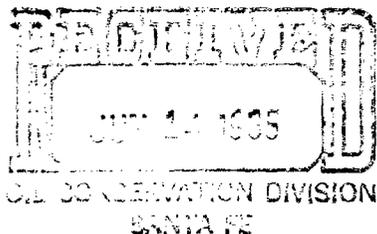


Bureau of Land Management  
Albuquerque District Office  
Minerals Division  
P.O. Box 6770  
Albuquerque, NM 87197-6770

SJ 31-6 Unit  
3100 (015)



JUN 12 1985

*H H 67*

Northwest Pipeline Corporation  
Attention: Mr. Darrell L. Gillen  
P.O. Box 1526  
Salt Lake City, UT 84110

Gentlemen:

An approved copy of your 1985 Plan of Development for the San Juan 31-6 Unit area, Rio Arriba County, New Mexico is enclosed. Such plan, proposing to drill the San Juan 31-6 Unit Well No. 53, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

The possibility might exist of drainage by wells outside of the unit boundary. You will be contacted at a later date about this possibility.

If you have any questions, please contact Ron Bartel at the above address or telephone (505) 766-2841.

Sincerely,

(Orig. Signed) - Sid Vogelpohl

For District Manager

Enclosure(s)

~~cc:~~  
NMOCD, Santa Fe  
Comm. of Pub. Lands, Santa Fe  
Micrographics 943B-1  
Fluids Section FRAH  
File: San Juan 31-6 Unit POD  
O&G Chron

015:RBartel:tt:6/5/85:0769

State of New Mexico



JIM BACA  
COMMISSIONER



Commissioner of Public Lands

June 5, 1985

#-467

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148  
Express Mail Delivery Used  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

Northwest Pipeline Corporation  
P. O. Box 1526  
Salt Lake City Utah 84110-1526

Re: San Juan 31-6 Unit  
1985 Drilling Program  
Rio Arriba County, New Mexico

ATTENTION: Mr. Darrell L. Gillen

Gentlemen:

The Commissioner of Public Lands has this date approved your 1985 Drilling Program for the San Juan 31-6 Unit Area, Rio Arriba County, New Mexico. Such plan proposes to drill the Unit Well No. 53, to test the Mesaverde/Dakota formation to be located in Section 1, Township 30 North, Range 6 West. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Enclosed is an approved copy for your files.

Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY: *Ray D. Graham*  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

JB/RDG/pm  
encls.

cc: OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico Attn: Fluids Branch  
BLM-Roswell, New Mexico Attn: Mr. Armando Lopez

**NORTHWEST PIPELINE CORPORATION**  
ONE OF THE WILLIAMS COMPANIES

LAND DEPARTMENT

P.O. BOX 1826  
SALT LAKE CITY, UTAH 84110-1526  
801-584-7215

343-85

May 17, 1985

Assistant District Manager for Minerals  
Bureau of Land Management  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, NM 87102

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, NM 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Richard L. Stamets  
P. O. Box 2088  
Santa Fe, NM 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
1985 Drilling Program

Gentlemen:

By letter dated April 12, 1984, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the captioned Unit providing for the drilling of two (2) Dakota wells. All of these wells have been timely drilled.

As of this date, the total number of wells drilled in the San Juan 31-6 Unit on acreage committed to the Unit is as follows:

Mesaverde, commercial	26
Mesaverde, non-commercial	1
Mesaverde, plugged and abandoned	2
Mesaverde/Dakota, Dual (Dakota temporarily abandoned)	1
Dakota, commercial	15
Dakota, waiting for completion	2
Dakota, commerciality undetermined	<u>1</u>
Total	48

Bureau of Land Management  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
May 17, 1985  
Page -2-

Pursuant to Section 10 of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, has contacted all of the Working Interest Owners and has received the necessary concurrence to propose the drilling of the following additional well during the calendar year 1985.

<u>Well Name</u>	<u>Location</u>	<u>Formation</u>
#53	Sec. 1, T30N, R6W	Mesaverde/Dakota

Northwest Pipeline Corporation, 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 which are requested by the Unit Operator or the Working Interest Owners.

If this Drilling Program is acceptable, please signify your approval as required under Section 10 of the Unit Agreement in the space provided on the attached sheet and return an approved copy to Northwest Pipeline Corporation.

Copies of this Drilling Program are being sent to the Working Interest Owners shown on the enclosed sheet.

Sincerely,



Darrell L. Gillen  
Land Coordinator

DLG:js

Enclosure

cc: Working Interest Owners

Bureau of Land Management  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
May 17, 1985  
Page -3-

APPROVED \_\_\_\_\_ Date \_\_\_\_\_  
Assistant District Manager for Minerals  
Bureau of Land Management  
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  
Assistant Area Oil and Gas Supervisor  
and the Oil Conservation Commission

APPROVED \_\_\_\_\_ Date \_\_\_\_\_  
Oil Conservation Commission  
Subject to like approval by the  
Assistant Area Oil and Gas Supervisor  
and the Commissioner of Public Lands

The foregoing approvals are for the 1985 Supplemental Drilling Program for the  
San Juan 31-6 Unit #14-08-001-464.

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
c/o Texas Commerce Bank of Houston  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

TEXACO PRODUCING, INC.  
P. O. BOX 1404  
HOUSTON, TX 77251

CONTINENTAL OIL COMPANY  
ATTN: D. W. Thompson  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA International, Ltd.  
Attn: Partner Operations  
5416 South Yale Avenue  
Tulsa, OK 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
905 OIL AND GAS BUILDING  
WICHITA FALLS, TEXAS 76301

PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. Study  
Woodside II  
7800 East Dorado Place  
Englewood, CO 80111

MERIDIAN OIL  
P. O. Box 4289  
Land Department  
FARMINGTON, NM 87499-4289

AMOCO PRODUCTION COMPANY  
Western Division, Production Mgr.  
AMOCO BUILDING  
DENVER, COLORADO 80202

Phillips Petroleum Company  
Attention: T. C. Doughty  
8055 E. Tufts Avenue Parkway  
Denver, CO 80237

0043t



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

# 467

TONEY ANAYA  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

October 12, 1984

Northwest Pipeline Corporation  
P.O. Box 1526  
Salt Lake City, Utah 84110-1526

Attention: Warren O. Curtis

Re: San Juan 31-6 Unit  
#14-08-001-464  
Rio Arriba County,  
NM, NOTICE OF COMPLE-  
TION OF ADDITIONAL WELL  
Mesaverde Formation

Dear Mr. Curtis:

Enclosed please find an approved copy of the material referenced above. Such approval is contingent upon like approval by the Commissioner of Public Lands and the Bureau of Land Management.

Sincerely,

ROY E. JOHNSON  
Petroleum Geologist

REJ/dp

cc: Commissioner of Public Lands - Santa Fe  
Bureau of Land Management - Albuquerque  
OCD District Office - Aztec

**NORTHWEST PIPELINE CORPORATION**  
ONE OF THE WILLIAMS COMPANIES 

P.O. BOX 1526  
SALT LAKE CITY, UTAH 84110-1526  
801-583-8800

5140-217-84/2672Q

September 13, 1984

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
NOTICE OF COMPLETION OF  
ADDITIONAL WELL  
Mesaverde Formation

Assistant Area Oil and Gas Supervisor  
Bureau of Land Management  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, NM 87102

State of New Mexico  
Commissioner of Public Lands  
Attention: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, NM 87501

State of New Mexico  
Oil Conservation Commission  
Attention: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, NM 87501

Gentlemen:

Pursuant to the provisions of Section 11(a) of the San Juan 31-6 Unit Agreement, Northwest Pipeline, as Unit Operator, has determined that the following described well is capable of producing unitized substances in paying quantities from the Mesaverde formation.

