GLOBAL NATURAL RESOURCES CORPORATION

OIL CONSERVATION DIVISION RECEIVED

'89 OCT 13 AM 9 09

October 9, 1989

Northwest Pipeline Corporation P.O. Box 8900 Salt Lake City, Utah 84108-0899

Attention: Mr. Darrell L. Gillen

Re: Proposal to Amend BLM Policy as to Effective Date of Expansions San Juan 31-6 Unit Rio Arriba County, New Mexico

Gentlemen:

Reference is made to your letter dated December 13, 1988, in which you propose that future expansions to participating areas be made on a prospective basis (ie., effective date 30 days after BLM approval) rather than on a retroactive basis. Be advised that Global Natural Resources Corporation of Nevada is adamantly opposed to this proposal.

Very truly yours,

GLOBAL NATURAL RESOURCES CORPORATION OF NEVADA

Examino W. 2 susta volto

Dorothy B. Wainwright Vice President-Land

DBW/jch

cc: Bureau of Land Management South Central Region 435 Montano N.E. Albuquerque, NM 87107 Attn: District Manager

> Commission of Public Lands State of New Mexico P.O. Box 1148 Santa Fe, NM 87504-1148 Attn: Mr. Pete Martinez

Oil Conservation Division State of New Mexico 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503 Attn: Mr. David Cotanach NORTHWEST PIPELINE CORPORATION

ONE OF THE WILLIAMS COMPANIES

LAND DEPARTMENT

September 5, 1989

P.O. BOX 8900 SALT LAKE CITY, UTAH 84108-0900 B01-584-6669 801-584-7215

506-89

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87504-1148

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

Re: San Juan 31-6 Unit #14-08-001-464 Rio Arriba County, New Mexico Supplemental 1989 Drilling Program

Gentlemen:

The Supplemental 1989 Drilling Program filed by letter dated July 12, 1989, for the San Juan 31-6 Unit has been approved by the regulatory agencies as follows:

Bureau of Land Management	8/1/89
Commissioner of Public Lands	7/26/89
Oil Conservation Commission	7/25/89

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Lyilk

Darrell L. Gillen Land Manager

DLG:cg Attachment

cc: Working Interest Owners W. O. Curtis P. C. Thompson

RECORD VED SEP 1 3 1989

OIL CONSERVATION DIV.

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY P.O. BOX 800 DENVER, CO 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC. LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM 87401 PHILLIPS PETROLEUM COMPANY ATTN: PARTNERSHIP OPERATIONS P.O. BOX 1967 HOUSTON, TX 77251-1967

PWG PARTNERSHIP P.O. BOX 451 Albuquerque, nm 87103

TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702

THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

State of New Mexico



W.R. HUMPHRIES

Commissioner of Public Lands

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

July 26, 1989

Northwest Pipeline Corporation P.O. Box 8900 Salt Lake City, Utah 84108-0899

ATTN: Darrell Gillen

RE: San Juan 31-6 Unit . Rio Arriba County, New Mexico Plan of Development - Amendment

Gentlemen:

The Commissioner of Public Lands has this date approved the July 12, 1989 Amendment to the above captioned 1989 Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

Enclosed is an approved copy for your files. If we may be of further help, please do not hesitate to contact us.

Very truly yours,

W.R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

BY: FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5749

cc: OCD - Santa Fe, New Mexico BLM Unit Correspondence File Unit P.O.D. File

WRH/FOP/SMH

NORTHWEST PIPELINE CORPORATION

LAND DEPARTMENT

390-89

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

July 12, 1989

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87504-1148

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

> Re: San Juan 31-6 Unit #14-08-001-464 Rio Arriba County, New Mexico Supplemental 1989 Drilling Program

Gentlemen:

By letter dated March 3, 1989, Northwest Pipeline Corporation, as Unit Operator, filed the 1989 Drilling Program for the San Juan 31-6 Unit.

Subsequent to filing the 1989 Drilling Program, it has been proposed that four (4) new wells be drilled in 1989. All necessary Working Interest Owners have been contacted pursuant to Section 7 of the Unit Operating Agreement.

The proposed wells are as follows:

Well Number	Drilling Block	Formation
San Juan 31-6 Unit #211	W/2 Sec. 2, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #213	W/2 Sec. 5, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #225	W/2 Sec. 31, T31N, R6W	Fruitland Coal
San Juan 31-6 Unit #230	E/2 Sec. 27, T31N, R6W	Fruitland Coal

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission July 12, 1989 Page 2

It is also proposed the 1 (one) Salt Water Disposal well be drilled in 1989 as follows:

Well NumberDrilling BlockFormation

San Juan 31-6 Unit #301 NE/4 Sec. 6, T30N, R6W Entrada

If this Supplemental 1989 Drilling Program for the San Juan 31-6 Unit meets with your approval, please signify your approval in the space provided and return an approved copy to Northwest Pipeline Corporation.

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Davel Leyellen

(Darrell L. Gillen Land Manager

DLG:cg Attachment

- cc: Working Interest Owners W. O. Curtis
 - P. C. Thompson

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission July 12, 1989 Page 3

APPROVED	Accietant District Managon Minonals	DATE	·····
	Assistant District Manager, 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		
	Area Oil and Gas Supervisor and		
	the Oil Conservation Commission		
	Call		
APPROVED	(Tischerman	DATE	7-25-89
	Off Conservation Commission	•	
	Subject to like approval by the Area Oil and Gas Supervisor and		
	the Commissioner of Public Lands		

The foregoing approvals are for the Supplemental 1989 Drilling Program for the San Juan 31-6 Unit #14-08-001-464.

U56N2650 07/12/89

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY P.O. BOX BOO DFNVER, CO BO201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENIION: SIUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. FRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC. LAND DEPARTMENT P.O. BOX 4289 FARMINGION, NM 87401 PHILLIPS PETROLEUM COMPANY ATIN: PARTNERSHIP OPERATIONS P.O. BOX 1967 HOUSTON, TX 77251-1967

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PWG PARTNERSHIP P.O. BOX 451 Albuquerque, NM 87103

TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702

THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301



220-89

LAND DEPARTMENT

April 27, 1989

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87504-1148

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

> Re: San Juan 31-6 Unit #14-08-001-464 Rio Arriba County, New Mexico 1989 Drilling Program

Gentlemen:

The 1989 Drilling Program filed by letter dated March 3, 1989, for the San Juan 31-6 Unit has been approved by the regulatory agencies as follows:

Bureau of Land Management	4/7/89
Commissioner of Public Lands	4/3/89
Oil Conservation Commission	3/13/89

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

61

∕Darrell L. Gillen Land Manager

DLG:cg Attachment

cc: Working Interest Owners W. O. Curtis P. C. Thompson

U56N2650 04/27/89

WORKING INTEREST OWNERS

AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY P.O. BOX 800 DENVER, CO 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC. Land department P.O. Box 4289 Farmington, NM 87401

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PHILLIPS PETROLEUM COMPANY ATTN: PARTNERSHIP OPERATIONS P.O. BOX 1967 HOUSTON, TX 77251-1967

PWG PARTNERSHIP P.O. BOX 451 Albuquerque, nm 87103 TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155

TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702 THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301



United States Department of the Interior

BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE 435 MONTANO N.E. ALBUQUERQUE, NEW MEXICO 87107



San Juan 31-6 (POD) 3180 (015)

APR 1 0 1989

Northwest Pipeline Corp. ATTN: Darrell L. Gillen P.O. Box 8900 Salt Lake City, Utah 84108

Gentlemen:

Two approved copies of your 1989 Plan of Development for the San Juan 31-6 Unit Area, Rio Arriba County, New Mexico are enclosed. Such plan, proposing the drilling of nine Fruitland Coal wells (San Juan 31-6 Well No. 201, No. 202, No. 203, No. 204, No. 205, No. 206, No. 207, No. 208 and No. 209) was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

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

If you have any questions, please contact Gail Keller at the above address or telephone (505) 761-4503.

Sincerely,

(Orig. Signed) - Sid Vegelpehl

Assistant District Manager Mineral Resources

Enclosure

NMOCD, Santa Fe

State of New Mexico



Commissioner of Public Lands

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

April 4, 1989

Northwest Pipeline Corporation P.O. Box 8900 Salt Lake City, Utah 84108-0899

ATTN: Darrell L. Gillen

RE: 1989 Plan of Development San Juan 31-6 Unit Rio Arriba County, New Mexico

Gentlemen:

The Commissioner of Public Lands has this date approved the above captioned 1989 Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

Enclosed is a copy for your files.

If we may be of further help, please do not hesitate to contact us.

Very truly yours,

W.R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS BY: FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5744

cc:OCD BLM

W.R. HUMPHRIES

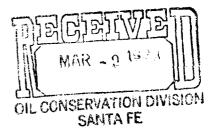
NORTHWEST PIPELINE CORPORATION ONE OF THE WILLIAMS COMPANIES

95-89

LAND DEPARTMENT

P.O. BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

March 3, 1989



Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87504-1148

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

> San Juan 31-6 Unit, #14-08-001-464 Re: Rio Arriba County, New Mexico 1989 Drilling Program

Gentlemen:

By letter dated April 13, 1988, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the referenced Unit. The Drilling Program indicated that no additional wells would be drilled during 1988 in the Unit.

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:

<pre>Mesaverde, commercial Mesaverde, plugged and abandoned Mesaverde, temporarily abandoned Mesaverde/Dakota, (Mesaverde commercial, Dakota non-commercial) Mesaverde/Dakota, (Mesaverde commercial, Dakota temporarily abandoned) Dakota, commercial Dakota, non-commercial</pre>	25 2 1 1 21 1
TOTAL	53

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission March 3, 1989 Page 2

The Participating Areas which have been established in the San Juan 31-6 Unit are as follows:

Formation	Revision	Effective
Mesaverde	Sixteenth	January 1, 1986
Dakota	Tenth	February 1, 1984

Pursuant to the Bureau of Land Management's new requirements to provide maps and the latest geologic interpretations of each of the Participating Areas within the unit, and our discussions with Robert Kent and Gail Keller of BLM, it was agreed that new maps are not required at this time due to the fact that Northwest Pipeline Corporation has provided maps for the Participating Areas listed above at the time of application, and there have been no changes to the Participating Areas listed. Additionally, the geology of the San Juan Basin is well established, therefore as agreed, we are not including our geologic interpretations.

Attached is a production history of each Participating Area within the San Juan 31-6 Unit area.

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 wells during the calendar year 1989.

Well Number	Drilling Block	Formation
San Juan 31-6 Unit #201	E/2 Sec. 1, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #202	W/2 Sec. 1, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #203	E/2 Sec. 3, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #204	W/2 Sec. 3, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #205	E/2 Sec. 4, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #206	W/2 Sec. 4, T30N, R6W	Fruitland Coal
San Juan 31-6 Unit #207	E/2 Sec. 6, T3ON, R6W	Fruitland Coal
San Juan 31-6 Unit #208	W/2 Sec. 6, T3ON, R6W	Fruitland Coal
San Juan 31-6 Unit #209	W/2 Sec. 1, T3ON, R7W	Fruitland Coal

All of the Working Interest Owners have been contacted and this Drilling Program reflects the desires of a majority of the Working Interest Owners. Northwest Pipeline Corporation, as Unit Operator, and the Working Interest Owners believe that all current obligations have been satisfied.

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. Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission March 3, 1989 Page 3

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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

and I. Gillen Darrell L. Gillen

Land Manager

DLG:cg

Attachment

- cc: Working Interest Owners
 - W. O. Curtis
 - P. C. Thompson

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission March 3, 1989 Page 4

APPROVED		DATE
	Assistant District Manager, 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	
	Area Oil and Gas Supervisor and	
	the Oil Conservation Commission	

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APPROVED

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

The foregoing approvals are for the 1989 Drilling Program for the San Juan 31-6 Unit #14-08-001-464.

DATE <u>3-13-89</u>

U56N2650 02/23/89

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

AMOCO PRODUCTION COMPANY Southern Division, Production Mgr. 1670 Broadway P.O. Box 800 Denver, Co 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

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MERIDIAN OIL PRODUCTION INC. Land department P.O. Box 4289 Farmington, nm 87401 PHILLIPS PETROLEUM COMPANY ATTN: PARTNERSHIP OPERATIONS P.O. BOX 1967 HOUSTON, TX 77251-1967

PWG PARTNERSHIP P.O. BOX 451 Albuquerque, nm 87103 TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155 _

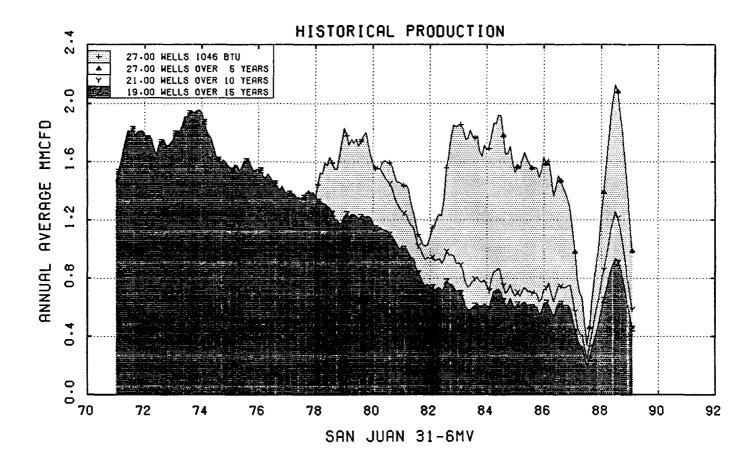
TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702 THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

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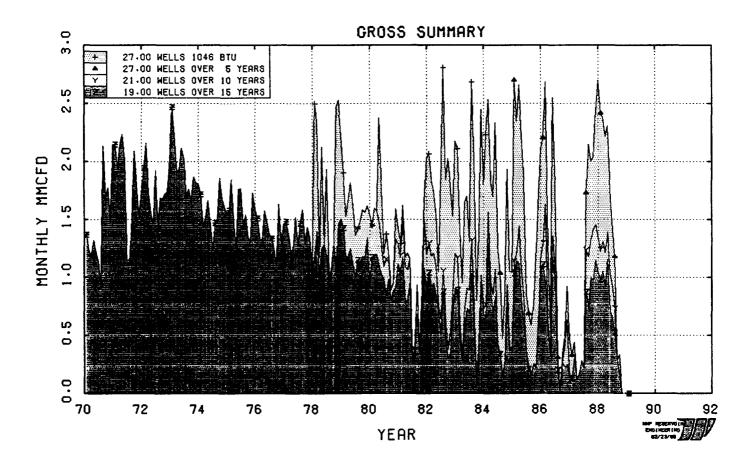
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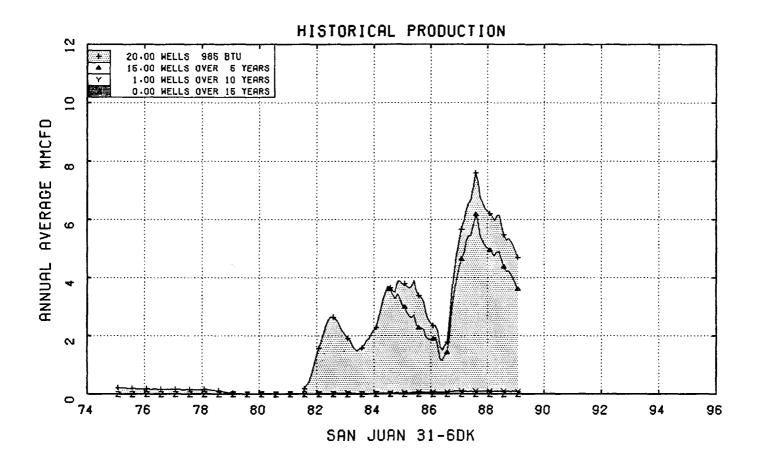
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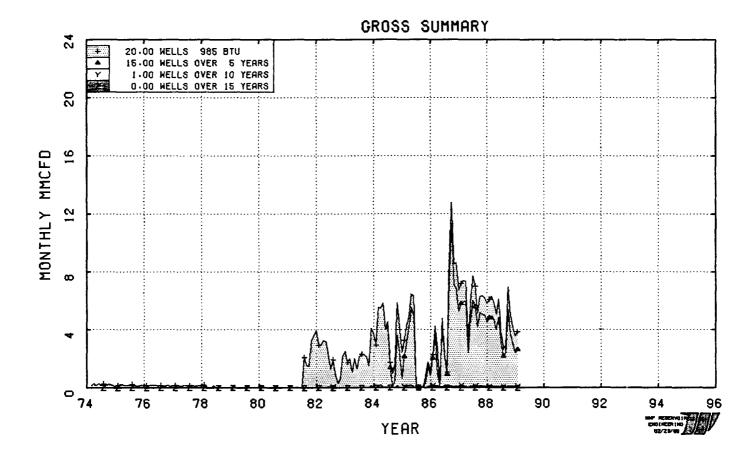
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#467

GLOBAL NATURAL RESOURCES CORPORATION

VIA FEDERAL EXPRESS

February 23, 1989

State Director (920) BUREAU OF LAND MANAGEMENT South Federal Place Joseph M. Montoya Building Santa Fe, New Mexico 87504

DIVISION

Re: Request for State Director Review San Juan 31-6 Unit #53 Dakota <u>Commerciality Evaluation</u>

Gentlemen:

Global Natural Resources Corporation of Nevada hereby requests a State Director's review of the "Notice of Completion of Non-Commercial Well" filed by the unit operator, Northwest Pipeline Corporation, for the San Juan 31-6 Unit #53 Dakota well on October 26, 1988. Global, as a working interest owner in the San Juan 31-6 Unit, believes this well is a commercial well based on the attached engineering report dated January 10, 1989 that was sent to the operator and to the BLM district office in Albuquerque.

Also attached is a letter from Northwest Pipeline dated January 12, 1989 which informs the working interest owners that the three regulatory agencies had approved their "Notice of Completion of Non-Commercial Well". Global received this letter on January 18, 1989. Through verbal contact, Northwest Pipeline informed Global that their engineers were reviewing our engineering report and that they would let us know if they concurred. Northwest said that if they did agree the well was commercial, they would then take the necessary steps with the BLM to change their original On February 20, 1989, Northwest Pipeline called to inform us that notice. they still deemed the well to be non-commercial. They said that our figures used projected volumes, and that theirs were based on actual They added that the BLM would not accept evaluations based on production. projected volumes, and that they had unsuccessfully argued this point several years ago with the BLM. On February 21, 1989, I called Robert Kemp with the BLM in Albuquerque to discuss the BLM's policy. Robert indicated that the BLM does use actual production unless a situation warrants

State Director (920)

-2-

otherwise, such as curtailment. As can be seen in Northwest Pipeline's original notice, the San Juan 31-6 Unit #53 Dakota well has been severely curtailed. The well only produced for 100.1 days over a 16-month period, or an average of 6.3 producing days per month.

Based upon these facts, Global feels that a State Director Review is warranted. If you have any questions, please call me at (713) 880-5464.

Very truly yours, Greg S. Cusack

Greg S. Wusack Project Engineer

bd

Attachment

cc: State of New Mexico Commissioner of Public Lands Post Office Box 1148 Santa Fe, New Mexico 87501 Attention: Mr. Floyd O. Prando Bureau of Land Management 425 Montano, N.E. Albuquerque, New Mexico 87107 Attention: Mr. Gary Stephens

State of New Mexico Oil Conservation Commission 310 Old Santa Fe Trail, Room 206 Santa Fe, New Mexico 87503 Northwest Pipeline Corporation Post Office Box 8900 Salt Lake City, Utah 84108-0899 Attention: Mr. Darrell L. Gillen



LAND DEPARTMENT

20-89

P 0 B0X 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

January 12, 1989

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87504-1148

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

CARGE AT \$

Re: San Juan 31-6 Unit #14-08-001-464 San Juan County, New Mexico NOTICE OF COMPLETION OF NON-COMMERCIAL WELL Dakota Formation

Gentlemen:

The Notice of Completion of Non-Commercial Well for the San Juan 31-6 Dakota Unit #53 filed by letter dated October 26, 1988, has been approved by the regulatory agencies as follows:

Bureau of Land Management	11/29/88
Commissioner of Public Lands	12/30/88
Oil Conservation Commission	11/3/88

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen Supervisor, Land Department

295 CHIPETA WAY SALT LAKE CITY, UTAH 84108

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Bureau of Land Management
Commissioner of Public Lands
Oil Conservation Commission
January 12, 1988
Page 2
DLG:CG
Attachment
cc: Working Interest Owners
K. J. Stracke
W. S. West
L. G. Loving
C. N. Potter
R. L. Glenn
M. H. Johnson
R. P. Gregory
L. K. Leaver
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U56N2650 01/11/89

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702

AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY P.O. BOX 800 DENVER, CO 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88240-0460

THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

> GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

...

MERIDIAN OIL PRODUCTION INC. LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM B7401 PHILLIPS PETROLEUM COMPANY ATTN: PARTNERSHIP OPERATIONS P.O. BOX 1967 HOUSTON, TX 77251-1967

PWG PARTNERSHIP P.O. BOX 451 ALBUQUERQUE, NM 87103 TENNECO DIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155



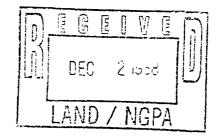
United States Department of the Interior

BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE 435 MONTANO N.E. ALBUQUERQUE, NEW MEXICO 87107 TAKE

NOV 2 9 1988

San Juan 31-6 (PA) 3180 (015)

Northwest Pipeline Corporation Attn: Darrell L. Gillen P.O. Box 8900 Salt Lake City, UT 84108



Gentlemen:

By letter dated October 26, 1988, we received a Notice of Completion of Non-Commercial well, Dakota Formation, San Juan 31-6 Unit, San Juan County, New Mexico. Northwest Pipeline Corporation, as unit operator, has determined that the San Juan 31-6 Unit Well No. 53 (located 1850 feet from the south line and 1000 feet from the east line, Section 1, T. 30 N., R. 6 W.) is not capable of producing unitized substances in paying quantities from the Dakota Formation. This notice is hereby accepted for the record.

If you have any further questions, please contact Gail Keller at (505) 761-4503.

