  
Secretary - Director

ALP/DSN:bp

CC-USGS, Roswell  
Commissioner of Public Lands, Santa Fe

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Y

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

P.O. Box 1659

March 1, 1957

Re: Chaco Unit Area  
No. 14-08-001-2026  
San Juan County, New Mexico

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

Commissioner of Public Lands  
Santa Fe, New Mexico

Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

The Unit Agreement for the development and operation of the Chaco Unit Area, embracing lands in San Juan County, New Mexico, was approved by the United States Geological Survey on January 4, 1955.

Great Western Drilling Company became unit operator of the above unit on March 11, 1955, and has drilled a test well known as the Chaco Unit No. 1, located 1450 feet from the North line and 1660 feet from the West line of Section 14, T-23-N, R-9-W, to a total depth of 5,830 feet. Said well was plugged back to 4,770 feet on April 4, 1955, and completion attempts were made. This well was put on production May 17, 1955. Since that date re-working operations in attempting to re-complete said well have been carried on constantly, and as to this date a total cost of approximately \$98,440.80 has been spent on said well. The average daily production has been 10 barrels of oil per day until July 10, 1956, when production declined to 3 barrels of oil per day. This well has been temporarily abandoned.

Five (5) drill stem tests were made and the following formation tops were determined:

Pictured Cliffs	1090'
Mesa Verde	1433'
Cliff House	2524'
Menefee	2621'
Point Lookout	3532'
Mancos	3650'
Tecito	4630'
Sanstee	5145'
Green Horn	5440'

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

Re: Chaco Unit Area

March 1, 1957

Graneros	5501'
Dakota	5537'
Morrison	5828'

The Chaco Unit No. 2 well was drilled at a location 660 feet from the South line and 2103 feet from the East line of Section 16, T-23-N, R-8-W, San Juan County, New Mexico, to a total depth of 6,098 feet. Said well was plugged back to a depth of 5,100 feet and completion attempts were made. This well was put on production June 3, 1955. Since that time re-working operations in attempting to re-complete said well have been carried on, the last attempt being April 7, 1956, and as to this date a total cost of \$162,437.50 has been spent on this well. The average daily production has been 10 barrels of oil. Eleven (11) drill stem tests were made, and the following formation tops were determined:

Bojo Alamo	240'
Airtland-Fruitland	350'
Farmington	
Pictured Cliffs	1390'
Menefee	2905'
Point Lookout	3800'
Mancos	3919'
Dakota	5817'
Morrison	6094'

On August 29, 1955, Great Western Drilling Company spudded its No. 1 Riddel well, which was located 777 feet from the North line and 681 feet from the East line of Section 12, T-23-N, R-8-W, San Juan County, New Mexico. This well was drilled to a total depth of 5,545 feet and was plugged and abandoned on November 2, 1955. A total of \$42,828.74 was spent in the drilling of this well, and the following formation tops were determined:

Fruitland	1616'
Pictured Cliffs	1888'
Mesa Verde	2293'
Cliff House	3387'
Menefee	3420'
Point Lookout	4220'
Mancos	4341'
Hosopah	5323'

On August 17, 1956, Great Western Drilling Company spudded its No. 3 Chaco well, which was located 2012 feet from the North line and 2016 feet from the East line of Section 21, T-23-N, R-8-W, San Juan County, New Mexico. This well was drilled to a total depth of 5000 feet and

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

Re: Chaco Unit Area

March 1, 1957

was completed on September 12, 1956, and potentialed at 44.12 barrels of oil in 24 hours. After a few months the production began to decline and the well is now making 11 barrels of oil per day. The total cost of drilling and equipping this well was \$83,472.77 and following formation tops were determined:

Pictured Cliffs	1280'
Mesa Verde	1662'
Cliff House	2738'
Wenefee	2875'
Point Lookout	3715'
Mancos	3810'
Tocito	4793'

On October 16, 1956, Great Western Drilling Company spudded its South Chaco No. 1 well, located 660 feet from the South line and 790 feet from the West line of Section 9, T-22-N, R-9-W, San Juan County, New Mexico, and completed same as a dry hole on November 3, 1956. Great Western Drilling Company then started the Chaco 6-22-S No. 1 well on November 8, 1956, located 660 feet from the North line and 1980 feet from the West line of Section 6, T-22-N, R-8-W, San Juan County, New Mexico, and this well was plugged as a dry hole on November 30, 1956.

