

NORTHWEST PIPELINE CORPORATION 
ONE OF THE WILLIAMS COMPANIES

222-88

LAND DEPARTMENT

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

April 5, 1988

446

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 32-8 Unit #14-08-001-446
San Juan County, New Mexico
Application for Approval for Extension
of Time to Drill Intervening Drilling
Block wells

Gentlemen:

Northwest Pipeline Corporation (NWP), as Unit Operator, in 1985 drilled well #50 MV, located in T32N, R8W, Sec. 28: W/2. The drilling of this well created two (2) intervening drilling blocks; Sec. 28: E/2 and Sec. 29: E/2.

In 1986 NWP applied for and received from the regulatory agencies an extension of time which deferred the drilling of these wells until 1988. There still exist a decline in the gas market. Therefore, NWP requests that another extension of time be given to drill these intervening drilling block wells.

We request that the extension of time given be that time which would be prudent and cost effective; determined from an evaluation of the gas market, instead of the year 1988.

Bureau of Land Management
Commissioner of Public Lands
Oil Conservation Commission
April 5, 1988
Page 2

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

Sincerely,

NORTHWEST PIPELINE CORPORATION



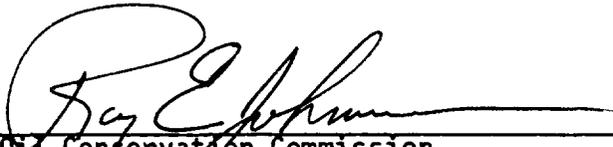
Darrell L. Gillen
Supervisor, Land/NGPA

DLG/cg
Attachments
cc: Working Interest Owners
K. J. Stracke

Assistant District Manager, Minerals
Commissioner of Public Lands
Oil Conservation Commission
April 5, 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

APPROVED  _____ DATE 5-5-88
Oil Conservation Commission
Subject to like approval by the
Area Oil and Gas Supervisor
and the Commissioner of Public Lands

U56N2650
04/05/88

WORKING INTEREST OWNERS
SAN JUAN 32-8 UNIT

H. H. PHILLIPS, AGENT
8918 TESORO DR. - SUITE 116
SAN ANTONIO, TX
78217

WINTERGREEN ENERGY CORP.
ATTN: GENE N. GARNETT
DORCHESTER PLACE - SUITE 125
5735 PINELAND DRIVE
DALLAS, TX
75231

H. H. PHILLIPS, JR.
8918 TESORO DR. - SUITE 116
SAN ANTONIO, TX
78217

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

PHILLIPS PETROLEUM COMPANY
ATTN: ANTHONY TAI
8055 E. TUFTS AVE. PKWY.
DENVER, CO
80237

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

SUN EXPLORATION & PRODUCTION COMPANY
ATTN: OBO ACCOUNTING
P.O. BOX 2880
DALLAS, TX
75221

SUZANNA P. KELLY
P.O. BOX 585
CAMERON, MT
59720

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

State of New Mexico

446



SLO REF. NO. OG-353

W.R. HUMPHRIES
COMMISSIONER

Commissioner of Public Lands

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

August 18, 1987

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

Re: San Juan 32-8 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,

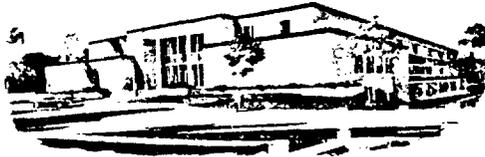
W. R. HUMPHRIES
COMMISSIONER OF PUBLIC LANDS

BY: *Floyd O. Prando*
FLOYD O. PRANDO, Director
Oil & Gas Division
(505) 827-5744

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

State of New Mexico

#446



SLO REF NO. OG-214

W.R. HUMPHRIES
COMMISSIONER

Commissioner of Public Lands

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

June 23, 1987

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

Re: San Juan 32-8 Unit Amended 18th and 19th
Expanded Participating Area-Mesaverde Formation
Effective Feb 1, 1982 and July 1, 1983

Gentlemen:

The Bureau of Land Management has notified this office that the Amended 18th, and 19th. Expanded Participating Areas for the Mesaverde Formation, San Juan 32-8 Unit, San Juan County, New Mexico have been approved. Please be advised that the Commissioner of Public Lands concurs with the Bureau of Land Management and has this date also approved your application for the above mentioned Participating Areas.

The Amended Eighteenth revision adds 320.00 acres to the Mesaverde Participating Area for a total of 1,280.00 acres. This additional acreage is described as the E/2 of Section 14, Township 32 North, Range 8 West., NMPM. The Amended Eighteenth revision is effective as of February 1, 1982 and is predicated upon the successful completion of the San Juan 32-8 Unit Well No. 46.

The Nineteenth revision to the Mesaverde Participating Area contains 320.00 Acres, and is described as the E/2 of Section 20, Township 32 North, Range 8 West. The Nineteenth revision is effective as of July 1, 1983 and is predicated upon the successful completion of the Rattlesnake Canyon Com Well No. 3.

