

590-88

LAND DEPARTMENT

P.O 80X 8900 SALT LAKE CITY, UTAH 84108-0899 801-584-7215

October 11, 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 32-7 Unit #14-08-001-441
San Juan County, New Mexico
NOTICE OF COMPLETION OF NON-COMMERCIAL WELL
Mesaverde Formation

### Gentlemen:

Pursuant to the provisions of Section II(a) of the San Juan 32-7 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 Mesaverde formation.

The well data is as follows:

The San Juan 32-7 Mesaverde Unit #83 well is located 460 feet from the south line and 660 feet from the west line, Section 28, Township 32 North, Range 7 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on August 2, 1985 and completed in the Mesaverde formation on October 15, 1985. The plug back depth is 6100'. The Mesaverde formation was perforated with 31 holes at the following depths:

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5574', 5676', 5736', 5742', 5748', 5754', 5760', 5766', 5772', 5814', 5818', 5860', 5868', 5874', 5880', 5886', 5892', 5898', 5912', 5922', 5928', 5934', 5952', 5958', 5964', 5986', 5993', 6002', 6010', 6030', 6054'
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Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 11, 1988 Page 2

The Mesaverde formation was hydraulically fractured with 2047 barrels of fluid carrying 100,000 pounds of 20/40 mesh sand. On November 4, 1985 the Mesaverde formation was tested using a positive choke. During the 3-hour test the well produced 303 Mcf of gas, flowing at a rate of 2423 Mcfd. The calculated AOF was 2667 Mcfd. The shut-in pressure prior to the test was 1122 psig.

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

and I. Eller

Darrell L. Gillen

Supervisor, Land Department

DLG/cg Attachments

cc: Working Interest Owners

K. J. Štracke

W. S. West

L. G. Loving

C. N. Potter

M. H. Johnson

R. P. Gregory

R. L. Glenn

L. K. Leaver

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission October 11, 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		
	and the off conservation commission		
APPROVED		DATE	
	Commissioner of Public Lands		
	Subject to like approval by the		
	Area Oil and Gas Supervisor		
	and the Oil Conservation Commission		
4 D D D O V C D		DATE	10-10 00
APPROVED	Oix Commission	DATE _/	10-20-88
	Oil Conservation Commission		
	Subject to 1/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 32-7 Unit #83 Well, Mesaverde Formation.

ELIZABETH CALLOWAY 4801 ST. JOHNS DRIVE DALLAS, TX 75205 FRED E, TURNER ONE ENERGY SQUARE, SUITE 852 4925 GREENVILLE AVENUE DALLAS, TX 75206-4079

J. GLENN TURNER, JR. 500 LTV CENTER 2001 ROSS AVENUE DALLAS, TX 75201 JOHN L. TURNER 8585 NORTH STEMMONS, SUITE 925N DALLAS, TX 75247 MARY FRANCIS TURNER, JR. C/O MERCANTILE NAT'L BANK AT DALLAS P.O. BOX 225415 DALLAS, TX 75265

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

NORTHWEST PIPELINE CORPORATION GAS RESERVES DEPARTMENT ECONOMIC STUDY S. J. 32-7 UNIT #83 MV (85967)

FRI SEPTEMBER 30, 19 88 9:21:42 AM

0.0	110:
ANNUAL COST INFLATION% ANNUAL PRICE INFLATION%	NEG INC TAX USED AS FUTURE CREDIT
100.0	36.0
WORKING INT. B/PAYOUT%	INCOME TAX

UNIT UF PRODUCTION DEPRECIATION

GAS PRODUCTION FROM SAN JUAN 32-7 #83 MV

LAND OWNER ROVALTY.........\* 12.5 OVERIDING ROVALTY......

AD VALOREM AND SEV TAXES...\* 10.4 OPERATING COSTS (\$/MO).....

MONTH OF CAPITAL EXPENSE.... 1 OPERATING COSTS (% OF PROD).

DRILLING COSTS (\$1000)..... 277.5 TANGIBLE \$ (% OF DRILLING \$)

SALVAGE VALUE (\$1000).....

0.0 304.0 0.0 36.1

ENDING MONTH	15	21	23	45	57	129	189	249	250
TO MCF/D	1	64.0	44.0	35.0	30.0	18.0	15.0	12.0	0.0
¥ DECLINE	98.6	53.6	89.4	11.7	14.3	8.2	3.6	4.4	100.0
MCF/D	550.0	94.0	64.0	44.0	35.0	30.0	18.0	15.0	12.0
INITIAL	10	15	21	23	45	57	129	189	249

YEAR	BEG. YR \$/ MCF	AVG MCF/D	ANNUAL	Z L	EVENUE AFT
1987	2.20	101	36756.	4595.	68.
1988	7	84	30815.	85	20.
1989	1.25	4	14874.	ū	16.
1990	1,25	36	13114.	1639.	14.
1991	1.25	31	11357.	1420.	12.
1992	1.25	28	10246.	1281.	-11.
1993	1.25	56	9410.	1176.	10.
1994	1.25	24	8642.	1080.	.6
1995	1.25	22	6	992.	.6
1996	1,25	20	7289.	911.	.89
1997	1,25	18	6707.	838.	7.
1998	1.25	17	6388.	798.	7.
1999		17	6159.	770.	7.
2000	1,25	16	5938.	742.	.9
2001	1.25	16	5726.	716.	.9
2002	1.25	15	5519.	.069	<b>.</b>
2003	1.25	14	5289.	. 199	.9
2004	1,25	14	5058.	632.	.9
2005	1.25	13	4837.	0	5.
2006	1.25	13	4626.	578.	S
2007	1,25	6	3337.	417.	4
TOTAL	• • • • • • • • • • • • • • • • • • • •	:	210020.	26253.	274.