The well data is as follows:

The San Juan 31-6 Unit Com #8A Well is located 1200 feet from the north line and 1865 feet from the east line, Section 6, Township 31 North, Range 6 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on August 14, 1982. The Mesaverde formation was completed on August 23, 1982. The Mesaverde formation was perforated with 29 holes at the following depths:

5088', 5110', 5116', 5122', 5144', 5150', 5179', 5242', 5260', 5266',  
5310', 5368', 5390', 5394', 5398', 5402', 5406', 5420', 5424', 5428',  
5432', 5440', 5452', 5458', 5466', 5471', 5490', 5495', 5500'

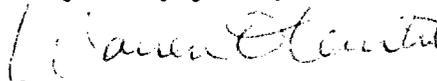
Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
Page 2  
September 13, 1984

These perforations were treated with 92,358 gallons pad water followed by 10,000 pounds of 20/40 sand. The well was tested on October 22, 1982, using a positive choke in a three hour test. The well was tested at a 2742 MCFD flow rate with a calculated AOF of 3880 MCFD. The ISIP was measured at 867 psig.

Since this well was drilled within the existing Mesaverde Participating Area, the Participating Area is not affected by virtue of this commercial well and the percentages of participation remain the same.

If this determination meets with your approval, please so indicate such approval in the space provided and return an approved copy for our files. Copies of this letter are being sent to the Working Interest Owners shown on the attached sheet.

Very truly yours,



Warren O. Curtis  
Proration/Land

jawc  
cc: Working Interest Owners

APPROVED \_\_\_\_\_  
Area Oil and Gas Supervisor  
Bureau of Land Management  
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  
Area Oil and Gas Supervisor and the  
Oil Conservation Commission

DATE \_\_\_\_\_

APPROVED  \_\_\_\_\_  
Oil Conservation Commission  
Subject to like approval by the  
Area Oil and Gas Supervisor and the  
Commissioner of Public Lands

DATE 10-12-84

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. MOSLEY  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CAMBRIDGE RELATED ASSETS, INC.  
ATTN: MR. WALTER BLESSING  
1200 SAN JACINTO BLDG.  
HOUSTON, TEXAS 77002

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
905 OIL AND GAS BUILDING  
WICHITA FALLS, TEXAS 76301

PHILLIPS PETROLEUM COMPANY  
ATTN: T. C. DOUGHTY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: LAND DEPARTMENT  
P. O. BOX 4289  
FARMINGTON, NM 87499-4289

AMOCO PRODUCTION COMPANY  
ATTN: J. C. BURNSIDE  
1670 BROADWAY - SUITE 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

PHILLIPS OIL COMPANY  
ATTN: T. C. DOUGHTY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

0049t

Northwest Pipeline Corporation  
Attention: Mr. Darrell L. Gillen  
P.O. Box 1526  
Salt Lake City, Utah 84110

MAY 18 1984

Dear Mr. Gillen:

Your 1984 Plan of Development for the San Juan 31-6 Unit No. 14-08-001-464, proposing the drilling of two Dakota wells and plans to drill any offset wells required to prevent drainage of unitized substances, has been received by this office. This Plan of Development is hereby approved. You are requested to furnish all interested principals with appropriate evidence of this approval.

Sincerely yours,

  
For District Manager

Enclosures

cc:   
NMOCD  
Commissioner Public Lands  
Micrographics  
Fluids Section (FRAH w/encl.)  
File: San Juan 31-6 Unit - POD File  
O&G Chrono

015:JGilmore:sj:5/16/84:0737P

7/1/84

State of New Mexico



Commissioner of Public Lands

JIM BACA  
COMMISSIONER

May 10, 1984

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148  
Express Mail Delivery User  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

Northwest Pipeline Corporation  
P. O. Box 1526  
Salt Lake City, Utah 84110-1526

Re: 1984 Drilling Program  
San Juan 31-6 Unit  
Rio Arriba County, New Mexico

ATTENTION: Mr. Darrell L. Gillen

Gentlemen:

The Commissioner of Public Lands has this date approved your 1984 Drilling Program for the San Juan 31-6 Unit, Rio Arriba County, New Mexico. Such program proposes to drill the Unit Well Nos. 50 and 51 to test the Dakota formation. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Enclosed is an approved copy for your files.

Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY:  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

JB/RDG/pm  
encls.

cc: OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico  
BLM-Roswell, New Mexico

**NORTHWEST PIPELINE CORPORATION**

ONE OF THE WILLIAMS COMPANIES

Land Department

P.O. BOX 1526

SALT LAKE CITY, UTAH 84110-1526

801-583-8800

April 12, 1984

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, New Mexico 87102

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P.O. Box 1148  
Santa Fe, New Mexico 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
1984 Drilling Program

Gentlemen:

By letter dated May 6, 1983, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the captioned Unit providing for the drilling of five (5) Dakota wells carried over from the 1982 program. All of these wells have been timely drilled.

As of this date, the total number of wells drilled in the San Juan 31-6 Unit on acreage committed to the unit is as follows:

Mesaverde, commercial	25
Mesaverde, non-commercial	1
Mesaverde, temporarily abandoned	1
Mesaverde, plugged and abandoned	2
Mesaverde/Dakota, Dual (Dakota temporarily abandoned)	1
Dakota, commercial	7
Dakota, waiting for completion	3
Dakota, commerciality undetermined	<u>6</u>
Total	46

Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
April 12, 1984  
Page 2

Pursuant to Section 10 of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, has contacted all of the Working Interest Owners and has received the necessary concurrence to propose the drilling of the following additional wells during the calendar year 1984.

<u>Well Name</u>	<u>Location</u>	<u>Formation</u>
#50	W/2 Sec. 31-31N-6W	Dakota
#51	W/2 Sec. 5-30N-6W	Dakota

Northwest Pipeline Corporation, 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 which are requested by the Unit Operator or the Working Interest Owners.

If this Drilling Program is acceptable, please signify your approval as required under Section 10 of the Unit Agreement in the space provided on the attached sheet and return an approved copy to Northwest Pipeline Corporation.

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

Very truly yours,

NORTHWEST PIPELINE CORPORATION

  
Darrell L. Gillen  
Land Coordinator

am

Attachment

cc: Working Interest Owners

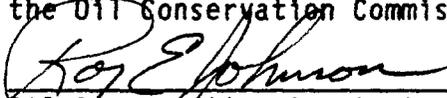
Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
April 12, 1984  
Page 3

APPROVED: \_\_\_\_\_  
Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
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  
Minerals Management Service and  
the Oil Conservation Commission

Date \_\_\_\_\_

APPROVED:  \_\_\_\_\_  
Oil Conservation Commission  
Subject to like approval by the  
Minerals Management Service and  
the Commissioner of Public Lands

Date 4-26-84

The foregoing approvals are for the 1984 Drilling Program for the San Juan  
31-6 Unit #14-08-001-464.

SAN JUAN 31-6  
WORKING INTEREST OWNERS

Matagorda Oil Company  
C/O Texas National Bank of Commerce  
Attn: Oil & Gas Department  
P.O. Box 2558  
Houston, Texas 77001

Continental Oil Company  
Attn: M. K. Mosley  
P.O. Box 460  
Hobbs, New Mexico 88240

Tenneco Oil Company  
Attn: Mr. R. J. Gibb  
P.O. Box 3249  
Englewood, Colorado 80155

The Wiser Oil Company  
905 Oil and Gas Building  
Whichita Falls, Texas 76301

El Paso Exploration Company  
Attn: James R. Permenter  
P.O. Box 1492  
El Paso, Texas 79978

General American Oil Company of Texas  
Attn: L. E. Dooley  
Meadows Building  
Dallas, Texas 75206

Getty Oil Company  
Attn: Mr. T. L. Dittmore  
Three Park Central - Suite 700  
Denver, Colorado 80202

CRA International LTD.  
Attn: Partner Operations  
5416 S. Yale Avenue  
Tulsa, Oklahoma 74135

PWG Partnership  
Sandia Savings Bldg. - Suite 800  
400 Gold Avenue, S.W.  
Albuquerque, New Mexico 87102

Phillips Petroleum Company  
Attn: M. K. Study  
8055 E. Tufts Avenue Parkway  
Denver, Colorado 80237

Amoco Production Company  
Attn: J. C. Burnside  
1670 Broadway - Suite 1914  
Amoco Building  
Denver, Colorado 80202

NORTHWEST PIPELINE CORPORATION

LAND DEPARTMENT



June 24, 1983

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, New Mexico 87102

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, New Mexico 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
1983 Drilling Program

Gentlemen:

The 1983 Drilling Program filed on May 6, 1983, for the San Juan 31-6 Unit has been approved by the regulatory agencies as follows:

Minerals Management Service	6/24/83
Commissioner of Public Lands	5/20/83
Oil Conservation Commission	5/10/83

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

Very truly yours,

A handwritten signature in cursive script that reads "Kathy Michael".