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

Very truly yours,

WILLIAM R. HUMPHRIES
COMMISSIONER OF PUBLIC LANDS
BY: *Floyd O. Prado*
FLOYD O. PRANDO, Director
Oil and Gas Division
(505) 827-5714

101 FOP/pm

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

NORTHWEST PIPELINE CORPORATION 
ONE OF THE WILLIAMS COMPANIES

LAND DEPARTMENT

P.O. BOX 8900
SALT LAKE COUNTY, UTAH 84118-8900
801 584 6669
801 584 7215

265-87

June 16, 1987

Assistant Area Oil and Gas Supervisor
Bureau of Land Management
425 Montano, N.E.
Albuquerque, NM 87107

State of New Mexico
Commissioner of Public Lands
ATTN: 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 32-8 Unit #14-08-001-446
San Juan County, New Mexico

APPROVAL OF THE AMENDED EIGHTEENTH EXPANDED PARTICIPATING AREA
Mesaverde Formation
Effective February 1, 1982

APPROVAL OF THE NINETEENTH EXPANDED PARTICIPATING AREA
Mesaverde Formation
Effective July 1, 1983

Gentlemen:

The referenced Approvals for the amended 18th and the 19th Expanded Participating Areas which were filed March 13, 1987, have been approved by the Bureau of Land Management on May 12, 1987.

Bureau of Land Management
Commissioner of Public Lands
June 16, 1987
Page Two

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

Very truly yours,



Darrell L. Gillen
Land/NGPA Supervisor

DLG/sp

Attachments

cc: K. J. Stracke
W. O. Curtis
W. S. West
L. Eaton
C. Potter - 10348
N. K. Zunino
J. E. McNeil - 10482
L. G. Loving - 10482
R. P. Gregory - 10482



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ALBUQUERQUE DISTRICT OFFICE

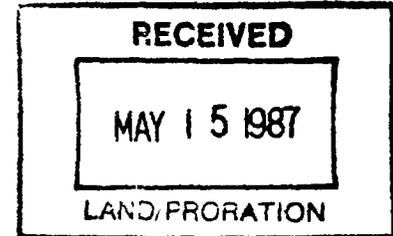
435 Montano N.E.
Albuquerque, New Mexico 87107



IN REPLY REFER TO

SJ 32-8 Unit
3160 (015)

MAY 12 1987



Northwest Pipeline Corporation
ATTN: Darrell L. Gillen
295 Chipeta Way
Salt Lake City, UT 84108

Gentlemen:

We have received your letter of March 13, 1987. You requested the approval of the amended 18th expanded participating area and 19th expanded participating area Mesaverde Formation, San Juan 32-8 Unit, San Juan County, New Mexico.

The application for approval of the amended 18th revision seeks to add 320.00 acres to the 18th revision (for a total of 1280.00 acres in the 18th revision) described as the E $\frac{1}{2}$ section 14, T. 32 N., R. 8 W., NMPM, to the Mesaverde participating area. Contributing to this area is the completion of the San Juan 32-8 Unit No. 46 well. The amended 18th revision is approved on this date and is effective February 1, 1982.

The application for approval of the 19th revision seeks to add 320.00 acres described as the E $\frac{1}{2}$ section 20, T. 32 N., R. 8 W., NMPM, to the Mesaverde participating area. Contributing to this area is the completion of the Rattlesnake Canyon Com well No. 3. The 19th revision is approved on this date and is effective July 1, 1983.

An approved copy of your 18th and 19th expansion is enclosed. If you have any questions regarding the above actions, please contact Gail Keller at the above address or telephone (505) 761-4503.

Sincerely,

Assistant District Manager
Mineral Resources

Enclosure

SAN JUAN 32-8
WORKING INTEREST OWNERS

Texaco Inc.
Mr. T. L. Ditmore, Manager, Petroleum Engineering
P. O. Box 2100
Denver, Co 80201

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

Southland Royalty Company
5613 DTC Parkway
Englewood, CO 80111

Wintergreen Energy
Dorchester Place - Suite 125
5735 Pineland Drive
Dallas, TX 75231

H. H. Phillips, Agent
8918 Tesoro Drive, Suite 116
San Antonio, TX 78217

Susanna Phillips Kelly
Bar K Ranch - P. O. Box 585
Cameron, MT 59720

H. H. Phillips, Jr.
8918 Tesoro Drive, Suite 116
San Antonio, TX 78217

NORTHWEST PIPELINE CORPORATION 
ONE OF THE WILLIAMS COMPANIES

LAND DEPARTMENT

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

March 13, 1987

2016t

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

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

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

Re: San Juan 32-8 Unit #14-08-001-446
San Juan County, New Mexico

AMENDED 18th EXPANDED PARTICIPATING
AREA
MESAVERDE FORMATION
Effective February 1, 1982

19th EXPANDED PARTICIPATING AREA
MESAVERDE FORMATION
Effective July 1, 1983

Gentlemen:

Pursuant to Section 11(a) of the San Juan 32-8 Unit Agreement, Northwest Pipeline Corporation, as Unit Operator, determined on the dates indicated below that the following wells, which are capable of producing unitized substances in paying quantities from the Mesaverde formation, have been completed upon a drilling block committed to this Unit.

Bureau of Land Management
Commissioner of Public Lands
Oil Conservation Commissioner
March 13, 1987
Page -2-

The San Juan 32-8 Unit No. 46 well was determined by the BLM as a commercial well. Therefore, it will enlarge the Eighteenth Expanded Participating Area by 320 acres, as indicated below.