NORTHWEST PIPELINE CORPORATION GAS RESERVES DEPARTMENT ECONOMIC STUDY S. J. 32-7 UNIT #83 MV (85967)

FRI SEPTEMBER 30, 19 88 9:21:42 AM ANNUAL COST INFLATION....% 0.0
ANNUAL PRICE INFLATION....% 0.0
NEG INC TAX USED AS FUTURE CREDIT 

RATE OF RETURN B.T. 0.0 RATE OF RETURN A.T. -0.58 DISCOUNTED PROFIT TO\*\*
\*\*\*INVESTMENT RATIO\*\*\*
BEFORE TAX AFTER TAX
0.00 -0.58 \*\*\*\*PRESENT VALUE\*\*\*\*\* \*\*\*\*\*\* \$1000 \*\*\*\*\*\*\*\* BEFORE TAX AFTER TAX 0. -160. -160. DISCOUNT \*\*RATE\*\* \*\*\* % \*\* F -9.3

00**** ***** AFTER	TAXES	-217	4	-	6	7	9	9	2	4	က	၈	က	2	2	2	2	2	-	-	-	- 1	-105
IN \$10 ***** INCOME	TAXES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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T EXPEN ****	DEPR.	181	15	7	9	2	ស	4	4	4	က	က	က	က	က	က	က	ဗ	2	2	2	7	1001
**PROJECT EXPENSES IN **** **** AD.V. CAPI- **** SEV.	*TAL*	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	278
INCOME **	*	1 89	20	16	4	12	=	01	o	6	89	7	7	7	7	9	9	9	9	S	z	4	274
###	œ	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL

THIS PROJECT DOES NOT PAYOUT

NORTHWEST PIPELINE RESERVOIR ENGINEERING SUMMARY @ 14.73 PSIA SAN JUAN 32-7 UNIT #87 MV

1001/0.000 2.05/ 0.78 : 0.874810	0.125190	٥			251 30.9									1 1 1 1 1 1
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0.000 46.589 -46.589	52	MCF PS	0	0	0	0	0	0	0	0	0	11344 2	7443 2	- 1
INITIAL MMCF: CUMULATIVE: REMAINING:	4AT10	DAYS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INITIAL CUMULAT REMAINI	R.L.RAT		0	0	0	0	0	0	0	0	0	0	0	0
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00	2/03/	DAYS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JT:859	-RL/WS	PSIG	0	0	0	0	0	0	0	0	0	0	0	0
METER/UT:85967/0 N.M.P.M.:T 32N R FOOTAGE.: OF	S DATE-RL/WS:	MCF	0	0	0	0	0	0	0	0	0	0	0	0
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7 UNIT # SAVERDE TION OPF	SAN JUAN GATHERING SYSTEM	MCF	0	0	0	0	0	0	0	0	0	0	0	0
45-26376-0000 SJ 32-7 UNIT NEW MEXICO BLANCO MESAVERDE FST PIPELINE CORPORATION OP	GATHERIN	MONTH	NAC	FEB	MAR	APR	MAY	NO7	100	AUG	SEP	OCT	>0N	DEC
6-000 ICO B	JUAN 9787	DAYS	0	0	0	0	0	0	0	0	0	0	70	175
-2637 W MEX T PIP	SAN 1070	MCF PSIG DAYS	0	0	0	0	0	0	0	0	0	0	289	248
API:30-045-26376-0000 SJ 32-7 UNIT #83 NP? NEW MEXICO BLANCO MESAVERDE NORTHWEST PIPELINE CORPORATION OPFRATOR	NWP SAN JUAN D DATE(MMDDYY): 10/09/87	MCF	0	0	0	0	0	0	0	0	0	0	24385	22204
AF	r n nate	YEAR	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988



468-88

LAND DEPARTMENT

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

August 1, 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 32-7 Unit, #14-08-001-441 San Juan County, New Mexico

1988 Drilling Program

### Gentlemen:

The 1988 Drilling Program filed on July 5, 1988, for the San Juan 32-7 Unit has been approved by the Regulatory Agencies as follows:

Bureau of Land Management 7/25/88 Commissioner of Public Lands 7/21/88 Oil Conservation Commission 7/8/88

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen Supervisor, Land/NGPA

DLG/cg Attachment

cc: Working Interest Owners

K. J. Štracke
P. C. Thompson

ELIZABETH CALLOWAY 4801 ST. JOHNS DRIVE DALLAS, TX 75205 FRED E. TURNER ONE ENERGY SQUARE, SUITE 852 4925 GREENVILLE AVENUE DALLAS, TX 75201

J. GLENN TURNER, JR. 500 LTV CENTER 2001 ROSS AVENUE DALLAS, TX 75206 JOHN L. TURNER 8585 NORTH STEMMONS, SUITE 925N DALLAS, TX 75247 MARY FRANCIS TURNER, JR. C/O MERCANTILE NAT'L BANK AT DALLAS P.O. BOX 225415 DALLAS, TX 75265

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

PHILLIPS PETROLEUM COMPANY ATTN: DAVID S. SMITH 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

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

33 32-7 (200) 3180 (015)

Morthwest Pipeline Corporation ATTh: Darrell L. Gillen P.O. Box 8900 Sait Lake City, UT 84108-0899

#### Gentlemen:

Two approved copies of your 1988 Plan of Development for the San Juan 32-7 Unit area, San Juan County, New Mexico are enclosed. Such plan, proposing no development drilling during 1988, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Starting with the 1989 Plan of Development, please provide the following information in your annual Plan of Development.

- 1. A summary of operations for the past year which should include up-to-date maps showing the latest geologic interpretations, all wells and participating area boundaries. Should there be no changes from one year to another, reference may be made to the most recent map submitted.
- 2. A list showing the status of all wells.
- 3. Performance curves covering the productive life of each horizon under a participating area, including injectivity curves.
- 4. Your plans for development within the unit area for the next year.
- 5. Pertinent data as to the effectiveness of the enhanced recovery project (if applicable). This information should include data on current and cumulative water injection rates, current and cumulative water, gas, and oil production and current water—oil ratios. A short discussion as to the general progress of the flood and any significant changes in any phase of the project should also be included.