Sincerely,

Sidvogelpe

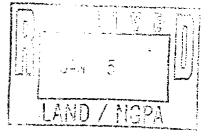
Assistant District Manager Mineral Resources

State of New Mexico

SLO REF NO OG-983







W.R. HUMPHRIES COMMISSIONER Commissioner of Public Lands

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

December 30, 1988

Northwest Pipeline Corporation Attn: Mr. Darrell L. Gillen P. O. Box 8900 Salt Lake City, Ut 84108-0899

> Re: San Juan 31-6 Unit San Juan County, New Mexico Notice of Completion of NC wells Dakota Formation

Gentlemen:

This office is in receipt of your letter of October 26, 1988, and a copy of a letter from the Bureau of Land Management, advising this office that the San Juan 31-6 Dakota Unit Well No. 53, is not capable of producing unitized substances in paying quantities from the Dakota formation.

Please be advised that the Commissioner of Public Lands, concurs with the Bureau of Land Management, that the above well is non-commercial and should be produced on a lease basis.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS BY: FLOYD O. PRANDO, Director Oil and Gas Division

(505) 827-5744

WRH/FOP/pm encls. cc: OCD BLM OGAD Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 26, 1988 Page 3

APPROVED		DATE	
	Assistant District Manager, 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 Area Oil and Gas Supervisor and the Oil Conservation Commission

U

APPROVED

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Oil Conservation Commission Subject to like approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands DATE 11-3-88

The foregoing is the approval of Notice of Completion of Non-Commercial Well for the San Juan 31-6 Unit #53 Well, Dakota Formation.

GLOBAL NATURAL RESOURCES CORPORATION

January 10, 1989

Northwest Pipeline Corporation P. O. Box 8900 Salt Lake City, Utah 84108-0899

Attention: Mr. Darrell L. Gillen

Re: Commerciality Evaluation San Juan 31-6 Unit #53 Well Dakota Formation Participating Area San Juan County, New Mexico

Gentlemen:

Reference is made to your letter to the BLM and State of New Mexico, dated October 26, 1988, in which you advise of your determination that the San Juan 31-6 Unit #53 Well "is not capable of producing unitized substances in paying quantities from the Dakota formation". Please be advised that Global Natural Resources Corporation of Nevada strongly recommends that at your earliest convenience, you re-submit to the BLM and State of New Mexico a "Notice of Completion of Commercial Well" pursuant to our Engineering Report which is attached hereto.

In the event we receive BLM approval of your non-commercial well notice/application prior to your re-submittal, Global will then ask the BLM for an administrative review of the #53 Well's commerciality based on the attached Engineering Report.

If you have any questions, please contact Mr. Greg Cusack at (713) 880-5464.

Very truly yours,

GLOBAL NATURAL RESOURCES CORPORATION OF NEVADA

Aturant me Scarborough

Stuart M. Scarborough Landman, CPL

SMS/jf

Attachment

Northwest Pipeline Corporation January 10, 1989 Page 2

cc: Working Interest Owners

Bureau of Land Management 425 Montano, N. E. Albuquerque, New Mexico 87107 Attn: Mr. Gary Stephens 'n

State of New Mexico Commission of Public Lands P. O. Box 1148 Santa Fe, New Mexico 87501 Attn: Mr. Floyd O. Prando

State of New Mexico Oil Conservation Commission 310 Old Santa Fe Trail Room 206 Santa Fe, NM 87503 Attn: Mr. William J. LeMay

.

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

'n

Amoco Production Company Texaco, Inc. 1670 Broadway P. O. Box 3109 P. O. Box 800 Midland, TX 79702 Denver, CO 80201 Attn: Operations Division Attn: Production Manager Southern Division Conoco, Inc. The Wiser Oil Company P. O. Box 460 700 Petroleum Building Hobbs, NM 88241-0460 Wichita Falls, TX 76301 Matagorda Oil Company 59677-01 Texas Commerce Bank, N.A. P. O. Box 2558 Houston, TX 77001 Attn: Trust Asset Management Operations Meridian Oil, Inc. P. O. Box 4289 Farmington, NM 87401 Attn: Land Department Phillips Petroleum Company 8055 E. Tufts Avenue Parkway Denver, CO 80237 Attn: Mr. Gary Kruse PWG Partnership P. O. Box 451 Albuquerque, NM 87103 Tenneco Oil Company P. O. Box 3249 Englewood, CO 80155 Attn: Joint Interest Dept.

ENGINEERING COMMERCIALITY EVALUATION SAN JUAN 31-6 UNIT NO. 53 DAKOTA RIO ARRIBA COUNTY, NEW MEXICO

INTRODUCTION

A commerciality evaluation was made for the San Juan 31-6 Unit No. 53 Dakota well to determine if economics show a reasonable rate-of-return when encumbered with the investment to drill and complete the well and monthly operating expenses. This evaluation was made in response to Northwest Pipeline Corporation's (hereinafter "NWPC") letter dated October 26, 1988 regarding "Notice of Completion of Non-Commercial Well".

In summary, it was determined that this well is a commercial well and therefore, should be incorporated into the Dakota Participating Area within the San Juan 31-6 Unit. The effective date for this expansion should be December 1, 1985. It was determined that the ultimate gas recovery and the initial production rate used by NWPC were both understated and therefore the economics calculated were not a true representation.

DISCUSSION

The San Juan 31-6 Unit No. 53 Dakota well is located 1850 feet from the South Line and 1000 feet from the East Line, Section 1, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 20, 1985 and completed in the Dakota formation on September 16, 1985. After a hydraulic fracture treatment, on December 11, 1985, the well produced 165 MCF of gas in three hours. This calculated 24-hour rate was 1317 MCFPD. It is unknown as to why, but the well did not produce again until May 1987. Since May 1987, the well has been severely curtailed. Attachment 1 shows the production history through August 1988 with a calculated daily rate based on the number of days produced. It can be seen that the calculated daily averages for 1987 and 1988 were 312 and 503 MCFPD, respectively. In August 1988, the well produced 8197 MCF in only 10.7 days for an average of 766 MCFPD. NWPC used 139 MCFPD as an initial rate in their economics.

By letter dated July 24, 1984, El Paso Exploration Company (hereinafter, "EPEC") wrote to the Bureau of Land Management regarding possible drainage to the San Juan 30-6 Unit in the Dakota formation (Attachment 2). The area in question directly offsets the San Juan 31-6 No. 53 well to the south. In this letter, EPEC showed reservoir calculations for two offsetting wells to the San Juan 31-6 No. 53. The San Juan 31-6 Unit No. 48 is located in the SE SE of Section 2, T30N, R6W and the San Juan 30-5 Unit No. 78 is located in the NW SW of Section 7, T30N, R5W. These two wells have similar log characteristics as the San Juan 31-6 No. 53 and are used as analogs further in this report. Engineering Commerciality Evaluation San Juan 31-6 Unit No. 53 Dakota

RESERVES

Original gas-in-place for the San Juan 31-6 No. 53 Dakota was found to be 656.5 MMCF. Recoverable gas-in-place was found to be 616.5 MMCF using a recovery factor of 93.9%. These calculations can be seen in Exhibit "1" as well as a discussion of reservoir parameters in Exhibit "2". Recoverable gas-in-place for the analogous 31-6 No. 48 and the 30-5 No. 78 were shown as 820 MMCF and 730 MMCF, respectively. NWPC used 311.6 MMCF of recoverable gas for their commerciality economics on the 31-6 No. 53.

ECONOMICS

Economics were run for the San Juan 31-6 Unit No. 53 Dakota well for determination of commerciality. All economics shown are before federal income tax.

Key Assumptions:

Completed well cost = \$243,800 (from NWPC) Operating cost = \$288/month (from NWPC, held constant) Severance tax rate = 10% of revenue after royalty Ad valorem tax rate = 3% of revenue after royalty and severance tax Gas price = \$1.25/MCF (held constant) Working interest = 100%, revenue interest = 87.5% Recoverable gas reserves = 616 MMCF Initial gas rate = 450 MCFPD

Economics: (Attachment 3)

Net present worth at 10% discount= \$161,660Payout at 10% discount= 2.44 yearsReturn on investment at 10% discount= 1.66Rate-of-return= 35.89%

Economics were also run for a "Conservative Case" using recoverable reserves of 400 MMCF with an initial gas rate of 350 MCFPD (Attachment 4). All other assumptions remained constant. These results are as follows:

Net present worth at 10% discount	= \$26,710
Payout at 10% discount	= 4.93 years
Return on investment at 10% discount	= 1.11
Rate-of-return	= 15.09%

CONCLUSIONS

The San Juan 31-6 Unit No. 53 Dakota well is a commercial well which yields a favorable rate-of-return using BLM guideline economics. This well should be incorporated into the San Juan 31-6 Unit Dakota Participating Area. Northwest Pipeline Corporation grossly underestimated the ultimate recovery and initial gas rates from this well resulting in unfavorable economics and a false picture of commerciality for this well.

EXHIBIT "1"

GAS-IN-PLACE CALCULATIONS

Reservoir Parameters:

 \emptyset = Porosity = 14% S_w = Water Saturation = 25% P_i = Initial Reservoir Pressure = 3136 psi P_a = Abandonment Reservoir Pressure = 200 psi T = Reservoir Temperature = 205° F = 665° R Z_i = Initial Gas Deviation Factor = .941 Z_a = Abandonment Gas Deviation Factor = .988 H = Formation Thickness = 18 ft. A = Drainage acres = 45 acres

Calculations:

1. B_{gi} = Formation Volume Factor, Initial

$$B_{gi} = 35.35 P_i/Z_iT$$

 $B_{gi} = 35.35 (3136)/(.941)(665)$
 $B_{gi} = 177.2 SCF/cu. ft.$

2. Bga = Formation Volume Factor, Abandonment

$$B_{ga} = 35.35 P_a/Z_a T$$

 $B_{ga} = 35.35 (200)/(.988)(665)$
 $B_{ga} = 10.8 SCF/cu. ft.$

3. RF = Recovery Factor

RF =
$$(B_{gi}-B_{ga})/B_{gi}$$

RF = $(177.2-10.8)/177.2$
RF = .939

4. OGIP = Original Gas-In-Place

5. G_D = Recoverable Gas-In-Place

$$G_p = (OGIP)(RF)$$

 $G_p = (656.5)(.939)$
 $G_p = 616.5 MMCF$

EXHIBIT "2"

- 1. Porosity (\emptyset) :
 - a. In their response to the BLM in 1984 on drainage in this area, El Paso Exploration Company used 14.5% and 16.0% in its calculations on the San Juan 30-5 No. 78 and the San Juan 31-6 No. 48 respectively. (Attachment 2).
 - b. Global Natural Resources Corporation has no usable porosity logs in the area. Therefore, based on the two offset wells mentioned in (a) above, a porosity of 14% was used for these calculations.
- 2. Water Saturation $(\frac{S_w}{W})$
 - a. El Paso used 27% in its calculation on No. 78 and 24% for No. 48.
 - b. After reviewing available induction logs, a value of 25% was chosen as a representative $S_{\rm w}.$
- 3. Reservoir Pressure (P):
 - a. El Paso used initial reservoir pressures of 3144 psi and 3127 psi for wells No. 48 and No. 78 respectively.
 - b. An average reservoir pressure of 3136 psi was felt to be representative and was used.
- 4. Reservoir Temperature (T):

Reservoir temperature of 205° F was taken from the San Juan 31-6 No. 53 log at perforation depth.

- 5. Gas Deviation Factor (Z):
 - a. Using an available gas analysis with pseudocritical pressure of 674 and pseudocritical temperature of 344, $Z_j = .941$.
 - b. Assuming an abandonment pressure of 200 psi, $Z_a = .988$.
- 6. Formation Thickness (H):

Determined from the No. 53 log to be 18'.

- 7. Drainage Acres (A):
 - a. El Paso calculated 48 acres and 47 acres for wells No. 48 and No. 78, respectively.
 - b. A drainage pattern of 45 acres was chosen for the No. 53. It is felt that the potential exists for greater drainage.

ATTACHMENT 1

AVERAGE DAILY PRODUCTION

i.

WELL NAME: SAN JUAN 31-6 #53 (DAKOTA) COUNTY : RIO ARRIBA STATE : NEW MEXICO OPERATOR : NORTHWEST PIPELINE

•

		198	87		1988			
MONTH	MCF	PSIG	DAYS	MCF/DAY	NCF	PSIG	DAYS	MCF/DAY
JAN	0	0	0.0	0	5646	287	14.4	392
FEB	0	C	0.0	0	3111	275	8.6	362
MAR	0	0	0.0	0	0	0	0.0	0
APR	0	263	2.4	0	0	0	0.0	0
MAY	5420	259	30.9	175	0	0	0.0	0
JUN	1117	252	4.5	248	0	0	0.0	0
JUL	2579	283	5.1	506	0	0	0.0	0
AUG	5266	283	12.7	415	8197	267	10.7	766
SEP	0	0	0.0	0				
OCT	0	0	0.0	0				
NOV	0	0	0.0	0				
DEC	7101	295	13.2	538				
TOTAL	21483		68.8	312	16954		33.7	503

ATTACHMENT 2

P. O. BOX 4289 FARMINGTON, NEW MEXICO 87499-4289

PHONE: 505-325-2841

Ext. 3104

July 24, 1984

UNITED STATES DEPARTMENT OF INTERIOR BUREAU OF LAND MANAGEMENT Attention: Ms. Sue Umsler Post Office Box 6770 505 Marquette Avenue, N.W., Suite 815 Albuquerque, New Mexico 87197-6770

-1350

Exploration Company

Re: San Juan 30-6 Unit #2 Rio Arriba County, New Mexico

Gentlemen:

By letter dated May 9, 1984 you advised that drainage is possibly occurring to the referenced unit in the Dakota formation. Lands within the Unit subject to drainage are the E_2^1 , NW¹₄ Section 12, N¹₂ Section 11, E_2^1 Section 13, NE¹₄ Section 24, N¹₂ Section 8 and the NW¹₄ Section 9, T30N, R6W, Rio Arriba County, New Mexico. The offending wells are the San Juan 30-5 Unit #88 in the NW¹₄ SW¹₄ Section 18, Township 30 North, Range 5 West, the San Juan 30-5 Unit #78 in the NW¹₄ SW¹₄ Section 7, Township 30 North, Range 5 West, the San Juan 31-6 Unit #48 in the SE¹₄ SE¹₄ Section 2, Township 30 North, Range 6 West and the San Juan 31-6 Unit #49 in the SE¹₄ NE¹₄ Section 5, Township 30 North, Range 6 West.

El Paso has reviewed the four wells listed above which the Bureau of Land Management considers to be draining the subject unit. Based upon production and geological data El Paso hereby makes the following evaluations:

 N¹/₂ of Section 8 and NW¹/₄ of Section 9, T30N, R6W The offending well, San Juan 31-6 Unit #49 was tied-in on July 11, 1984 and sufficient production is not yet available to determine reserve calculations or a drainage radius. Therefore, we request that you grant an extension of time until adequate production data is available.

2) E¹/₂ Section 13 and NE¹/₄ Section 24, T30N, R6W The offending well, San Juan 30-5 Unit #88 has not yet first delivered. Therefore, we request that you grant an extension of time until adequate production data is available so that reserve calculations and a drainage radius can be calculated.

BUREAU OF LAND MANAGEMENT

3) N¹₂ Section 11 and E¹₂, NW¹₄ Section 12, J3ON, R6W The offending wells are the San Juan 31-6 Unit #48 and the San Juan 30-5 Unit #78. The Reservoir Engineering Department and the Geological Department have reviewed this situation and have reached the conclusion that no drainage is occurring to the San Juan 30-6 Unit. This conclusion is based on the USGS circle method which shows that the drainage radius for the offending wells does not reach the indicated tracts. Attached are the Exhibits 1, 2, 3 and 4 in support of our findings that no drainage is occurring.

-2-

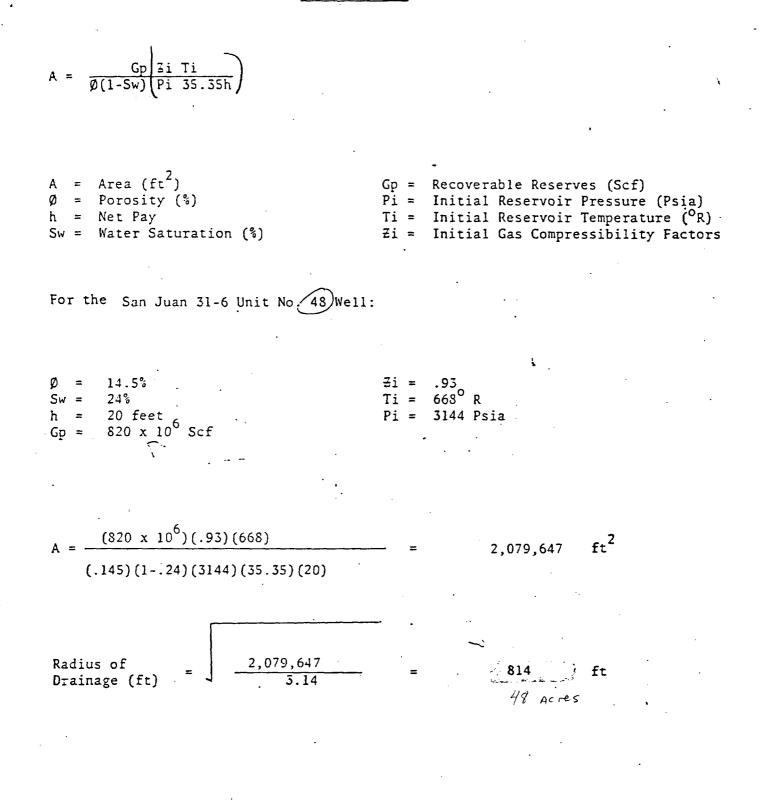
If any further information is required, please contact this office.

Yours very truly,

Alán Alexander District Land Manager Exploration-Land

AA:ld

, EXHIBIT NO. 1



•

EXHIBIT NO. 2

$$A = \frac{Gp \ Zi \ Ti}{\emptyset(1-Sw) \ Pi \ 35.35h}$$

 $A = Area (ft^2)$ Gp = Recoverable Reserves (Scf) $\emptyset = Porosity (%)$ Pi = Initial Reservoir Pressure (Psia)h = Net Pay $Ti = Initial Reservoir Temperature (^R)$ Sw = Water Saturation (%)Zi = Initial Gas Compressibility Factors

For the San Juan 30-5 Unit No. 78 Well:

$$A = \frac{(730 \times 10^{6})(.927)(661)}{(.16)(1-.27)(3127)(35.35)(17)} = 2,037,957 \text{ ft}^{2}$$

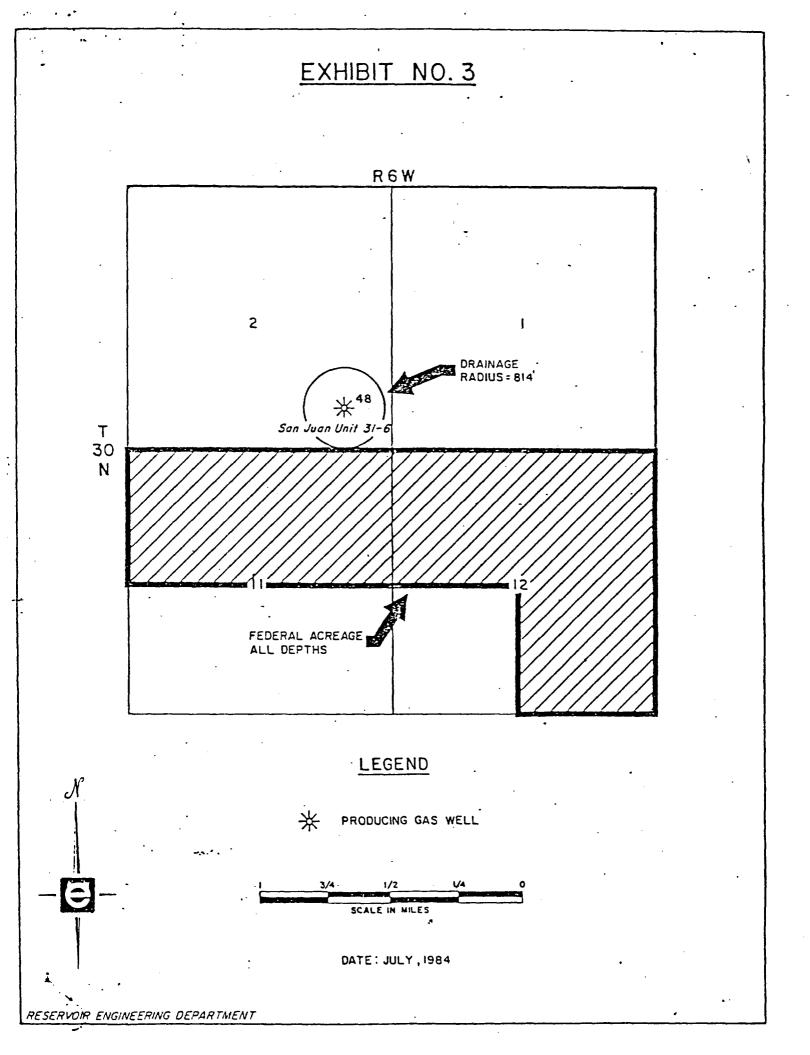
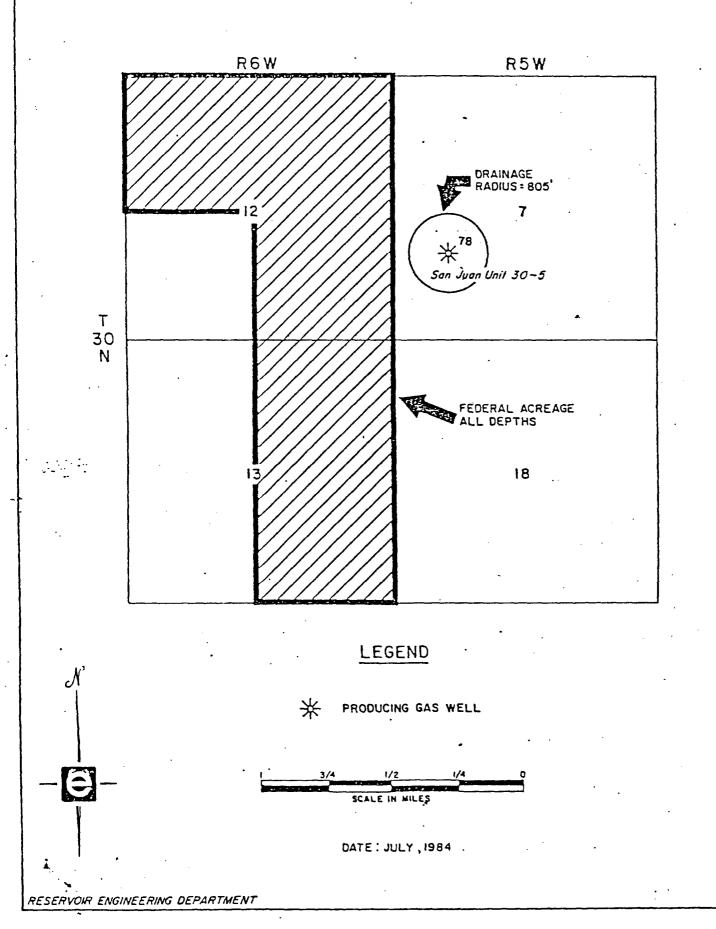


EXHIBIT NO. 4



SAN JUAN 31-6 #53(DAKOTA) SAN JUAN 31-6 UNIT RIO ARRIBA CO., NM N.W.PIPELINE CORP. $Q_i = 450$ MCFPD $G_p = 616$ MMCF

.