AMENDED EIGHTEENTH EXPANDED PARTICIPATING AREA - Effective February 1, 1982

<u>DESCRIPTION OF ADDITIONAL LANDS</u>	<u>Acres</u>	<u>Well Name & No.</u>
<u>Township 32 North, Range 8 West</u> <u>Section 14: E/2</u>	320.00	San Juan 32-8 Unit No. 46
<u>DESCRIPTION OF EXISTING LANDS</u>	<u>Acres</u>	<u>Well Name & No.</u>
<u>Township 32 North, Range 8 West</u> <u>Section 14: W/2</u>	320.00	San Juan 32-8 Unit No. 45
<u>Township 32 North, Range 8 West</u> <u>Section 15: E/2</u>	320.00	Intervening Drilling Block
<u>Township 32 North, Range 8 West</u> <u>Section 30: E/2</u>	320.00	San Juan 32-8 Unit No. 47

NINETEENTH EXPANDED PARTICIPATING AREA - Effective July 1, 1983

<u>Township 32 North, Range 8 West</u> <u>Section 20: E/2</u>	320.00	Rattlesnake Canyon Com Well #3
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The well information is as follows:

The San Juan 32-8 #46 well is located 1820 feet from the North line and 790 feet from the East line, Section 14, Township 32 North, Range 8 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on September 5, 1981 and is a dually completed well. The Mesaverde formation was completed on January 5, 1982. This formation was perforated with 24 holes at the following depths:

5940' to 6330'

These perforations were treated with 10,000 gallons pad water followed by 80,000 pounds of 20/40 sand in fracturing fluid. The well was initially tested on January 5, 1982 using a positive choke in a three hour test. The SITP was 1154 psig with a flowing pressure of 118 psig producing at a rate of 1651 MCFD. The calculated AOF was 1721 MCFD.

Bureau of Land Management
Commissioner of Public Lands
Oil Conservation Commissioner
March 13, 1987
Page -3-

The Rattlesnake Canyon Com #3 well is located 1450 feet from the South line and 1140 feet from the East line, Section 20, Township 32 North, Range 8 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on May 12, 1983. The Mesaverde formation was completed on June 20, 1983. The Mesaverde formation was perforated with 92 holes at the following depths:

5334' to 5743'

These perforations were treated with 167,186 gallons pad water followed by 119,250 pounds of 20/40 sand. The well was tested on June 20, 1983 using a positive choke in a three hour test. The well was tested at a 3451 MCFD flow rate with a calculated AOF of 3572 MCFD. The ISIP was measured at 1059 psig.

Attached are Schedules IXX, XX, and ownership maps showing the 18th and 19th Expanded Participating Areas for the Mesaverde Formation of the San Juan 32-8 Unit Area. The Schedules describe the Expanded Participating Areas and show the percentage of utilized substances allocated to each tract. Inasmuch as this needs no official approval, in the absence of disapproval, the subject expansions are effective as of the dates indicated.

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

Very truly yours,


Darrell L. Gillen
Land Coordinator

DLG:js

Attachments

cc: K. J. Stracke
W. O. Curtis
K. Nielsen
L. Eaton
C. Potter - 10348
R. L. Glenn - 10350
J. E. McNeil - 10482
I. G. Loving - 10482
R. P. Gregory - 10482

Minerals Management Service
Commissioner of Public Lands
Oil Conservation Commission
March 13, 1987
Page -4-

APPROVED _____
Assistant District Manager, Minerals
Subject to like approval by the
Commissioner of Public Lands and the
Oil Conservation Division

Date _____

APPROVED _____
Commissioner of Public Lands
Subject to like approval by the
Assistant District Manager, Minerals
and the Oil Conservation Division

Date _____

APPROVED  _____
Oil Conservation Division
Subject to like approval by the
Assistant District Manager, Minerals
and the Commissioner of Public Lands

Date 3-30-87

The foregoing is the approval for the AMENDED 18TH EXPANDED PARTICIPATING AREA
AND THE 19TH EXPANDED PARTICIPATING AREA, MESAVERDE FORMATION in the San Juan
32-8 Unit.

SAN JUAN 32-8 UNIT
WORKING INTEREST OWNERS

Texaco, Inc.
Mr. T. L. Ditmore, Manager, Petroleum Engineering
P. O. Box 2100
Denver, Colorado 80201

Meridian Oil
Land Department
P. O. Box 4289
Farmington, NM 87401

Southland Royalty Company
5613 DTC Parkway
Englewood, CO 80111

Wintergreen Energy
Dorchester Place - Suite 125
5735 Pineland Drive
Dallas, TX 75231

H. H. Phillips, Agent
8918 Tesoro Drive, Suite 116
San Antonio, TX 78217

Susanna Phillips Kelly
Bar K Ranch - P. O. Box 585
Cameron, MT 59720

H. H. Phillips, Jr.
8918 Tesoro Drive, Suite 116
San Antonio, TX 78217

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 3</u>							
NM-013364	T-31-N, R-8-W Sec. 21: N/2N/2 N/2S/2, SE/4SE/4	360.00	Royalty; Working Interest:		12.500000%	12.500000%	3.135320%
			Northwest Pipeline Corp.,		54.263195%	54.263195%	
			Susanna Kelly		1.539378%	1.539378%	
			Wintergreen Energy		10.102190%	10.102190%	
			H. H. Phillips, Agent		18.761217%	18.761217%	
			H. H. Phillips, Jr.		1.539377%	1.539377%	
			ORRI;		1.294643%	1.294643%	
			Total		100.000000%	100.000000%	
<u>TRACT 4</u>							
SF-079004	T-31-N, R-8-W Sec. 9: All Sec. 10: All Sec. 15: N/2, N/2SE/4, SE/4SE/4	1,720.00	Royalty; Working Interest:		12.500000%	12.500000%	14.979865%
			Northwest Pipeline Corp.,		82.500000%	82.500000%	
			ORRI;		5.000000%	5.000000%	
			Total		100.000000%	100.000000%	
<u>TRACT 5</u>							
SF-079013	T-32-N, R-8-W Sec. 17: W/2 Sec. 20: W/2 Sec. 29: W/2	960.00	Royalty; Working Interest:		12.500000%	12.500000%	8.360854%
			Northwest Pipeline Corp.,		82.500000%	82.500000%	
			ORRI;		5.000000%	5.000000%	
			Total		100.000000%	100.000000%	