All plans of development are to be filed in triplicate.

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

Sincerely,

Isl Gary A. Stephens

FOR

Assistant District Manager Mineral Resources

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own of Pub. Lands

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## State of New Mexico

SLO REF NO OG-844



W.R. HUMPHRIES COMMISSIONER



### Commissioner of Public Lands

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

July 21, 1988

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

> Re: 1988 Plan of Development San Juan 32-7 Unit

> > San Juan 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

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

WRH/FOP/pm encls. cc: OCD BLM



416-88

LAND DEPARTMENT

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

July 5, 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 32-7 Unit, #14-08-001-441
San Juan County, New Mexico
Approval of Extension of Time to Drill Intervening
Drilling Block Wells

### Gentlemen:

By letter dated April 5, 1988, Northwest Pipeline Corporation requested an extension of time to drill Intervening Drilling Block Wells in the referenced unit. This request has been approved by the BLM June 1, 1988 and by the Commissioner of Public Lands June 15, 1988, and extends the time for drilling said Intervening Drilling Block Wells to July 1, 1989.

A copy of this letter is being sent to the Working Interest Owners shown on the attached sheet.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen Supervisor, Land/NGPA

DLG:cg Attachment

cc: Working Interest Owners

K. J. Stracke P. C. Thompson

ELIZABETH CALLOWAY 4801 ST. JOHNS DRIVE DALLAS, TX 75205 FRED E. TURNER ONE ENERGY SQUARE, SUITE 852 4925 GREENVILLE AVENUE DALLAS, TX 75201

J. GLENN TURNER, JR. 500 LTV CENTER 2001 ROSS AVENUE DALLAS, TX 75206 JOHN L. TURNER 8585 NORTH STEMMONS, SUITE 925N DALLAS, TX 75247 MARY FRANCIS TURNER, JR. C/O MERCANTILE NAT'L BANK AT DALLAS P.O. BOX 225415 DALLAS, TX 75265

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

PHILLIPS PETROLEUM COMPANY ATTN: DAVID S. SMITH 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

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

## NORTHWEST PIPELINE CORPORATION ONE OF THE WILLIAMS COMPANIES

414-88

LAND DEPARTMENT

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

July 5, 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 32-7 Unit, #14-08-001-441 San Juan County, New Mexico 1988 Drilling Program

#### 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 32-7 Unit on acreage committed to the unit is as follows:

Fruitland, commercial	2
Fruitland/Pictured Cliffs, commercial	1
Pictured Cliffs, commercial	12
Pictured Cliffs, non-commercial	3
Pictured Cliffs/Mesaverde, commerciality	
undetermined	1
Pictured Cliffs/Mesaverde, commercial	2
Pictured Cliffs/Mesaverde, (Pictured Cliffs	
non-commercial, Mesaverde commercial)	1
Pictured Cliffs/Mesaverde, (Pictured Cliffs	
undetermined, Mesaverde commercial)	1
Mesaverde, commercial	33
Mesaverde, non-commercial	1

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission July 5, 1988 Page 2

Mesaverde, plugged and abandoned	4
Mesaverde/Dakota, commercial	1
Mesaverde/Dakota, (Mesaverde commercial,	
Dakota non-commercial	2
Dakota, commercial	3
Dakota, commerciality undetermined	1
Dakota, non-commercial	10
IATOT	78

Pursuant to Section 10 of the San Juan 32-7 Unit Agreement, Northwest Pipeline Corporation is submitting a Drilling Program for the calendar year 1988. 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

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 June 5, 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	DATE	
APPROVED	Commissioner of Public Lands Subject to like approval by the Area Oil and Gas Supervisor and the Oil Conservation Commission	DATE	
APPROVED <sub>(</sub>	Oil Conservation Commission Subject to like approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands	DATE	7-8-88

The foregoing approvals are for the 1988 Drilling Program for the San Juan 32-7 Unit #14-08-001-441.

ELIZABETH CALLOWAY 4801 ST. JOHNS DRIVE DALLAS, TX 75205 FRED E. TURNER ONE ENERGY SQUARE, SUITE 852 4925 GREENVILLE AVENUE DALLAS, TX 75201

J. GLENN TURNER, JR. 500 LTV CENTER 2001 ROSS AVENUE DALLAS, TX 75206 JOHN L. TURNER 8585 NORTH STEMMONS, SUITE 925N DALLAS, TX 75247 MARY FRANCIS TURNER, JR. C/O MERCANTILE NAT'L BANK AT DALLAS P.O. BOX 225415 DALLAS, TX 75265

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

PHILLIPS PETROLEUM COMPANY ATTN: DAVID S. SMITH 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

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

T =

### State of New Mexico

SLO REF NO OG-820



COMMISSIONER



### Commissioner of Public Lands

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

June 15, 1988

Northwest Pipeline Corporation Attn: Mr. Darrell L. Gillen P. O. Box 8900 Salt Lake City, UT 84108-08900

Re: San Juan 32-7 Unit, San Juan County, New Mexico, Application for Approval of Extension of Time to Drill Intervening Drilling Block wells

Gentlemen:

This office has been advised by the Bureau of Land Management, that your application Dated April 5, 1988, requesting an additional extension of time to drill two intervening drilling block wells in the San Juan 32-7 Unit area has been approved.

The Commissioner of Public Lands has this date also approved the above extension until July 1, 1989 to commence drilling wells on the intervening drilling blocks in the  $E^{1/2}_{7}$  Section 29 and  $W^{1/2}_{7}$  Section 33, Township 32 North, Range 7 West, San Juan County, New Mexico.

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.