During the months of April through July of 1956 Great Western Drilling Company reworked the Chaco well No. 2 and attempted to raise the production. An expenditure in excess of \$39,000.00 was made and for a short period of time production was raised. Now, production has again fallen to approximately 10 barrels per day.

From January 18, 1956 to February 24, 1956, Great Western Drilling Company employed National Geophysical Company to conduct seismic work on the North Chaco area. The cost incurred for this survey was in excess of \$49,000.00. Again on March 25 through April 27, 1956, Great Western Drilling Company employed geophysical services and a Gamma-Ray survey was taken under the Chaco area. The findings of the two services were not identical; so, during the month of February 1957, Great Western Drilling Company again had National Geophysical Company re-evaluate the seismic work.

On February 28, 1957, we were advised that El Paso Natural Gas Company had spudded a well located 660 feet from the South line and 660 feet from the East line of Section 30, T-24-N, R-8-W, San Juan County, New Mexico. We believe that this well will influence the location of our next required test well on the North Chaco, which is due March 12, 1957. We have presently staked our location in Section 16, T-~~24~~<sup>23</sup>-N, R-8-W, but due to this recent development we hereby request a ninety (90) day extension from March 12, 1957, before it is necessary to commence our required well. In the event El Paso Natural Gas Company's well is a producer, our logical location would be to move as close to their Section 30 as possible in order to obtain production, but in the event

GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

Re: Chaco Unit Area

March 1, 1957

the well is non-commercial, we will probably remain our present location in Section 16, which is 1980 feet from the North line and 1980 feet from the West line of said section.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

S. H. Snoddy  
Land Manager

sns:sh

The foregoing is approved this \_\_\_\_\_ day of \_\_\_\_\_, 1957.

\_\_\_\_\_  
Director of U.S.G.S.

\_\_\_\_\_  
Commissioner of Public Lands

*101 ALPQ*

\_\_\_\_\_  
Oil Conservation Commission

THIS APPROVAL GRANTED SUBJECT TO LIKE APPROVAL BEING GRANTED BY THE UNITED STATES GEOLOGICAL SURVEY AND BY THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO.

January 4, 1957

In reply refer to:  
Unit Division

Great Western Drilling Co.  
Midland, Texas

Re: Chaco Unit Area  
San Juan County, N. Mex.

Attention: Mr. S. H. Snoddy  
Land Manager

Gentlemen:

You have failed to answer our letter which was written February 8, 1956, in which we requested definite information concerning this Unit. Under Paragraph 11, Participation After Discovery, you, as Operator, are responsible, and as the State Land Commissioner asked for this information over a year ago we are at a loss to know why we received no reply to this letter.

Your Chaco Unit Well No. 2 in Section 16-23N-8W is on State acreage, and we request that you give us the participating area which is dedicated to this well so that we may properly post our records.

Your request for an extension of time, expiring September 1, 1956, within which to commence your fourth test well under the terms of the Chaco Unit Agreement was granted by the New Mexico Oil Conservation Commission, the United States Geological Survey, and the Commissioner of Public Lands, however we have had no report since this extension was granted. If you have started a fourth test well we have received no report on this.

May we hear from you at your earliest convenience.