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 7</u>							
SF-079029	<u>T-31-N, R-8-W</u> Sec. 3: Lots 1,2, 3,4, S/2N/2, S/2 Sec. 4: Lots 1,2, 3,4, S/2N/2, SE/4, E/2SW/4, SW/4SW/4 Sec. 21: S/2N/2, S/2SW/4, SW/4SE/4	1,522.08	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	13.256135%
<u>TRACT 8</u>							
SF 079047	<u>T-31-N, R-8-W</u> Sec. 14: W/2 Sec. 23: W/2	640.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	5.573903%
<u>TRACT 11</u>							
SF 079341-A	<u>T-32-N, R-8-W</u> Sec. 19: SW/4SE/4 Sec. 30: E/2	360.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	3.135320%
<u>TRACT 13</u>							
SF 079351	<u>T-31-N, R-8-W</u> Sec. 24: E/2, E/2NW/4	400.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 85.000000% <u>2.500000%</u> 100.000000%	12.500000% 85.000000% <u>2.500000%</u> 100.000000%	3.483689%

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 14</u>							
SF 079353	<u>T-32-N, R-8-W</u> Sec. 14: N/2 Sec. 15: N/2, SW/4 Sec. 19: NE/4, N/2SE/4, SE/4SE/4 Sec. 33: W/2	1,400.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.192913%
<u>TRACT 15</u>							
SF 079380	<u>T-32-N, R-8-W</u> Sec. 14: S/2 Sec. 15: SE/4 Sec. 22: W/2	800.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	6.967379%
<u>TRACT 16</u>							
SF 079381	<u>T-32-N, R-8-W</u> Sec. 33: E/2 Sec. 34: W/2 Sec. 35: E/2	960.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	8.360854%
<u>TRACT 17</u>							
SF 079717	<u>T-32-N, R-8-W</u> Sec. 27: W/2SW/4, SE/4SW/4	120.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	1.045107%

Effective February 1, 1982

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 18</u>							
SF 080412-A	<u>T-32-N, R-8-W</u> Sec. 27: NW/4, NE/4SW/4	200.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 85.000000% <u>2.500000%</u>	12.500000% 85.000000% <u>2.500000%</u>	1.741845%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 19</u>							
SF 080854	<u>T-31-N, R-8-W</u> Sec. 24: W/2NW/4, SW/4	240.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	2.090214%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 20</u>							
SF 081089	<u>T-31-N, R-8-W</u> Sec. 23: E/2	320.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	2.786951%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 21</u>							
NM-03402	<u>T-31-N, R-8-W</u> Sec. 15: SW/4, SW/4SE/4 Sec. 22: All	840.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	7.315748%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 24</u>							
E-1204-4	<u>T-31-N, R-8-W</u> Sec. 16: NW/4NE/4, SE/4NE/4, NW/4, NE/4SW/4, SW/4SW/4, N/2SE/4	400.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	3.483689%
<u>TRACT 26</u>							
E-3704-3	<u>T-31-N, R-8-W</u> Sec. 16: SW/4SE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	.348369%
<u>TRACT 28</u>							
E-3868-3	<u>T-31-N, R-8-W</u> Sec. 16: SW/4NE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	.348369%
<u>TRACT 31</u>							
E-5113-70	<u>T-31-N, R-8-W</u> Sec. 16: NW/4SW/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 81.500000% <u>6.000000%</u> 100.000000%	12.500000% 81.500000% <u>6.000000%</u> 100.000000%	.348369%

Effective February 1, 1982

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 34</u>							
E-5382	<u>T-31-N, R-8-W</u> Sec. 16: NE/4NE/4	40.00	Royalty; Working Interest: Texaco, Inc., ORRI;		12.500000%	12.500000%	.348369%
					87.500000%	87.500000%	
					<u>0.000000%</u>	<u>0.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 38</u>							
B-11240-71	<u>T-31-N, R-8-W</u> Sec. 16: SE/4SW/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.348369%
					85.000000%	85.000000%	
					<u>2.500000%</u>	<u>2.500000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 38-A</u>							
B-11240-70	<u>T-31-N, R-8-W</u> Sec. 16: SE/4SE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.348369%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	

SCHEDULE IXX
AMENDED EIGHTEENTH PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area:

Township 32 North, Range 8 West, N.M.P.M.

Sections 17, 20, 22, 27, 29, 34: W/2
Sections 19, 30, 35: E/2
Sections 14, 15, 33: All

Township 31 North, Range 8 West, N.M.P.M.