OCD

## NORTHWEST PIPELINE CORPORATION ONE OF THE WILLIAMS COMPANIES

221-88

LAND DEPARTMENT

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

April 5, 1988

420

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 32-7 Unit #14-08-001-441
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 #83 MV, located in T32N, R7W, Sec. 28: W/2. The drilling of this well created two (2) intervening drilling blocks; Sec. 29: E/2 and Sec. 33: W/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

Dwell L. Gillen
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	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
APPROVED	Oil Conservation Commission Subject to like approval by the Area Oil and Gas Supervisor and the Commissioner of Public Lands	DATE 4-15-88

ELIZABETH CALLOWAY 4801 ST. JOHNS DRIVE DALLAS, TX 75205

FRED E. TURNER
ONE ENERGY SQUARE, SUITE 852
4925 GREENVILLE AVENUE
DALLAS, TX
75201

J. GLENN TURNER, JR.
500 LTV CENTER
2001 ROSS AVENUE
DALLAS, TX
75206

JOHN L. TURNER 8585 NORTH STEMMONS, SUITE 925N DALLAS, TX 75247

MARY FRANCIS TURNER, JR.
C/O MERCANTILE NAT'L BANK AT DALLAS
P.O. BOX 225415
DALLAS, TX
75265

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

PHILLIPS PETROLEUM COMPANY ATTN: DAVID S. SMITH 8055 E. TUFTS AVE. PKWY. DENVER, CO 80237

SOUTHLAND ROYALTY COMPANY 3535 E. 30TH STREET FARMINGTON, NM 87499 State of New Mexico







SLO REF NO. OG-584

### Commissioner of Public Lands

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

November 23, 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 Third Expanded Participating Area Dakota Formation Effective 5-1-81

Gentlemen:

This office is in receipt of your letter of September 14, 1987, wherein as operator of the San Juan 32-7 Unit, you have requested our approval of the Third Expanded Participating Area for the Dakota Formation, San Juan County, New Mexico.

The Commissioner of Public Lands has this date approved your application. The Third Expansion to the Dakota Formation Participating Area adds 640 acres described as the N/2 of Section 28 and the N/2 of Section 35, Township 32 North, Range 7 West, NMPM. This expansion is predicated upon the successful completion of the Unit Well Nos. 63 and 69.

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

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

FLOYD O. PRANDO, Director Oil and Gas Division

(505) 827-5744

 $\mathtt{WRH/FOP/pm}$ 

encls.

cc: OCD-Santa Fe, New Mexico

BLM-Albuquerque, New Mexico

GULRAM

TRD Oll and Gas Processing



505-87

LAND DEPARTMENT

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

November 10, 1987

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 32-7 Unit #14-08-001-441 San Juan County, New Mexico

APPROVAL OF THE THIRD EXPANDED PARTICIPATING AREA Dakota Formation Effective May 1, 1981

### Gentlemen:

The referenced approval of the Third Expanded Participating Area in the San Juan 32-7 Dakota Unit has been approved by the Bureau of Land Management on October 7, 1987.

Please note that in tract 1 the acreage has changed. This is due to a resurvey. According to the BLM even though the resurvey took place in 1969 the additional acreage will be included from this expansion forward and will have no impact on previously approved expansions.

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

Assistant District Manager, Minerals Commissioner of Public Lands Oil Conservation Commission November 6, 1987 Page 2

Sincerely,

NORTHWEST PIPELINE CORPORATION

Danell L. Gillen

Supervisor, Land/NGPA

DLG/cg

Attachments

cc: Working Interest Owners

K. J. Stracke

W. O. Curtis

L. G. Loving

C. N. Potter

R. L. Glenn

M. H. Johnson

W. S. West

L. L. Fullmer

P. A. Rodgers

N. K. Zunino

# WORKING INTEREST OWNERS SAN JUAN 32-7 UNIT DK

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

Phillips Petroleum Company Attn: David S. Smith 8055 E. Tufts Ave. Pkwy. Denver, CO 80237



### United States Department of the Interior

# BUREAU OF LAND MANAGEMENT ALBUQUERQUE DISTRICT OFFICE

435 Montano N.E. Albuquerque, New Mexico 87107



San Juan 32-7 Unit 3160 (015)

OCT 0 7 1987

Northwest Pipeline Corporation ATTN: Darrell L. Gillen PO Box 8900 Salt Lake City, UT 84108

#### Gentlemen:

We have received your letter of September 14, 1987. You requested the approval of the third expanded Participating Area, Dakota Formation, San Juan 32-7 Unit, San Juan County, New Mexico. The application for approval of the third revision seeks to add 640 acres described as the  $N_2^1$  Section 28 and the  $N_2^1$  Section 35, T. 32 N., R. 7 W., to the Dakota Participating Area contributing to this area is the completion of the San Juan 32-7 Unit Well No. 69 and San Juan 32-7 Unit Well No. 63. The third revision was approved on this date and is effective May 1, 1981.

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

Sincerely,

For District Manager

Enclosure



OCT 47 88.

Sen Jean 31-7 Unit 3160 (315)

doranwest Fipeline Corporation

ATTI: Dairei: L. Gillon

20 sex 8966

Sait bere City, UT 34108

#### Gentlemen:

We have received your letter of September 14, 1987. You requested the approval of the third expanded Participating Area, Dakota Formation, San Juan 32-7 Unit, San Juan County, New Henico. The application for approval of the taird revision seeks to adm 640 acres described as the N<sup>3</sup> Section 35 and the N<sub>3</sub> Jection 35, T. 32 n., R. 7 W., to the Dakota Participating Area contributing to this area is the completion of the San Juan 32-7 Unit Well No. 35 and San Juan 32-7 Unit Well No. 35 and San Juan 32-7 Unit Well No. 35 date and is effective May 1, 1981.

If you have any questions regarding the above action, please contact Gail keller at the above address or telephone (503) 766-2841.