Kathy Michael  
Supervisor/Land Department

KM:bs  
Attachment  
CC: Working Interest Owners

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. Mosley  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA INTERNATIONAL LTD.  
ATTN: PARTNER OPERATIONS  
5416 S. YALE AVENUE  
Tulsa, Oklahoma 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
905 OIL AND GAS BUILDING  
WICHITA FALLS, TEXAS 76301

PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. STUDY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: JAMES R. PERMENTER  
P. O. BOX 1492  
EL PASO, TEXAS 79978

AMOCO PRODUCTION COMPANY  
ATTN: J. C. Burnside  
1670 Broadway - Suite 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

PHILLIPS OIL COMPANY  
ATTN: DEBBIE SHELL  
MEADOWS BUILDING  
DALLAS, TEXAS 75206

State of New Mexico



Case  
467

JIM BACA  
COMMISSIONER

Commissioner of Public Lands

May 20, 1983

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

Northwest Pipeline Corporation  
1125 Seventeenth Street, Suite 2140  
Denver, Colorado 80202

Re: 1983 Drilling Program  
San Juan 31-6 Unit  
Rio Arriba County, New Mexico

ATTENTION: Kathy Michael

Gentlemen:

The Commissioner of Public Lands has this date approved your 1983 Drilling Program for the San Juan 31-6 Unit, Rio Arriba County, New Mexico. Such program calls for no wells to be drilled in 1983 except the Dakota Wells carried over from 1981 and 1982. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Enclosed is an approved copy for your files.

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

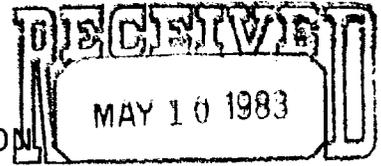
Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY:  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

JB/RDG/pm  
encls.  
cc:

OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico



NORTHWEST PIPELINE CORPORATION

OIL CONSERVATION DIVISION

LAND DEPARTMENT

May 6, 1983

Santa Fe  
625 Seventh Street, Suite 2140  
Denver, Colorado 80202  
303-292-4906

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, New Mexico 87102

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, New Mexico 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
1983 Drilling Program

Gentlemen:

By letter dated March 29, 1982, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the captioned Unit providing for the drilling of one (1) Mesaverde Well. By letter dated December 17, 1982, Northwest Pipeline Corporation filed a Supplemental Drilling Program providing for the drilling of nine (9) Dakota Wells. Four (4) Dakota Wells were carried over from the 1982 Drilling Program. The Mesaverde Well, three (3) of the 1981 Dakota Wells and five (5) of the 1982 Dakota Wells have been timely drilled. The following Dakota Wells will be carried over into 1983: #40, 44, 45, 47, and 49.

As of this date, the total number of wells drilled in the San Juan 31-6 Unit on acreage committed to the Unit is as follows:

Mesaverde, commercial	25
Mesaverde, noncommercial	1
Mesaverde, temporarily abandoned	1
Mesaverde, plugged and abandoned	2
Mesaverde/Dakota, Dual	1
(Dakota temporarily abandoned)	
Dakota, commercial	1
Dakota, waiting for completion	3
Dakota, commerciality undetermined	7
Total	41

Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
May 6, 1983  
Page 2

Pursuant to Section 10 of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, has contacted all of the Working Interest Owners and has received the necessary concurrence to propose that no wells be drilled in 1983 except the Dakota Wells carried over from 1981 and 1982.

Northwest Pipeline Corporation, 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 which are requested by the Unit Operator or the Working Interest Owners.

If this Drilling Program is acceptable, please signify your approval as required under Section 10 of the Unit Agreement in the space provided on the attached sheet and return an approved copy to Northwest Pipeline Corporation.

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

Very truly yours,



Kathy Michael  
Supervisor/Land Department

KM:bs  
Attachment  
CC: Working Interest Owners

Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
San Juan 31-6 Unit  
May 6, 1983  
Page 3

APPROVED: \_\_\_\_\_  
Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
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  
Minerals Management Service and  
the Oil Conservation Commission

Date \_\_\_\_\_

APPROVED: *Roy Johnson*  
Oil Conservation Commission  
Subject to like approval by the  
Minerals Management Service and  
the Commissioner of Public Lands

Date 5-10-83

The foregoing approvals are for the 1983 Drilling Program for the San Juan 31-6 Unit #14-08-001-464.

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. Mosley  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA INTERNATIONAL LTD.  
ATTN: PARTNER OPERATIONS  
5416 S. YALE AVENUE  
Tulsa, Oklahoma 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
905 OIL AND GAS BUILDING  
WICHITA FALLS, TEXAS 76301

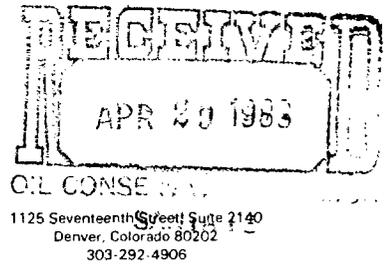
PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. STUDY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: JAMES R. PERMENTER  
P. O. BOX 1492  
EL PASO, TEXAS 79978

AMOCO PRODUCTION COMPANY  
ATTN: J. C. Burnside  
1670 Broadway - Suite 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

GENERAL AMERICAN OIL COMPANY OF TEXAS  
ATTN: L. E. DOOLEY  
MEADOWS BUILDING  
DALLAS, TEXAS 75206

NORTHWEST PIPELINE CORPORATION



LAND DEPARTMENT

April 18, 1983

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, New Mexico 87102

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, New Mexico 87501

✓ State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
NOTICE OF COMPLETION OF  
ADDITIONAL WELLS  
Mesaverde Formation

Gentlemen:

Pursuant to the provisions of Section 11(a) of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, has determined that additional wells capable of producing unitized substances in paying quantities have been completed within the Mesaverde Formation Participating Area.

The well data is as follows:

The San Juan 31-6 #6A Well is located 1780 feet from the north line and 790 feet from the west line, Section 1, Township 30 North, Range 7 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 5, 1981. The Mesaverde Formation was completed on November 5, 1981. The Formation was perforated with 22 holes at the following depths:

5426' to 5805'

April 18, 1983

Page Two

These perforations were treated with 10,000 gallons pad water followed by 126,000 pounds of 10/20 sand. This well was initially tested using a positive choke in a three hour test. The SITP was 534 psig with a flowing tubing pressure of 137 psig producing at a rate of 1841 MCFD. The calculated AOF was 3026 MCFD.

The San Juan 31-6 #3A Well is located 745 feet from the south line and 1955 feet from the east line, Section 6, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 17, 1981. The Mesaverde Formation was completed on October 10, 1981. This Formation was perforated with 30 holes at the following depths:

5230' to 5607'

These perforations were treated with 10,000 gallons pad water followed by 100,000 pounds of 20/40 sand in fracturing fluid. The well was initially tested with a positive choke in a three hour test. The SITP was 860 psig with a flowing pressure of 217 psig producing at a rate of 2919 MCFD. The calculated AOF was 4165 MCFD.