Section 14: W/2
Sections 3, 9, 10, 15, 16, 21, 22, 23, 24: All
Section 4: N/2, SE/4, NE4/SW/4, S/SW/4

Total Number of Acres in Participating Area: 11,482.08

Total Number of Acres Committed to Participating Area: 11,482.08

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 3</u>							
NM-013364	<u>T-31-N, R-8-W</u> Sec. 21: N/2N/2, N/2S/2, SE/4SE/4	360.00	Royalty; Working Interest: Northwest Pipeline Corp., Susanna Kelly Wintergreen Energy H. H. Phillips, Agent H. H. Phillips, Jr. ORRI;		12.500000% 54.263195% 1.539378% 10.102190% 18.761217% 1.539377% <u>1.294643%</u> Total	12.500000% 54.263195% 1.539378% 10.102190% 18.761217% 1.539377% <u>1.294643%</u> <u>100.000000%</u>	3.102892%
<u>TRACT 4</u>							
SF-079004	<u>T-31-N, R-8-W</u> Sec. 9: All Sec. 10: All Sec. 15: N/2, N/2SE/4, SE/4SE/4	1,720.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> Total	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	14.824927%
<u>TRACT 5</u>							
SF-079013	<u>T-32-N, R-8-W</u> Sec. 17: W/2 Sec. 20: W/2, SW/4SE/4, N/2NE/4 Sec. 29: W/2	1,080.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> Total	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	9.308676%

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 6</u>							
NM-33056	T-32-N, R-8-W Sec. 20: S/2NE/4, N/2SE/4, SE/4SE/4	200.00	Royalty; Working Interest: Southland Royalty ORRI;		12.500000% 85.000000% <u>2.500000%</u> 100.000000%	00.000000% 00.000000% <u>00.000000%</u> 00.000000%	0.000000%
<u>TRACT 7</u>							
SF-079029	T-31-N, R-8-W Sec. 3: Lots 1, 2,3,4, S/2SN/2, S/2 Sec. 4: Lots 1,2, 3,4, S/2N/2, SE/4, E/2SW/4, SW/4SW/4 Sec. 21: S/2N/2, S/2SW/4, SW/4SE/4	1,522.08	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	13.119027%
<u>TRACT 8</u>							
SF 079047	T-31-N, R-8-W Sec. 14: W/2 Sec. 23: W/2	640.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> 100.000000%	12.500000% 82.500000% <u>5.000000%</u> 100.000000%	5.516252%

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 11</u>							
SF 079341-A	<u>T-32-N, R-8-W</u> Sec. 19: SW/4SE/4 Sec. 30: E/2	360.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> Total <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	3.102892%
<u>TRACT 13</u>							
SF 079351	<u>T-31-N, R-8-W</u> Sec. 24: E/2, E/2NW/4	400.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 85.000000% <u>2.500000%</u> Total <u>100.000000%</u>	12.500000% 85.000000% <u>2.500000%</u> <u>100.000000%</u>	3.447658%
<u>TRACT 14</u>							
SF 079353	<u>T-32-N, R-8-W</u> Sec. 14: N/2 Sec. 15: N/2, SW/4 Sec. 19: NE/4, N/2SE/4, SE/4SE/4 Sec. 33: W/2	1,400.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u> Total <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	12.066802%
<u>TRACT 15</u>							
SF 079380	<u>T-32-N, R-8-W</u> Sec. 14: S/2 Sec. 15: SE/4 Sec. 22: W/2	800.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 82.500000% <u>5.000000%</u> Total <u>100.000000%</u>	12.500000% 82.500000% <u>5.000000%</u> <u>100.000000%</u>	6.895315%

Effective July 1, 1983

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 16</u>							
SF 079381	<u>T-32-N, R-8-W</u> Sec. 33: E/2 Sec. 34: W/2 Sec. 35: E/2	960.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	8.274378%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 17</u>							
SF 079717	<u>T-32-N, R-8-W</u> Sec. 27: W/2SW/4, SE/4SW/4	120.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	1.034297%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 18</u>							
SF 080412-A	<u>T-32-N, R-8-W</u> Sec. 27: NW/4, NE/4SW/4	200.00	Royalty; Working Interest: El Paso Natural Gas Co., ORRI;		12.500000% 85.000000% <u>2.500000%</u>	12.500000% 85.000000% <u>2.500000%</u>	1.723829%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 19</u>							
SF 080854	<u>T-31-N, R-8-W</u> Sec. 24: W/2NW/4, SW/4	240.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000% 82.500000% <u>5.000000%</u>	12.500000% 82.500000% <u>5.000000%</u>	2.068594%
			Total		<u>100.000000%</u>	<u>100.000000%</u>	

Effective July 1, 1983

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 20</u>							
SF 081089	<u>T-31-N, R-8-W</u> Sec. 23: E/2	320.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	2.758126%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 21</u>							
NM-03402	<u>T-31-N, R-8-W</u> Sec. 15: SW/4, SW/4SE/4 Sec. 22: All	840.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	7.240081%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 24</u>							
E-1204-4	<u>T-31-N, R-8-W</u> Sec. 16: NW/4NE/4, SE/4NE/4, NW/4, NE/4SW/4, SW/4SW/4, N/2SE/4	400.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	3.447658%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 26</u>							
E-3704-3	<u>T-31-N, R-8-W</u> Sec. 16: SW/4SE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.344766%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
<u>TRACT 28</u>							
E-3868-3	<u>T-31-N, R-8-W</u> Sec. 16: SW/4NE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.344766%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 31</u>							
E-5113-70	<u>T-31-N, R-8-W</u> Sec. 16: NW/4SW/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.344766%
					81.500000%	81.500000%	
					<u>6.000000%</u>	<u>6.000000%</u>	
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 34</u>							
E-5382	<u>T-31-N, R-8-W</u> Sec. 16: NE/4NE/4	40.00	Royalty; Working Interest: Texaco, Inc., ORRI;		12.500000%	12.500000%	.344766%
					87.500000%	87.500000%	
					<u>0.000000%</u>	<u>0.000000%</u>	
			Total		<u>100.000000%</u>	<u>100.000000%</u>	
<u>TRACT 38</u>							
B-11240-71	<u>T-31-N, R-8-W</u> Sec. 16: SE/4SW/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.344766%
					85.000000%	85.000000%	
					<u>2.500000%</u>	<u>2.500000%</u>	
			Total		<u>100.000000%</u>	<u>100.000000%</u>	