Sincerely,

(Orlg. Signed) CORT A. STEAHENS

For District Manager

unclosure

cc:
NH-016
Com Public Lands w/o enc.
AMOCD w/o enc.
015:GKeller:rvh:10/2/87:3538N



LAND DEPARTMENT

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

September 14, 1987

135-85 0609t-46

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

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

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

Re: San Juan 32-7 Unit #14-08-001-441 San Juan County, New Mexico

<u>APPLICATION FOR APPROVAL OF THE THIRD EXPANDED PARTICIPATING AREA</u>
Dakota Formation
Effective May 1, 1981

#### Gentlemen:

Pursuant to the provisions of Section 11(b) of the San Juan 32-7 Unit Agreement #14-08-001-441, NORTHWEST PIPELINE CORPORATION, as Unit Operator, hereby respectfully requests approval of the Third Expanded Participating Area for the Dakota Formation.

This proposed revision of the participating area for the Dakota Formation is predicated upon the determination by Northwest Pipeline Corporation, as Unit Operator, that the following San Juan 32-7 Unit Dakota wells, which were completed outside the limits of the existing Dakota Participating Area, are capable of producing unitized substances in paying quantities from the Dakota Formation.

Minerals Management Service Commissioner of Public Lands Oil Conservation Commission September 14, 1987 Page 2

### THIRD EXPANDED PARTICIPATING AREA - Effective May 1, 1981

Description of Land

No. of Acres

Township 32 North, Range 7 West, N.M.P.M.

640.00

Section 28: N/2 Section 35: N/2

The well data is as follows:

The San Juan 32-7 Unit #63 well is located 1795 feet from the North line and 1575 feet from the East line, Section 28, Township 32 North, Range 7 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on January 4, 1981 and completed on May 15, 1981 in the Dakota Formation at a plug back depth of 8120 feet. The Dakota Formation was perforated with twelve holes between the following depths:

8118' to 8184'

These perforations were sand-water fractured with 21,500 gallons of treated fluid and 50,000 pounds of 20/40 sand. The well was shut-in with a SIP of 2,695 psig. On May 15, 1981 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 672 Mcf/D with a calculated AOF of 674 Mcf/D.

The San Juan 32-7 #69 well is located 860 feet from the North line and 1570 feet from the East line, Section 35, Township 32 North, Range 7 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on February 2, 1981 and completed on May 27, 1981. The Dakota Formation was perforated with eighteen holes between the following depths:

8212' to 8278'

These perforations were fractured with 25,500 gallons of fluid and 46,000 pounds of 20/40 sand. The well was shut-in with a SIPT of 2,775 psig and SIPC of 2770 psig. On May 27, 1981 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 530 Mcf/D with a calculated AOF of 533 Mcf/D.

In support of these applications, the following listed Exhibits are made a part thereof:

### Exhibit "A"

Ownership maps reflecting the boundaries of the Unit and the Proposed Third Expansion of the Participating Area of the Dakota Formation within the San Juan 32-7 Unit.

Minerals Management Service Commissioner of Public Lands Oil Conservation Commission September 14, 1987 Page 3

### Exhibit "B"

Geological Reports on the above cited Participating Areas of the Dakota Formation within the San Juan 32-7 Unit.

### Exhibit "C"

Figure No. 1: San Juan 32-7 Dakota Structure Map Figure No. 2: San Juan 32-7 Dakota Isopach Map

Figure No. 3: San Juan 32-7 Dakota Sand Thickness Map

### Exhibit "D"

Table No. I: Schedule of San Juan 32-7 Unit Dakota Production

Attached is Schedule IV showing the proposed expansion cited above for the Dakota Formation in the San Juan 32-7 Unit Area. This Schedule describes the participating area, shows the percentage of unitized substances allocated to each unitized tract, and the percentage of ownership in the tracts.

If this application referenced above meets with your approval, please indicate such approval in the space provided on the attached sheet and return an approved copy for our files.

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

Sincerely,

Darrell L. Gillen

Supervisor, Land/NGPA

Dovell Gill

DLG:1m:js
Attachments

cc: Working Interest Owners

K. J. Stracke

W. O. Curtis

L. G. Eaton

R. P. Gregory

M. H. Johnson

L. G. Loving

W. S. West

Minerals Management Service Commissioner of Public Lands Oil Conservation Commission September 14, 1987 Page 4

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	
		Q 7/07
APPROVED	Day Monument	DATE 9-21-87
	Oil Conservation Division	
	Subject to like approval by the	
	Assistant District Manager, Minerals	
	and the Commissioner of Public Lands	

The foregoing is the approval for the THIRD EXPANDED PARTICIPATING AREA, Dakota Formation, in the San Juan 32-7 Unit.

# WORKING INTEREST OWNERS SAN JUAN 32-7 UNIT (DK)

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

Phillips Petroleum Company Attn: David S. Smith 8055 E. Tufts Ave. Parkway Denver, CO 80237

SCHEDULE IV
THIRD EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION
SAN JUAN 32-7 UNIT AREA

SERIAL NUMBER	R <u>DESCRIPTION</u>	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
TRACT 1						
SF-078459	T-32-N, R-7-W Sec. 22: Lots	342.56	Royalty Working Interest	12.500000%	12.500000%	21.312230%
	1, 2, 3, 4, 5, 6, 7, 8		El Paso Natrual Gas Co. ORRI	82.500000% 5.000000%	82.500000% 5.000000%	
	0, 1, 0	•	Total	100.00000%	100.00000%	
	T-32-N, R-7-W Sec. 22: Lots	326.40	Royalty Working Interest	12.500000%	12.500000%	20.306842%
	9, 10, 11, 12, SW/4		Phillips Petroleum Co. ORRI	82.500000% 5.000000%	82.500000%	
	3W/ 4		Total	100.00000%	5.00000% 100.000000%	
TRACT 3						
SF-078472	<u>T-32-N, R-7-W</u> Sec. 28: N/2	320.00	Royalty Working Interest	12.500000%	12.500000%	19.908669%
	Sec. 26. N/2		Phillips Petroleum Co.	82.500000%	82.500000%	
			ORRI Total	5.00000%	5.00000% 100.00000%	
				100.00000	100.00000	
TRACT 6						
SF-078543	T-32-N, R-7-W Sec. 35: N/2	320.00	Royalty Working Interest	12.500000%	12.500000%	19.908669%
			Phillips Petroleum Co.	82.500000%	82.500000%	
			ORRI Total	5.00000%	5.00000%	
				122122222	1991 999 999	
TRACT 21						
Fee	T-32-N, R-7-W Sec. 7: Lot 1,	180.88	Royalty Working Interest	12.500000%	12.500000%	11.253375%
	E/2 SE/4		El Paso Natural Gas Co.	87.500000%	87.500000%	
	Sec. 8: Lot 3,		ORRI	0.000000%	0.000000%	
	E/2 SW/4		Total	100.000000%	100.000000%	