*

DATE: 01-06-89 TIME: 20:23:14 FILE: SJ31DK FILE: SETDATA PROJ: 3

RESERVES AND ECONOMICS

AS OF DATE: 1/1/1988

-END- MO-YR	GROSS OIL PRODUCTION	GROSS GAS PRODUCTION	NET OIL PRODUCTION	NET GAS PRODUCTION	NET OIL PRICE	NET GAS PRICE	NET OIL SALES	NET GAS SALES	TOTAL NET SALES
•	MBBLS	MMCF	MBBLS	MMCF	\$/BBL	\$/MCF	M\$	M\$	M\$
12-88	.00	144.58	.00	126.51	.000	1.250	.00	158.14	158.14
12-89	.00	111.40	.00	97.48	.000	1.250	.00	121.85	121.85
12-90	.00	85.84	.00	75.11	.000	1.250	.00	93.89	93.89
12-91	.00	66.14	.00	57.87	.000	1.250	.00	72.34	72.34
12-92	.00	50.96	.00	44.59	.000	1.250	.00	55.74	55.74
12-93	.00	39.27	.00	34.36	.000	1.250	.00	42.95	42.95
12-94	.00	30.25	.00	26.47	.000	1,250	.00	33.09	33.09
S TOT	.00	528.45	.00	462.39	.000	1.250	.00	577.99	577.99
AFTER	.00	85.20	.00	74.55	.000	1.250	.00	93.19	93.19
TOTAL	.00	613.65	.00	536.94	.000	1.250	.00	671.18	671.18
-END-	WINDFALL	NET ADVAL &	DIRECT OPER	INTEREST	CAPITAL	EQUITY	FUTURE NET	CUMULATIVE	CUM. DISC.
MO-YR		PROD. TAXES	EXPENSE	PAID	REPAYMENT	INVESTMENT	CASHFLOW	CASHFLOW	CASHFLOW
	M\$	M\$	M\$		M\$	M\$	M\$	M\$	M\$
12-88	.00	20.08	3.46	.00	.00	243.80	-109.20	-109.20	-115.69
12-89	.00	15.47	3.46	.00	.00	.00	102.92	-6.28	-27.01
12-90	.00	11.92	3.46	.00	.00	.00	78,51	72.22	34.22
12-91	.00	9.19	3.46	.00	.00	-00	59.70	131.92	76.36
12-92	.00	7.08	3.46	.00	.00	.00	45.20	177.12	105.25
12-93	.00	5.45	3.46	.00	.00	.00	34.04	211.16	124.94
12-94	.00	4.20	3.46	.00	.00	.00	25.43	236.59	138.26
S TOT	.00	73.40	24.19	.00	.00	243.80	236.59	236.59	138.26
AFTER	.00	11.84	24.19	.00	.00	.00	57.16	293.75	161.66
TOTAL	.00	85.24	48.38	.00	.00	243.80	293.75	293.75	161.66
IOIAL	.00	07.24	40.30			243100	2/41/2		
		OIL	GAS					W.% P.W.	
GROSS	WELLS) 1.0	LIFE,	YRS.	14.00		4.00 232	.608
GROSS	ULT., MB & MM	IF .000	613.648	DISCO		10.00	+ 4	6.00 206	.564
GROSS	CUM., MB & MM	IF .000	.000	UNDIS	COUNTED PAYOU	T, YRS. 2.08	; 4	8.00 183	.020
GROSS	RES., NB & MM	IF .000	613.648	DISCO	UNTED PAYOUT,	YRS. 2.44	. 1	0.00 161	.662
NET RE	S., MB& MM	IF .000	536.942		COUNTED NET/I				.221
NET RE	VENUE, M\$.000	671.178	DISCO	UNTED NET/INV				. 158
INITIA	L PRICE, \$.000	1.250	RATE-	OF-RETURN, PC	T. 35.8 9			.416
INITIA	L N.I., PCT.	.000	87.500	ÍNITI	AL W.I., PCT.	100.000			.216
									.094
							10	0.00 -121	.569

* san juan 31-6 #53(dakota)	ATTACHMENT 4	DATE: 01-06-89
SAN JUAN 31-6 UNIT		TIME: 20:22:54
RIO ARRIBA CO., NM	CONSERVATIVE CASE	FILE: SJ31DK
N.W.PIPELINE CORP.		FILE: SETDATA PROJ: 2
$Q_i = 350 \text{ MCFPD}$		· · · · · · · · · · · · · · · · · · ·
$G_p = 400 \text{ MMCF}$		
	RESERVES AND ECONOMICS	

AS OF DATE: 1/1/1988

-END- MO-YR	GROSS OIL PRODUCTION MBBLS	GROSS GAS PRODUCTION	NET OIL PRODUCTION MBBLS	NET GAS PRODUCTION	NET OIL PRICE \$/BBL	NET GAS PRICE	NET OIL SALES	NET GAS SALES M\$	TOTAL NET SALES
	MBOL3	MMCr	MOBL3			- /////			
12-88	.00	109.83	.00	96.10	.000	1.250	.00	120.13	120.13
12-89	.00	80.54	.00	70.47	.000	1.250	.00	88.09	88.09
12-90	.00	59.06	.00	51.67	.000	1.250	.00	64.59	64.59
12-91	.00	43.30	.00	37.89	.000	1.250	.00	47.36	47.36
12-92	.00	31.75	.00	27.78	.000	1.250	.00	34.73	34.73
12-93	.00	23.28	.00	20.37	.000	1.250	.00	25.47	25.47
12-94	.00	17.07	.00	14.94	.000	1.250	.00	18.67	18.67
S TOT	.00	364.84	.00	319.24	.000	1.250	.00	399.04	399.04
3 101	.00		.00	517.24		1.250	.00	377.04	377.04
AFTER	.00	33.37	.00	29.20	.000	1.250	.00	36.50	36.50
TOTAL	.00	398.21	.00	348.43	.000	1.250	.00	435.54	435.54
-END-	WINDFALL	NET ADVAL &	DIRECT OPER	INTEREST	CAPITAL	EQUITY	FUTURE NET	CUMULATIVE	CUM. DISC.
MO-YR		PROD. TAXES	EXPENSE	PAID	REPAYMENT	INVESTMENT	CASHFLOW	CASHFLOW	CASHFLOW
	M\$					M\$			
47.00		45.04			00	2/7 80	4/2 70	1/2 70	4/7 07
12-88	.00	15.26	3.46	.00	.00	243.80	-142.38	-142.38	-147.27
12-89	.00	11.19	3.46	.00	.00 .00	.00 .00	73.44 52.93	-68.94 -16.01	-83.99 -42.71
12-90	.00	8.20	3.46	-00	.00	.00	37.89	21.89	-15.95
12-91 12-92	.00 .00	6.02 4.41	3.46 3.46	.00	.00	.00	26.86	48.75	1.21
12-92	-00	4.41	3.40	.00	.00	.00	20.00	40.73	1.21
12-93	.00	3.23	3.46	.00	.00	.00	18.78	67.53	12.08
12-94	.00	2.37	3.46	.00	.00	.00	12.85	80.37	18.80
S TOT	.00	50.68	24.19	.00	.00	243.80	80.37	80.37	18.80
AFTER	.00	4.63	13.82	.00	.00	.00	18.04	98.41	26.71
TOTAL	.00	55.31	38.02	.00	.00	243,80	98.41	98.41	26.71
		OIL	GAS					J. % P.W.	•
GROSS	WELLS		1.0	LIFE,	YRS.	11.00			.029
	ULT., MB & MM			DISCO		10.00		5.00 51	.825
GROSS	CUM., MB & MM	F .000		UNDIS	COUNTED PAYOUT	r, YRS. 3.42	1	8.00 38	.758
	RES., MB & MM				UNTED PAYOUT,				.707
NET RE	•				COUNTED NET/1				.570
	VENUE, MS	.000		DISCO	JNTED NET/INVE				.379
	L PRICE, \$.000			DF-RETURN, PC				.976
	L N.I., PCT.	.000			AL W.I., PCT.	100.000	3!	5.00 -69	.208
							50	0.00 -100	.290
							10	0.00 -153	.706

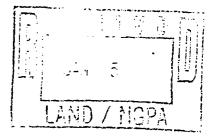
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SLO REF NO OG-983





State of New Mexico



W.R. HUMPHRIES

Commissioner of Public Lands

December 30, 1988

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

Northwest Pipeline Corporation Attn: Mr. Darrell L. Gillen P. O. Box 8900 Salt Lake City, Ut 84108-0899

> Re: San Juan 31-6 Unit San Juan County, New Mexico Notice of Completion of NC wells Dakota Formation

Gentlemen:

This office is in receipt of your letter of October 26, 1988, and a copy of a letter from the Bureau of Land Management, advising this office that the San Juan 31-6 Dakota Unit Well No. 53, is not capable of producing unitized substances in paying quantities from the Dakota formation.

Please be advised that the Commissioner of Public Lands, concurs with the Bureau of Land Management, that the above well is non-commercial and should be produced on a lease basis.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS BY: FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5744

WRH/FOP/pm encls. cc: OCD BLM OGAD Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 26, 1988 Page 3

APPROVED

. . •

Assistant District Manager, Minerals Bureau of Land Management Subject to like approval by the Commissioner of Public Lands and the Oil Conservation Commission

APPROVED

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

APPROVED

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

DATE

DATE //-3-88

DATE

The foregoing is the approval of Notice of Completion of Non-Commercial Well for the San Juan 31-6 Unit #53 Well, Dakota Formation.



LAND DEPARTMENT

690-88

P.O. BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

December 8, 1988

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

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

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

Re: San Juan 31-6 Unit #14-08-001-464

APPROVAL OF THE SIXTEENTH PARTICIPATING AREA Mesaverde Formation Effective January 1, 1986

Gentlemen:

The referenced approval of the Sixteenth Participating Area in the San Juan 31-6 Mesaverde Unit has been approved by the Jurisdictional Agencies as follows:

Bureau of Land Management	November 21, 1988
Commissioner of Public Lands	December 1, 1988
Oil Conservation Commission	October 21, 1988

Please be advised that the effective date for the Sixteenth Participating Area shown on the application letter dated October 7, 1988 and the ownership schedules are incorrectly shown as December 1, 1985. The correct effective date of the Sixteenth Participating Area is January 1, 1986. Please change your records accordingly. Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission December 8, 1988 Page 2

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

rella 011 1

Darrell L. Gillen Supervisor, Land Department

DLG/cg Attachment

- cc: Working Interest Owners
 - K. J. Štracke
 - W. S. West
 - L. G. Loving
 - C. N. Potter
 - R. L. Glenn
 - M. H. Johnson
 - R. P. Gregory
 - L. K. Leaver

U56N2650 12/06/88

AMOCO PRODUCTION COMPANY Southern Division, production Mgr. 1670 broadway P.O. Box 800 Denver, co 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-4SSET MGMT. 0PER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC. LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM 87401

PHILLIPS PETROLEUM COMPANY ATTN: GARY KUSE 8055 E. TUFTS AVE. PKWV. DENVER, CO 80237

PWG PARTNERSHIP P.O. BOX 451 ALBUQUERQUE, NM B7103 TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155 -

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702 THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301



United States Department of the Interior

BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE 435 MONTANO N.E. ALBUQUERQUE, NEW MEXICO 87107

NOV 2 1 1988

SJ 31-6 (MVPA) 3180 (015)

5 6 5 1

MFD

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Northwest Pipeline Corporation ATTN: Darrell Gillen P.O. Box 8900 Salt Lake City, UT 84108-0899

Gentlemen:

We have received your application of October 7, 1988 in which you requested approval of the sixteenth revision to the Mesaverde Participating Area in the San Juan 31-6 Unit, Rio Arriba County, New Mexico.

The sixteenth revision enlarges the Mesaverde Participating Area by 226.61 acres described as Lots 5, 6, 9, 10, 11, SW \pm NE \pm , W \pm SE \pm (E \pm) Section 1, T. 30 N., R. 6 W., NMPM. The revision is based on the completion of the San Juan 31-6 Unit well No. 53. The sixteenth revision is approved this date and pursuant to the terms in Section 11 of the Unit Agreement, the revision is effective January 1, 1986.

If you have any questions, please contact Robert Kent at (505) 761-4503.

Sincerely,

FOLAssistamt District Manager Mineral Resources

Enclousre

SLO REF NO OG-950



W.R. HUMPHRIES COMMISSIONER State of New Mexico



Commissioner of Public Lands

DEC - 5 1988 AND NGPA

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

December 1, 1988

Northwest Pipeline Corporation Attn: Mr. Darrell Gillen P. O. Box 8900 Salt Lake City, Utah 84108-0899

> Re: San Juan 31-6 Unit 16th MV formation P. A. Effective January 1, 1986 Rio Arriba County, New Mexico

Gentlemen:

The Bureau of Land Management has advised this office by their letter of November 21, 1988, that the sixteenth revision to the Mesaverde Participating Area for the San Juan 31-6 Unit has been approved.

The Commissioner of Public Lands concurs with the BLM and has this date approved the following participating areas:

The Sixteenth Revision to the Mesaverde Participating Area is effective as of January 1, 1986 and is described as Lots 5, 6, 9, 10, 11, SWANEA, WASEA (EA) of Section 1, Township 30 North, Range 6 West containing 160.00 acres. This revision is based upon the commercial completion of the Unit Well No. 53.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

BY: Coul & Carando by BY: FLOYD O. PRANDO, Director 7 3 1 Oil and Gas Division (505) 827-5744

WRH/FOP/pm encls. cc: OCD BLM OGAD Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 7, 1988 Page 4

APPROVED		DATE
	Assistant District Manager, Minerals	
	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 10-20-88

APPROVED

4.

Oil Conservation Commission Subject to Vike approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands

The foregoing are approvals for the SIXTEENTH PARTICIPATING AREA in the Mesaverde formation of the San Juan 31-6 Unit #14-08-001-464.

State of New Mexico

SLO REF NO OG-950





W.R. HUMPHRIES COMMISSIONER Commissioner of Public Lands

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

December 1, 1988

Northwest Pipeline Corporation Attn: Mr. Darrell Gillen P. O. Box 8900 Salt Lake City, Utah 84108-0899

Re: San Juan 31-6 Unit 16th MV formation P. A. Effective January 1, 1986 Rio Arriba County, New Mexico

467

Gentlemen:

The Bureau of Land Management has advised this office by their letter of November 21, 1988, that the sixteenth revision to the Mesaverde Participating Area for the San Juan 31-6 Unit has been approved.

The Commissioner of Public Lands concurs with the BLM and has this date approved the following participating areas:

The Sixteenth Revision to the Mesaverde Participating Area is effective as of January 1, 1986 and is described as Lots 5, 6, 9, 10, 11, SW_4NE_4 , W_2SE_4 (E¹/₂) of Section 1, Township 30 North, Range 6 West containing 160.00 acres. This revision is based upon the commercial completion of the Unit Well No. 53.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

BY: Server of Strands line of FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5744

WRH/FOP/pm encls. cc: OCD BLM OGAD Bureau of Land Management
 Minerals Division
 435 Montano NE
 Albuquerque, NM 87107

9 3

NOV 2 1 1988

SJ 31-6 (MVPA) 3180 (015)

Northwest Pipeline Corporation ATTN: Darrell Gillen P.O. Box 8900 Salt Lake City, UT 84108-0899

Gentlemen:

We have received your application of October 7, 1988 in which you requested approval of the sixteenth revision to the Mesaverde Participating Area in the San Juan 31-6 Unit, Rio Arriba County, New Mexico.

The sixteenth revision enlarges the Mesaverde Participating Area by 226.61 acres described as Lots 5, 6, 9, 10, 11, SW2NE2, W2SE2 (E2) Section 1, T. 30 N., R. 6 W., NMPM. The revision is based on the completion of the San Juan 31-6 Unit well No. 53. The sixteenth revision is approved this date and pursuant to the terms in Section 11 of the Unit Agreement, the revision is effective January 1, 1986.

If you have any questions, please contact Robert Kent at (505) 761-4503.

Sincerely,

[s] Gary A. Stephens

FOR Assistant District Manager Mineral Resources

Enclousre

cc: MMS Comm. of Pub. Land (w/o encl) NM-109 015:RKent:js:11/15/88:0454M



United States Department of the Interior

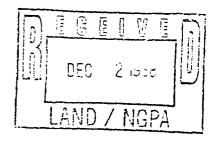
BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE 435 MONTANO N.E. ALBUQUERQUE, NEW MEXICO 87107



NOV 2 9 1988

San Juan 31-6 (PA) 3180 (015)

Northwest Pipeline Corporation Attn: Darrell L. Gillen P.O. Box 8900 Salt Lake City, UT 84108



Gentlemen:

By letter dated October 26, 1988, we received a Notice of Completion of Non-Commercial well, Dakota Formation, San Juan 31-6 Unit, San Juan County, New Mexico. Northwest Pipeline Corporation, as unit operator, has determined that the San Juan 31-6 Unit Well No. 53 (located 1850 feet from the south line and 1000 feet from the east line, Section 1, T. 30 N., R. 6 W.) is not capable of producing unitized substances in paying quantities from the Dakota Formation. This notice is hereby accepted for the record.

If you have any further questions, please contact Gail Keller at (505) 761-4503.

Sincerely,

Sidvagel

Assistant District Manager Mineral Resources





609-88

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

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

State of New Mexico Oil Conservation Commission Attn: Mr. William J. LeMay 310 Old Santa Fe Trail, Room 206 Santa Fe, NM 87503

> Re: San Juan 31-6 Unit #14-08-001-464 San Juan County, New Mexico NOTICE OF COMPLETION OF NON-COMMERCIAL WELL Dakota Formation

Gentlemen:

Pursuant to the provisions of Section 11(b) of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, has determined that the following described well is not capable of producing unitized substances in paying quantities from the Dakota formation.

The well data is as follows:

The San Juan 31-6 Dakota Unit #53 well is located 1850 feet from the south line and 1000 feet from the east line, Section 1, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 20, 1985 and completed in the Dakota formation on September 16, 1985. The plug back depth is 7914'. The Dakota formation was perforated with one shot per foot at the following depths:

7784', 7786', 7788', 7790', 7792', 7794', 7796', 7798', 7800', 7802', 7804', 7828', 7830', 7832', 7834', 7836'

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 26, 1988 Page 2

The Dakota formation was hydraulically fractured with 119,112 gallons of treated water carrying 40,000 pounds of 40/60 mesh sand and 28,110 pounds of 20/40 mesh sand. On December 11, 1985 a 3-hour test through a positive choke produced 165 Mcf of gas. The calculated 24 hour rate was 1317 Mcfd.

If this determination meets with your approval, please 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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen Supervisor, Land Department

DLG/cg Attachments

- cc: Working Interest Owners
 - K. J. Stracke
 - W. S. West
 - L. G. Loving
 - C. N. Potter
 - M. H. Johnson
 - R. P. Gregory
 - R. L. Glenn
 - L. K. Leaver

Commissi	t District Manager, Minerals oner of Public Lands ervation Commission 26, 1988	
APPROVED	·	DATE
	Assistant District Manager, Minerals	
	Bureau of Land Management Subject to like approval by the	
	Commissioner of Public Lands	
	and the Oil Conservation Commission	
APPROVED		DATE
AFFRONED	Commissioner of Public Lands	
	Subject to like approval by the	
	Area Oil and Gas Supervisor	
	and the Oil Conservation Commission	
APPROVED	Sa hohum	DATE //-3-88
	Oil Conservation Commission	
	Subject to //ke approval by the	
	Area Oil and Gas Supervisor	
	and the Commissioner of Public Lands	

The foregoing is the approval of Notice of Completion of Non-Commercial Well for the San Juan 31-6 Unit #53 Well, Dakota Formation.

U56N2650 10/24/88

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

AMOCO PRODUCTION COMPANY Southern Division, production mgr. 1670 broadway P.O. Box Boo Denver, co Bo201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

.

MERIDIAN OIL PRODUCTION INC. Land department P.O. Box 4289 Farmington, NM 87401

PHILLIPS PETROLEUM COMPANY ATTN: GARY KUSE 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

PWG PARTNERSHIP P.O. BOX 451 ALBUQUERQUE, NM 87103 TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO B0155 -

TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702 THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

TUE OCTOBER 4, 1988 5:07:56 PM	ST INFLATION	8 ROVALTV			/ENUE AFTER /alty \$1000	
NORTHWEST PIPELINE CORPORATION (AS RESERVES DEPARTMENT ECONOMIC STUDY San JUAN 31-6 UNIT #53 (85954) (DK)	100.0 ANNUAL CO 100.0 ANNUAL PR 36.0 NEG INC T 0N	31-6 UNIT #53 (DK) 12.5 OVERRIDING 10.4 OPERATING C 8 OPERATING C 243.8 TANGIBLE \$ 0.0	T MCF/	220.00 220.00 220.00 220.00 220.00 220.00 246.00 246.00 246.00 246.00 270.00 270.00 20.0	AI. ROVALTY REV CF MCF ROV	8080 2260 8080 3175 55400 3175 55400 3175 55400 3175 55400 3175 55400 3175 55400 2148 9506 2438 5167 1296 5167 1700 5167 1700 2148 1612 2148 1612 2144 1555 2000 1700 217 1345 1008 1376 0757 1317
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NORTHWEST PIPELINE RESERVOIR ENGINEERING SUMMARY @ 14.73 PSIA PRODUCTION TO DATE

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LAND DEPARTMENT

582-88

P.O BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

October 7, 1988

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

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

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

Re: San Juan 31-6 Unit #14-08-001-464

APPLICATION FOR APPROVAL OF THE SIXTEENTH PARTICIPATING AREA Mesaverde Formation Effective December 1, 1985

Gentlemen:

Pursuant to the provisions of Section 11(a) of the San Juan 31-6 Unit Agreement #14-08-001-464, Northwest Pipeline Corporation, as Unit Operator, hereby respectfully requests approval of the Sixteenth Participating Area for the Mesaverde formation.