Effective July 1, 1983

SCHEDULE XX
 NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
 SAN JUAN 32-8 UNIT AREA

<u>SERIAL NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER OF ACRES</u>	<u>OWNERSHIP</u>	<u>DRILLING BLOCK</u>	<u>PERCENTAGE</u>	<u>PERCENTAGE COMMITTED</u>	<u>PRESENT ACTUAL PARTICIPATION</u>
				<u>TRACT 38-A</u>			
B-11240-70	<u>T-31-N, R-8-W</u> Sec. 16: SE/4SE/4	40.00	Royalty; Working Interest: Northwest Pipeline Corp., ORRI;		12.500000%	12.500000%	.344766%
					82.500000%	82.500000%	
					<u>5.000000%</u>	<u>5.000000%</u>	
				Total	<u>100.000000%</u>	<u>100.000000%</u>	

Effective July 1, 1983

SCHEDULE XX
NINETEENTH EXPANDED PARTICIPATING AREA FOR THE MESAVERDE FORMATION
SAN JUAN 32-8 UNIT AREA

RECAPITULATION

Description of Lands in Participating Area:

Township 32 North, Range 8 West, N.M.P.M.

Sections 17, 22, 27, 29, 34: W/2

Sections 19, 30, 35: E/2

Sections 14, 15, 20, 33: All

Township 31 North, Range 8 West, N.M.P.M.

Section 14: W/2

Sections 3, 9, 10, 15, 16, 21, 22, 23, 24: All

Section 4: N/2, SE/4, NE4/SW/4, S/2SW/4

Total Number of Acres in Participating Area: 11,802.08

Total Number of Acres Committed to Participating Area: 11,602.08

Total Number of Acres Not Committed to Participating Area: 200.00

Effective July 1, 1983

Pertinent Data
San Juan 32-8 Unit
Well #46 (MV)

Drilling Block

Acres

T32N R8W
Section 14

E/2 Section 14
320

The San Juan 32-8 #46 well is located 1820 feet from the north line and 790 feet from the east line, section 14, Township 32 north, Range 8 west, N.M.P.M., San Juan county, New Mexico. This well was spudded on Sep. 5, 1981 and is a dually completed well. The Mesa Verde formation was completed on Jan. 5, 1982. This formation was perforated with 24 holes at the following depths:

5940' to 6330'

These perforations were treated with 10,000 gallons pad water followed by 80,000 pounds of 20/40 sand in fracturing fluid. The well was initially tested with a positive choke in a three hour test. The SITP was 1154 psig with a flowing pressure of 118 psig producing at a rate of 1651 MCFD. The calculated AOF was 1721 MCFD.

This well has been determined to be commercial.

NORTHWEST PIPELINE CORPORATION
 GAS RESERVES DEPARTMENT ECONOMIC STUDY
 COMMERCIALITY OF SJU 32-8 #46 MV

FRI MAY 9, 1986
 12:45:27 PM

WORKING INT. B/PAYOUT.....%	100.0	ANNUAL COST INFLATION.....%	0.0
WORKING INT. A/PAYOUT.....%	100.0	ANNUAL PRICE INFLATION.....%	0.0
INCOME TAX.....%	48.0	NEG INC TAX USED AS FUTURE CREDIT	
UNIT OF PRODUCTION DEPRECIATION			

GAS PRODUCTION FROM SJU 32-8 #46

LAND OWNER ROYALTY.....%	12.5	OVERRIDING ROYALTY.....	0.0
AD VALOREM AND SEV TAXES...%	7.9	OPERATING COSTS (\$/MO).....	300.0
MONTH OF CAPITAL EXPENSE....	10	OPERATING COSTS (% OF PROD).	0.0
DRILLING COSTS (\$1000).....	251.2	TANGIBLE \$ (% OF DRILLING \$)	34.6
SALVAGE VALUE (\$1000).....	0.0		

INITIAL MONTH	MCF/D	% DECLINE	TO MCF/D	ENDING MONTH
19	267.4	83.6	108.4	25
25	108.4	44.9	80.5	31
31	80.5	30.7	67.0	37
37	67.0	23.5	58.6	43
43	58.6	19.1	52.7	49
49	52.7	15.7	48.4	55
55	48.4	13.9	44.9	61
61	44.9	12.1	42.1	67
67	42.1	10.6	39.8	73
73	39.8	9.8	37.8	79
79	37.8	8.8	36.1	85
85	36.1	8.1	34.6	91
91	34.6	7.4	33.3	97
97	33.3	7.1	32.1	103
103	32.1	5.7	15.0	258
258	15.0	100.0	0.0	259

YEAR	PRICE \$/ MCF	AVG MCF/D	ANNUAL MCF	ROYALTY MCF	REVENUE AFTER ROYALTY \$1000
1981	3.22	0	0.	0.	0.
1982	3.22	95	34640.	4330.	98.
1983	3.22	85	31188.	3899.	88.
1984	3.22	60	21824.	2728.	61.
1985	3.22	49	17861.	2233.	50.
1986	3.22	42	15496.	1937.	44.
1987	3.22	38	13887.	1736.	39.
1988	3.22	35	12697.	1587.	36.
1989	3.22	32	11780.	1473.	33.
1990	3.22	30	11083.	1385.	31.
1991	3.22	29	10449.	1306.	29.
1992	3.22	27	9851.	1231.	28.
1993	3.22	25	9288.	1161.	26.
1994	3.22	24	8756.	1095.	25.
1995	3.22	23	8255.	1032.	23.
1996	3.22	21	7783.	973.	22.
1997	3.22	20	7338.	917.	21.
1998	3.22	19	6918.	865.	19.
1999	3.22	18	6523.	815.	18.