# SCHEDULE IV THIRD EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 32-7 UNIT AREA

SERIAL NUMBER	<u>DESCRIPTION</u>	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 21-A			
Fee	T-32-N, R-7-W Sec. 7: 1 acre	1.00	Royalty Working Interest	12.500000%	12.500000%	. 062215%
	out of SW/4SE/4	4SE/4	El Paso Natural Gas Co. ORRI	87.500000% 0.000000%	87.500000% 0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 22			
Fee	T-32-N, R-7-W Sec. 7: 17.09	17.09	Royalty Working Interest	12.500000%	12.500000%	1.063247%
	acres out of		El Paso Natural Gas Co.	84.500000%	84.500000%	
	E/2SE/4		ORRI Total	3.000000% 100.000000%	3.000000%	
			TRACT 25			
Fee	T-32-N, R-7-W	99.41	Royalty	12.500000%	12.500000%	6.184753%
	Sec. 8: Lot 4, W/2SW/4	•	Working Interest El Paso Natural Gas Co.	87.500000%	87.500000%	
	LUNI 7		ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	

## SCHEDULE IV THIRD EXPANDED PARTICIPATING AREA FOR THE DAKOTA FORMATION SAN JUAN 32-7 UNIT AREA

### RECAPITULATION

### Township 32 North, Range 7 West, N.M.P.M.

Section 7 (Frac): Lot 1, E/2SE/4 Section 8 (Frac): Lots 3, 4, SW/4

Section 22: All Section 28: N/2

Section 35: N/2

Total Number of Acres in Participating Area: 1,607.34
Total Number of Acres Committed to Participating Area: 1,607.34

## EXHIBIT "B"

San Juan 32-7 Unit
San Juan County, New Mexico

GEOLOGIC REPORT

DAKOTA PRODUCING INTERVAL

THIRD EXPANSION OF THE

DAKOTA PARTICIPATING AREA

NORTHWEST PIPELINE CORPORATION

Approved by

A Stracke, Director

Production Division

#### EXHIBIT "B"

San Juan 32-7 Unit San Juan County, New Mexico

Geologic Report
Dakota Producing Interval
Third Expansion of the
Dakota Participating Area

#### INTRODUCTION

The San Juan 32-7 Unit, located in the northern portion of the San Juan Basin, includes parts of Townships 31 and 32 North, Ranges 6 and 7 West, San Juan County, New Mexico. The unit area consists of 17828.51 acres.

Within the unit area, the "Dakota Producing Interval" has been tested in 18 wells. Five of these wells are considered to be commercial; twelve wells are non-commercial, and one well was plugged and abandoned.

The "Dakota Producing Interval" includes the Graneros shale (located immediately below the Greenhorn Limestone), the Dakota Sandstone, and the Upper Morrison Formation (NMOCD Order No. R-1670-C, Rule 25). This interval has been defined, and the lithology and stratigraphy have been discussed in geologic reports for adjacent units and previous expansions of the San Juan 32-7 Unit.

Included in this report as Exhibit "C" are three maps (Figures 1, 2 and 3). Figure 1 shows the configuration of the subsurface structure of the Dakota interval using mean sea level as the datum plane and the top of the Graneros shale as the mapping horizon; the contour interval is 20 feet. The most dominant structural feature is the synclinal axis of the San Juan Basin which trends in a northwest-southeast direction across the unit area.

Figure 2 is an isopachous map contoured on the net productive Upper Dakota sandstone. Net thickness was determined from radioactive and resistivity logs of wells drilled within the unit and the surrounding area: the contour interval is five feet. Productivity of the Upper Dakota Sandstone in this area apparently is significantly affected by factors (e.g. permeability) in addition to sand thickness, as evidenced by the number of non-commercial wells drilled in areas showing favorable sand development. The producing sands within the San Juan 32-7 Unit probably represent a lagoonal environment landward from a northwest-southeast trending barrier beach as represented by sands in the Allison Unit to the northeast. This is illustrated by Figure 3, which is an isorate map showing the average daily rate during the first year Sands deposited in the beach environment are more productive of production. than those deposited in the lagoonal environment.

Exhibit "D" (Table 1) is a tabulation of the Dakota gas production from the unit. The table shows monthly gas production of each well for April 1985 through March 1986. Cumulative production to April 1, 1986 is shown. The San Juan 32-7 Unit has produced 6,052,235 Mcf of gas from the Dakota Producing Interval as of April 1, 1986.

Dakota Producing Interval May 1986 Page 2

PROPOSED THIRD EXPANSION OF THE DAKOTA PARTICIPATING AREA

Effective Date: May 1, 1981

Proposed Acreage: Township 32 North, Range 7 West, N.M.P.M.