This proposed revision of the participating area for the Mesaverde formation is predicated upon the determination by Northwest Pipeline Corporation, as Unit Operator, that the following San Juan 31-6 Unit Mesaverde well which was completed outside the limits of the existing Mesaverde Participating Area, is capable of producing unitized substances in paying quantities from the Mesaverde formation. Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission October 7, 1988 Page 2

SIXTEENTH PARTICIPATING AREA - Effective December 1, 1985

Description of Land

No. of Acres

Township 30 North, Range 6 West, N.M.P.M.226.61Section 1: E/2

The well data is as follows:

The San Juan 31-6 Unit #53 well is located 1850 feet from the south line and 1000 feet from the east line, Section 1, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 20, 1985 and completed in the Mesaverde formation on September 10, 1985. The plug back depth is 7914'. The Mesaverde formation was perforated with 32 holes at the following depths:

5341', 5369', 5395', 5446', 5552', 5458', 5464', 5470', 5476', 5488', 5520', 5542', 5564', 5570', 5594', 5605', 5622', 5628', 5634', 5640', 5646', 5654', 5670', 5681', 5688', 5695', 5703', 5726', 5732', 5762', 5770', 5782'

The Mesaverde formation was hydraulically fractured with 2326 barrels of treated water carrying 100,000 pounds of 20/40 mesh sand. On December 17, 1985 the Mesaverde formation was tested using a positive choke. During the 3-hour test the well produced 243 Mcf of gas, flowing at a rate of 1945 Mcfd. The calculated AOF was 4837 Mcfd. The shut-in casing pressure prior to the test was 1066 psig.

Attached is Schedule XVII along with the ownership map showing the Sixteenth Participating Area for the Mesaverde formation of the San Juan 31-6 Unit Area. The schedule describes the Revised Participating Area and shows the percentage of unitized substances allocated to each unitized tract. Inasmuch as this needs no official approval, in the absence of disapproval within 30 days, the Sixteenth Participating Area will become effective December 1, 1985.

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

anell Lly illen

Darrell L. Gillen
Supervisor, Land/NGPA

Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission October 7, 1988 Page 3

DLG/cg Attachments

- cc: Working Interest Owners K. J. Stracke

 - W. S. West
 - L. G. Loving
 - C. N. Potter
 - R. L. Glenn
 - M. H. Johnson
 - R. P. Gregory L. K. Leaver

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Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 7, 1988 Page 4 DATE APPROVED Assistant District Manager, 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 Area Oil and Gas Supervisor and the Oil Conservation Commission DATE 10-20-88 nn APPROVED 9 (Oil Conservation Commission Subject to like approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands

The foregoing are approvals for the SIXTEENTH PARTICIPATING AREA in the Mesaverde formation of the San Juan 31-6 Unit #14-08-001-464.

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY P.O. BOX 800 DENVER, CO 80201

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460

GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

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MERIDIAN OIL PRODUCTION INC. LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM 87401

PHILLIPS PETROLEUM COMPANY ATTN: GARY KUSE 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

-

PWG PARTNERSHIP P.O. BOX 451 ALBUQUERQUE, NM 87103

TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155

> TEXACO, INC. OPERATIONS DIVISION P.O. BOX 3109 MIDLAND, TX 79702

THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

Page 1 of 6 3691-7

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK Ownership	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF-078995	T-31-N, R-6-W Sec. 28: W/2	960.00	Working Interest	12.500000%	12.500000%	12.292909%
	Sec. 31: All		Northwest Pipeline Corp. ORRI Total	82.500000% 5.000000% 100.000000%	82.500000% 5.000000% 100.000000%	
			TRACT 2	#2e3dec3ac¥	eeeesseas	
SF-078999	<u>T-31-N, R-6-W</u> Sec. 27: E/2	960.00	Royalty Working Interest	12.500000%	12.500000%	12.292909%
	Sec. 34: E/2 Sec. 35: E/2		Northwest Pipeline Corp. ORRI Total	82.500000% 5.000000% 100.000000%	82.500000% 5.000000% 100.000000%	
			TRACT_2-A			
SF-078999	<u>T-31-N, R-6-W</u> Sec. 33: W/2	320.00	Royalty Working Interest	12.500000%	12.500000%	4.097636%
			Northwest Pipeline Corp. ORRI Total	82.500000% 5.000000% 100.000000%	82.500000% 5.000000% 100.000000%	
			TRACT 3			
SF-079000	T-30-N, R-7-W Sec. 1: Lots 7, 8, S/2NW/4, SW/4	319.10	Working Interest El Paso Natural Gas Co.	12.500000% 84.000000%	12.500000% 84.000000%	4.086112%
			ORRI Total	3.500000% 100.000000%	3.500000%	
			TRACT 4			
SF-079000-A	$\frac{T-30-N, R-7-W}{Sec. 1: Lots 5,}$	319.70	Royalty Working Interest	12.500000%	12.500000%	4.093795%
	6, S/2NE/4, SE/4		Tenneco Oil Co. Conoco Inc. ORRI Total	- 33.500000% 33.500000% 20.500000% 100.000000%	33.500000% 33.500000% 20.500000% 100.000000%	

Page 2 of 6 3691-8

UNIT AREA EXPANSION SCHEDULE

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	R DESCRIPTION	NUNBER Of Acres	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 5			
NM-012735	<u>T-30-N, R-6-W</u> Sec. 6: Lots 8,	639.40	Royalty Working Interest	12.500000%	12.500000%	8.187590%
	9, 10, 11, S/2,		El Paso Natural Gas Co.	82.500000%	82.500000%	
	S/2N/2 (A11)		ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	
			- TRACT 6			
SF-079012	<u>1-30-N, R-6-W</u> Sec. 4: Lots 5,	639.84	Royalty Working Interest	12.500000%	12.500000%	8.193224%
	6, 7, 8, S/2N/2,		El Paso Natural Gas Co.	82.500000%	82.500000%	
	S/2 (A11)		ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	
			TRACT 7			
SF-079401	<u>T-30-N, R-6-W</u> Sec. 1: Lots 7,	159.69	Royalty Working Interest	12.500000%	12.500000%	2.044849%
	8, S/2NW/4		Northwest Pipeline Corp.	83.000000%	83.000000%	
	·		ORRI	4.500000%	4.500000%	
			Total	100.000000%	100.000000%	
			TRACT 8			
NM-012299	<u>T-30-N, R-6-W</u> Sec. 1: Lots 5,	386.61	Royalty Working Interest	12.500000%	12.500000%	4.950585%
	6, 9, 10, 11, W/2SE/4, SW/4NE/4,		El Paso Natural Gas Co. Global Natural Resources	42.250000%	42.250000%	
	SW/4		of Nevada	32.955000%	32.955000%	
			Matagorda Oil Co.	9.295000%	9.295000%	
			ORRI	3.00000%	3.000000%	
			Total	100.000000%	100.000000%	
			TRACT 9			
NM-012292	<u>T-30-N, R-6-W</u> Sec. 3: Lots 5,	640.48	Royalty Working Interest	12.500000%	12.500000%	8.201420%
	6, 7, 8, S/2,		El Paso Natural Gas Co.	82.500000%	82.500000%	
	S/2N/2 (A11)		ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	
				·····		

Page 3 of 6 3691-9

UNIT AREA EXPANSION SCHEDULE

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK Ownership	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 10			
NM-03404	<u>T-30-N, R-6-W</u> Sec. 5: Lots 5,	639.16	Royalty Working Interest	12.500000%	12.500000%	8.184517%
	6, 7, 8, S/2N/2, S/2 (A11)		Northwest Pipeline Corp. ORRI	82.500000% 5.000000%	82.500000% 5.000000%	
	5/2 (AII)		Total	100.000000%	100.00000%	
			TRACT 11			
E-289-3	T-31-N, R-6-W	160.00		12.500000%	12.500000%	2.048818%
	Sec. 32: NW/4		Working Interest		07 500000	
			Wiser Oil Company ORRI	87.500000% 0.000000%	87.500000% 0.000000%	
			Total	100.00000%	100.000000%	
			TRACT 11-A			
E-289-45	T-31-N, R-6-W	40.00	Royalty	12.500000%	12.500000%	.512205%
	Sec. 32: SW/4NE/4		Working Interest			
			Northwest Pipeline Corp.	82.500000%	82.500000%	
			ORRI Total	5.000002 100.000002	$\frac{5.000000\%}{100.00000\%}$	
			TOCAL			
			TRACT 11-B			
E-289-43	<u>T-31-N, R-6-W</u> Sec. 32: N/2NE/4	80.00	Royalty Working Interest	12.500000%	12.500000%	1.024409%
	Jet. JZ. N/286/4		Northwest Pipeline Corp.	82.500000%	82.500000%	
			ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	
			TRACT 12			
E-346-26	T-31-N, R-6-W	200.00		12.500000%	12.500000%	2.561023%
	Sec. 32: SE/4NE/4, SE/4	,	Working Interest Northwest Pipeline Corp.	.82.500000%	82 500000%	
	JL/4		ORRI	5.000000%	82.500000% 5.000000%	
			Total	100.000000%	100.000000%	
				***********	**********	

Page 4 of 6 3691-10

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER Of Acres	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 12-A			
E-346-25	<u>T-31-N, R-6-W</u> Sec. 32: SW/4	160.00	Royalty Working Interest	12.500000%	12.500000%	2.048818%
			Northwest Pipeline Corp.	85.000000%	85.000000%	
			ORRI	2.500000%	2.500000%	
			Total	100.00000%	100.000000%	
			TRACT 13			
E-347-40	<u>T-30-N, R-6-W</u> Sec. 2: N/2SE/4	160.00	Royalty Working Interest	12.500000%	12.500000%	2.048818%
	T-31-N, R-6-W		Northwest Pipeline Corp.	82.750000%	82.750000%	
	Sec. 36: N/2NW/4		ORRI	4.750000%	4.750000%	
			Total	100.000000%	100.000000%	
			TRACT 13-A			
E-347-41	<u>T-30-N, R-6-W</u> Sec. 2: S/2SE/4	80.00	Royalty Working Interest	12.500000%	12.500000%	1.024409%
			Northwest Pipeline Corp.	82.500000%	82.500000%	
			ORRI	5.000000%	5.00000%	
			Total	100.000000%	100.000000%	
E-347-34	T-31-N, R-6-W	80.00	Royalty	12.500000%	12.500000%	1.024409%
	Sec. 36: S/2NW/4		Working Interest			
			Amoco Production Co.	82.500000%	82.500000%	
			ORRI	5.00000%	5.00000%	
			Total	100.00000%	100.000000%	
			TRACT 13-B			
E-347-38	<u>T-30-N, R-6-W</u> Sec. 2: SW/4	320.00	Royalty Marking Interest	12.500000%	12.500000%	4.097636%
	Sec. 2: SW/4 T-31-N, R-6-W		Working Interest Northwest Pipeline Corp.	85.000000%	85.000000%	
	$\frac{1-31-10, 10-0}{\text{Sec. 36: SW/4}}$		ORRI	2.500000%	2.500000%	
			Total	100.0000002	100.000000%	

Page 5 of 6 3691-11

UNIT AREA EXPANSION SCHEDULE

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13-C			
E-347-39	<u>T-30-N, R-6-W</u> Sec. 2: Lots 5,	545.40	Royalty Working Interest	12.500000%	12.500000%	6.983909%
	6, 7, 8, S/2N/2		Northwest Pipeline Corp.	82.500000%	82.500000%	
	T-31-N, R-6-W		ORRI	5.000000%	5.000000%	
	Sec. 36: Lots 1, 2, 3, 4, W/2E/2		Total	100.000000%	100.000000%	

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Page 6 of 6 3691-12

UNIT AREA EXPANSION SCHEDULE

SCHEDULE XVII SIXTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION SAN JUAN 31-6 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area:

Township 31 North, Range 6 West, N.M.P.M. Sections 27, 34, 35: E/2 Sections 28, 33: W/2 Sections 31, 32, 36: All

Township 30 North, Range 6 West, N.M.P.M. Sections 1, 2, 3, 4, 5, 6: All

Township 30 North, Range 7 West, N.M.P.M. Section 1: All

Total	Number	of	Acres	in Participating Area:	7,809.38
Total	Number	of	Acres	Committed to Participating Area:	7,809.38

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NORTHWEST PIPELINE GAS RESERVES DEPAR SJ 31-6 UNIT # 53 M	TMENT ECONOMIC	STUDY		WED JUNE 15, 12:32:29	
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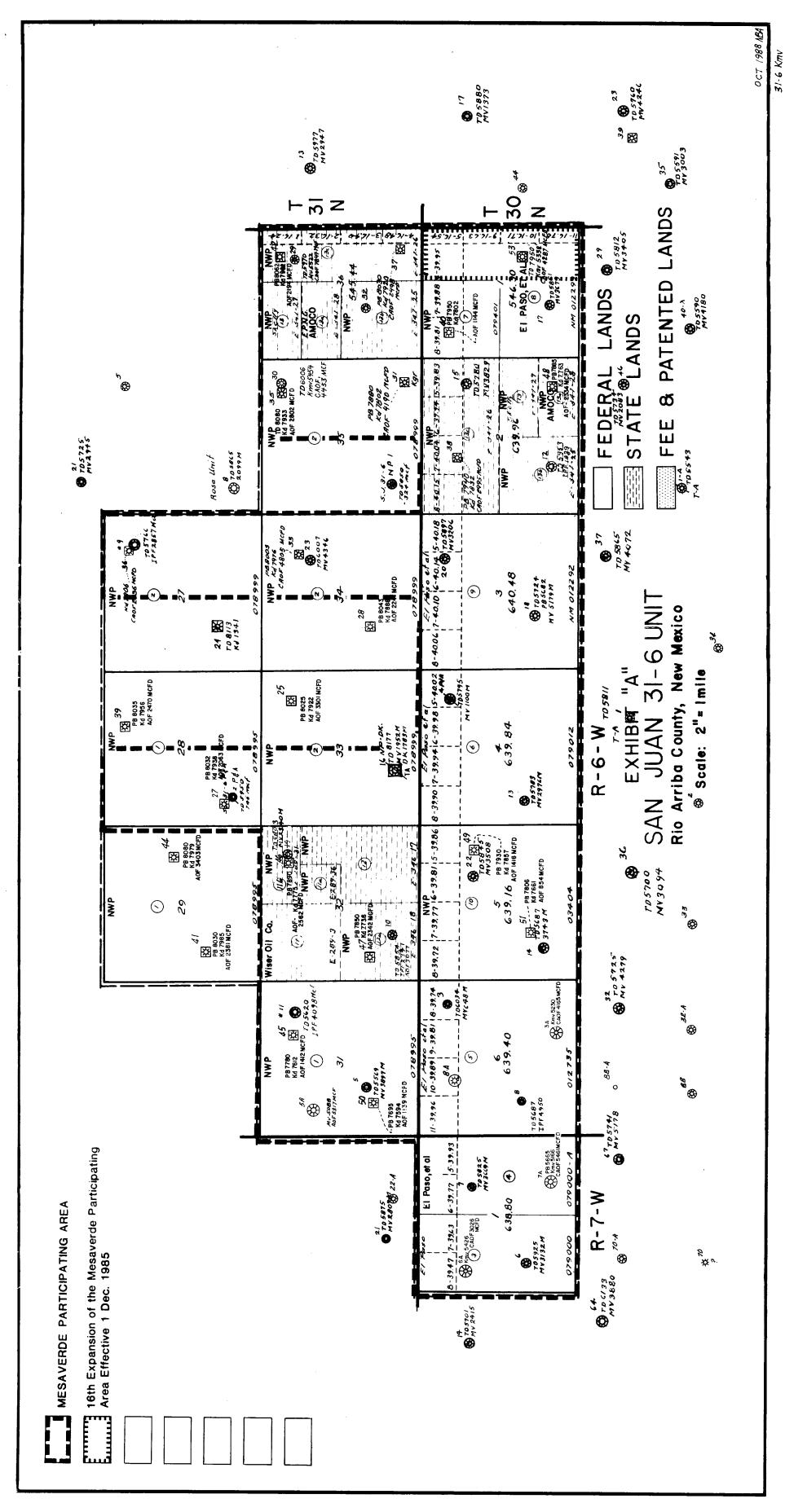
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372-88

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

LAND DEPARTMENT

June 8, 1988

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

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

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

> Re: San Juan 31-6 Unit, #14-08-001-464 Rio Arriba County, New Mexico 1988 Drilling Program

Gentlemen:

The 1988 Drilling Program filed on April 13, 1988, for the San Juan 31-6 Unit has been approved by the Regulatory Agencies as follows:

Bureau of Land Management	5/18/88
Commissioner of Public Lands	4/20/88
Oil Conservation Commission	4/20/88

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Davel I. Giller

Darrell L. Gillen Supervisor, Land/NGPA

DLG/cg Attachment

cc: Working Interest Owners K. J. Stracke P. C. Thompson

295 CHIPETA WAY SALT LAKE CITY, UTAH 84108

U56N2650 06/08/88

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

> AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY 1670 BROADWAY 1670 BOX BOO DENVER, CO BOZO1

CONOCO, INC. P.O. BOX 460 HOBBS, NM 88241-0460 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM 87401

PHILLIPS PETROLEUM COMPANY ATIP DAVID S. SMITH 8055 E. TUFTS AVE. PKWV. DENVER, CO 80237

PWG PARTNERSHIP 400 GOLD AVENUE, S.W. Albuquerque, NM 87102

.

SOUTHLAND ROVALTY COMPANY 3535 E. 30TH STREET FARMINGTON, NM 87499

TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO 80155

TEXACO, INC. ATTN: COMPTROLLERS DEPARTMENT P.O. BOX 2100 DENVER, CO 80201

THE WISER OIL COMPANY 700 PETROLEUM BUILDING WICHITA FALLS, TX 76301

State of New Mexico



SLO REF NO OG-763

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

W.R. HUMPHRIES

Commissioner of Public Lands

April 20, 1988

Northwest Pipeline Corp. Attn: Mr. Darrell L. Gillen P. O. Box 8900 Salt Lake City, UT 84108-0899

> Re: 1988 Plan of Development San Juan 31-6 Unit Rio Arriba County, New Mexico

Gentlemen:

The Commissioner of Public Lands has this date approved your 1988 Plan of Development for the above captioned unit area.

Our approval is subject to like approval by all other appropriate agencies.

Enclosed is an approved copy for your files.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

10 BY:

FLOYD O. (RANDO, Director Oil and Gas Division (505) 827-5744

WRH/FOP/pm encls. cc: OCD BLM



LAND DEPARTMENT

142-88

P O BOX 8900 SALT LAKE C-TY, UTAH 84108 0899 801 584-7215

April 13, 1988

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands ATTN: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87501

State of New Mexico Oil Conservation Commission ATTN: Mr. William J. LeMay P.O. Box 2088 Santa Fe, NM 87501

> Re: San Juan 31-6 Unit, #14-08-001-464 Rio Arriba County, New Mexico 1988 Drilling Program

> > 53

Gentlemen:

By letter dated March 3, 1987, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the referenced Unit. The Drilling Program indicated that no additional wells would be drilled during 1987 in the Unit.

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, plugged and abandoned	2
Mesaverde, temporarily abandoned	2
Mesaverde/Dakota, commerciality undetermined	1
Mesaverde/Dakota, (Mesaverde commercial, Dakota	
temporarily abandoned)	1
Dakota, commercial	21
Dakota, non-commercial	1
-	

TOTAL

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission April 13, 1988 Page 2

Pursuant to Section 10 of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation is submitting a Drilling Program for the calendar year 1988. No additional wells are proposed to be drilled during 1988.

All of the Working Interest Owners have been contacted and this Drilling Program reflects the desires of a majority of the Working Interest Owners. Northwest Pipeline Corporation, as Unit Operator, and the Working Interest Owners believe that all current obligations have been satisfied.

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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Danell I. Gella

Darrell L. Gillen Supervisor, Land/NGPA

DLG:cg

Attachment

cc: Working Interest Owners K. J. Stracke P. C. Thompson Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission April 13, 1988 Page 3

APPROVED

Assistant District Manager, Minerals Bureau of Land Management Subject to like approval by the Commissioner of Public Lands and the Oil Conservation Commission

APPROVED

DATE

DATE 4-20-88

DATE

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

APPROVED

or Annu

Oil Conservation Commission Subject to Tike approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands

The foregoing approvals are for the 1988 Drilling Program for the San Juan 31-6 Unit #14-08-001-464.