2000	3.22	17	6149.	769.	17.
2001	3.22	16	5798.	725.	16.
TOTAL.....			257557.	32195.	726.

NORTHWEST PIPELINE CORPORATION
 GAS RESERVES DEPARTMENT ECONOMIC STUDY
 COMMERCIALITY OF SJU 32-8 #46 MV

FRI MAY 9, 1986
 12:45:27 PM

WORKING INT. B/PAYOUT.....% 100.0 ANNUAL COST INFLATION.....% 0.0
 WORKING INT. A/PAYOUT.....% 100.0 ANNUAL PRICE INFLATION.....% 0.0
 INCOME TAX.....% 48.0 NEG INC TAX USED AS FUTURE CREDIT
 UNIT OF PRODUCTION DEPRECIATION

DISCOUNT ***** PRESENT VALUE***** DISCOUNTED PROFIT TO**
 RATE ***** \$1000 ***** ***INVESTMENT RATIO***
 *** % ** BEFORE TAX AFTER TAX BEFORE TAX AFTER TAX
 19.9 0. 0.00 RATE OF RETURN B.T.
 12.8 0. 0.0 RATE OF RETURN A.T.
 15.0 36. -14. 0.14 -0.05

YEAR	INCOME	**PROJECT EXPENSES IN \$1000*				****CASH FLOW ANALYSIS IN \$1000****				
	\$1000	***	*****	AD.V.	*****	*****	**CUM	*****	*****	*****
	NET*	CAPI-	***	SEV.	PROD.	BEFORE	BEFORE	TAXED	INCOME	AFTER
	*****	*TAL*	DEPR.	TAXES	COSTS	*TAXES	TAXES	INCOME	TAXES	TAXES
1981	0	251	0	0	0	-251	-251	-164	0	-251
1982	98	0	12	8	2	38	-163	76	0	38
1983	88	0	11	7	4	77	-86	67	0	77
1984	62	0	7	5	4	53	-33	46	12	41
1985	50	0	6	4	4	43	10	37	18	25
1986	44	0	5	3	4	37	47	31	15	22
1987	39	0	5	3	4	32	79	28	13	19
1988	36	0	4	3	4	29	108	25	12	17
1989	33	0	4	3	4	27	135	23	11	16
1990	31	0	4	2	4	25	160	21	10	15
1991	29	0	4	2	4	23	184	20	10	14
1992	28	0	3	2	4	22	206	19	9	13
1993	26	0	3	2	4	20	226	17	8	12
1994	25	0	3	2	4	19	245	16	8	11
1995	23	0	3	2	4	18	263	15	7	11
1996	22	0	3	2	4	17	280	14	7	10
1997	21	0	2	2	4	15	295	13	6	9
1998	20	0	2	2	4	14	310	12	6	9
1999	18	0	2	1	4	13	323	11	5	8
2000	17	0	2	1	4	12	335	10	5	7
2001	16	0	2	1	4	11	347	9	5	7
TOTAL	726	251	87	58	70	347	0	346	166	180

PAYOUT DURING MONTH 10 OF YEAR 5

Pertinent Data
Rattlesnake Canyon Com
Well #3 (mv)

Drilling Block	Acres
T32N R8W Section 20	E/2 Section 20 320

The Rattlesnake Canyon Com #3 well is located 1450 feet from the south line and 1140 feet from the east line, section 20, Township 32 north, Range 8 west, N.M.P.M., San Jaun county, New Mexico. This well was spudded on May 12, 1983. The Mesaverde formation was completed on Jun. 20, 1983. The Mesaverde formation was perforated with 92 holes at the following depths:

5334', 5336', 5338', 5339', 5340', 5341', 5342', 5343', 5344', 5406',
 5408', 5410', 5411', 5412', 5413', 5414', 5415', 5417', 5419', 5424',
 5426', 5428', 5429', 5430', 5432', 5434', 5435', 5436', 5437', 5438',
 5495', 5497', 5501', 5502', 5504', 5405', 5506', 5507', 5508', 5588',
 5590', 5591', 5592', 5594', 5596', 5598', 5663', 5664', 5665', 5666',
 5667', 5668', 5669', 5670', 5671', 5672', 5673', 5674', 5676', 5678',
 5680', 5684', 5686', 5688', 5690', 5692', 5694', 5700', 5702', 5726',
 5728', 5729', 5730', 5732', 5733', 5734', 5738', 5739', 5740', 5741',
 5742', 5743', 5744', 5746', 5748', 5750', 5764', 5766', 5768', 5771',
 5773', 5743'

These perforations were treated with 167,186 gallons pad water followed by 119,250 pounds of 20/40 sand. The well was tested on Jun. 20, 1983 using a positive choke in a three hour test. The well was tested at a 3451 MCFD flow rate with a calculated AOF of 3572 MCFD. The ISIP was measured at 1059 psig.

