NORTHWEST PIPELINE CORPORATION
ONE OF THE WILLIAMS COMPANIES

'90 APR 5 AM 9 04

215-90

LAND DEPARTMENT

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

March 29, 1990

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: Rosa Unit I, Sec. No. 587
San Juan and Rio Arriba Counties, New Mexico
1990 Plan of Development

Gentlemen:

The 1990 Plan of Development filed by letter dated February 26, 1990 for the Rosa Unit has been approved by the regulatory agencies as follows:

Bureau of Land Management	3/15/90
Oil Conservation Commission	3/6/90

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen

Darrell L. Gillen
Land Manager

DLG:cg
Attachment

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

U56N2650
03/29/90

WORKING INTEREST OWNERS
ROSA UNIT

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

COASTAL OIL & GAS CORP.
ATTN: MR. JOHN R. KENNEDY
P.O. BOX 749
DENVER, CO 80201-0749

ELIZABETH T. CALLOWAY
4801 ST. JOHNS DRIVE
DALLAS, TX 75205

FRANK A. SCHULTZ
LINCOLN PLAZA, SUITE 2160 LB-1
500 NORTH AKARD
DALLAS, TX 75201

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 BRENNAND, EXECUTOR OF
ESTATE OF J.R. BRENNAND
P.O. BOX 6616
SANTA BARBARA, CA 93160

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

LOIS J. WILLARD
P.O. BOX 5205
SANTA FE, NM 87502

MARY FRANCIS TURNER, JR.
TRUST (6743)
AMERITRUST TEXAS N.A. TRUSTEE
P.O. BOX 2320
DALLAS, TX 75221-2320

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

MITCHELL ENERGY CORPORATION
ATTN: MR. JERRY TAYLOR
555 SEVENTEENTH STREET, SUITE 3500
DENVER, CO 80202

PATRICIA PENROSE SCHIEFFER, TRUSTEE
1640 1ST CITY BANK TOWER
201 MAIN STREET
FORT WORTH, TX 76102

PHILLIPS PETROLEUM COMPANY
ATTN: JAY KIEKE
300 WEST ARRINGTON, SUITE 200
FARMINGTON, NM 87401

THE WISER OIL COMPANY
P.O. BOX 192
SISTERSVILLE, WV 26175

WILLIAM G. WEBB
2200 ROSS AVENUE, SUITE 2200
DALLAS, TX 75201-6776

WORKING INTEREST OWNERS
ROSA UNIT

WINIFRED K. PONDER
C/O TEXAS COMMERCE BANK OF EL PASO
ATTN: JULIA E. MERKT
P.O. DRAWER 140
EL PASO, TX 79980

\# 133

State of New Mexico
Commissioner of Public Lands

March 19, 1990

Northwest Pipeline Corporation
P.O. Box 8900
Salt Lake City, Utah 84018-0900

ATTN: Mr. Darrell Gillen

RE: Designation of Sub-Operator
Rosa Unit
San Juan and Rio Arriba Counties, New Mexico

Gentlemen:

We received your letter, dated October 2, 1989, and designation of sub-operator wherein Northwest Pipeline Corporation requests to relinquish its rights as Unit Operator of the Rosa Unit Fruitland formation and proposes that Meridian Oil Inc. be designated as Suboperator of the Rosa Fruitland formation. We note that Meridian Oil Inc. has accepted the duties and responsibilities of Unit Operator of the Fruitland formation and that Northwest Pipeline Corporation will continue to operate all other formations in the Rosa Unit.

The Commissioner of Public Lands hereby approves the designation of Meridian OIl Inc. as sub-operator of the Rosa Unit Fruitland formation. Two approved copies of the designation of sub-operator are enclosed for your files.

If you have any questions, please call Susan Howarth at (505) 827-5791.

Very truly yours,

W.R. HUMPHRIES,
COMMISSIONER OF PUBLIC LANDS

BY: Floyd Prando

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

MERIDIAN OIL '90 MAR 19 AM 8 32

#133

March 12, 1990

Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, New Mexico 87401

Commissioner of Public Lands
State of New Mexico
P.O. Box 1148
Santa Fe, NM 87501

Oil Conservation Division
State of New Mexico
P.O. Box 2088
Santa Fe, NM 87501

Re: Rosa Unit I Sec. No. 587
Fruitland Formation
First Supplemental
1990 Plan of Development
San Juan County, New Mexico &
Rio Arriba County, New Mexico

Gentlemen:

By letter dated February 27, 1990, Meridian Oil Inc., as Sub-Operator of the Fruitland formation for the Rosa Unit, filed a Plan of Development which proposed the drilling of the one hundred and four (104) Fruitland Coal wells.