U56N2650 04/13/88

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

> AMOCO PRODUCTION COMPANY SOUTHERN DIVISION, PRODUCTION MGR. 1670 BROADWAY BODVER, CO 80202

CONOCO, INC. P.O. BOX 460 HOBBS, NM BB240 GLOBAL NATURAL RESOURCES OF NEVADA ATTENTION: STUART SCARBOROUGH P.O. BOX 4682 HOUSTON, TX 77210

MATAGORDA OIL COMPANY 59677-01 TEXAS COMMERCE BANK N.A. TRUST-ASSET MGMT. OPER. P.O. BOX 2558 HOUSTON, TX 77001

MERIDIAN OIL PRODUCTION INC LAND DEPARTMENT P.O. BOX 4289 FARMINGTON, NM 87401

ł

PHILLIPS PETROLEUM COMPANY ATTN: DAVID S. SMITH BO55 E. TUFTS AVE. PKWY. DENVER, CO 80237

PWG PARTNERSHIP 400 GOLD AVENUE, S.W. Albuquerque, nm 87102 SOUTHLAND ROVALTY COMPANY 3535 E. 30TH STREET FARMINGTON, NM 87499

TENNECO OIL COMPANY ATTN: JOINT INTEREST DEPARTMENT P.O. BOX 3249 ENGLEWOOD, CO BOISS

TEXACO, INC. ATTN: COMPTROLLERS DEPARTMENT P.O. BOX 2100 DENVER, CO 80201

THE WISER OIL COMPANY 905 OIL & GAS BUILDING WICHITA FALLS, TX 76301

467

NORTHWEST PIPELINE CORPORATION

165-88

LAND DEPARTMENT

March 3, 1988

P D BOX 8900 SALT LAKE CITY, UTAH 84108-0900 801-584-6669 801-584-7215

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands ATTN: Mr. Floyd O. Prando P.O. Box 1148 Santa Fe, NM 87501

State of New Mexico Oil Conservation Commission ATTN: Mr. William J. LeMay P.O. Box 2088 Santa Fe, NM 87501

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

Gentlemen:

The Notice of Completion of Non-Commercial Well, which was filed November 10, 1987 for the San Juan 31-6 Unit Well #50 has been approved by BLM 12/8/87, Commissioner of Public Lands 1/13/88, and the Oil Conservation Commission 11/16/87.

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Danell Spille

Darrell L. Gillen Supervisor, Land/NGPA

DLG:cg Attachment Bureau of Land Management Commissioner of Public Lands 011 Conservation Commission March 3, 1988 Page 2

- cc: Working Interest Owners
 - K. J. Stracke
 - W. O. Curtis
 - W. S. West
 - L. G. Loving
 - C. N. Potter
 - R. L. Glenn
 - M. H. Johnson
 - R. P. Gregory N. K. Zunino

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

Amoco Production Co. Southern Division, Production Manager 1660 Broadway Denver, CO 80202 Global Natural Resources of Nevada Attn: Stuart Scarborough P.O. Box 4682 Houston, TX 77210 Conoco, Inc. P.O. Box 460 Hobbs, NM 88240 Meridian Oil Production Inc. **Production Department** P. O. Box 4289 Farmington, NM 87401 Phillips Petroleum Co. Attn: David S. Smith 8055 E. Tufts Ave. Pkwy. Denver, CO 80237 **PWG** Partnership 400 Gold Ave., S.W. Albuquerque, NM 87102 Southland Royalty Co. 3535 East 30th Street Farmington, NM 87499 Tenneco Oil Co. Joint Interest Dept. P. O. Box 3249 Englewood, CO 80155 Texaco, Inc. Attn: Comptrollers Department P.O. Box 2100 Denver, CO 80201 The Wiser Oil Company 905 011 & Gas Building Wichita Falls, TX 76301 3128t-9

State of New Mexico



Commissioner of Public Lands

January 21, 1988

Northwest Pipeline Corporation ATTENTION: Mr. Darrell L. Gillen P. O.Box 8900 Salt Lake City, Utah 84108-0900

> Re: Correction letter San Juan 30-5 Unit, should be San Juan 31-6 Unit Rio Arriba County, New Mexico Notice of Completion of non-commercial well No. 50 Dakota Formation

Gentlemen:

This office is in receipt of your letter of November 10, 1987 and the approval letter from the Bureau of Land Management dated December 8, 1987, wherein the San Juan 31-6 Unit Well No. 50, located in the NW/4SW/4 of Sec. 31-31N-6W was determined to be non-commercial.

The Commissioner of Public Lands concurs with the Bureau of Land Management that this well is non-commercial and should be produced on a lease basis.

Enclosed is an approved copy for your files.

Very truly yours,

WILLIAM R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

BY: FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5744

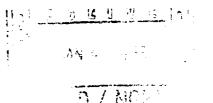
WRH/FOP/pm encls. cc: OCD-Santa Fe, New Mexico BLM-Albuquerque, New Mexico GULRAM TRD-Oil and Gas Processing

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• • • ;



W.R. HUMPHRIES COMMISSIONER A.M.E.N.D.E.D



SLO REF NO. 0G-650

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

Assistant District Manager, Minerals Commissioner of Public Lands 011 Conservation Commission November 6, 1987 Page 3 DATE APPROVED Assistant District Manager, 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 Area 011 and Gas Supervisor and the Oil Conservation Commission DATE _11-16-87 o APPROVED Tum 011 Conservation Commission Subject to like approval by the Area 011 and Gas Supervisor and the Commissioner of Public Lands

The foregoing is the approval of Notice of Completion of Non-Commerical Well for San Juan 31-6 Unit #50 Dakota.



United States Department of the Interior

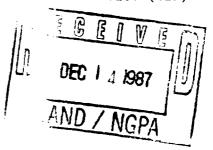
BUREAU OF LAND MANAGEMENT

Rio Puerco Resource Area 435 Montano N.E Albuquerque, New Mexico 87107

DEC 0 3 1387



San Juan 31-6 NC 3180 (015)



Northwest Pipeline Corporation ATTN: Darrell L. Gillen P.O. Box 8900 Salt Lake City, Utah 84108-0900

Gentlemen:

We are in receipt of your letter dated November 10, 1987, notifying this office of completion of a non-commercial well in the San Juan 31-6 Unit, Rio Arriba County, New Mexico. Northwest Pipeline Corporation, as unit operator, has determined that the San Juan 31-6 Unit Well No. 50, located in the NW12SW12 Section 31, T. 31 N., R. 6 W., is not capable of producing unitized substances in paying quantities from the Dakota Formation. This notice is hereby approved.

If you have any questions, please contact Shirley Bryant at the above address or telephone (505) 761-4503.

Sincerely,

Sid Vogel

Assistant District Manager Mineral Resources

NORTHWEST PIPELINE CORPORATION

ONE OF THE WILLIAMS COMPANIES

501-87

LAND DEPARTMENT

November 10, 1987

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0900 801 584-6669 801-584-7215

Assistant District Manager, Minerals Bureau of Land Management 425 Montano, N.E. Albuquerque, NM 87107

State of New Mexico Commissioner of Public Lands Attn: Mr. Floyd O. Prando P. O. Box 1148 Santa Fe. NM 87501

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

> Re: San Juan 31-6 Unit #14-08-001-464 Rio Arriba County, New Mexico <u>NOTICE OF COMPLETION OF NON-COMMERICAL WELL</u> Dakota Formation

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 not capable of producing unitized substances in paying quantities from the Dakota formation.

The well data is as follows:

<u>The San Juan 31-6 Unit well #50</u> is located 1450 feet from the South line and 1190 feet from the West line of Section 31, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on July 17, 1984 and completed in the Dakota formation on September 11, 1984. The plug back depth is 7695'. The Dakota formation was perforated with one shot per foot over the following intervals:

7595-7611; 7632-7646

The Dakota formation was hydraulically fractured with 1580 barrels of treated fluid carrying 30,000 pounds of 40/60 sand and 30,000 pounds of 20/40 sand. The well was tested on October 1, 1984 for 3 hours using a positive choke. During the test the well produced 187 Mcf of gas flowing at a rate of 1139 Mcfd. The shut-in pressure prior to the test was 2810 psig.

Assistant District Manager, Minerals Commissioner of Public Lands Dil Conservation Commission November 10, 1987 Page 2

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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Danell J. Gillen

Darrell L. Gillen
 Supervisor, Land/NGPA

DLG:cg Attachment cc: Working Interest Owners

- K. J. Stracke
 - W. O. Curtis
 - W. S. West
 - L. G. Loving
 - C. N. Potter
 - R. L. Glenn
 - M. H. Johnson
 - R. P. Gregory
 - N. Z. Zunino

Assistant District Manager, Minerals Commissioner of Public Lands 011 Conservation Commission November 6, 1987 Page 3 APPROVED DATE Assistant District Manager, 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 Area 011 and Gas Supervisor and the Oil Conservation Commission DATE _11-16-87 a Tum APPROVED 011 Conservation Commission

The foregoing is the approval of Notice of Completion of Non-Commerical Well for San Juan 31-6 Unit #50 Dakota.

Subject to like approval by the Area Oil and Gas Supervisor

and the Commissioner of Public Lands

WORKING INTEREST OWNERS SAN JUAN 31-6 UNIT

Amoco Production Co. Western Division, Production Manager 1660 Broadway Denver, CO 80202 Global Natural Resources of Nevada Attn: Stuart Scarborough P.O. Box 4682 Houston, TX Conoco, Inc. P.O. Box 460 Hobbs, NM 88240 Meridian Oil Production Inc. **Production Department** P. O. Box 4289 Farmington, NM 87401 Phillips Petroleum Co. Attn: David S. Smith 8055 E. Tufts Ave. Pkwy. Denver, CO 80237 **PWG** Partnership 400 Gold Ave., S.W. Albuquerque, NM 87102 Southland Royalty Co. 3535 East 30th Street Farmington, NM 87499 Tenneco Oil Co. Joint Interest Dept. P. O. Box 3249 Englewood, CO 80155 Texaco, Inc. Attn: Comptrollers Department P.O. Box 2100 Denver, CO 80201 The Wiser Oil Company 905 Oil & Gas Building Wichita Falls, TX 76301

3128t-8

NORTHWEST PIPELINE GAS RESERVES DEPART SJU 31-6 # 50 DK		STUDY	WED NOVEMBER 4 12:08:55 P	
WORKING INT. B				
WORKING INT. A/ INCOME TAX UNIT OF PRODUCT		36.0		
GAS PRODUCTION	FROM SJU 31-6	#50DK		
LAND OWNER ROYA	LTY	12.5	OVERRIDING ROYALTY	0.0
AD VALOREM AND	SEV TAXES%	10.4	OPERATING COSTS (\$/MO)	400.0
MONTH OF CAPITA	L EXPENSE	6	•	
DRILLING COSTS	(\$1000)	358.2	TANGIBLE \$ (% OF DRILLING \$)	40.2
SALVAGE VALUE (\$1000)	0.0		
INITIAL MONTH MC	X CF/D DECLINE	TO MCF/D	ENDING MONTH	
15 45	60.0 88.8	375.0	16	

450.0	88.8	375.0	16
375.0	89.4	311.0	17
311.0	92.4	251.0	18
251.0	53.8	194.0	22
194.0	45.1	130.0	30
130.0	6.8	35.0	254
35.0	100.0	0.0	255
	375.0 311.0 251.0 194.0 130.0	375.089.4311.092.4251.053.8194.045.1130.06.8	375.089.4311.0311.092.4251.0251.053.8194.0194.045.1130.0130.06.835.0

	BEG. YR	AVG	ANNUAL	ROYALTY	REVENUE AFTER
YEAR	\$/ MCF	MCF/D	MCF	MCF	ROYALTY \$1000
*-					
1985	2.53	0	0.	0.	0.
1986	2.53	217	79258.	9907.	113.
1987	1.17	138	50264.	6283.	67.
1988	1.74	121	44139.	5517.	67.
1989	1.74	113	41143.	5143.	63.
1990	1.74	105	38350.	4794.	58.
1991	1.74	98	35747.	4468.	54.
1992	1.74	91	33320.	4165.	51.
1993	1.74	85	31058.	3882.	47.
1994	1.74	79	28950.	3619.	44.
1995	1.74	74	26985.	3373.	41.
1996	1.74	69	25153.	3144.	38.
1997	1.74	64	23445.	2931.	36.
1998	1.74	60	21854.	2732.	33.
19 99	1.74	56	20370.	2546.	31.
2000	1.74	52	18988.	2373.	29.
2001	1.74	48	17699.	2212.	27.
2002	1.74	45	16497.	2062.	25.
2003	1.74	42	15377.	1922.	23.
2004	1.74	39	14334.	1792.	22.
2005	1.74	37	13361.	1670.	20.
TOTAL	• • • • • • • • •	• • • • • •	596285.	74534.	891.

NORTHWEST PIPELINE CORPORATIONWED NOVEMBER 4, 1987GAS RESERVES DEPARTMENT ECONOMIC STUDY12:08:55 PMSJU 31-6 #50 DK12:08:55 PM										
WO IN	RKING I COME TA	NT. B/PA NT. A/PA X RODUCTIO	YOUT		L00.0 L00.0 36.0 N		PRICE 1	INFLATI(0.0 0.0 INCOME
	SCOUNT					COUNTED PR				
	RATE**		•			NVESTMENT				
XX.	* % **	BEFORE		FTER TA	YX BELC	RE TAX 0.00	AFTER 1			יי גע
	11.4 9.3		0.).	0.00	0		OF RETUR	
	15.0	-	48.	-59		-0.13	-0.		OF KEIU	AN A.I.
	17.0		-0.		•	0.15	0.	10		
*	\$1000 *NET*	**PROJEC ***** CAPI- *TAL*	*****	AD.V. SEV. TAXES	***** PROD.	****** BEFORE	**CUM BEFORE	*****	5 IN \$100 ****** INCOME TAXES	00**** ***** AFTER TAXES
1985	0	358	0	0	0	-358			-77	-281
1986	113	0	19	12	4	97	-261		28	69
1987	67	0	12	7	5	56	-206		16	40
1988	67	0	11	7	5	55	-150		16	39
1989	63	0	10	7	5	51	-99		15	36
1990	58	0 0	9	6 6	5 5	47 44	-51	38 35	14	34
1991 1992	54 51	0	9 8	5	5	44 41	-7 33	33	13 12	31 29
1993	47	0	8	5	5	38	71	30	11	27
1994	44	0	7	5	5	35	105	28	10	25
1995	41	Ō	7.	4	5	32	137	25	9	23
1996	38	0	6	4	5	29	167	23	8	21
1997	36	0	6	4	5	27	194	21	8	19
1998	33	0	5	3	5	25	219	20	7	18
1999	31	0	5	3	5	23	242	18	7	16
2000	29	0	5	3	5	21	263	16	6	15
2001	27	0	4	3	5	19	282	15	5	14
2002	25	0	4	3	5	18	300	14	5	13
2003 2004	23 22	0 0	4 3	2 2	5 5	16 15	316 331	12 11	4	12 11
2004	22	0	3	2	5	13	344	10	4 4	10
TOTAL	891	358	144	93	95	344	0	344	124	220

PAYOUT DURING MONTH 3 OF YEAR 8

5JU 31-6 DK	DK											WED NOVEMBER 4.	R 4, 1987		2:11:26	Md
API	:30-039	-2344	8-000	16 L2 01	API:30-039-23448-0000 SJ 31-6 UNIT #50 NP?	150 NP	ć.	METER/UT:85894/00000	194/00 0	000	INITIAL MMCF				1018/0.000	00
	-	NEW M	EXICO	NEW MEXICO BASIN DAKOTA	DAKOTA			N. M. P. M. 1 3	31N R	6W 31L	CUMULATIVE.				12/ 0.	33
	NORTH	WEST	PIPEL	INE COR	NORTHWEST PIPELINE CORP OPERATOR	R		FOOTAGE.: 1450FSL	150FSL	1190FWL	REMAINING.	8 -	LSHD	5	0.000000	00
	dmn	SAN	JUAN	GATHERI	NWP SAN JUAN GATHERING SYSTEM	-		S DATE-RL/WS:10/21/85-1/	5:10/21	1/85-1/1	R.L.RATIO.		CNTR	5	1,0000	00
I.D.DATE(MMDDVV):03/06/86	(AVDDWW)	:03/0	6/86			1983		1984		•	1985	1986			1987	r
VEAR	MCF	PSIG DAVS	DAVS	MONTH	MCF	= PSIG	DAVS	MCF PSIG	DAVS	MCF		MCF PSIG	DAVS	MCF	PSIG D	AVS
1976	0	0	0	NAL	J	0	0.0		0.0	0			0.0	5700		8.8
1977	0	0	0	FEB	0	0	0.0	00	0.0	0	0.0 0	0	0.0	2941	276	2.9
1978	0	0	0	MAR	U.	0 0	0.0	0	0.0	0	0.0 0		21.5	3761		3.5
1979	0	0	0	APR	J	- -	0.0 0	0	0.0	0	0.0 0		0.0	1483		2.3
1980	0	0	0	MAV	J	0	0.0	0	0.0	0	0.0 0		30.9	4221		0.0
1981	0	0	0	NON	J	с С	0.0	0	0.0	•	0.0		28.5	4297		8.7
1982	a	a	0	JUL	J	- -	0.0	0	0.0	0	0.0 0		4.6	3959		3.3
1983	0	0	0	AUG	0	0	0.0	0	0.0	0	0.0 0		19.6	3141		0.0
1984	0	0	0	SEP	U	о С	0.0	0	0.0	0	0.0 0		12.7	2790		3.5
1985	0	0	0	0CT	0	0	0.0	0	0.0	0	0.0		1.6			•
1986	51922	255	135	NON	J		0.0	0	0.0	Q	0.0 0	5508 241 8.7	8.7			
1987	32293	261	53	DEC	J	5	0.0	0	0.0	0	0.0 0		7.3			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1) 1 1 1			1111				# # E L 1		****				1

NORTHWEST PIPELINE RESERVOIR ENGINEERING SUMMARY @ 14.73 PSIA SJU 31-6 DK

State of New Mexico



SLO RE

W.R. HUMPHRIES COMMISSIONER SLO REF. NO. OG-350

Commissioner of Public Lands

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

August 18, 1987

Northwest Pipeline Corp. Attention: Darrell L. Gillen 295 Chipeta Way Salt Lake City. Utah 84108

> Re: San Juan 31-6 Unit 1987 Plan of Development Rio Arriba County, New Mexico

Gentlemen:

The Commissioner of Public Lands has this date approved the above captioned Plan of Development. Our approval is subject to like approval by all appropriate agencies.

In future Plan of Developments, please submit a plat of the unit area.

If we may be of further help, please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS

BY: Diryles Wham

FLOYD O. PRANDO, Director Oil & Gas Division (505) 827-5744

WRH/FOP/ams enclosure cc:Bureau of Land Management **Oil Conservation Division**



LAND DEPARTMENT

139-87

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0900 801-584-6669 801-584-7215

March 3, 1987

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 Attn: Mr. Floyd O. Prando P. O. Box 1148 Santa Fe, NM 87501

State of New Mexico Oil Conservation Commission Attn: William J. LeMay P. O. Box 2088 Santa Fe, NM 87501

> Re: San Juan 31-6 Unit, #14-08-001-464 Rio Arriba County, New Mexico 1987 Drilling Program

Gentlemen:

By letter dated March 26, 1986, Northwest Pipeline Corporation, as Unit Operator, filed a Drilling Program for the captioned Unit providing for the drilling of no wells.

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, plugged and abandoned	2
Mesaverde, temporarily abandoned	2
Mesaverde/Dakota, commerciality undetermined	٦
Mesaverde/Dakota, (Mesaverde commercial,	
Dakota temporarily abandoned)	1
Dakota, commercial	20
Dakota, commerciality undetermined	2
TOTAL	53

Assistant Area Oil and Gas Supervisor Commissioner of Public Lands Oil Conservation Commission San Juan 31-6 1987 Drilling Program March 3, 1987 Page -2-

Pursuant to Section 10 of the San Juan 31-6 Unit Agreement, Northwest Pipeline Corporation is submitting a Drilling Program providing for the drilling of no wells during the calendar year 1987.

All of the Working Interest Owners have been contacted and this Drilling Program reflects the desires of a majority of the Working Interest Owners. Northwest Pipeline Corporation, as Unit Operator, and the Working Interest Owners believe that all current obligations have been satisfied.

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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

anell Loula

Darrell L. Gillen Land Coordinator

DLG:js

Attachment

- cc: Working Interest Owners
 - K. J. Stracke
 - W. O. Curtis
 - P. C. Thompson

Assistant Area Oil and Gas Supervisor Commissioner of Public Lands Oil Conservation Commission San Juan 31-6 1987 Drilling Program March 3, 1987 Page -3-

DATE APPROVED Assistant District Manager for Minerals Bureau of Land Management Subject to like approval by the Commissioner of Public Lands and the 011 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 DATE 3-17-87 Tray E 10 Min APPROVED

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 1987 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

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

AMOCO PRODUCTION COMPANY Western Division, Production Land AMOCO BUILDING DENVER, COLORADO 80202

Tenneco Dil Company Joint Interest Department P. O. Box 3249 Englewood, CO 80155

Conoco P. O. Box 2197 Houston, TX 77252 Southland Royalty Company 3535 East 30th Street Farmington, NM 87499

PHILLIPS PETROLEUM COMPANY ATTN: Dave S. Smith 8055 E. Tufts Avenue Parkway Denver, CO 80237

CAMBRIDGE ROYALTY COMPANY 5300 Memorial Suite 800 Houston, TX 77007

Meridian Oil P. D. Box 4289 Land Department Farmington, NM 87499-4289

0043t



State of New Mexico

#467

OFFICE OF THE

Commissioner of Public Lands

WILLIAM R. HUMPHRIES COMMISSIONER

Santa Fe

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

January 9, 1987

Northwest Pipeline Corporation ATTENTION: Mr. Darrell L. Gillen P. O. Box 8900 Salt Lake City Utah 84108-0900

> Re: Application for Approval of the Fifth, Sixth, Seventh, Eight, Ninth and Tenth Expanded Participating areas for the Dakota Formation San Juan 31-6 Unit Rio Arriba County, New Mexico

Gentlemen:

By your letter of December 23, 1986, you have advised this office that the Bureau of Land Management has approved your application dated May 22, 1986 for approval of the Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expanded Participating Areas for the Dakota Formation, San Juan 31-6 Unit Area, Rio Arriba County, New Mexico.

This office is also in receipt of your letter of May 22, 1986 requesting our approval. The Commissioner of Public Lands concurs with the Bureau of Land Management and has this date also approved your application. 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 Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expansions of the Participating Area for the Dakota Formation as Follows:

The Fifth revison adds 320.00 acres to the Dakota Participating Area and is described as the W/2 of Section 29 Township 31 North, Range 6 West. The Fifth revision is effective as of March 1, 1983 and is predicated upon the successful completion of the San Juan 31-6 Unit Well No. 41.

The Sixth revison adds 272.56 acres to the Dakota Participating Area and is described as the N/2 of Section 36, Township 31 North, Range 6 West. The Sixth revision is effective as of April 1, 1983 and is predicated upon the successful completion of the San Juan 31-6 Unit Well No. 42.