Very truly yours,

MURRAY E. MORGAN  
Commissioner of Public Lands

MEM:MMR/m  
cc: OCC-Santa Fe; USGS-Roswell  
Royalty Division-Linnie Crook

J. M. HERVEY 1874-1953  
HIRAM M. DOW  
CLARENCE E. HINKLE  
W. E. BONDURANT, JR.  
GEORGE H. HUNKER, JR.  
HOWARD C. BRATTON  
S. B. CHRISTY IV  
LEWIS C. COX, JR.  
PAUL W. EATON, JR.  
ROBERT C. BLEDSOE

LAW OFFICES  
HERVEY, DOW & HINKLE  
HINKLE BUILDING  
ROSWELL, NEW MEXICO

TELEPHONE MAIN 2-6510  
POST OFFICE BOX 547

September 15, 1959

444

Mr. A. L. Porter, Jr., Secretary-Director  
New Mexico Oil Conservation Commission  
Mabry Hall, State Capitol  
Santa Fe, New Mexico

Re: Termination of Chaco Unit Area

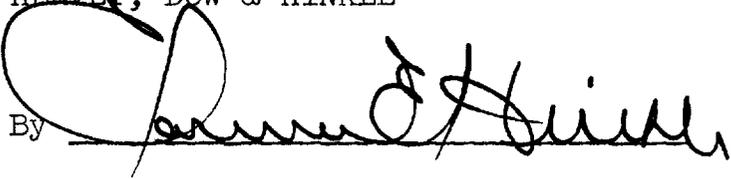
Dear Mr. Porter:

We enclose herewith photostatic copy of Termination of Chaco Unit Agreement.

You will note that this termination was approved by the Commissioner of Public Lands on August 11 and by the Director of the U.S.G.S. on September 1, 1959, which is the effective date of the termination. Please note your records accordingly.

Yours very truly,

HERVEY, DOW & HINKLE

By 

CEH/bp  
Encl.

cc: Great Western Drilling Company

Case  
449



*file*

R. C. TUCKER, PRES

March 29, 1956

PHONE 2-5241  
ADDRESS REPLY TO:  
BOX 1659  
MIDLAND, TEXAS

Re: (Chaco #1 Unit)  
San Juan County, New Mexico

Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

Great Western Drilling Company, as Operator of the Chaco Unit #14-08-001-2026 in San Juan County, New Mexico, has made application for an extension on the above described unit. This extension has been granted until September 1, 1956.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

S. H. Snoddy  
Land Manager

SHS:mc  
Encl.

cc: Commissioner of Public Lands  
Santa Fe, New Mexico

Skelly Oil Company  
Tulsa 2, Oklahoma  
Attention: T. F. Thompson

Humble Oil & Refining Company  
P. O. Box 1600  
Midland, Texas  
Attention: Leon McMillan

Three States Natural Gas Company  
17th Floor Corrigan Tower  
Dallas, Texas  
Attention: Joe Donahue

TURNER, ATWOOD, WHITE, McLANE AND FRANCIS

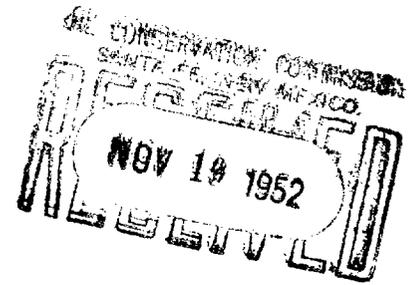
ATTORNEYS AND COUNSELORS AT LAW

SUITE 1711 MERCANTILE BANK BUILDING

DALLAS 1, TEXAS

November 17, 1952

J. GLENN TURNER  
FELIX ATWOOD  
W. D. WHITE  
ALFRED E. McLANE  
EDWARD L. FRANCIS  
JAMES B. FRANCIS  
TREVOR REES-JONES  
WM. V. COUNTS  
HARRY S. WELCH  
THOS. R. HARTNETT III  
H. L. HITCHINS, JR.  
WILLIAM L. McINERNEY  
WILLIAM G. WEBB  
JULIAN M. MEER



Mr. W. B. Macey  
Chief Engineer  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Re: Chaco Unit Agreement.