Since these wells were drilled within the existing Mesaverde Formation Participating Area, the Participating Area is not affected by virtue of these commercial wells and the percentages of participation remain the same.

Inasmuch as this needs no official approval, pursuant to Section 11 of the San Juan 31-6 Unit Agreement, no provision is made therefore, and in the absence of disapproval, this determination shall be effective as of the date the subject wells were tested.

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

Very truly yours,



Kathy Michael  
Supervisor/Land Department

KM:bs

Attachment

CC: Working Interest Owners

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. Mosley  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA INTERNATIONAL LTD.  
ATTN: PARTNER OPERATIONS  
5416 S. YALE AVENUE  
Tulsa, Oklahoma 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

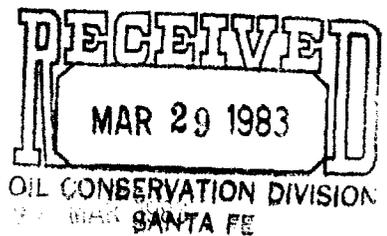
THE WISER OIL COMPANY  
P. O. BOX 2467  
HOBBS, NEW MEXICO 88240

PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. STUDY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: JAMES R. PERMENTER  
P. O. BOX 1492  
EL PASO, TEXAS 79978

AMOCO PRODUCTION COMPANY  
ATTN: M. R. GILE  
1670 Broadway - Suite 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

GENERAL AMERICAN OIL COMPANY OF TEXAS  
ATTN: L. E. DOOLEY  
MEADOWS BUILDING  
DALLAS, TEXAS 75206



*Case  
467*

Northwest Pipeline Corporation  
1125 Seventeenth Street  
Suite 2140  
Denver, Colorado 80202

Gentlemen:

Your application of December 17, 1982, requesting approval of the first, second, third, and fourth expansion, Dakota participating area, San Juan 31-6 Unit, Rio Arriba County, New Mexico, was approved this date by the Deputy Minerals Manager, Oil and Gas, Albuquerque, New Mexico, effective as of June 1, 1980, July 1, 1980, March 1, 1981, and April 1, 1981.

The first, second, third, and fourth expansions add 2192.84 acres and are described as: the first expanded participating area consists of section 34 and the S<sub>1/2</sub> of section 35 T. 31 N., R. 6 W., N.M.P.M.; the second area consists of the N<sub>1/2</sub> of section 35 T. 31 N., R. 6 W., N.M.P.M.; the third area consists of the E<sub>1/2</sub> of section 27, T. 31 N., R. 6 W., N.M.P.M., and the fourth area consists of the S<sub>1/2</sub> of section 36, T. 31 N., R. 6 W. and the N<sub>1/2</sub> section 2, T. 30 N., R. 6 W., N.M.P.M. Contributing to this area is the completion of six wells as follows:

1. No. 31, section 35, T. 31 N., R. 6 W., N.M.P.M.  
Initial potential - 4190 Mcfd
2. No. 33, section 34, T. 31 N., R. 6 W., N.M.P.M.  
Initial potential - 4305 Mcfd
3. No. 35, section 35, T. 31 N., R. 6 W., N.M.P.M.  
Initial potential - 2643 Mcfd
4. No. 36, section 27, T. 31 N., R. 6 W., N.M.P.M.  
Initial potential - 2557 Mcfd
5. No. 37, section 36, T. 31 N., R. 6 W., N.M.P.M.  
Initial potential - 2498 Mcfd
6. No. 38, section 2, T. 30 N., R. 6 W., N.M.P.M.  
Initial potential - 2995 Mcfd

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are enclosed. You are requested to furnish the State of New Mexico and other interested parties with appropriate evidence of this approval.

Sincerely yours,

Gene F. Daniel  
Deputy Minerals Manager  
Oil and Gas

**Enclosures**

cc:

BLM, Santa Fe

Comma. of Public Lands, Santa Fe

✓ N.M.O.C.D., Santa Fe

District Supervisor, Farmington (w/encl)

File, San Juan 31-6 Unit

Roswell Accounting

Miller

O&G chrono

DMiller:dm:3-22-83



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

TONEY ANAYA  
GOVERNOR

January 20, 1983

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

NORTHWEST PIPELINE CORP.  
1125 Seventeenth St.  
Suite 2140  
Denver, CO 80202

ATTENTION: Kathy Michael

RE: San Juan 31-6 Unit  
Rio Arriba County, New Mexico  
Dakota Formation

Dear Ms. Michael:

Enclosed please find an approved copy of the material referenced above. Such approval is contingent upon like approval by the New Mexico Commissioner of Public Lands and the U. S. Minerals Management Service.

Sincerely,

A handwritten signature in cursive script that reads "Roy E. Johnson".

Roy E. Johnson  
Petroleum Geologist

REJ/dp

Enc.

cc: Commissioner of Public Lands - Santa Fe  
Minerals Management Service - Albuquerque  
OCD District Office - Aztec

EXHIBIT "D"

TABLE NO. 1

SAN JUAN 31-6 UNIT: DAKOTA GAS PRODUCTION  
RIO ARRIBA COUNTY, NEW MEXICO

GAS VOLUMES IN MCF @ 14.73 PSIA & 60° F

UNIT WELL NO.	LOCATION	I. D. DATE	MAR 81	APR 81	MAY 81	JUN 81	JUL 81	AUG 81	SEP 81	OCT 81	NOV 81	DEC 81	JAN 82	FEB 82	CUMULATIVE PRODUCTION TO 3-1-82
38	02-30N-6W	10-81	-----	-----	-----	-----	-----	-----	-----	-----	19564	27676	12640	20578	80453
36	27-31N-6W	11-81	-----	-----	-----	-----	-----	-----	-----	-----	-----	14540	14339	12818	41657
24	27-31N-6W	02-74	77	1427	770	12	216	0	0	0	0	1469	0	898	279324
16*	33-31N-6W	12-59	0	0	0	0	0	0	0	0	0	0	0	0	73831
33	34-31N-6W	06-81	-----	-----	-----	171	26775	18334	7887	30170	16978	20846	20020	17118	158299
35	35-31N-6W	06-81	-----	-----	-----	213	22321	15782	9733	20329	16479	14877	14085	9532	123351
31	35-31N-6W	06-81	-----	-----	-----	-----	11545	13833	9835	32871	24294	23243	21894	15017	152532
37	36-13N-6W	08-81	-----	-----	-----	-----	-----	-----	15243	17567	12098	11493	7939	7237	71577

\*Non-commercial, temporarily abandoned

# State of New Mexico



JIM BACA  
COMMISSIONER



## Commissioner of Public Lands

January 14, 1983

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

Northwest Pipeline Corporation  
1125 Seventeenth Street, Suite 2140  
Denver, Colorado 80202

# AC67  
Re: San Juan 31-6 Unit, Rio Arriba County, New Mexico  
APPLICATION FOR APPROVAL OF THE FIRST, SECOND,  
THIRD AND FOURTH EXPANDED PARTICIPATING AREAS  
DAKOTA FORMATION

ATTN: KATHY MICHAEL

Gentlemen:

The Commissioner of Public Lands has this date approved the First, Second, Third and Fourth Expanded Participating Areas for the Dakota Formation, San Juan 31-6 Unit, Rio Arriba County, New Mexico. Such Expanded Participating Areas are predicted upon the commercial determination of the Well Nos. 31, 33, 35, 36, 37, and 38. The following lands constitute the First Expanded Participating Area effective June 1, 1980. All of Section 34 and the S/2 of Section 35, Township 31 North, Range 6 West. The Second Expanded Participating Area effective July 1, 1980 consists of the N/2 of Section 35, Township 31 North, Range 6 West. The Third Expanded Participating area consists of the E/2 of Section 27, Township 31 North, Range 6 West and is Effective March 1, 1981. The Fourth Expanded Participating Area is Effective April 1, 1981 and consists of the S/2 of Section 36, Township 31 North, Range 6 West and the N/2 of Section 2, Township 30 North, Range 6 West, Rio Arriba County, New Mexico.