The Seventh revision adds 1,280.00 Acres to the Dakota Participating Area and is described as the S/2 of Section 2, Township 30 North, Range 6 West, W/2 of Section 28, E/2 Section 32 and the E/2 Section 33, Township 31 North, Range 6 West. The Seventh revision is effective as of May 1, 1983 and is predicated upon the successful completion of the San Juan 31-6 Unit Well Nos. 25, 27, 46 and 48. Northwest Pipeline Corporation January 9, 1987 Page 2

The Eighth revision adds 320.00 acres to the Dakota Participating Area and is described as the E/2 Section 28, Township 31 North, Range 6 West. The Eighth revision is effective June 1, 1983 and is predicated upon the successful completion of the San Juan 31-6 Unit Well No. 39.

The Ninth revision adds 1,232.48 acres to the Dakota Participating Area and is described as the N/2 of Section 1, E/2 Section 5, Township 30 North, Range 6 West, E/2 Section 31, and the W/2 Section 32 Township 31 North, Range 6 West. The Ninth revision is effective January 1, 1984 and is predicated upon the successful completion of the San Juan 31-6 Unit Well Nos. 40, 45, 47 and 49.

The Tenth revision adds 320.00 acres to the Dakota Participating Area and is described as the E/2 of Section 29, Township 31 North, Range 6 West. The Tenth revision is effective February 1, 1984 and is predicated upon the successful completion of the San Juan 31-6 Unit Well No. 44.

If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES COMMISSIONER OF PUBLIC LANDS BY: 1 and Other FLOYD O. PRANDO, Director

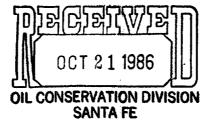
FLOYD O. PRANDO, Director Oil and Gas Division (505) 827-5744

WRH/FOP/pm

cc: OCD-Santa Fe, New Mexico BLM-Albuquerque, New Mexico Attn: Fluids Branch OGAD-Santa Fe, New Mexico Sureau of Land Management Alkuquerosa Dicirict Office Winerals Division NO. Box 6770 Ibuquerque, NM 87197-6770

OCT 1 a 1986

SJ 31-6 Dakota PA 3130 (015)



Cortheest Pipeline Corporation Attu: Darcell L. Gillen F.O. Box 8900 Calt Lake City, Stan 84108-0900

Gentlemen

we have received your letter of May 22, 1986, in which you requested approval of the fifth through tenth revisions of the Dakota Mornation Participating area in the San Juan 31-6 unit, his Arriba county, New Nexico. We have also reviewed the additional information which was submitted by your letter of August 27, 1933.

The fifth revision enlarges the Dakota Formation Participating Area 320.00 acres described as the WA Section 29, T. 31 V., R. 5 J., MNPD. The revision is based on the completion of the San Juan 31-5 unit well no. 41. The fifth revision is approved this date and is effective as of March 1, 1983.

The sixth revision enlarges the Dakota Formation Participating Area 272.50 peres described as Lots 1 and 2, WaNEL, NFL (ML) Section 36, 7. 31 M., 1. 5 M., WHFM. The revision is based on the completion of the San Juan 31-6 anit well no. 42. The sixth revision is approved this date and is effective as of April 1, 1993.

The seventh revision enlarges the Dakota Pormation Participating area 1250.00 acres described as the SA Section 2, T. 30 H., R. 5 W.; W. Section 28, El Section 32, and U. Section 33, T. 31 M., R. 5 W., HEPH. The revision is based on the completion of San Juan 31-6 unit well Mos. 48, 27, 46 and 25. The seventh revision is approved this date and is effective as of day 1, 1983.

The eighth revision enlarges the Dakota Formation Participating Area 320.00 acres described as the NY Section 28, T. JL N., K. 6 M., NHPH. The revision is based on the Can Juan 31-6 unit Well No. 39. The eighth revision is approved this date and is effective as of June 1, 1980.

The minth revision enlarges the Dakota Formation Participating Area 1232.48 acres described as Lots 5, 6, 7, 8, 9, SWAMSS, MUL (N) Section 1, and Lots 5 and 5, SUMMAS, SER (E4) Section 5, T. 30 N., R. 6 M.; E1 Section 31 and W_2 Section 32, T. 31 M., R. 6 M., MPH. The revision is based on the completion of San Juan 31-6 unit well Nos. 40, 49, 45, and 47. The minth revision is approved this date and is effective as of January 1, 1934.



tenth revision enlarges the Dakota Formation Participating Area 320.00 acres described as the E_2^{1} Section 29, T. 31 N., R. 6 W., NMPM. The revision is based on the completion of the San Juan 31-6 unit well No. 44. The tenth revision is approved this date and is effective as of February 1, 1984.

Copies of the approved request are being distributed to the appropriate Federal agencies and one copy is returned herewith. If you have any questions on this matter, please contact Shirley Bryant at the above address or telephone (505) 766-2841.

. da

Sincerely,

(Orig. Signed) - Sid Vogelpahl

For District Manager

cc: Micrographics (943B-1) FRA (016) ~NMOCD O&G Chron 015:SBryant:gcb:10-17-86:2318M

50 YEARS



STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION



GOVERNOR

June 12, 1986

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 1505) 827-5800

#4107

Northwest Pipeline Corp. P. O. Box 8900 Salt Lake City, Utah 84108-0900

Attention: Kenneth J. Stracke

Re: San Juan 31-6 Unit #14-08-001-464
Rio Arriba County, New Mexico
Application for Approval of the Fifth Expanded
Participating Area, Effective March 1, 1983
Application for Approval of the Sixth Expanded
Participating Area, Effective April 1, 1983
Application for Approval of the Seventh Expanded
Participating Area, Effective May 1, 1983
Application for Approval of the Eighth Expanded
Participating Area, Effective June 1, 1983
Application for Approval of the Ninth Expanded
Participating Area, Effective June 1, 1984
Application for Approval of the Tenth Expanded
Participating Area, Effective February 1, 1984

Dakota Formation

Gentlemen:

The above-referenced submittal has been approved by the New Mexico Oil Conservation Division effective this date. Such approval is contingent upon like approval by the New Mexico Commissioner of Public Lands and the Bureau of Land Management.

incerely,

ROY 2. JOHNSON, Senior Petroleum Geologist

cc: Commissioner of Public Lands - Santa Fe Bureau of Land Management - Albuquerque Burceu of Land Management Albuquerque District Office Minerals Division P.O. Box 6770 Albuquerque, NM 87197-6770

San Juan 31-6 Unit POD 3180 (015)

MAY 1 9 1986

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

Gentlemen:

Two approved copies of your 1986 Plan of Development for the San Juan 31-6 Unit area, Rio Arriba County, New Mexico are enclosed. Such plan, proposing the drilling of no wells during the calendar year 1986, is approved this date subject to like approval by the appropriate officials of the State of New Mexico.

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

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

Sincerely,

(and Coned) - Sid Vogelpohl

For District Manager

Enclosure(s)

cc:

Micrographics 943B-1 Fluids Section FRAH NMOCD, Santa Fe Comm. of Pub. Lands, Santa Fe O&G Chron

015:GKeller:klm:5-15-86:1877M



LAND DEPARTMENT

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132-86

P O BOX 8900 SALT LAKE CITY, UTAH 84108-0900 801-584-6669 801-584-7215

May 22, 1986

1655t

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

19

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

State of New Mexico Oil Conservation Commission Attn: Richard Stamets 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 FIFTH EXPANDED PARTICIPATING AREA Effective March 1, 1983

> APPLICATION FOR APPROVAL OF THE SIXTH EXPANDED PARTICIPATING AREA Effective April 1, 1983

APPLICATION FOR APPROVAL OF THE SEVENTH EXPANDED PARTICIPATING AREA Effective May 1, 1983

APPLICATION FOR APPROVAL OF THE EIGHTH EXPANDED PARTICIPATING AREA Effective June 1, 1983

<u>APPLICATION FOR APPROVAL OF THE NINTH EXPANDED PARTICIPATING AREA</u> Effective January 1, 1984

<u>APPLICATION FOR APPROVAL OF THE TENTH EXPANDED PARTICIPATING AREA</u> Effective February 1, 1984

DAKOTA FORMATION

Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -2-

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 Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expansions of the Participating Area for the Dakota Formation as follows:

FIFTH EXPANDED PARTICIPATING AREA - Effective March 1, 1983

Township 31 North, Range 6 West, N.M.P.M. Section 29: W/2

Containing 320.00 acres, more or less

The San Juan 31-6 Unit well No. 41 is located 1840 feet from the South line and 1050 feet from the West line, Section 29, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on January 5, 1983 and completed on March 6, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7989', 7990', 7991', 7992', 7993', 7994', 7995', 7996', 7997', 7998', 7999', 8000', 8001', 8002', 8003', 8004', 8005', 8006', 8007', 8008', 8009', 8010', 8011', 8012'.

The Dakota formation was hydraulically fractured through these perforations with 130,830 gallons of treated water carrying 50,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on March 22, 1983 using a positive choke in a three-hour test. A flow rate of 2266 Mcfd was measured with a calculated AOF of 2381 Mcfd. The ISIP Was measured at 2840 psig.

SIXTH EXPANDED PARTICIPATING AREA - Effective April 1, 1983

Township 31 North, Range 6 West, N.M.P.M. Section 36: N/2

Containing 272.56 acres, more or less

The San Juan 31-6 Unit well No. 42 is located 790 feet from the North line and 1020 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 February 23, 1983 and completed on March 11, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7982', 7983', 7984', 7985', 7986', 7987', 7988', 7989', 7990', 7991', 7992', 7993', 7994', 7995', 7996', 7997', 7998', 7999', 8000', 8001', 8002', 8003', 8004'. Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -3-

> The Dakota formation was hydraulically fractured through these perforations with 132,720 gallons of treated water carrying 50,000 pounds of 40/60 sand and 10,000 pounds or 20/40 sand. The well was tested on April 18, 1983 using a positive choke in a three-hour test. A flow rate of 2092 Mcfd was measured with a calculated ADF of 2194 Mcfd. The ISIP was measured at 2800 psig.

SEVENTH EXPANDED PARTICIPATING AREA - Effective May 1, 1983

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

Township 31 North, Range 6 West, N.M.P.M. Section 28: W/2 Section 32: E/2 Section 33: E/2

Containing 1,280.00 acres, more or less.

The San Juan 31-6 Unit well No. 48 is located 880 feet from the South line and 965 feet from the East line, Section 2, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 17, 1983 and completed on April 17, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7774', 7775', 7776', 7777', 7778', 7779', 7780', 7781', 7782', 7783', 7784', 7785', 7786', 7787', 7788', 7789', 7790', 7818', 7819', 7820', 7821', 7822'.

The Dakota formation was hydraulically fractured through these perforations with 120,204 gallons of treated water carrying 60,000 pounds of 40/60 sand and 10,000 pounds or 20/40 sand. The well was tested on May 5, 1983 using a positive choke in a three-hour test. A flow rate of 2215 Mcfd was measured with a calculated AOF of 2334 Mcfd. The ISIP was measured at 2615 psig.

The San Juan 31-6 Unit well No. 27 is located 1120 feet from the South line and 790 feet from the West line, Section 28, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 19, 1983 and completed on May 7, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7940', 7941', 7942', 7943', 7944', 7945', 7946', 7947', 7948', 7949', 7950', 7951', 7952', 7953', 7954', 7955', 7956', 7957', 7958', 7959', 7960', 7984', 7985', 7986', 7987', 7988', 7989'.

The Dakota formation was hydraulically fractured through these perforations with 113,694 gallons of treated water carrying 54,400 pounds of 40/60 sand. The well was tested on May 24, 1983 using a positive choke

Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -4-

in a three-hour test. The well was tested at a 1987 Mcfd flow rate with a calculated AOF of 2063 Mcfd. The ISIP was measured at 2788 psig.

The San Juan 31-6 Unit well No. 46 is located 1065 feet from the North line and 1180 feet from the East line, Section 32, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 28, 1983 and completed on April 30, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7775', 7776', 7777', 7778', 7779', 7780', 7781', 7782', 7783', 7784', 7785', 7786', 7787', 7788', 7789', 7790', 7791', 7821', 7822', 7823', 7824', 7825', 7826', 7827'.

The Dakota formation was hydraulically fractured through these perforations with 130,788 gallons of treated water carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on May 19, 1983 using a positive choke in a three-hour test. A flow rate of 2408 Mcfd was measured with a calculated AOF of 2562 Mcfd. The ISIP was measured at 2530 psig.

The San Juan 31-6 Unit well No. 25 is located 1000 feet from the North line and 1020 feet from the East line, Section 33, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 6, 1983 and completed on April 24, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7922', 7923', 7924', 7925', 7926', 7927', 7928', 7929', 7930', 7931', 7932', 7933', 7934', 7935', 7936', 7937', 7938', 7939', 7940', 7941', 7942', 7972', 7973', 7974', 7975', 7976', 7977', 7978'.

The Dakota formation was hydraulically fractured through these perforations with 114,114 gallons of treated water carrying 60,000 pounds of 40/60 sand and 8,530 pounds of 20/40 sand. The well was tested on May 9, 1983 using a positive choke in a three-hour test. A flow rate of 3059 Mcfd was measured with a calculated AOF of 3301 Mcfd. The ISIP was measured at 2810 psig.

EIGHTH EXPANDED PARTICIPATING AREA - Effective June 1, 1983

Township 31 North, Range 6 West, N.M.P.M. Section 28: E/2

Containing 320.00 acres, more or less.

The San Juan 31-6 Unit Well No. 39 is located 830 feet from the North Line and 1850 feet from the East line, Section 28, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on April 9, 1983 and Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -5-

completed June 3, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7963', 7964', 7965', 7966', 7967', 7968', 7069', 7970', 7971', 7972', 7973', 7974', 7975', 7976', 7977', 7978', 7979', 7980', 8010', 8011', 8012', 8013', 8014', 8015', 8016', 8017', 8018'

The Dakota formation was hydraulically fractured through these perforations with 139,062 gallons of treated water carrying 60,000 pounds of 40/60 sand and 5,180 pounds of 20/40 sand. The well was tested on June 17, 1983 using a positive choke in a three-hour test. A flow rate of 2347 Mcfd was measured with a calculated ADF of 2470 Mcfd. The ISIP was measured at 2822 psig.

NINTH EXPANDED PARTICIPATING AREA - Effective January 1, 1984

Township 30 North, Range 6 West, N.M.P.M. Section 1: N/2 Section 5: E/2

Township 31 North, Range 6 West, N.M.P.M. Section 31: E/2 Section 32: W/2

Containing 1,232.48 acres, more or less.

The San Juan 31-6 Unit well No. 40 is located 970 feet from the North line and 950 feet from the West line of Section 1, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 17, 1983 and completed in the Dakota formation on January 8, 1984. The plug back depth is 7950'. The Dakota formation was perforated with 19 holes at the following depths:

7812', 7813', 7814', 7815', 7816', 7817', 7818', 7819', 7820', 7821', 7822', 7823', 7824', 7825', 7826', 7827', 7828', 7829', 7830'.

The formation was sand water fractured through these perforations using 2000 bbls of treated water carrying 40,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on January 31, 1984 using a positive choke. The test lasted three hours and during this time the well made 180 Mcf of gas. The flowing tubing pressure was 78 psig, and the SITP and SICP were 2810 and 2800 psig, respectively. The calculated AOF for this well was 1144 Mcfd. Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -6-

> The San Juan 31-6 Unit well No. 49 is located 1780 feet from the North line and 880 feet from the East line, Section 5, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 30, 1983 and completed on January 4, 1984. The PBTD is 7930'. The Dakota zone was perforated with a total of 21 holes at the following depths:

7864', 7865', 7866', 7867', 7868', 7869', 7870', 7871', 7872', 7873', 7874', 7875', 7876', 7877', 7878', 7879', 7905', 7906', 7907', 7908', 7909'.

The formation was sand water fractured using 2813 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 8836 pounds of 20/40 sand. On January 23, 1984 the Dakota Interval was tested. During this three hour test, the well produced 233 Mcf of gas with a light mist. The flowing tubing pressure was 98 psig, and the SITP and SICP were 2685 and 2680 psig, respectively. The calculated AOF was 1416 Mcfd.

The San Juan 31-6 Unit well No. 45 is located 1120 feet from the North line and 1850 feet from the East line, Section 31, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 12, 1983 and completed in the Dakota formation on December 8, 1983. The plug back depth is 7780'. The Dakota formation was perforated with 30 holes at the following depths:

7620', 7621', 7622', 7623', 7624', 7625', 7626', 7627', 7628', 7629', 7630', 7631', 7632', 7633', 7634', 7635', 7636', 7637', 7638', 7639', 7640', 7641', 7642', 7643', 7644', 7664', 7665', 7666', 7667', 7668'.

The formation was sand water fractured using 2935 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on January 4, 1984 using a positive choke. During the three-hour test, the well made 221 Mcf of gas against a flowing tubing pressure of 98 psig. The SITP was 2830 psig and the SICP was 2835 psig. The well produced a light mist throughout the test. The calculated AOF was 1412 Mcfd.

The San Juan 31-6 Unit well No. 47 is located 1600 feet from the South line and 790 feet from the West line, Section 32, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. On November 21, 1983, the well was spudded and it was completed on December 16, 1983. The plug back depth is 7850'. The well was perforated with a total of 24 holes at the following depths: Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -7-

> 7744', 7745', 7746', 7747', 7748', 7749', 7750', 7751', 7752', 7753', 7754', 7755', 7756', 7757', 7758', 7759', 7760', 7761', 7762', 7788', 7789', 7790', 7791', 7792'.

The formation was sand water fractured using 2689 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. On January 10, 1984 this well was tested for three hours. During this test, the well made 348 Mcf of gas against a flowing tubing pressure of 166 psig. The SITP was 2705 psig and the SICP was 2710 psig. The well produced a light mist throughout the test. The calculated AOF was 2342 Mcfd.

TENTH EXPANDED PARTICIPATING AREA, Effective February 1, 1984

Township 31 North, Range 6 West, N.M.P.M. Section 29: E/2

Containing 320.00 acres, more or less.

The San Juan 31-6 Unit well No. 44 is located 2425 feet from the North line and 1020 feet from the East line, Section 29, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 9, 1983 and the Dakota formation was completed on January 15, 1984. The plug back depth is 8080'. The well was perforated with a total of 27 holes at the following depths:

7984', 7985', 7986', 7987', 7988', 7989', 7990', 7991', 7992', 7993', 7994', 7995', 7996', 7997', 7998', 7999', 8000', 8001', 8002', 8003', 8004', 8005', 8031', 8032', 8033', 8034', 8035'.

The formation was sand water fractured using 2584 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. On February 3, 1984 this well was tested for three hours. During this test, the well made 367 Mcf of gas against a flowing tubing pressure of 229 psig. The well produced a light mist throughout the three-hour flow period. The SITP was 2800 psig and the SICP was 2790 psig. The calculated AOF was 3403 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 Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expansions of the Participating Area of the Dakota Formation within the San Juan 31-6 Unit. Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission February 14, 1986 Page -8-

EXHIBIT "B"

Geological Report on the Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expansions of the Participating Area of the Dakota Formation within the San Juan 31-6 Unit.

<u>EXHIBIT "C"</u> 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.