Dear Mr. Macey:

In accordance with your instructions by letter dated November 12, 1952, we are pleased to enclose herewith two signed copies of Three States Natural Gas Company's Application for Approval of the Chaco Unit Area in San Juan County, New Mexico.

Unless we are informed by your office to the contrary we will make plans for the hearing of the above Application on December 16, 1952.

Very truly yours,

TURNER, ATWOOD, WHITE, McLANE  
AND FRANCIS

By

William G. Webb

WGW:jco  
Enclosures

*Send 114*

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

*Case 444*

November 12, 1952

C

Mr. William G. Webb  
TURNER, ATWOOD, WHITE, McLANE & FRANCIS  
1711 Mercantile Bank Building  
Dallas 1 - Texas

O

Dear Sir:

This will acknowledge receipt of your application in behalf of your client, Three States Natural Gas Company, for hearing in regard to the proposed Chaco Unit Area in San Juan County, New Mexico.

P

It will be possible to set the case for hearing at the Commission's regular hearing on December 16, 1952. However, we should have two more signed copies of the application itself; will you please send this to us as soon as possible?

Y

Yours very truly,

W. B. Macey  
Chief Engineer

WBM:nr

- Case 444

TURNER, ATWOOD, WHITE, MCLANE AND FRANCIS

ATTORNEYS AND COUNSELORS AT LAW

SUITE 1711 MERCANTILE BANK BUILDING

DALLAS 1, TEXAS

J. GLENN TURNER  
FELIX ATWOOD  
W. D. WHITE  
ALFRED E. MCLANE  
EDWARD L. FRANCIS  
JAMES B. FRANCIS  
TREVOR REES-JONES  
WM. V. COUNTS  
HARRY S. WELCH  
THOS. R. HARTNETT III  
H. L. HITCHINS, JR.  
WILLIAM L. MCINERNEY  
WILLIAM G. WEBB  
JULIAN M. MEER

November 7, 1952



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

Gentlemen:

Please find enclosed herewith the Application of Three States Natural Gas Company for approval of a unit plan of development of the Chaco Unit Area comprising all of Township 23 North, Range 8 and 9 West, and being situated in San Juan County, New Mexico.

If you will issue the requisite public notice and set this matter down for hearing, we will greatly appreciate the courtesy.

All notices and communications in connection with such Application should be sent to us at the above address.

Yours very truly,

TURNER, ATWOOD, WHITE, MCLANE  
AND FRANCIS

By William G. Webb  
William G. Webb

WGW:jco  
Enclosure

cc: Mr. Ben R. Howell  
Mr. C. L. Perkins  
Miss Margaret Clark  
Mr. Max Cohen

In reply refer to:  
Unit Division

September 23, 1959

C  
O  
P  
Y  
  
Harvey, Dow & Hinkle  
Hinkle Building  
P. O. Box 547  
Roswell, New Mexico

Re: Termination of Chaco Unit Area  
San Juan County, New Mexico

Gentlemen:

This office has terminated Chaco Unit Agreement, effective as of September 1, 1959 and our records have been posted accordingly.

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

BY:  
Ted Bilberry, Supervisor  
Oil and Gas Division

MEM/MAR/m

cc:

Davis Oil Company  
1020 Midland Savings Bldg.  
Denver, Colorado

Oil Conservation Commission  
Santa Fe, New Mexico

OIL CONSERVATION COMMISSION  
P. O. BOX 871  
SANTA FE, NEW MEXICO

March 5, 1957

444

C  
O  
P  
Y

Great Western Drilling Company  
Midland, Texas

ATTENTION: S. H. Snoddy

Re: Chaco Unit Area

Gentlemen:

This is to advise that the New Mexico Oil Conservation Commission has this date approved your request for a ninety-day extension of time to June 12th in which to commence the fourth test well on the subject unit, subject to like approval by the U. S. Geological Survey and by the Commissioner of Public Lands of the State of New Mexico.