Section 28: N/2 (320 Acres) Section 35: N/2 (320 Acres)

Total Acres: 640

The Third Expansion of the Dakota Participating Area is based on log interpretation, initial test results, and production histories of the Northwest Pipeline Corporation San Juan 32-7 Unit wells #63 and #69. Production histories from surrounding wells were also used in determining the extent of this expansion. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the Dakota Producing Interval. The wells are described as follows:

The San Juan 32-7 Unit #63 well is located 1795 feet from the North line and 1575 feet from the East line, Section 28, Township 32 North, Range 7 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on January 4, 1981 and completed on May 15, 1981 in the Dakota Formation at a plug back depth of 8120 feet. The Dakota Formation was perforated with twelve holes between the following depths:

#### 8118' to 8184'

These perforations were sand-water fractured with 21,500 gallons of treated fluid and 50,000 pounds of 20/40 sand. The well was shut-in with a SIP of 2,695 psig. On May 15, 1981 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 672 Mcf/D with a calculated AOF of 674 Mcf/D.

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

The San Juan 32-7 #69 well is located 860 feet from the North line and 1570 feet from the East line, Section 35, Township 32 North Range 7 West, N.M.P.M., San Juan County, New Mexico. This well was spudded on February 2, 1981 and completed on May 27, 1981. The Dakota Formation was perforated with eighteen holes between the following depths:

#### 8212' to 8278'

These perforations were fractured with 25,500 gallons of fluid and 46,000 pounds of 20/40 sand. The well was shut-in with a SIPT of 2,775 psig and SIPC of 2,770 psig. On May 27, 1981 the well was tested and after flowing for three hours through a 3/4 inch variable choke, the well gauged 530 Mcf/D with a calculated AOF of 533 Mcf/D.

Dakota Producing Interval May 1986 Page 3

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

# NORTHWEST PIPELINE CORPORATION GAS RESERVES DEPARTMENT ECONOMIC STUDY SAN JUAN 32-7 DAKOTA UNIT COMMERCIALITY

WED AUGUST 12, 1987 4:47:44 PM

WORKING INT. B/PAYOUT% WORKING INT. A/PAYOUT% INCOME TAX% UNIT OF PRODUCTION DEPRECIATION	_	ANNUAL COST INFLATION% 0.0 ANNUAL PRICE INFLATION% 0.0 NEG INC TAX OFFSET BY OTHER INCOME
CAS DEODUCTION FROM SAN IIIAN	22 7 462	

GAS PRODUCTION FROM SAN JUAN	32-1 #03		
LAND OWNER ROYALTY%	12.5	OVERRIDING ROYALTY	0.0
AD VALOREM AND SEV TAXES%	8.5	OPERATING COSTS (\$/MO)	330.0
MONTH OF CAPITAL EXPENSE	3	OPERATING COSTS (% OF PROD).	0.0
DRILLING COSTS (\$1000)	400.0	TANGIBLE \$ (% OF DRILLING \$)	34.6
SALVAGE VALUE (\$1000)	0.0		

INITIAL	MCF/D	%	TO	ENDING
MONTH		DECLINE	MCF/D	MONTH
9	136.0	7.3	87.0	80
80	87.0	7.1	31.0	248
248	31.0	100.0	0.0	249

	BEG. YR	AVG	ANNUAL	ROYALTY	REVENUE AFTER
YEAR	\$/ MCF	MCF/D	MCF	MCF	ROYALTY \$1000
1981	4.48	45	16403.	2050.	64.
1982	4.48	128	46803.	5850.	183.
1983	4.49	119	43399.	5425.	171.
1984	4.06	110	40243.	5030.	143.
1985	3.06	102	37316.	4664.	100.
1986	2.08	95	34602.	4325.	63.
1987	1.52	88	32090.	4011.	43.
1988	1.52	82	29799.	3725.	40.
1989	1.52	76	27681.	3460.	37.
1990	1.52	70	25714.	3214.	34.
1991	1.52	65	23887.	2986.	32.
1992	1.52	61	22190.	2774.	29.
1993	1.52	56	20613.	2577.	27.
1994	1.52	52	19148.	2394.	25.
1995	1.52	49	17788.	2223.	24.
1996	1.52	45	16524.	2065.	22.
1997	1.52	42	15350.	1919.	20.
1998	1.52	39	14259.	1782.	19.
1999	1.52	36	13246.	1656.	18.
2000	1.52	34	12304.	1538.	16.
2001	1.52	21	7713.	964.	10.
TOTAL.	• • • • • • • •	• • • • •	517063.	64633.	1120.

WORKING INT. B/PAYOUT%	100.0	ANNUAL COST INFLATION%	0.0
WORKING INT. A/PAYOUT%	100.0	ANNUAL PRICE INFLATION%	0.0
INCOME TAX%	36.0	NEG INC TAX OFFSET BY OTHER INC	OME
UNIT OF PRODUCTION DEPRECIATI	ON		

DISCOUNT	****PRESENT \	/ALUE****	DISCOUNTED P	ROFIT TO**		
**RATE**	***** \$1000	******	***INVESTMEN	T RATIO***		
*** % **	BEFORE TAX	AFTER TAX	BEFORE TAX	AFTER TAX		
26.0	0.		0.00	RATE	OF RETURN	B.T.
20.6		0.		O.O RATE	OF RETURN	A.T.
15.0	121.	49.	0.30	0.12		

YEAR	INCOME *\$1000 **NET*	**PROJEC ***** CAPI- *TAL*	T EXPEN	AD.V. SEV. TAXES	\$1000* ***** PROD. COSTS	****CASF ****** BEFORE *TAXES	FLOW **CUM BEFORE TAXES	***** TAXED	S IN \$10 ****** INCOME TAXES	000**** ***** AFTER TAXES
1981	64	400	4	5	1	-343	-343	-208	 -75	-267
1982	183	0	13	16	4	164	-179	151	54	109
1983	171	0	12	15	4	152	-27	140	51	101
1984	143	0	11	12	4	127	100	116	42	85
1985	100	0	10	9	4	87	188	77	28	60
1986	63	0	9	5	4	54	241	44	16	38
1987	43	0	9	4	4	35	276	26	10	26
1988	40	0	8	3 3 3 3 3 2	4	32	309	24	9	23
1989	37	0	7	3	4	30	338	22	8	22
1990	34	0	7	3	4	27	366	20	7	20
1991	32	0	6	3	4	25	391	19	7	18
1992	29	0	6	3	4	23	414	17	6	17
1993	27	0	6		4	21	435	16	6	15
1994	25	0	5	2	4	19	454	14	5	14
1995	24	0	5	2	4	18	472	13	5	13
1996	22	0	4	2	4	16	488	12	4	12
1997	20	0	4	2	4	15	502	11	4	11
1998	19	0	4	2	4	13	516	10	3	10
1999	18	0	4	2	4	12	528	9	3	9
2000	16	0	3 2	]	4	11	539	8	3 3 2	8
2001	10	0	2	1 	3	7	546	5	2	5
TOTAL	1121	400	139	95	79	546	0	545	196	349