Attached hereto are Schedules VI, VII, VIII, IX, X, XI showing the proposed Fifth, Sixth, Seventh, Eighth, Ninth and Tenth 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 Fifth, Sixth, Seventh, Eighth, Ninth and Tenth 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.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Parell & Gillen

(Darrell L. Gillen Land Coordinator

DLG:js

Enclosures

cc: Working Interest Owners K.J. Stracke W.O. Curtis K. Nielsen Bureau of Land Management Commissioner of Public Lands Oil Conservation Commission May 22, 1986 Page -9-

APPROVED DATE Assistant District Manager, Minerals Subject to like approval by the Commissioner of Public Lands and the **Oil Conservation Division** APPROVED DATE Commissioner of Public Lands Subject to like approval by the Assistant District Manager, Minerals and the Oil Conservation Division DATE 6-11-86 mun APPROVED ' Oil Conservation Division Subject to like approval by the Assistant District Manager, Minerals

The foregoing approvals are for the Fifth, Sixth, Seventh, Eighth, Ninth and Tenth Expanded Participating Areas of the Dakota Formation, San Juan 31-6 Unit, #14-08-001-464, Rio Arriba County, New Mexico.

and the Commissioner of Public Lands

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

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

AMOCO PRODUCTION COMPANY Western Division, Production Land AMOCO BUILDING DENVER, COLORADO 80202 TEXACO PRODUCING, INC. P. O. BOX 1404 HOUSTON, TX 77251

PHILLIPS PETROLEUM COMPANY ATTN: Steve F. Beasley 8055 E. Tufts Avenue Parkway Denver, CO 80237

CAMBRIDGE ROYALTY COMPANY 1200 San Jacinto Building 911 Walker Street Houston, TX 77002

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SCHEDULE VI FIFTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF-078995	<u>T-31-N, R-6-W</u> Sec. 29: W/2	320.00	Royalty Working Interest	12.500000%	12.500000%	11.296084%
			Phillips Petroleum	87.50000%	87.500000%	
			ORRI	00.00000%	00.00000%	
			Total	100.00000%	100.00000%	
			TRACT 2			
SF 078999	<u>T-31-N, R-6-W</u> Sec. 27: All	1920.00	Royalty Working Interest	12.500000%	12.500000%	67.776507%
	Sec. 34: A11		Phillips Petroleum	84.000000%	84.00000%	
	Sec. 35: All		ORRI	3.500000%	3.500000%	
			Total	100.00000%	100.00000%	
			TRACT 13-B			
	<u>T-31-N, R-6-W</u> Sec. 36: SW/4	160.00	Royalty Working Interest	12.500000%	12.500000%	5.648043%
			Phillips Petroleum	85.000000%	85.00000%	
			ORRI	2.500000%	2.500000%	
			Total	100.00000%	100.00000%	
			TRACT 13-C			
E-347-39	<u>T-30-N, R-6-W</u> Sec. 2: Lots 5,	432.84	Royalty Working Interest	12.50000%	12.500000%	15.279366%
	6, 7, 8 S/2N/2		Phillips Petroleum	82.50000%	82.500000%	
	<u>T-31-N, R-6-W</u>		ORRI	5.000000%	5.00000%	
	Sec. 36: Lots 3, 4, W/2SE/4	,	Total	100.00000%	100.00000%	

Effective March 1, 1983

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SCHEDULE VI FIFTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

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 29: W/2 Section 34: All Section 35: All Section 36: Lots 3, 4, W/2SE/4, SW/4

Total Number of Acres in Participating Area2,832.84Total Number of Committed Acres in Participating Area2,832.84

SCHEDULE VII SIXTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE CONMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF-0 78995	<u>T-31-N, R-6-W</u> Sec. 29: W/2	320.00	Royalty Working Interest	12.500000%	12.500000%	10.304631%
			Phillips Petroleum ORRI	87.50000% 00.00000%	87.50000% 00.00000%	
			Total	100.00000%	100.00000%	
			TRACT 2			
SF 078999	<u>T-31-N, R-6-W</u>	1920.00	Royalty	12.500000%	12.500000%	61.827784%
	Sec. 27: All Sec. 34: All		Working Interest Phillips Petroleum	84.000000%	84.000000%	
	Sec. 35: All		ORRI	3.500000%	3.500000%	
			Total	100.00000%	100.00000%	
			TRACT 13			
E-347-40	<u>T-31-N, R-6-W</u> Sec. 36: N/2NW/	80.00 4	Royalty Working Interest	12.50000%	12.50000%	2.576158%
			Техасо	82.750000%	82.750000%	
			ORRI Total	4.750000%	4.75000%	
			TRACT 13-A			
E-347-34	<u>T-31-N, R-6-W</u> Sec. 36: S/2NW/	80.00 4	Royalty Working Interest	12.500000%	12.500000%	2.576157%
			Amoco	82.50000%	82.50000%	
			ORRI Total	5.00000%	5.00000%	
			iotai	100.000000	100.00000	
			TRACT 13-B			
E- 347-3 8	<u>T-31-N, R-6-W</u> Sec. 36: SW/4	160.00	Royalty Working Interest	12.50000%	12.50000%	5.152315%
			Phillips Petroleum	85.000000%	85.000000%	
			ORRI Total	2.50000%	2.50000%	

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SCHEDULE VII SIXTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUNBER OF ACRES	<u>DRILLING BLOCK</u> OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			<u>TRACT 13-C</u>			
E34739	<u>T-30-N, R-6-W</u> Sec. 2: Lots 5,	545.40	Royalty Working Interest	12.500000%	12.50000%	17.562955%
	6, 7, 8 5/2N/2		Phillips Petroleum	82.50000%	82.500000%	
	<u>T-31-N, R-6-W</u>		ORRI	5.00000%	5.00000%	
	Sec. 36: Lots 1 2, 3, 4, W/2E/2	•	Total	100.00000%	100.00000%	

SCHEDULE VII SIXTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

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 29: W/2 Section 34: All Section 35: All Section 36: All

Total Number of Acres in Participating Area3,105.40Total Number of Committed Acres in Participating Area3,105.40

SCHEDULE VIII SEVENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE CONMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF078995	<u>T-31-N, R-6-W</u> Sec. 28: W/2	640.00	Royalty Working Interest	12.500000%	12.500000%	14.593880%
	Sec. 29: W/2		Phillips Petroleum ORRI	87.50000% 00.00000%	87.500000% 00.000000%	
			Total	100.000000%	100.000000%	
			TRACT 2			
SF 078999	<u>T-31-N, R-6-W</u>	2240.00	Royalty	12.500000%	12.500000%	51.078579%
	Sec. 27: All Sec. 33: E/2		Working Interest Phillips Petroleum	84.000000%	84.000000%	
	Sec. 34: All		ORRI	3.50000%	3.50000%	
	Sec. 35: All		Total	100.00000%	100.00000%	
			TRACT 11-A			
E289-45	<u>T-31-N, R-6-W</u> Sec. 32:	40.00	Royalty Working Interest	12.500000%	12.500000%	.912117%
	SW/4NE/4		Phillips Petroleum	82.500000%	82.50000%	
			ORRI	5.00000%	5.00000%	
			Total	100.00000%	100.00000%	
			TRACT 11-B			
E-289-43	<u>1-31-N, R-6-W</u> Sec. 32:	80.00	Royalty Working Interest	12.50000%	12.500000%	1.824235%
	N/2NE/4		Phillips Petroleum	82.500000%	82.500000%	
			ORRI Total	5.00000%	<u>5.000000%</u> 100.000000%	
			IOLAT	100.00000	100.00000	
			TRACT 12			
E-346-26	<u>T-31-N, R-6-W</u> Sec. 32:	200.00	Royalty Working Interest	12.50000%	12.500000%	4.560587%
	SEC. 32: SE/4NE/4, SE/4		Phillips Petroleum	82.500000%	82.500000%	
	·		ORRI	5.00000%	5.00000%	
			Total	100.00000%	100.00000%	

Effective May 1, 1983

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SCHEDULE VIII SEVENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE CONNITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
E-347-40	<u>T-30-N, R-6-W</u> Sec. 2:	160.00	Royalty Working Interest	12.500000%	12.500000%	3.648470%
	N/25E/4		Texaco	82.750000%	82.750000	
	<u>T-31-N, R-6-W</u> Sec. 36:		ORRI Total	4.750000%	4.750000%	
	N/2NW/4		local			
			TRACT 13-A			
E34734	<u>T-31-N, R-6-W</u> Sec. 36:	80.00	Royalty Working Interest	12.50000%	12.50000%	1.824235%
	s/2NW/4		Amoco	82.500000%	82.500000%	
			ORRI	5.000000%	5.00000%	
			Total	100.00000%	100.00000%	
			TRACT 13-B			
E-347-25	<u>T-30-N, R-6-W</u> Sec. 2: SW/4	320.00	Royalty Working Interest	12.50000%	12.500000%	7.296940%
	T-31-N, R-6-W		Phillips Petroleum	85.000000%	85.00000%	
	Sec. 36: SW/4		ORRI	2.500000%	2.500000%	
			Total	100.00000%	100.00000%	
			TRACT 13-C			
E-347-26	<u>T-30-N, R-6-W</u>	545.40	Royalty	12.50000%	12.50000%	12.436722%
	Sec. 2: Lots 5, 6, 7, 8 5/2N/2		Working Interest Phillips Petroleum	82.500000%	82.500000%	
	T-31-N, R-6-W		ORRI	5.000000%	5.000000%	
	Sec. 36: Lots 1	,	Total	100.00000%	100.00000%	
	2, 3, 4, W/2E/2					
			TRACT 13-D			
E-347-41	<u>T-30-N, R-6-W</u> Sec. 2: S/2SE/4	80.00	Royalty Working Interest	12.500000%	12.50000%	1.824235%
	Jec. 2. J/2JE/4		Anoco	82.50000%	82.500000%	
			ORRI	5.000000%	5.000000%	
			Total	100.00000%	100.00000%	

Effective May 1, 1983

SCHEDULE VIII SEVENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area

Township 30 North, Range 6 West, N.M.P.N. Section 2: All

Township 31 North, Range 6 West, N.M.P.M. Section 27: All Section 28: W/2 Section 29: W/2 Section 32: E/2 Section 33: E/2 Section 34: All Section 35: All Section 36: All

Total	Number	of	Acres in Participating Area	4,385.40
Total	Number	of	Committed Acres in Participating Area	4,385.40

SCHEDULE IX EIGHTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF-0 78995	<u>T-31-N, R-6-W</u> Sec. 28: All	960.00	Royalty Working Interest	12.500000%	12.500000%	20.402091%
	Sec. 29: W/2		Phillips Petroleum ORRI	87.500000% 00.000000%	87.500000% 00.000000%	
			Total	100.00000%	100.00000%	
			TRACT 2			
SF -078999	<u>T-31-N, R-6-H</u>	2240.00	Royalty	12.500000%	12.500000%	47.604879%
	Sec. 27: All Sec. 33: E/2		Working Interest Phillips Petroleum	84.000000%	84.000000%	
	Sec. 34: All Sec. 35: All		ORRI Total	3.50000%	3.50000%	
			TRACT 11-A			
E28945	<u>T-31-N, R-6-W</u> Sec. 32:	40.00	Royalty Working Interest	12.50000%	12.50000%	.850087%
	SW/ANE/A		Phillips Petroleum ORRI	82.500000% 5.000000%	82.50000% 5.00000%	
			Tota]	100.00000%	100.00000%	
			TRACT 11-B			
E-289-43	<u>T-31-N, R-6-W</u> Sec. 32:	80.00	Royalty Working Interest	12.50000%	12.500000%	1.700174%
	N/2NE/4		Phillips Petroleum	82.500000%	82.500000%	
			ORRI Total	<u>5.00000%</u> 100.00000%	<u>5.000000%</u> 100.000000%	
			TRACT_12			
E-346-26	<u>T-31-N, R-6-₩</u> Sec. 32:	200.00	Royalty Working Interest	12.50000%	12.500000%	4.250436%
	SE/4NE/4, SE/4		Phillips Petroleum	82.500000%	82.500000%	
			ORRI Total	<u>5.00000%</u> 100.00000%	<u>5.000000%</u> 100.000000%	

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SCHEDULE IX EIGHTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER Of Acres	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
E347-40	<u>T-30-N, R-6-W</u> Sec. 2: N/2SE/4	160.00	Royalty Working Interest Texaco ORRI	12.500000% 82.750000% 4.750000%	12.500000% 82.750000% 4.750000%	3.400349%
	<u>T-31-N, R-6-W</u> Sec. 36: N/2NW/4		Total	100.000000	100.000000%	
			TRACT 13-A			
E-347-34	<u>T-31-N, R-6-W</u> Sec. 36:	80.00	Royalty Working Interest	12.500000%	12.500000%	1.700174%
	s/2nw/4		Amoco ORRI	82.50000% 5.00000%	82.50000% 5.00000%	
			Total	100.000000%	100.000000%	
			TRACT 13-B			
E347-38	<u>T-30-N, R-6-W</u> Sec. 2: SW/4	320.00	Royalty Working Interest	12.500000%	12.50000%	6.800697%
	<u>T-31-N, R-6-W</u>		Phillips Petroleum	85.000000%	85.000000%	
	Sec. 36: SW/4		ORRI Total	2.500000%	2.50000%	
			TRACT 13-C			
E-347-39	<u>T-30-N, R-6-W</u> Sec. 2: Lots 5,	545.40	Royalty Working Interest	12.50000%	12.500000	11.590938%
	6, 7, 8 S/2N/2		Phillips Petroleum	82.500000%	82.500000%	
	<u>T-31-N, R-6-W</u> Sec. 36: Lots 1 2, 3, 4, W/2E/2	•	ORRI Total	5.000000% 100.000000%	5.000000% 100.000000%	
			TRACT_13-D			
E-347-41	<u>T-30-N, R-6-W</u> Sec. 2: S/2SE/4	80.00	Royalty Working Interest Amoco	12.500000% 82.500000%	12.500000%	1.700175%
			ORRI Total	<u>5.000000%</u> 100.000000%	<u>5.000000%</u> 100.000000%	

Effective June 1, 1983

SCHEDULE IX EIGHTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area

Township 30 North, Range 6 West, N.M.P.M. Section 2: All

Township 31 North, Range 6 West, N.N.P.M. Section 27: All Section 28: All Section 29: W/2 Section 32: E/2 Section 33: E/2 Section 34: All Section 35: All Section 36: All

Total Number	of	Acres in Participating Area	4,705.40
Total Number	of	Committed Acres in Participating Area	4,705.40

SCHEDULE X NINTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

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SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF0 78995	<u>T-31-N, R-6-W</u> Sec. 28: All	1280.00	Royalty Working Interest	12.500000%	12.500000%	21.556515%
	Sec. 29: W/2		Phillips Petroleum	87.50000%	87.50000%	
	Sec. 31: E/2		ORRI Total	00.00000%	00.00000%	
			TRACT 2			
SF <i>-</i> 078 9 99	<u>T-31-N, R-6-W</u> Sec. 27: All	2240.00	Royalty Working Interest	12.500000%	12.50000%	37.723901%
	Sec. 33: E/2		Phillips Petroleum	84.000000%	84.000000%	
	Sec. 34: All		ORRI	3.50000%	3.50000%	
	Sec. 35: All		Total	100.00000%	100.00000%	
			TRACT 7			
SF-07 94 01	<u>T-30-N, R-6-W</u> Sec. 1: Lots	159.69	Royalty Working Interest	12.50000%	12.500000%	2.689344%
	7, 8, S/2NW/4		Phillips Petroleum	83.00000%	83.00000%	
			ORRI Total	4.50000%	4.50000%	
			IULAI	100.000005	100.000004	
			TRACT 8			
NM-012299	<u>T-30-N, R-6-W</u> Sec. 1: Lots	113.12	Royalty Working Interest	12.50000%	12.500000%	1.905057%
	5, 6, 9,		Cambridge Royalty	65.910000%	65.910000%	
	SW/4NE/4		Matagorda Oil	18.590000%	18.590000%	
			ORRI Total	3.00000%	3.00000%	
			Iotal	100.000005	100.00000	
			TRACT 10			
NM-03404	<u>T30-N, R-6-W</u>	319.67	Royalty	12.500000%	12.500000%	5.383571%
	Sec. 5: Lots 5,		Working Interest	03 500000	02 500000	
	6, S/2NE/4, SE/	4	Phillips Petroleum ORRI	82.50000% 5.00000%	82.500000% 5.000000%	
			Total	100.000000%	100.000000%	

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SCHEDULE X NINTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE CONMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 11			
E-289-3	<u>T-31-N, R-6-W</u> Sec. 32: NW/4	160.00	Royalty Working Interest	12.500000%	12.500000%	2.694565%
			Wiser Oil Co. ORRI Total	87.500000% 00.000000% 100.000000%	87.500000% 00.000000% 100.000000%	
				100.000005	100.000000	
			TRACT 11-A			
E-289-45	<u>T-31-N, R-6-W</u> Sec. 32:	40.00	Royalty Working Interest	12.50000%	12.500000%	.673641%
	SW/4NE/4		Phillips Petroleum ORRI	82.50000% 5.00000%	82.500000% 5.000000%	
			Total	100.000000%	100.000000	
			TRACT 11-B			
E-289-43	<u>1-31-N, R-6-W</u> Sec. 32:	80.00	Royalty Working Interest	12.50000%	12.500000%	1.347282%
	N/2NE/4		Phillips Petroleum	82.50000%	82.500000%	
			ORRI Total	5.00000%	<u>5.000000%</u> 100.000000%	
			TRACT 12			
E346-26	<u>1-31-N, R-6-W</u> Sec. 32:	200.00	Royalty Working Interest	12.500000%	12.500000%	3.368205%
	SE/4NE/4, SE/4		Phillips Petroleum	82.500000%	82.500000	
			ORRI Total	5.00000%	<u>5.00000%</u> 100.00000%	
			TRACT 12-A			
E-346-25	<u>T-31-N, R-6-W</u> Sec. 32: SW/4	160.00	Royalty Working Interest	12.50000%	12.500000%	2.694565%
			Phillips Petroleum	85.000000%	85.000000%	
			ORRI Total	2.50000%	2.500000%	

SCHEDULE X NINTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
E-347-40	<u>T-30-N, R-6-W</u> Sec. 2: N/2SE/4 <u>T-31-N, R-6-W</u>	160.00	Royalty Working Interest Texaco	12.500000% 82.750000%	12.500000% 82.750000%	2.694565%
	Sec. 36: N/2NW/	4	ORRI Total	4.750000%	4.750000%	
			TRACT 13-A			
E-347-34	<u>T-31-N, R-6-W</u> Sec. 36: S/2NW/4	80.00 4	Royalty Working Interest	12.500000%	12.500000%	1.347282%
			Amoco	82.500000%	82.500000%	
			ORRI Total	5.00000%	<u>5.000000%</u> 100.00000%	
			TRACT 13-B			
E-347-38	<u>T-30-N, R-6-W</u> Sec. 2: SW/4	320.00	Royalty Working Interest	12.500000%	12.500000%	5.389128%
	<u>T-31-N, R-6-W</u> Sec. 36: SW/4		Phillips Petroleum ORRI	85.000000% 2.500000%	85.000000% 2.500000%	
			Total	100.00000%	100.00000%	
			TRACT 13-C			
E-347-39	<u>T-30-N, R-6-W</u> Sec. 2: Lots 5,	545.40	Royalty Working Interest	12.50000%	12.500000%	9.185096%
	6, 7, 8 S/2N/2		Phillips Petroleum ORRI	82.50000% 5.00000%	82.50000% 5.00000%	
	<u>T-31-N, R-6-W</u> Sec. 36: Lots 1 2, 3, 4, W/2E/2	-	Total	100.000000%	100.00000%	
			TRACT 13-D			
E-347-41	<u>T-30-N, R-6-W</u> Sec. 2: S/2SE/4	80.00	Royalty Working Interest	12.500000%	12.50000%	1.347283%
	• • • • • • • • •		Amoco	82.500000%	82.50000%	
			ORRI Total	<u>5.000000%</u> 100.00000%	5.000000%	

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SCHEDULE X NINTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area

Township 30 North, Range 6 West, N.M.P.M. Section 1: N/2

Section 2: All Section 5: E/2

Township 31 North, Range 6 West, N.M.P.M. Section 27: All

Section 27: All Section 28: All Section 29: W/2 Section 31: E/2 Section 32: All Section 33: E/2 Section 34: All Section 35: All Section 36: All

Total Number of Acres in Participating Area	5,937.88
Total Number of Committed Acres in Participating A	rea 5,937.88

SCHEDULE XI TENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE CONMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 1			
SF 078995	<u>T-31-N, R-6-W</u> Sec. 28: All	1600.00	Royalty Working Interest	12.500000%	12.500000%	25.567765 %
	Sec. 29: A11		Phillips Petroleum	87.50000%	87.50000%	
	Sec. 31: E/2		ORRI Total	00.00000%	00.00000%	
			TRACT 2			
SF 078999	<u>T-31-N, R-6-W</u> Sec. 27: All	2240.00	Royalty Working Interest	12.500000%	12.500000%	35.794870 %
	Sec. 33: E/2		Phillips Petroleum	84.000000%	84.000000%	
	Sec. 34: All		ORRI	3.50000%	3.50000%	
	Sec. 35: All		Total	100.00000%	100.00000%	
			TRACT 7			
SF -079401	<u>T-30-N, R-6-W</u> Sec. 1: Lots	159.69	Royalty Working Interest	12.500000%	12.500000%	2.551823%
	7, 8, S/2NW/4		Phillips Petroleum	83.00000%	83.00000%	
			ORRI Total	4.50000%	4.50000%	
			TRACT 8		<u></u>	
NM-012299	<u>T-30-N, R-6-W</u> Sec. 1: Lots	113.12	Royalty Working Interest	12.50000%	12.50000%	1.807641%
	5, 6, 9,		Cambridge Royalty	65.910000%	65.910000%	
	SW/4NE/4		Natagorda Oil	18.590000%	18.590000%	
			ORRI Total	3.00000%	3.00000%	
			IULAI	100.00000%	100.00000%	
	TRACT 10					
NM-03404	<u>T-30-N, R-6-W</u> Sec. 5: Lots 5,	319.67	Royalty Working Interest	12.500000%	12.500000%	5.108279%
	6, S/2NE/4, SE/		Phillips Petroleum	82,50000%	82.500000%	
	-		ORRI	5.000000%	5.00000%	
			Total	100.00000%	100.00000%	

SCHEDULE XI TENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE	PRESENT ACTUAL PARTICIPATION
			TRACT 11			
E-289-3	<u>1-31-N, R-6-W</u> Sec. 32: NW/4	160.00	Royalty Working Interest	12.500000%	12.500000%	2.556776 %
			Wiser Oil Co. ORRI	87.50000% 00.00000%	87.50000% 00.00000%	
			Total	100.00000%	100.0000005	
			TRACT 11-A			
E-289-45	<u>T-31-N, R-6-W</u>	40.00	Royalty	12.50000%	12.500000%	.639194%
	Sec. 32: SW/4NE/4		Working Interest Phillips Petroleum	82.500000%	82.500000%	
			ORRI	5.00000%	5.00000%	
			Total	100.00000%	100.00000%	
			TRACT 11-B			
E-289-43	<u>T-31-N, R-6-W</u> Sec. 32:	80.00	Royalty Working Interest	12.50000%	12.500000%	1.278388%
	N/2NE/4		Phillips Petroleum	82.500000%	82.50000%	
			ORRI Total	5.00000%	<u>5.000000%</u> 100.000000%	
			IUCAI	100.000004	100.000005	
			TRACT 12			
E-346-26	<u>T-31-N, R-6-W</u> Sec. 32:	200.00	Royalty Working Interest	12.50000%	12.50000%	3. 19597 1%
	SE/4NE/4, SE/4		Phillips Petroleum	82.500000%	82.50000%	
			ORRI Total	5.00000%	<u>5.000000%</u> 100.000000%	
			TRACT 12-A			
E-346-25	<u>T-31-N, R-6-W</u> Sec. 32: SW/4	160.00	Royalty Working Interest	12.50000%	12.500000%	2.556776%
			Phillips Petroleum	85.000000%	85.00000%	
			ORRI	2.500000%	2.50000%	
			Total	100.000007	100.00000%	

Effective February 1, 1984

SCHEDULE XI TENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
E-347-40	<u>T-30-N, R-6-W</u> Sec. 2: N/2SE/4	160.00	Royalty Working Interest	12.500000%	12.500000%	2.556776 %
	<u>T-31-N, R-6-W</u> Sec. 36: N/2NW/4	1	Texaco ORRI	82.750000% 4.750000%	82.750000% 4.750000%	
			Total	100.00000%	100.00000%	
			TRACT 13-A			
E-347-34	<u>T-31-N, R-6-W</u> Sec. 36: 5/2NW/4	80.00	Royalty Working Interest	12.500000%	12.500000%	1.278388%
			Amoco ORRI	82.50000% 5.00000%	82.500000%	
			Total	100.00000%	<u>5.000000%</u> 100.000000%	
			TRACT 13-B			
E-347-25	<u>T-30-N, R-6-W</u> Sec. 2: SW/4	320.00	Royalty Working Interest	12.500000%	12.500000%	5.113553%
	<u>T-31-N, R-6-W</u>		Phillips Petroleum	85.00000%	85.000000%	
	Sec. 36: SW/4		ORRI Total	2.50000%	2.50000%	
			TRACT 13-C			
E-347-26	<u>1-30-N, R-6-W</u> Sec. 2: Lots 5,	545.40	Royalty Working Interest	12.500000%	12.500000%	8.715412%
	6, 7, 8 S/2N/2		Phillips Petroleum	82.500000%	82.500000%	
	<u>T-31-N, R-6-W</u> Sec. 36: Lots 1, 2, 3, 4, W/2E/2	•	ORRI Total	<u>5.000000%</u> 100.000000%	<u>5.000000%</u> 100.000000%	
	2, 3, 4, W/2C/2		TRACT 13-D			
			INACI 13-0			
E-347-41	<u>T-30-N, R-6-W</u> Sec. 2: S/2SE/4	80.00	Royalty Working Interest	12.50000%	12.50000%	1.278388%
			Amoco	82.500000%	82.500000%	
			ORRI Total	<u>5.000000%</u> 100.000000%	<u>5.000000%</u> 100.000000%	

Effective February 1, 1984

SCHEDULE XI TENTH EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 31-6 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area

Township 30 North, Range 6 West, N.M.P.M. Section 1: N/2 Section 2: All Section 5: E/2

Township 31 North, Range 6 West, N.N.P.N.Section 27: AllSection 28: AllSection 29: AllSection 31: E/2Section 32: AllSection 33: E/2Section 34: AllSection 35: AllSection 35: All

Total Number of Acres in Participating Area	6,257.88
Total Number of Committed Acres in Participatin	g Area 6,257.88

EXHIBIT "B"

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

GEOLOGIC REPORT DAKOTA PRODUCING INTERVAL

FIFTH THROUGH TENTH EXPANSIONS OF THE DAKOTA PARTICIPATING AREA

Prepared by Carolyn H. Firth

NORTHWEST PIPELINE CORPORATION

APPROVED BY:

2

Kenneth J. Stracke Director Production Division

EXHIBIT "B"

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

GEOLOGIC REPORT DAKOTA PRODUCING INTERVAL

FIFTH THROUGH TENTH EXPANSIONS OF THE DAKOTA PARTICIPATING AREA

GENERAL INFORMATION

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 24 wells, resulting in 1 noncommercial well (No. 16, permanently disconnected), 20 commercial wells, 1 well pending commerciality determination (No. 51), and 2 wells awaiting pipeline connection (Nos. 50 and 53).