Six approved copies of the request dated March 1st, 1957, are enclosed herewith.

Yours very truly,

A. L. Porter, Jr.  
Secretary - Director

ALP/DSN:bp

CC-USGS, Roswell  
Commissioner of Public Lands, Santa Fe

# Memo

From

WILLIAM B. MACEY  
Chief Engineer

To RRS

This unit is very large and the plan of drilling to discovery calls for one well to the Dakota (8000') within 6 months and one every 6 Months until discovery. Even though this area is "Wild" I don't believe that it ise enough development and perhaps we ought do contact Emery Arnold on the possibilities of production and hold up on the signature pending a further investigation of the plan of development.

OK - *WBM*  
RS

*WBM*



RRS::

Have discussed this unit area with Emery Arnold and Canfield and Anderson of USGS. They have informed me that there has already been one Dakota Well drilled within this unit ~~xx~~ area and that under the proposed unit plan they are required to drill two Dakota tests, one in each ~~XXXXXXX~~ township, the first well to start 3 months after approval of the unit and the second well to start within 6 months after the completion of the first well. Emery Arnold says that they have a fair shot for Pictured Cliff production and also a shot at Tecito Oil production in the area. Under the terms of the unit they must drill to the Dakota regradless of the development of shallow production in any other zone. Since there is a preponderance of Federal acreage involved, (93.02%) and the USGS is satisfied with it I don't see any further reason to delay approval.

WBM

TURNER, WHITE, ATWOOD, McLANE AND FRANCIS

ATTORNEYS AND COUNSELORS AT LAW

1725 FLOOR MERCANTILE BANK BUILDING

DALLAS 1, TEXAS

October 29, 1953

J. GLENN TURNER  
W. D. WHITE  
FELIX ATWOOD  
ALFRED E. McLANE  
EDWARD L. FRANCIS  
JAMES B. FRANCIS  
JULIAN M. MEER  
TREVOR REES-JONES  
HARRY S. WELCH  
THOS. R. HARTNETT III  
H. L. HITCHINS JR.  
WILLIAM L. MEINERNEY  
WILLIAM G. WEBB  
LEWIS CHANDLER  
SNOWDEN M. LEFTWICH, JR.  
WILLIAM C. HERNDON, JR.

NOV 2 1953

C Mr. E. S. Walker  
Commissioner of Public Lands  
State Land Office  
Santa Fe, New Mexico

O Re: Chaco Unit Agreement  
San Juan County, New Mexico  
Your Case Number 444

Dear Mr. Walker:

P This will acknowledge receipt of your letter dated October 26, 1953 requesting an executed copy of the above Unit Agreement. The above Unit Agreement has not, as of this date, been finally executed by the parties owning interests in the Chaco Unit Area and, therefore, same has not been filed for final approval by the U. S. Geological Survey.

Y As you will recall, this Unit Area was initially formed over a year ago and, due to various delays encountered by the Unit Operator, he has only recently decided to go forward with the unitization of this area. When this Unit Agreement has been finally executed and filed with the U. S. Geological Survey in Washington, D. C. for the Survey's final approval, we will, of course, furnish an executed copy of the approved Agreement for your files.

Yours very truly,

TURNER, WHITE, ATWOOD, McLANE  
and FRANCIS

By William G. Webb  
William G. Webb

WGW:mch

cc - Oil Conservation Commission  
Mr. R. E. Anderson  
Mr. Bob Slay

June 4, 1953

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

Re: Chaco Unit Agreement,  
San Juan County, New Mexico  
Case Number 444  
Order R-240

Gentlemen:

Our records reveal that the Chaco Unit Agreement has been approved by the Oil Conservation Commission.