Our approval is subject to like approval by the Bureau of Land Management and the New Mexico Oil Conservation Division.

Enclosed is an approved copy for your files.

Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY: Floyd O. Prando, Assistant Director  
Oil & Gas Division, AC/505-827-5744

JB/FOP/cm

Enclosure

cc: OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico  
Administration



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

BERNARD KING  
GOVERNOR

December 29, 1982

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-2434

Northwest Pipeline Corp.  
1125 17th St.  
Suite 2140  
Denver, CO 80202

ATTN: Kathy Michael

Case 467  
~~45~~

RE: San Juan 31-6 Unit  
San Juan 30-5 Unit  
Dakota Formation  
Rio Arriba County, NM

Dear Ms. Michael:

Enclosed please find the approved copies of the material referenced above. Such approval is contingent upon like approval by the Commissioner of Public Lands and the U. S. Minerals Management Service.

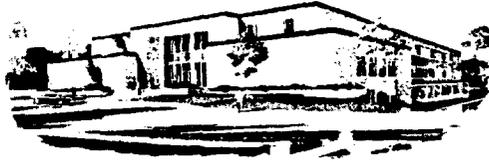
Sincerely,

Roy E. Johnson  
Petroleum Geologist

REJ/dp

cc: Commissioner of Public Lands - Santa Fe  
Minerals Management Service - Albuquerque  
OCD District Office

State of New Mexico



ALEX J. ARMIJO  
COMMISSIONER

Commissioner of Public Lands

December 28, 1982

P. O. BOX 1148  
SANTA FE, N. M. 87504-1148

Northwest Pipeline Corporation  
1125 Seventeenth Street, Suite 2140  
Denver, Colorado 80202

# 467

Re: San Juan 31-6 Unit  
Rio Arriba County, New Mexico  
Supplemental 1982 Drilling Program

ATTENTION: Kathy Michael

Gentlemen:

The Commissioner of Public Lands has this date approved your Supplemental 1982 Drilling Program for the San Juan 31-6 Unit Rio Arriba County, New Mexico. Such supplemental program proposes to drill nine additional Dakota wells prior to the filing of your 1983 Drilling Program. Our approval is subject to like approval by the United States Minerals Management Service and the New Mexico Oil Conservation Division.

Enclosed is an approved copy for your files.

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

Very truly yours,

ALEX J. ARMIJO  
COMMISSIONER OF PUBLIC LANDS

BY: *Ray D. Graham*  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

AJA/RDG/pm  
encls.

cc: OCD-Santa Fe, New Mexico  
USMMS-Albuquerque, New Mexico  
Administration

NORTHWEST PIPELINE CORPORATION

File COPY

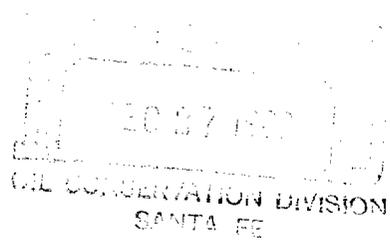
LAND DEPARTMENT

December 17, 1982

1125 Seventeenth Street, Suite 2140  
Denver, Colorado 80202  
303-620-3559

Case # 445  
467

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, New Mexico 87102



State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, NM 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, NM 87501

Re: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico  
Supplemental 1982 Drilling Program

Gentlemen:

By letter dated March 29, 1982, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the captioned Unit for the Calendar Year 1982.

Phillips Petroleum Company has requested the following additional Dakota Wells to be drilled under the 1982 Drilling Program. We plan to commence the drilling of these Wells prior to the filing of our 1983 Drilling Program.

<u>WELL NUMBER</u>	<u>LOCATION/DEDICATION</u>
39	NE 28-31N-6W (E $\frac{1}{2}$ )
27	SW 28-31N-6W (W $\frac{1}{2}$ )
44	NE 29-31N-6W (E $\frac{1}{2}$ )
45	NE 31-31N-6W (E $\frac{1}{2}$ )
47	SW 32-31N-6W (W $\frac{1}{2}$ )
46	NE 32-31N-6W (E $\frac{1}{2}$ )
25	NE 33-31N-6W (E $\frac{1}{2}$ )
48	SE 2-30N-6W (S $\frac{1}{2}$ )
49	NE 5-30N-6W (E $\frac{1}{2}$ )

9 wells

Northwest Pipeline has contacted all of the Working Interest Owners and has received the necessary approval to propose this Supplemental Drilling Program.

Assistant Area Oil and Gas Supervisor  
Commissioner of Public Lands  
Oil Conservation Commission  
December 17, 1982  
Page Two

If this 1982 Supplemental Drilling Program is acceptable, please signify your approval in the space provided and return one (1) copy to this office.

Copies of this 1982 Supplemental Drilling Program are being sent to the Working Interest Owners shown on the attached sheet.

Sincerely,



Kathy Michael  
Supervisor/Land Department

KM:bs

CC: Working Interest Owners  
attachment

APPROVED

Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
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  
Assistant Area Oil and Gas Supervisor  
and the Oil Conservation Commission

DATE \_\_\_\_\_

APPROVED



Oil Conservation Commission  
subject to like approval by the  
Assistant Area Oil and Gas Supervisor  
and the Commissioner of Public Lands

DATE 12-29-82

The foregoing approvals are for the 1982 Supplemental Drilling Program for the San Juan 31-6 Unit #14-08-001-464



SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. Mosley  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA INTERNATIONAL LTD.  
ATTN: PARTNER OPERATIONS  
5416 S. YALE AVENUE  
Tulsa, Oklahoma 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W.  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
P. O. BOX 2467  
HOBBS, NEW MEXICO 88240

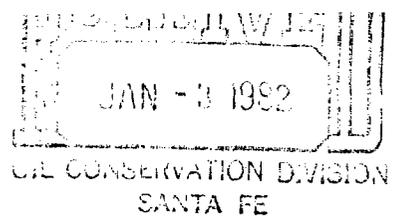
PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. STUDY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: JAMES R. PERMENTER  
P. O. BOX 1492  
EL PASO, TEXAS 79978

AMOCO PRODUCTION COMPANY  
ATTN: M. R. GILE  
1670 Broadway - Suite 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

GENERAL AMERICAN OIL COMPANY OF TEXAS  
ATTN: L. E. DOOLEY  
MEADOWS BUILDING  
DALLAS, TEXAS 75206





NORTHWEST PIPELINE CORPORATION

LAND DEPARTMENT

December 17, 1982

1125 Seventeenth Street, Suite 2140  
Denver, Colorado 80202  
303-620-3559

Assistant Area Oil & Gas Supervisor  
Minerals Management Service  
Western National Bank Building  
505 Marquette NW, Suite 815  
Albuquerque, NM 87102

*Case #467*

State of New Mexico  
Commissioner of Public Lands  
Attn: Mr. Ray D. Graham  
P. O. Box 1148  
Santa Fe, NM 87501

State of New Mexico  
Oil Conservation Commission  
Attn: Mr. Joe Ramey  
P. O. Box 2088  
Santa Fe, NM 87501

RE: San Juan 31-6 Unit #14-08-001-464  
Rio Arriba County, New Mexico

APPLICATION FOR APPROVAL OF THE  
FIRST EXPANDED PARTICIPATING AREA  
Effective June 1, 1980

APPLICATION FOR APPROVAL OF THE  
SECOND EXPANDED PARTICIPATING AREA  
Effective July 1, 1980

APPLICATION FOR APPROVAL OF THE  
THIRD EXPANDED PARTICIPATING AREA  
Effective March 1, 1981

APPLICATION FOR APPROVAL OF THE  
FOURTH EXPANDED PARTICIPATING AREA  
Effective April 1, 1981

DAKOTA FORMATION

Gentlemen:

Pursuant to Section 10 of the San Juan 31-6 Unit, Northwest Pipeline Corporation, as Unit Operator, has determined on the dates indicated below that wells located in the San Juan 31-6 Unit were capable of producing unitized substances in paying quantities from the Dakota Formation and should create the First, Second, Third and Fourth Expansions of the Participating Area for the Dakota Formation as follows:

FIRST EXPANDED PARTICIPATING AREA - Effective June 1, 1980

Township 31 North, Range 6 West, N.M.P.M.