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 base of the Greenhorn Limestone as the mapping horizon; the contour interval is 20 feet. Regional strike is generally east-west, with regional dip averaging 0.5 degrees to the north. Anticlinal flexuring has occurred across the unit, the folds plunging northward.

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 thickest portion (greater than 10 feet) of the sand unit(s) covers a significant area within the San Juan 31-6 Unit, the sand trending approximately N60°W across the unit.

Table 1 (Exhibit "D") is a tabulation of the Dakota gas production from the unit. The table shows monthly gas production of each well from November 1984 through October 1985. Cumulative production is also shown. The San Juan 31-6 Unit has produced 4,584,923 Mcf of gas from the Dakota Producing Interval as of November 1, 1985. Dakota Expansion December 1985 Page Two

PROPOSED FIFTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date:	March 1, 1983
Proposed Acreage:	Township 31 North, Range 6 West, N.M.P.M.
	Section 29: W/2 (320 acres)
	Total Acres: 320

The Fifth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and production history of the Northwest Pipeline Corporation San Juan 31-6 Unit well No. 41. 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 well No. 41 is located 1840 feet from the South line and 1050 feet from the West line, Section 29, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on January 5, 1983 and completed on March 6, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7989',7990',7991',7992',7993',7994',7995',7996', 7997',7998',7999',8000',8001',8002',8003',8004', 8005',8006',8007',8008',8009',8010',8011',8012'

The Dakota formation was hydraulically fractured through these perforations with 130,830 gallons of treated water carrying 50,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on March 22, 1983 using a positive choke in a three-hour test. A flow rate of 2266 Mcfd was measured with a calculated AOF of 2381 Mcfd. The ISIP was measured at 2840 psig.

On the basis of this well, the W/2 of Section 29 (320 acres) is recommended as the Fifth Expansion of the Dakota Participating Area.

PROPOSED SIXTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date:	April 1, 1983
Proposed Acreage:	Township 31 North, Range 6 West, N.M.P.M.
	Section 36: N/2 (272.56 acres)
	Total Acres: 272.56

The Sixth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and production history of the Northwest Pipeline Corporation San Juan 31-6 Unit well No. 42.. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in Dakota Expansion December 1985 Page Three

commercial quantities from the Dakota Producing Interval. The well is described as follows:

The San Juan 31-6 Unit well No. 42 is located 790 feet from the North line and 1020 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 February 23, 1983 and completed on March 11, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7982',7983',7984',7985',7986',7987',7988',7989', 7990',7991',7992',7993',7994',7995',7996',7997', 7998',7999',8000',8001',8002',8003',8004'

The Dakota formation was hydraulically fractured through these perforations with 132,720 gallons of treated water carrying 50,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on April 18, 1983 using a positive choke in a three-hour test. A flow rate of 2092 Mcfd was measured with a calculated AOF of 2194 Mcfd. The ISIP was measured at 2800 psig.

On the basis of this well, the N/2 of Section 36 (272.56 acres) is recommended as the Sixth Expansion of the Dakota Participating Area.

PROPOSED SEVENTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: May 1, 1983 Proposed Acreage: Township 30 North, Range 6 West, N.M.P.M. Section 2: S/2 (320 acres) Township 31 North, Range 6 West, N.M.P.M. Section 28: W/2 (320 acres) Section 32: E/2 (320 acres) Section 33: E/2 (320 acres) Total Acres: 1280

The Seventh Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and production histories of the Northwest Pipeline Corporation San Juan 31-6 Unit well Nos. 48, 27, 46, and 25. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in commercial guantities from the Dakota Producing Interval. The wells are described as follows:

> The San Juan 31-6 Unit well No. 48 is located 880 feet from the South line and 965 feet from the East line, Section 2, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 17,

Dakota Expansion December 1985 Page Four

> 1983 and completed on April 17, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7774',7775',7776',7777',7778',7779',7780',7781', 7782',7783',7784',7785',7786',7787',7788',7789', 7790',7818',7819',7820',7821',7822'

The Dakota formation was hydraulically fractured through these perforations with 120,204 gallons of treated water carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on May 5, 1983 using a positive choke in a three-hour test. A flow rate of 2215 Mcfd was measured with a calculated AOF of 2334 Mcfd. The ISIP was measured at 2615 psig.

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

> The San Juan 31-6 Unit well No. 27 is located 1120 feet from the South line and 790 feet from the West line, Section 28, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 19, 1983 and completed on May 7, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7940',7941',7942',7943',7944',7945',7946',7947', 7948',7949',7950',7951',7952',7953',7954',7955', 7956',7957',7958',7959',7960',7984',7985',7986', 7987',7988',7989'

The Dakota formation was hydraulically fractured through these perforations with 113,694 gallons of treated water carrying 54,400 pounds of 40/60 sand. The well was tested on May 24, 1983 using a positive choke in a three-hour test. The well was tested at a 1987 Mcfd flow rate with a calculated AOF of 2063 Mcfd. The ISIP was measured at 2788 psig.

On the basis of the above well, the W/2 of Section 28 (320 acres) is recommended for inclusion in the Seventh Expansion of the Dakota Participating Area.

> The San Juan 31-6 Unit well No. 46 is located 1065 feet from the North line and 1180 feet from the East line, Section 32, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 28, 1983 and completed on April 30, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7775',7776',7778',7779',7780',7781',7782', 7783',7784',7785',7786',7787',7788',7789',7790', 7791',7821',7822',7823',7824',7825',7826',7827'

The Dakota formation was hydraulically fractured through these perforations with 130,788 gallons of treated water carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on May 19, 1983 using a positive choke in a three-hour test. A flow rate of 2408 Mcfd was measured with a calculated AOF of 2562 Mcfd. The ISIP was measured at 2530 psig.

On the basis of the above well, the E/2 of Section 32 (320 acres) is recommended for inclusion in the Seventh Expansion of the Dakota Participating Area.

The San Juan 31-6 Unit well No. 25 is located 1000 feet from the North line and 1020 feet from the East line, Section 33, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on March 6, 1983 and completed on April 24, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7922',7923',7924',7925',7926',7927',7928',7929', 7930',7931',7932',7933',7934',7935',7936',7937', 7938',7939',7940',7941',7942',7972',7973',7974', 7975',7976',7977',7978'

The Dakota formation was hydraulically fractured through these perforations with 114,114 gallons of treated water carrying 60,000 pounds of 40/60 sand and 8,530 pounds of 20/40 sand. The well was tested on May 9, 1983 using a positive choke in a three-hour test. A flow rate of 3059 Mcfd was measured with a calculated AOF of 3301 Mcfd. The ISIP was measured at 2810 psig.

On the basis of this well, the E/2 of Section 33 (320 acres) is recommended for inclusion in the Seventh Expansion of the Dakota Participating Area.

PROPOSED EIGHTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: June 1, 1983 Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M. Section 28: E/2 (320 acres) Total Acres: 320

The Eighth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and the production history of the

Dakota Expansion December 1985 Page Six

Northwest Pipeline Corporation San Juan 31-6 Unit well No. 39. 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 well No. 39 is located 830 feet from the North line and 1850 feet from the East line, Section 28, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on April 9, 1983 and completed on June 3, 1983 in the Dakota formation, with perforations (one shot per foot) at the following depths:

7963',7964',7965',7966',7967',7968',7969',7970', 7971',7972',7973',7974',7975',7976',7977',7978', 7979',7980',8010',8011',8012',8013',8014',8015', 8016',8017',8018'

The Dakota formation was hydraulically fractured through these perforations with 139,062 gallons of treated water carrying 60,000 pounds of 40/60 sand and 5,180 pounds of 20/40 sand. The well was tested on June 17, 1983 using a positive choke in a three-hour test. A flow rate of 2347 Mcfd was measured with a calculated AOF of 2470 Mcfd. The ISIP was measured at 2822 psig.

On the basis of this well, the E/2 of Section 28 (320 acres) is recommended as the Eighth Expansion of the Dakota Participating Area.

PROPOSED NINTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date:	January 1, 1984
Proposed Acreage:	Township 30 North, Range 6 West, N.M.P.M.
	Section 1: N/2 (320 acres)
	Section 5: E/2 (320 acres)
	Township 31 North, Range 6 West, N.M.P.M.
	Section 31: E/2 (320 acres)
	Section 32: W/2 (320 acres)
	Total Acres: 1280

The Ninth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and production histories of the Northwest Pipeline Corporation San Juan 31-6 Unit well Nos. 40, 49, 45, and 47. 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 well No. 40 is located 970 feet from the North line and 950 feet from the West line of Section 1,

Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 17, 1983 and completed in the Dakota formation on January 8, 1984. The plug back depth is 7950'. The Dakota formation was perforated with 19 holes at the following depths:

7812',7813',7814',7815',7816',7817',7818',7819', 7820',7821',7822',7823',7824',7825',7826',7827', 7828',7829',7830'

The formation was sand water fractured through these perforations using 2000 bbls of treated water carrying 40,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on January 31, 1984 using a positive choke. The test lasted three hours and during this time the well made 180 Mcf of gas. The flowing tubing pressure was 78 psig, and the SITP and SICP were 2810 and 2800 psig, respectively. The calculated AOF for this well was 1144 Mcfd.

On the basis of the above well, the N/2 of Section 1 (320 acres) is recommended for inclusion in the Ninth Expansion of the Dakota Participating Area.

The San Juan 31-6 Unit well No. 49 is located 1780 feet from the North line and 880 feet from the East line of Section 5, Township 30 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 30, 1983 and completed in the Dakota formation on January 4, 1984. The PBTD is 7930'. The Dakota zone was perforated with a total of 21 holes at the following depths:

7864',7865',7866',7867',7868',7869',7870',7871', 7872',7873',7874',7875',7876',7877',7878',7879', 7905',7906',7907',7908',7909'

The formation was sand water fractured using 2813 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 8836 pounds of 20/40 sand. On January 23, 1984 the Dakota Interval was tested. During this three-hour test, the well produced 233 Mcf of gas with a light mist. The flowing tubing pressure was 98 psig, and the SITP and SICP were 2685 psig and 2680 psig, respectively. The calculated AOF was 1416 Mcfd.

On the basis of the above well, the E/2 of Section 5 (320 acres) is recommended for inclusion in the Ninth Expansion of the Dakota Participating Area.

The San Juan 31-6 Unit well No. 45 is located 1120 feet from the North line and 1850 feet from the East line of

Section 31, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on November 12, 1983 and completed in the Dakota formation on December 8, 1983. The plug back depth is 7780'. The Dakota formation was perforated with 30 holes at the following depths:

7620',7621',7622',7623',7624',7625',7626',7627', 7628',7629',7630',7631',7632',7633',7634',7635', 7636',7637',7638',7639',7640',7641',7642',7643', 7644',7664',7665',7666',7667',7668'

The formation was sand water fractured using 2935 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. The well was tested on January 4, 1984 using a positive choke. During the three-hour test, the well made 221 Mcf of gas against a flowing tubing pressure of 98 psig. The SITP was 2830 psig and the SICP was 2835 psig. The well produced a light mist throughout the test. The calculated AOF was 1412 Mcfd.

On the basis of the above well, the E/2 of Section 31 (320 acres) is recommended for inclusion in the Ninth Expansion of the Dakota Participating Area.

> The San Juan 31-6 Unit well No. 47 is located 1600 feet from the South line and 790 feet from the West line of Section 32, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. On November 21, 1983, the well was spudded and it was completed on December 15, 1983. The plug back depth is 7850'. The well was perforated with a total of 24 holes at the following depths:

7744',7745',7746',7747',7748',7749',7750',7751', 7752',7753',7754',7755',7756',7757',7758',7759', 7760',7761',7762',7788',7789',7790',7791',7792'

The formation was sand water fractured using 2689 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. On January 10, 1984 this well was tested for three hours. During this test, the well made 348 Mcf of gas against a flowing tubing pressure of 166 psig. The SITP was 2705 psig and the SICP was 2710 psig. The well produced a light mist throughout the test. The calculated AOF was 2342 Mcfd.

On the basis of the above well, the W/2 of Section 32 (320 acres) is recommended for inclusion in the Ninth Expansion of the Dakota Participating Area. Dakota Expansion December 1985 Page Nine

PROPOSED TENTH EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: February 1, 1984 Proposed Acreage: Township 31 North, Range 6 West, N.M.P.M. Section 29: E/2 (320 acres) Total Acres: 320

The Tenth Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and the production history of the Northwest Pipeline Corporation San Juan 31-6 Unit well No. 44. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in commercial guantities from the Dakota Producing Interval. The well is described as follows:

> The San Juan 31-6 Unit well No. 44 is located 2425 feet from the North line and 1020 feet from the East line of Section 29, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 9, 1983 and the Dakota formation was completed on January 15, 1984. The plug back depth is 8080'. The well was perforated with a total of 27 holes at the following depths:

7984',7985',7986',7987',7988',7989',7990',7991', 7992',7993',7994',7995',7996',7997',7998',7999', 8000',8001',8002',8003',8004',8005',8031',8032', 8033',8034',8035'

The formation was sand water fractured using 2584 bbls of treated fluid carrying 60,000 pounds of 40/60 sand and 10,000 pounds of 20/40 sand. On February 3, 1984 this well was tested for three hours. During this test, the well made 367 Mcf of gas against a flowing tubing pressure of 229 psig. The well produced a light mist throughout the three-hour flow period. The SITP was 2800 psig and the SICP was 2790 psig. The calculated AOF for this well was 3403 Mcfd.

On the basis of this well, the E/2 of Section 29 (320 acres) is recommended as the Tenth Expansion of the Dakota Participating Area.

CUMULATIVE PRODUCTION TO 11/1/85	73831 73831 73831 73831 738324728 7583885 4558385 4558387 4558387 4556339 4559239 4557239 1870428 790999 1870428 187048 1870428 187048 197048	4584923
OCT 85	333 333 333 333 333 0 11982 11982 333 333 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TOTAL
SEP 85		
AUG 85 SE	2441 2441 3600 3600	
JUL 85 A	16072 16072 16072 16072	
JUN 85 J	648 648 648 0 0 2073 733 733 733 733 733 733	
MAY 85	2566 17117 17117 17117 19391 19322 19128 19128 19128 19128 19128 19128 19128 19128 19128 1553 10655 1553 1553 1553 1553 1553 1553 1553 1	
APR 85	466 466 10656 10656 10656 10656 10656 10658 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10628 10658 10656 10566 10656 10566 10656 10566 1005666 10000000000	
MAR 85	5617 5617 1696 1696 19435 7971 16412 16412 16412 16412 16412 1696 17886 17866 178866 17886 17886 17886 178866 178866 17886 178866 178866 178866 178866 17886	
FEB 85	2519 2519 00 17912 1865 17912 1883 17865 17865 17865 18035 8035 8035 8035 8035 16290 16290 16290 16290 16290 16290 16290 16290 16290 16200 16200 16200 17600 17700 17600 17600 17700 17600 17600 17600 17700 17600 17600 17600 17600 17600 17700 176000 176000 176000 176000 1760000000000	
JAN 85	1591 1591 1591 1591 13376 13376 133376 13592 15592 155	
DEC 84	13673 279 0 0 0 603 603 603 1909 10976 10976 7416 7416 7416 7079	
NOV 84	25808 25808 10567 100 1711 650 1711 650 1711 1928 10128 112855 112263 113290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 119290 1192000 1192000 11920000000000	
I.D. DATE	12/59 12/59 10/83 11/83 11/83 6/81 6/81 6/81 11/83 11/83 10/81 11/83 10/83 10/83 11/	
NO	88888888888888888888888888888888888888	
OCATION		
го	XHPLABIBCOBCOAAGP8WAXN 99922999900000000000000000000000000000	
UNIT WELL NO.	5 4 4 4 4 4 4 4 9 3 3 3 3 3 3 4 6 4 4 4 4 4 4 4 4 4 4 4 4	

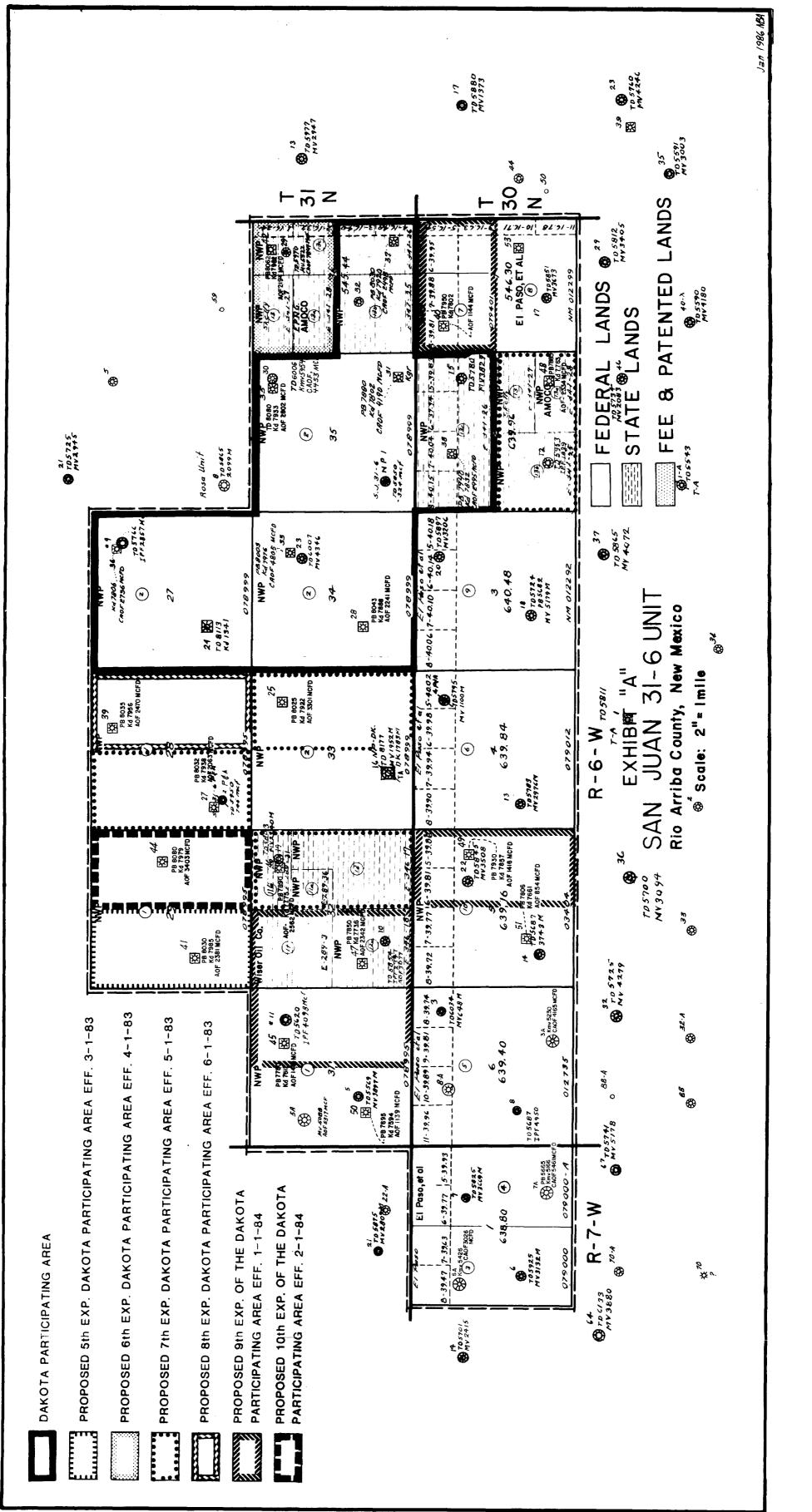
EXHIBIT "D"

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TABLE NO. 1 SAN JUAN 31-6 UNIT: DAKOTA GAS PRODUCTION RIO ARRIBA COUNTY, NEW MEXICO

GAS VOLUMES IN MCF @ 14.73 PSIA & 60 DEG. F

* PERMANENTLY DISCONNECTED ** COMMERCIALITY NOT VET DETERMINED



1. 31.6 Kd Jan 86 MBA