PAYOUT DURING MONTH 3 OF YEAR 4

# NORTHWEST PIPELINE CORPORATION GAS RESERVES DEPARTMENT ECONOMIC STUDY SAN JUAN 32-7 DAKOTA UNIT COMMERCIALITY

WED AUGUST 12, 1987 4:36:48 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%	36.0	NEG INC TAX OFFSET BY OTHER INCOME
UNIT OF PRODUCTION DEPRECIATI	ON	

GAS	PRODUCTION	FROM	SAN	JUAN	32-7	#69	DK
						_	

LAND OWNER ROYALTY%	12.5	OVERRIDING ROYALTY	0.0
AD VALOREM AND SEV TAXES%	8.6	OPERATING COSTS (\$/MO)	330.0
MONTH OF CAPITAL EXPENSE	4	OPERATING COSTS (% OF PROD).	0.0
DRILLING COSTS (\$1000)	453.3	TANGIBLE \$ (% OF DRILLING \$)	35.5
SALVAGE VALUE (\$1000)	0.0	• • •	

INITIAL	MCF/D	%	TO	ENDING
MONTH		DECLINE	MCF/D	MONTH
10 12 19 25 78 250	210.0 180.0 153.0 140.0 112.0 50.0	60.3 24.3 16.3 4.9 5.5 100.0	180.0 153.0 140.0 112.0 50.0	12 19 25 78 250 251

YEAR	BEG. YR \$/ MCF	AVG MCF/D	ANNUAL MCF	ROYALTY MCF	REVENUE AFTER ROYALTY \$1000
YEAR 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994					
1996 1997 1998 1999 2000 2001 TOTAL	1.53 1.53 1.53 1.53 1.53 1.53	67 64 60 57 54 43	24599. 23253. 21981. 20779. 19642. 15545. 682836.	3075. 2907. 2748. 2597. 2455. 1943. 85352.	33. 31. 29. 28. 26. 21. 1381.

NORTHWEST PIPELINE CORPORATION
GAS RESERVES DEPARTMENT ECONOMIC STUDY
SAN JUAN 32-7 DAKOTA UNIT COMMERCIALITY

WORKING INT. B/PAYOUT%	100.0	ANNUAL COST INFLATION% 0.0
WORKING INT. A/PAYOUT%	100.0	ANNUAL PRICE INFLATION% 0.0
INCOME TAX%	36.0	NEG INC TAX OFFSET BY OTHER INCOME
INIT OF PRODUCTION DEPRECIATI	ON	

1	DISCOUNT **RATE** *** % ** 27.8 21.9	***** BEFORE	\$1000 * TAX # O.		** ***] X BEFO	COUNTED PRINTERSTMENT ORE TAX O.00	RATIO	***  FAX  RATE  O RATE	OF RETU	
YEAR	15.0 INCOME *\$1000 **NET* *****	**PROJEC ***** CAPI- *TAL*	62. T EXPEN **** ***** DEPR.	70 NSES IN AD.V. SEV. TAXES	\$1000* ***** PROD. COSTS	0.36  ****CASH ***** BEFORE *TAXES	I FLOW E **CUM BEFORE		S IN \$10 ****** INCOME TAXES	000**** **** AFTER TAXES
1981 1982 1983 1984 1985 1986	70 226 181 153 106 78	453 0 0 0 0 0	14 12 11 11 10	6 19 16 13 9 7	1 4 4 4 4	-390 203 162 136 93 67	-390 -188 -26 111 204 271	-233 189 150 125 83 57	-84 68 54 45 30 21	-306 135 108 91 63 47

1981	70	453	4	6	1	-390	-390	-233	-84	-306
1982	226	Ō	14	19	4	203	-188	189	68	135
1983	181	0	12	16	4	162	-26	150	54	108
1984	153	0	11	13	4	136	- 111	125	45	91
1985	106	0	11	9	4	93	204	83	30	63
1986	78	0	10	7	4	67	271	57	21	47
1987	55	0	10	5	4	46	317	36	13	33
1988	52	0	9	4	4	43	360	34	12	31
1989	49	0	9	4	4	41	401	32	12	29
1990	46	0	8	4	4	38	439	30	11	27
1991	44	0	8	4	4	36	475	28	10	26
1992	41	0	7	4	4	34	509	26	10	24
1993	39	0	7	3	4	32	540	25	9	23
1994	37	0	6	3	4	30	570	23	8	21
1995	35	0	6	3	4	28	598	22	8	20
1996	33	0	6	3	4	26	624	20	7	19
1997	31	0	5	3	4	24	649	19	7	18
1998	29	0	5	3	4	23	672	18	6	17
1999	28	0	5	2	4	21	693	17	6	15
2000	26	0	5	2	4	20	713	15	6	14
2001	21	0	4	2	3	16	729	12	4	11
TOTAL	1381	453	161	119	80	729	0	729	262	466

PAYOUT DURING MONTH 3 OF YEAR 4

NORTHWEST PIPELINE RESERVOIR ENGINEERING SUMMARY @ 14.73 PSIA SJU 32-7 DK

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NORTHWEST PIPELINE RESERVOIR ENGINEERING SUMMARY @ 14.73 PSIA SJU 32-7 DK

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