Section 34: All

Section 35: S/2

Containing 960 acres, more or less

The San Juan 31-6 Unit #31 Well is located 820 feet from the South Line and 820 feet from the East Line, Section 35, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This Well was spudded on November 22, 1979 and completed on June 26, 1980 in the Dakota Formation at a plug back depth of 7880'. The Dakota Formation was perforated with one hole at each of the following depths:

7802', 7803', 7804', 7805', 7806', 7807', 7808',  
7809', 7810', 7811', 7812', 7813', 7814', 7815',  
7816', 7817', 7818', 7819', 7820', 7821', 7822',  
7823', and 7824'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-water fracturing. The Well was shut-in June 7, 1980 for 19 days with a SIPT of 2957 psig and SIPC of 2961 psig. On June 26, 1980, the Well was tested and after flowing for three (3) hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the Well gauged 3770 MCFD with a calculated AOF of 4190 MCFD.

The San Juan 31-6 Unit #33 Well is located 1450 feet from the North Line and 1450 feet from the East Line, Section 34, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This Well was spudded on November 6, 1979 and completed on June 27, 1980 in the Dakota Formation at a plug back depth of 8003'. The Dakota Formation was perforated with one hole at each of the following depths:

7976', 7977', 7978', 7979', 7980', 7981', 7982',  
7983', 7984', 7985', 7986', 7987', 7988', 7989',  
7990', 7991', 7992', 7993', 7994', 7995', 7996',  
7997', 7998', 7999', 8000'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-water fracturing. The Well was shut-in June 11, 1980 for 16 days with a SIPT of 2866 psig and SIPC of 2871 psig. On June 27, 1980, the Well was tested and after flowing for three (3) hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the Well gauged 4119 MCFD with a calculated AOF of 4805 MCFD.

SECOND EXPANDED PARTICIPATING AREA - Effective July 1, 1980

Township 31 North, Range 6 West, M.M.P.M.

Section 35: N/2

Containing 320 acres, more or less.

The San Juan 31-6 Unit #35 Well is located 880 feet from the North Line and 1185 feet from the East Line, Section 35, Township 31 North, Range 6 West, M.M.P.M., Rio Arriba County, New Mexico. This well was spudded on October 25, 1979 and completed on July 1, 1980 in the Dakota Formation at a total depth of 8080'. The Dakota Formation was perforated with one hole at each of the following depths:

7933', 7934', 7935', 7936', 7937', 7938', 7939',  
7940', 7941', 7942', 7943', 7944', 7945', 7946',  
7947', 7948', 7949', 7950', 7951', 7952', 7953',  
and 7954'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-fracturing. The Well was shut-in June 16, 1980 for 15 days with a SIPT of 2867 psig and SIPC of 2867 psig. On July 1, 1980, the Well was tested and after flowing for three (3) hours through a 3/4 inch variable choke on the 2 3/8 tubing, the Well gauged 2643 MCFD with a calculated AOF of 2802 MCFD.

THIRD EXPANDED PARTICIPATING AREA - Effective March 1, 1981

Township 31 North, Range 6 West, N.M.P.M.  
Section 27: E/2

Containing 320 acres, more or less.

The San Juan 31-6 Unit #36 Well is located 845 feet from the North Line and 790 feet from the East Line, Section 27, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This Well was spudded on December 23, 1980 and completed on March 8, 1981. The Dakota Formation was perforated with twenty-five (25) holes between each of the following depths:

7806' to 7830'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-water fracturing. The Well was shut-in with a SIPT of 2744 psig and SIPC of 2744 psig. The Well was tested on March 8, 1981 and after flowing for three (3) hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the Well gauged 2557 MCFD with a calculated AOF of 2736.

FOURTH EXPANDED PARTICIPATING AREA - Effective April 1, 1981

Township 31 North, Range 6 West, N.M.P.M.  
Section 36: S/2 (272.88 acres)

Township 30 North, Range 6 West, N.M.P.M.  
Section 2: N/2 (319.96 acres)

Containing 592.84 acres, more or less.

The San Juan 31-6 Unit #37 Well is located 1000 feet from the South Line and 900 feet from the East Line, Section 36, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This Well was spudded on December 8, 1980 and completed on April 14, 1981 in the Dakota Formation at a plug back depth of 8030'. The Dakota Formation was perforated with twenty-three (23) holes between the following depths:

7952' to 7980' and 7920' to 7934'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-water fracturing. On April 14, 1981, the Well was tested and after flowing for three (3) hours through a 3/4 inch variable choke, the Well gauged 2370 MCFD with a calculated AOF of 2498 MCFD.

The San Juan 31-6 Unit #38 Well is located 1000 feet from the North Line and 1800 feet from the West Line, Section 2, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This Well was spudded on January 5, 1981 and completed on April 16, 1981 in the Dakota Formation at a plug back depth of 7940'. The Dakota Formation was perforated with one (1) hole at each of the following depths:

13 holes from 7832' to 7856' and  
3 holes from 7880' to 7888'

These perforations were treated with 500 gallons of 7 1/2% HCL followed by a sand-water fracturing. On April 16, 1981, the Well was tested and after flowing for three (3) hours through a 3/4 inch variable choke, the Well gauged 2828 MCFD with a calculated AOF of 2995 MCFD.

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

EXHIBIT "A"

Ownership maps reflecting the boundaries of the Unit and the proposed First, Second, Third and Fourth Expansions of the Participating Area of the Dakota Formation within the San Juan 31-6 Unit.

EXHIBIT "B"

Geological Report on the First, Second, Third and Fourth Expansions of the Participating Area of the Dakota Formation within the San Juan 31-6 Unit.

EXHIBIT "C"

Figure 1 - Dakota Structural Contour Map  
Figure 2 - Isopachous Map

EXHIBIT "D"

Table 1: Schedule of San Juan 31-6 Unit Dakota production and deliverability.

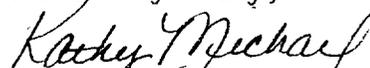
Minerals Management Service  
Commissioner of Public Lands  
Oil Conservation Commission  
December 17, 1982

Attached hereto are Schedules II, III, IV, V showing the proposed First, Second, Third and Fourth Expanded Participating Areas for the Dakota Formation in the San Juan 31-6 Unit Area. These Schedules describe the Participating Area, show the percentage of unitized substances allocated to each unitized tract, and the percentage of ownership in the tracts.

If the First, Second, Third and Fourth Expanded Participating Areas of the Dakota Formation meet with your approval, please indicate such approval in the space provided on the attached sheet and return an approved copy hereof for our files.

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

Yours very truly,



Kathy Michael  
Supervisor/Land Department

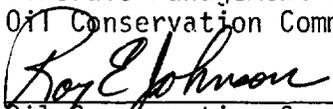
KM:bs  
enclosures  
CC: Working Interest Owners

APPROVED: \_\_\_\_\_  
Assistant Area Oil and Gas Supervisor  
Minerals Management Service  
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  
Minerals Management Service and the  
Oil Conservation Commission

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

APPROVED:  \_\_\_\_\_  
Oil Conservation Commission  
Subject to like approval by the  
Minerals Management Service and the  
Commissioner of Public Lands

DATE: 1-20-83

The foregoing approvals are for the First, Second, Third and Fourth Expanded Participating Areas of the Dakota Formation, San Juan 31-6 Unit, #14-08-001-464, Rio Arriba County, New Mexico.