Please forward a copy of the Oil Conservation Commission Order to this office together with the proper ratifications and joiners. Upon receipt of these instruments we will proceed to post our leases and tract books accordingly.

Very truly yours,

E. S. WALKER  
Commissioner of Public Lands

cc: U. S. Geological Survey  
Roswell, New Mexico (3)  
Oil Conservation Commission  
Santa Fe, New Mexico (1)

C  
O  
P  
Y

Case 444  
Order R-26

January 14, 1959

OIL CONSERVATION  
SANTA FE  
RECEIVED  
JAN 16 1959

Turner, Atwood, White, Malone and Francis  
Attorneys and Counselors at Law  
Suite 1711 Mercantile Bank Building  
Dallas 1, Texas

Re: Chase Unit Agreement  
San Juan County, New Mexico

Gentlemen:

I have examined the proposed form of the Chase Unit Agreement in San Juan County, New Mexico. It appears that this proposal form is substantially the form of agreement heretofore approved by me for others.

I am withholding approval of the proposition pending a hearing to be had before the Oil Conservation Commission of New Mexico and the evidence adduced at that time in support of the agreement.

Very truly yours,

H. B. WALKER  
Commissioner of Public Lands

cc: U.S. Geological Survey  
Oil Conservation Commission ✓

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 21, 1953

C  
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P  
Y

Mr. William G. Webb  
Turner, Atwood, White, McLane and Francis  
DALLAS 1 - TEXAS

Dear Sir:

We enclose two signed copies of Order R-240 issued by the Commission in Case 444 in which you represented Three States Natural Gas Company before the Commission.

Very truly yours,

R. R. Spurrier

RRS:nr

HISTORY OF OIL OR GAS WELL

*1. All  
Chase Unit  
#444*

The Chase Unit #1 was spudded March 10, 1955 and 10-3/4" casing was set @ 206' with 200 sacks.

The well was drilled to 5830' with a 9" bit with tests, coring, etc. as follows:

March 15, 1955 - Ran Schlumberger to 3800'.

Core #1: 4560-5612. Rec. 52' dark gray shale with calcareous streaks.

Core #2: 4652-4705. Rec. 53' shaley sand and shale - saturated.

Core #3: 4705-4757. Rec. 53' shaley sand and shale - saturated.

D. S. T. #1: 4641-4757. Open 1 1/2 hours, weak blow air immediately, died 26 minutes. Recovered 145' drilling mud. No show.  
Flow Pressure - 0, Shut-in - 0 in 30 minutes,  
Hydrostatic - 2325. 3-22-55 - Tocene Formation.

Core #4: 4757-4807. Rec. 50' sand with shale partings. Top 12' saturated.

Core #5: 4807-4819. Rec. 12' sandstone with shale partings. No show.

D. S. T. #2 and 3: Failed. 3-24-55 and 3-25-55

D. S. T. #4: 4756-4819. Open 1 hour, very weak blow air immediately, decreased and died in 14 minutes. Recovered 5' very slightly oil cut mud. Flow Pressure - 0, Shut-In - 0 in 30 minutes.  
Hydrostatic - 4050. 3-26-55. Tocene Formation.

Average Oil Saturation - 19.0%  
Average Water Saturation - 49.0%  
Average Porosity - 13.0 %  
Average Permeability - 0

D. S. T. #5: 5524-5830. Open 1 hour, strong blow air immediately, decreased in 35 minutes to weak and remained weak. Recovered 4006' fluid; top 240' mud, 3766' water.  
Flow Pressure - 380-1960. Shut-In - 2400 in 30 minutes.  
Hydrostatic - 2950. 4-2-55. Dakota Formation.

The well was plugged back and casing run as follows:

April 2, 1955 - 170 sacks from 5830' to 5450'.  
90 sacks from 4950' to 4750'.

April 4, 1955 - Plug dressed down to 4770' R. M.

April 5, 1955 - 4609' - 5-1/2" - 15.5# J-55 casing set @ 4619' with 275 sacks.