This well has been determined to be commercial

NORTHWEST PIPELINE CORPORATION
 GAS RESERVES DEPARTMENT ECONOMIC STUDY
 COMMERCIALITY OF RATTLESN. CNY. #3

MON MAY 12, 1986
 11:16:45 AM

WORKING INT. B/PAYOUT.....%	100.0	ANNUAL COST INFLATION.....%	0.0
WORKING INT. A/PAYOUT.....%	100.0	ANNUAL PRICE INFLATION.....%	0.0
INCOME TAX.....%	48.0	NEG INC TAX USED AS FUTURE CREDIT	

GAS PRODUCTION FROM RATTLESN. CNY. #3

LAND OWNER ROYALTY.....%	12.5	OVERRIDING ROYALTY.....	0.0
AD VALOREM AND SEV TAXES...%	7.9	OPERATING COSTS (\$/MO).....	300.0
MONTH OF CAPITAL EXPENSE....	6	OPERATING COSTS (% OF PROD).	0.0
DRILLING COSTS (\$1000).....	277.7	TANGIBLE \$ (% OF DRILLING \$)	36.9
SALVAGE VALUE (\$1000).....	0.0		

INITIAL MONTH	MCF/D	% DECLINE	TO MCF/D	ENDING MONTH
12	505.0	57.8	470.0	13
13	470.0	100.0	225.0	14
14	225.0	96.8	169.0	15
15	169.0	89.6	140.0	16
16	140.0	100.0	25.0	17
17	25.0	48.8	16.0	25
25	16.0	-193.7	47.0	37
37	47.0	-2118.2	102.0	40
40	102.0	9.6	17.0	252
252	17.0	100.0	0.0	253

YEAR	PRICE \$/ MCF	AVG MCF/D	ANNUAL MCF	ROYALTY MCF	REVENUE AFTER ROYALTY \$1000
1983	3.22	42	15371.	1921.	43.
1984	3.22	97	35608.	4451.	100.
1985	3.22	27	10043.	1255.	28.
1986	3.22	90	32700.	4087.	92.
1987	3.22	90	32972.	4122.	93.
1988	3.22	82	29792.	3724.	84.
1989	3.22	74	26919.	3365.	76.
1990	3.22	67	24323.	3040.	69.
1991	3.22	60	21977.	2747.	62.
1992	3.22	54	19857.	2482.	56.
1993	3.22	49	17942.	2243.	51.
1994	3.22	44	16212.	2026.	46.
1995	3.22	40	14648.	1831.	41.
1996	3.22	36	13235.	1654.	37.
1997	3.22	33	11959.	1495.	34.
1998	3.22	30	10805.	1351.	30.
1999	3.22	27	9763.	1220.	28.
2000	3.22	24	8822.	1103.	25.
2001	3.22	22	7971.	996.	22.
2002	3.22	20	7202.	900.	20.
2003	3.22	18	6507.	813.	18.
TOTAL.....			374623.	46828.	1056.

NORTHWEST PIPELINE CORPORATION
 GAS RESERVES DEPARTMENT ECONOMIC STUDY
 COMMERCIALITY OF RATTLESN. CNY. #3

MON MAY 12, 1986
 11:16:45 AM

WORKING INT. B/PAYOUT.....%	100.0	ANNUAL COST INFLATION.....%	0.0
WORKING INT. A/PAYOUT.....%	100.0	ANNUAL PRICE INFLATION....%	0.0
INCOME TAX.....%	48.0	NEG INC TAX USED AS FUTURE CREDIT	
UNIT OF PRODUCTION DEPRECIATION			

DISCOUNT	****PRESENT VALUE*****		DISCOUNTED PROFIT TO**	
RATE	***** \$1000 *****		***INVESTMENT RATIO***	
*** % **	BEFORE TAX	AFTER TAX	BEFORE TAX	AFTER TAX
25.8	0.		0.00	RATE OF RETURN B.T.
17.2		0.		0.0 RATE OF RETURN A.T.
15.0	112.	19.	0.40	0.07

YEAR	INCOME	**PROJECT EXPENSES IN \$1000*				****CASH FLOW ANALYSIS IN \$1000****				
	\$1000	***	*****	AD.V.	*****	*****	**CUM	*****	*****	*****
NET*	CAPI-	***	SEV.	PROD.	*****	BEFORE	BEFORE	TAXED	INCOME	AFTER
*****	*TAL*	DEPR.	TAXES	COSTS	*****	*TAXES	TAXES	INCOME	TAXES	TAXES
1983	43	278	4	3	0	-238	-238	-140	0	-238
1984	100	0	10	8	4	89	-149	79	0	89
1985	28	0	3	2	4	22	-127	20	0	22
1986	92	0	9	7	4	81	-46	72	15	66
1987	93	0	9	7	4	82	36	73	35	47
1988	84	0	8	7	4	74	110	66	31	42
1989	76	0	7	6	4	66	176	59	28	38
1990	69	0	7	5	4	59	236	53	25	34
1991	62	0	6	5	4	53	289	47	23	31
1992	56	0	5	4	4	48	337	42	20	28
1993	51	0	5	4	4	43	380	38	18	25
1994	46	0	4	4	4	38	418	34	16	22
1995	41	0	4	3	4	34	453	30	15	20
1996	37	0	4	3	4	31	484	27	13	18
1997	34	0	3	3	4	27	511	24	12	16
1998	30	0	3	2	4	24	535	21	10	14
1999	28	0	3	2	4	22	557	19	9	13
2000	25	0	2	2	4	19	576	17	8	11
2001	22	0	2	2	4	17	593	15	7	10
2002	20	0	2	2	4	15	608	13	6	9
2003	18	0	2	1	4	13	622	11	6	8
TOTAL	1056	278	103	84	73	622	0	622	299	323

PAYOUT DURING MONTH 7 OF YEAR 5