SAN JUAN 31-6  
WORKING INTEREST OWNERS

MATAGORDA OIL COMPANY  
C/O TEXAS NATIONAL BANK OF COMMERCE  
ATTN: OIL & GAS DEPARTMENT  
P. O. BOX 2558  
HOUSTON, TEXAS 77001

GETTY OIL COMPANY  
ATTN: MR. T. L. DITMORE  
THREE PARK CENTRAL - SUITE 700  
DENVER, COLORADO 80202

CONTINENTAL OIL COMPANY  
ATTN: M. K. Mosley  
P. O. BOX 460  
HOBBS, NEW MEXICO 88240

CRA INTERNATIONAL LTD.  
ATTN: PARTNER OPERATIONS  
5416 S. YALE AVENUE  
Tulsa, Oklahoma 74135

TENNECO OIL COMPANY  
ATTN: MR. R. J. GIBB  
P. O. BOX 3249  
ENGLEWOOD, COLORADO 80155

PWG PARTNERSHIP  
SANDIA SAVINGS BLDG. - SUITE 800  
400 GOLD AVENUE, S.W. -  
ALBUQUERQUE, NEW MEXICO 87102

THE WISER OIL COMPANY  
P. O. BOX 2467  
HOBBS, NEW MEXICO 88240

PHILLIPS PETROLEUM COMPANY  
ATTN: M. K. STUDY  
8055 E. TUFTS AVENUE PARKWAY  
DENVER, COLORADO 80237

EL PASO EXPLORATION COMPANY  
ATTN: JAMES R. PERMENTER  
P. O. BOX 1492  
EL PASO, TEXAS 79978

AMOCO PRODUCTION COMPANY  
ATTN: M. R. GILE  
1670 Broadway - Suite 1914  
AMOCO BUILDING  
DENVER, COLORADO 80202

GENERAL AMERICAN OIL COMPANY OF TEXAS  
ATTN: L. E. DOOLEY  
MEADOWS BUILDING  
DALLAS, TEXAS 75206

Northwest Pipeline Corporation  
UNIT AREA EXPANSION SCHEDULE

SCHEDULE II  
FIRST EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION  
SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE	
<u>TRACT 2</u>					
SF 078999	T-31N, R-6W Sec. 27: W/2 Sec. 34: A11 Sec. 35: S/2	1280.00	Royalty Working Interest: Phillips Petroleum ORRI	12.500000% 84.000000% <u>3.500000%</u>	12.500000% 84.000000% <u>3.500000%</u>
TOTAL				<u>100.000000%</u>	<u>100.000000%</u>

RECAPITULATION

DESCRIPTION OF LANDS IN PARTICIPATING AREA:

Township 31 North, Range 6 West, N.M.P.M.  
Section 27: W/2  
Section 34: A11  
Section 35: S/2

Total number of acres in Participating Area 1280.00  
Total number of committed acres in Participating Area 1280.00

Northwest Pipeline Corporation  
UNIT AREA EXPANSION SCHEDULE

SCHEDULE III  
SECOND EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION  
SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE	
SF 078999	T-31N, R-6W Sec. 27: W/2 Sec. 34: A11 Sec. 35: A11	1600.00	Royalty Working Interest: Phillips Petroleum ORRI	12.500000% 84.000000% 3.500000%	12.500000% 84.000000% 3.500000%
TOTAL				100.000000%	100.000000%

TRACT 2

RECAPITULATION

DESCRIPTION OF LANDS IN PARTICIPATING AREA:

Township 31 North, Range 6 West, N.M.P.M.  
Section 27: W/2  
Section 34: A11  
Section 35: A11

Total number of acres in Participating Area 1600.00  
Total number of committed acres in Participating Area 1600.00

Effective July 1, 1980

Northwest Pipeline Corporation  
UNIT AREA EXPANSION SCHEDULE

SCHEDULE IV  
THIRD EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION  
SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE		
<u>TRACT 2</u>						
SF 078999	T-31N, R-6W Sec. 27: A11 Sec. 34: A11 Sec. 35: A11	1920.00	Royalty Working Interest: Phillips Petroleum ORRI	12.500000%	12.500000%	<u>100.000000%</u>
TOTAL				<u>100.000000%</u>	<u>100.000000%</u>	

RECAPITULATION

DESCRIPTION OF LANDS IN PARTICIPATING AREA:

Township 31 North, Range 6 West, N.M.P.M.  
Section 27: A11  
Section 34: A11  
Section 35: A11

Total number of acres in Participating Area 1920.00  
Total number of committed acres in Participating Area 1920.00

Effective March 1, 1981

Northwest Pipeline Corporation  
UNIT AREA EXPANSION SCHEDULE

SCHEDULE V  
FOURTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION  
SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK		PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			OWNERSHIP	PERCENTAGE		
SF 078999	T-31N, R-6W	1920.00	Royalty Working Interest: Phillips Petroleum ORRI	12.500000%	12.500000%	76.407571%
	Sec. 27: A11			84.000000%	84.000000%	
	Sec. 34: A11			3.500000%	3.500000%	
	Sec. 35: A11			100.000000%	100.000000%	
TOTAL						
<u>TRACT 2</u>						
E-347-25	T-31N, R-6W	160.00	Royalty Working Interest: Phillips Petroleum ORRI	12.500000%	12.500000%	6.367297%
	Sec 36: SW/4			85.000000%	85.000000%	
				2.500000%	2.500000%	
				100.000000%	100.000000%	
TOTAL						
<u>TRACT 13-B</u>						
E-347-26	T-30N, R-6W	432.84	Royalty Working Interest: Phillips Petroleum ORRI	12.500000%	12.500000%	17.225132%
	Sec. 2: Lots 5, 6, 7, 8 S/2N/2			82.500000%	82.500000%	
	T-31N, R-6W			5.000000%	5.000000%	
	Sec. 36: Lots 3, 4, W/2SE/4			100.000000%	100.000000%	

RECAPITULATION

Description of Lands in Participating Area:

Township 30 North, Range 6 West, N.M.P.M.  
Section 2: Lots 5, 6, 7, 8, S/2N/2

Township 31 North, Range 6 West, N.M.P.M.  
Section 27: All  
Section 34: All  
Section 35: All  
Section 36: Lots 3, 4, W/2SE/4, SW/4

Total number of acres in Participating Area:

2512.84

Total number of committed acres in Participating Area:

2512.84

EXHIBIT "B"

SAN JUAN 31-6 UNIT  
RIO ARRIBA COUNTY, NEW MEXICO

GEOLOGIC REPORT  
DAKOTA PRODUCING INTERVAL

FIRST, SECOND, THIRD AND FOURTH EXPANSIONS  
OF THE DAKOTA PARTICIPATING AREA

NORTHWEST PIPELINE CORPORATION

APPROVED BY



Kenneth J. Stracke  
Director  
Production Division

## EXHIBIT "B"

SAN JUAN 31-6 UNIT  
RIO ARRIBA COUNTY, NEW MEXICO

GEOLOGIC REPORT  
DAKOTA PRODUCING INTERVAL

FIRST, SECOND, THIRD AND FOURTH EXPANSIONS  
OF THE DAKOTA PARTICIPATING AREA

### INTRODUCTION

The San Juan 31-6 Unit is located in the northeast quadrant of the San Juan Basin, including parts of Townships 31 North, Range 6 West; 30 North, 6 West; and 30 North, 7 West. The Unit covers a total of 10,039.28 acres.

Within the unit area, the "Dakota Producing Interval" has been tested in eight wells, resulting in one non-commercial well (#16, disconnected December, 1961) and seven commercial wells (nos. 24, 31, 33, 35, 36, 37, and 38).

The "Dakota Producing Interval" consists of the Graneros, Dakota, and Upper Morrison formations below the Greenhorn limestone. This interval has been defined and the lithology and stratigraphy have been discussed in geologic reports for adjacent units.