April 7, 1955 - Drilled shoe and displaced mud with water.

The rotary rig was released and a cable tool rig was moved in April 13, 1955 and the well treated as follows:

The hole was swabbed and bailed dry and in a three hour test no fluid was recovered. No oil was recovered by bailing or swabbing.

The well was shot with 270 quarts SMC from 4760' to 4653' (Gr.) with a 14" gravel tamp April 16, 1955. The hole was not loaded. The shot collapsed the bottom joint of casing.

The bottom joint of casing was drilled up or out and the hole cleaned out to 4760' with a sand pump. There was a show of oil but production could not be determined using the sand pump. The open hole sluffed and bridged frequently.

500 gallons of mud acid was dumped in the well May 2, 1955 and the casing was swabbed. Five or six barrels of oil was recovered and the acid water was pumped out with the sand pump. Another 500 gallons of mud acid was dumped in the well May 3, 1955 and this treatment seemed to "block" the formation. Acid water and only a trace of oil were recovered by swabbing and pumping.

The water was pumped down using the sand pump and the well showed signs of making water. While running the pump the hole bridged at 4725' and did not show any water above the bridge.

The well was sand-frac'd down the casing with the bridge at 4725' May 4, 1955 with 476 barrels of crude and 33,000# of sand. Total fluid used was 906 barrels. Break-down pressure was 1900 psi, average injection 28 barrels per minute @ 1650 psi, shut-down pressure 1000 psi, 780 psi on well after 16 hours. Well flowed back 16 1/2 barrels in 12 hours and died.

The rig was released May 11, 1955 after 679 barrels of fluid had been recovered. The well was swabbing four barrels per hour through 2" tubing.

The well was put on pump May 17, 1955 and the load oil was recovered May 23, 1955. The well was pumping three barrels per hour with a G. O. R. of 1100 to 1 at this time.

The production declined to 30 barrels per day by June 6 and to 18 barrels per day by July 6, 1955.

A reverse circulation rig was moved on the well July 8, 1955 and the hole was cleaned out from 4712' to 4760' using oil. The formation took oil while cleaning out and 701 barrels were put in the well to clean out to bottom. The hole sluffed and bridged several times. A sand pump was also used.

The well was put to pumping again July 27, 1955 and the load oil had been recovered by August 7, 1955.

Cleaning the well out did not increase the production any and the production was down to about 16 barrels September 1, 1955 and by October 1, 1955 was down to 12 barrels per day with 3% water and a G. O. R. of 275 cubic feet per barrel.

TURNER, WHITE, ATWOOD, McLANE AND FRANCIS

ATTORNEYS AND COUNSELORS AT LAW

17<sup>TH</sup> FLOOR MERCANTILE BANK BUILDING

DALLAS I, TEXAS

September 29, 1955

J. GLENN TURNER  
W. D. WHITE  
FELIX ATWOOD  
ALFRED E. McLANE  
EDWARD L. FRANCIS  
JAMES B. FRANCIS  
JULIAN M. MEER  
TREVOR REES-JONES  
HARRY S. WELCH  
THOS. R. HARTNETT III  
H. L. HITCHINS, JR.  
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WILLIAM G. WEBB  
LEWIS CHANDLER  
SNOWDEN M. LEFTWICH, JR.  
WILLIAM C. HERNDON, JR.  
THOMAS B. McELROY

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

Gentlemen:

Please find enclosed herewith executed counter-  
parts of the Unit Agreement and Unit Operating Agreement  
relative to the Chaco Unit Area, designated Unit Number  
14-08-001-2026 and approved and effective as of January 4,  
1955.

With best wishes, we are

Yours very truly,

TURNER, WHITE, ATWOOD, McLANE  
and FRANCIS

By   
William G. Webb

WGW:mch  
cc: Mr. S. H. Snoddy  
Enclosures