Included in this report as Exhibit "C" are two maps (Figures 1 and 2). Figure 1 shows the configuration of the subsurface structure of the Dakota interval using mean sea level as the datum plane and the top of the Graneros shale as the mapping horizon; the contour interval is 20 feet. The major structural features include two anticlinal noses separated by a synclinal trough. The anticline located along the eastern edge of the unit plunges northward, but the syncline and anticline in the central part of the unit plunge to the northeast. Regional dip is approximately one degree to the northeast.

Figure 2 is an isopachous map contoured on the net productive Upper Dakota sandstone as determined from radioactive and electric logs of wells drilled within the unit and the surrounding area; the contour interval is five feet. The net productive Middle Dakota sandstone is also shown, but due to the discontinuous nature of the sands, the interval was not contoured.

Table 1 (Exhibit "D") is a tabulation of the Dakota gas production from the unit. The table shows monthly gas production of each well for March 1981

through February 1982. Cumulative production to February 28, 1982 is also shown. The San Juan 31-6 Unit has produced 981,069 MCF of gas from the Dakota Formation as of March 1, 1982.

PROPOSED FIRST EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: June 1, 1980

Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M.  
Section 34: All (640 acres)  
Section 35: S/2 (320 acres)  
Total Acres: 960

The First Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and seven months of production of the Northwest Pipeline Corporation San Juan 31-6 Unit wells #31 and #33. Production histories from surrounding wells and interpretation of the isopachous map were also used in determining the extent of this expansion. From this data it is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the Dakota Producing Interval. The wells are described as follows:

The San Juan 31-6 Unit #31 well is located 820 feet from the South line and 820 feet from the East line, Section 35, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 22, 1979, and completed on June 26, 1980 in the Dakota Formation at a plug back depth of 7880'. The Dakota Formation was perforated with one hole at each of the following depths:

7802', 7803', 7804', 7805', 7806', 7807', 7808', 7809',  
7810', 7811', 7812', 7813', 7814', 7815', 7816', 7817',  
7818', 7819', 7820', 7821', 7822', 7823', and 7824'.

These perforations were treated with 500 gallons of 7 1/2% HCl followed by a sand-water fracturing. The well was shut-in June 7, 1980 for 19 days with a SIPT of 2957 psig and SIPC of 2961 psig. On June 26, 1980 the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the well gauged 3770 MCFD with a calculated AOF of 4190 MCFD.

On the basis of the above well, the S/2 of Section 35 (320 acres) is recommended for inclusion in the First Expansion of the Dakota Participating Area.

The San Juan 31-6 Unit #33 well is located 1450 feet from the North line and 1450 feet from the East line, Section 34, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 6, 1979 and completed on June 27, 1980 in the Dakota Formation at a plug back depth of 8003'. The Dakota Formation was perforated with one hole at each of the following depths:

7976', 7977', 7978', 7979', 7980', 7981', 7982', 7983', 7984',  
7985', 7986', 7987', 7988', 7989', 7990', 7991', 7992', 7993',  
7994', 7995', 7996', 7997', 7998', 7999', and 8000'.

These perforations were treated with 500 gallons of 7 1/2% HCl followed by a sand-water fracturing. The well was shut in June 11, 1980 for 16 days with a SIPT of 2866 psig and SIPC of 2871 psig. On June 27, 1980 the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the well gauged 4119 MCFD with a calculated AOF of 4805 MCFD.

On the basis of the above well and the surrounding geology, it is recommended that Section 34 (640 acres) be included in the First Expansion of the Dakota Participating Area.

#### PROPOSED SECOND EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: July 1, 1980

Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M.  
Section 35: N/2 (320 acres)  
Total Acres: 320

The Second Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and seven months of production of the Northwest Pipeline Corporation San Juan 31-6 Unit well #35. From this data it is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the Dakota Producing Interval. The well is described as follows:

The San Juan 31-6 Unit #35 well is located 880 feet from the North line and 1185 feet from the East line, Section 35, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on October 25, 1979 and completed on July 1, 1980 in the Dakota Formation at a total depth of 8080'. The Dakota Formation was perforated with one hole at each of the following depths:

7933', 7934', 7935', 7936', 7937', 7938', 7939', 7940',  
7941', 7942', 7943', 7944', 7945', 7946', 7947', 7948',  
7949', 7950', 7951', 7952', 7953', and 7954'.

These perforations were treated with 500 gallons of 7 1/2% HCl followed by a sand-water fracturing. The well was shut-in June 16, 1980 for 15 days with a SIPT of 2867 psig and SIPC of 2867 psig. On July 1, 1980, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the well gauged 2643 MCFD with a calculated AOF of 2802 MCFD.

Dakota Producing Interval  
April 1982  
Page 4

On the basis of this well, the N/2 of Section 35 (320 acres) is recommended as the Second Expansion of the Dakota Participating Area.

PROPOSED THIRD EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: March 1, 1981

Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M.  
Section 27: E/2 (320 acres)  
Total Acres: 320

The Third Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and three months of production of the Northwest Pipeline Corporation San Juan 31-6 Unit well #36. From this data is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the Dakota Producing Interval. The well is described as follows:

The San Juan 31-6 Unit #36 well is located 845 feet from the North line and 790 feet from the East line, Section 27, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 23, 1980 and completed on March 8, 1981 in the Dakota Formation at a plug back depth of 7870'. The Dakota Formation was perforated with 25 holes within the depth interval from 7806' to 7830'.

These perforations were treated with 500 gallons of 7 1/2% HCl and 1000 gallons of 15% HCl followed by a sand-water fracturing. The well was shut-in February 26, 1981 for 10 days with a SIPT of 2744 psig and SIPC of 2744 psig. On March 8, 1981, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2 3/8 inch tubing, the well gauged 2557 MCFD with a calculated AOF of 2736 MCFD.

On the basis of this well, the east half of Section 27 (320 acres) is recommended as the Third Expansion of the Dakota Participating Area.

PROPOSED FOURTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: April 1, 1981

Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M.  
Section 36: S/2 (272.88 acres)  
Township 30 North, Range 6 West, N.M.P.M.  
Section 2: N/2 (319.96 acres)  
Total Acres: 592.84

The Fourth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and at least four months of production of the Northwest Pipeline Corporation San Juan 31-6 Unit wells #37 and #38. From this data, the proposed acreage is assumed to be capable of producing unitized substances in commercial quantities from the Dakota Producing Interval. The wells are described as follows:

The San Juan 31-6 Unit #37 well is located 1000 feet from the South line and 900 feet from the East line, Section 36, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 8, 1980 and completed on April 14, 1981 in the Dakota Formation at a plug back depth of 8030'. The Dakota Formation was perforated with twenty-three holes between the following depths:

7952' to 7980' and 7920' to 7934'.

These perforations were treated with 500 gallons of 7 1/2% HCl followed by a sand-water fracturing. The well was shut in April 6, 1981 for eight days with a SIPT of 2906 psig and SIPC of 2910 psig. On April 14, 1980 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 2370 MCFD with a calculated AOF of 2498 MCFD.

Based on the performance of the above well, the S/2 of Section 36 (272.88 acres) is recommended for inclusion in the Fourth Expansion of the Dakota Participating Area.

The San Juan 31-6 Unit #38 well is located 1000 feet from the North line and 1800 feet from the West line, Section 2, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on January 5, 1981 and completed on April 16, 1981 in the Dakota Formation at a plug back depth of 7940'. The Dakota Formation was perforated within the following depths:

Thirteen holes from 7832' to 7856', and  
three holes from 7880' to 7888'.

These perforations were treated with 500 gallons of 7 1/2% HCl followed by a sand-water fracturing. The well was shut in April 9, 1981 for seven days with a SIPT of 2881 psig and a SIPC of 2881 psig. On April 16, 1980 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 2828 MCFD with a calculated AOF of 2995 MCFD.

On the basis of the above well, the north half of Section 2, (319.96 acres) is recommended for inclusion in the Fourth Expansion of the Dakota Participating Area.