In addition to the Plan of Development proposed by letter dated February 27, 1990, Meridian Oil Inc., as Unit Sub-Operator, desires to carry over one additional well from the 1989 Plan of Development which had received prior working interest owner approval. The well to be carried over is as follows:

WELL NAME	DESCRIPTION	FORMATION
Rosa Unit #230	N/2 Sec. 31, T31N, R5W	Fruitland Coal

Meridian Oil Inc., as Unit Sub-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 Sub-Operator or the working interest owners.

If this First Supplemental Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet and return an approved copy of the attention of the undersigned at the letterhead address.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

Kent Beers
Attorney-in-Fact

KOB:AA:gm

Rosa Unit 3.0
63+

APPROVED: ______________________________ DATED: ____________________

Bureau of Land Management
(Subject to like approval by the
Commissioner of Public Lands and
the Oil Conservation Division)

APPROVED: ______________________________ DATED: ____________________

Commissioner of Public Lands
(Subject to like approval by the
Bureau of Land Management and the
Oil Conservation Division)

APPROVED: ______________________________ DATED: 3-13-90

Oil Conservation Division
(Subject to like approval by the
Bureau of Land Management and the
Commissioner of Public Lands)

The foregoing approvals for the First Supplemental 1990 Plan of Development for the Rosa Unit I Sec. No. 587, San Juan & Rio Arriba Counties, New Mexico.

ROSA UNIT WORKING INTEREST OWNERS

Amoco Production Company

Coastal Oil & Gas Corp.

Elizabeth T. Calloway

Winifred K. Ponder

Frank A. Schultz

Fred E. Turner

J. Glenn Turner, Jr.

John Brennand, Executor

John L. Turner

Lois J. Willard

Mary Francis Truner, Jr.

Mitchell Energy Corporation

Northwest Pipeline Corporation

Patricia Penrose Schieffer, Trustee

Phillips Petroleum Company

The Wiser Oil Company

William G. Webb

NORTHWEST PIPELINE CORPORATION
ONE OF THE WILLIAMS COMPANIES

136-90

LAND DEPARTMENT

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

March 6, 1990

Assistant District Manager, Minerals
Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, NM 87401

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: Rosa Unit I Sec. No. 587
San Juan and Rio Arriba Counties, New Mexico
NOTICE OF COMPLETION OF NON-COMMERCIAL WELLS
Dakota formation

Gentlemen:

Pursuant to the provisions of Section 10 of the Rosa Unit Agreement I Sec. No. 587, Northwest Pipeline Corporation, as Unit Operator, has determined that the following described wells are not capable of producing unitized substances in paying quantities from the Dakota formation.

The well data is as follows:

The Rosa Dakota Unit #59 well is located 1190 feet from the South line and 1560 feet from the West line, Section 25, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on October 21, 1983, and completed in the Dakota formation on July 26, 1984. The Dakota formation was perforated with 110 holes between the following depths:

7867' to 8018'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 2395 psig. On August 22, 1984, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 1866 Mcf/D with a calculated AOF of 2671 Mcf/D.

The Rosa Dakota Unit #87 well is located 700 feet from the East line and 1660 feet from the North line, Section 28, Township 31 North, Range 4 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on September 10, 1981, and completed in the Dakota formation on February 23, 1982. The Dakota formation was perforated with 110 holes between the following depths:

8486' to 8544'

These perforations were sand/water fractured. This well has a 2-1/16 inch tubing string. The well was shut-in with a SIPT of 2875 psig. On April 7, 1982, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-1/16 inch tubing, the well gauged 1476 Mcf/D with a calculated AOF of 1496 Mcf/D.

The Rosa Dakota Unit #97 well is located 790 feet from the West line and 1850 feet from the South line, Section 31, Township 31 North, Range 5 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on October 6, 1983, and completed in the Dakota formation on November 27, 1982. The Dakota formation was perforated with 184 holes between the following depths:

7968' to 8160'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 2303 psig. On December 17, 1985, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 1766 Mcf/D with a calculated AOF of 1792 Mcf/D.

The Rosa Dakota Unit #98 well is located 790 feet from the West line and 1870 feet from the South line, Section 23, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on September 13, 1983, and completed in the Dakota formation on December 21, 1983. The Dakota formation was perforated with 80 holes between the following depths:

7779' to 7921'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 1724 psig. On March 28, 1984, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 4016 Mcf/d with a calculated AOF of 4392 Mcf/D.

The Rosa Dakota Unit #99Y well is located 855 feet from the South line and 1790 feet from the West line, Section 26, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on June 21, 1984, and completed in the Dakota formation on October 1, 1984. The Dakota formation was perforated with 218 holes between the following depths:

7896' to 8062'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 2445 psig. On October 26, 1984, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 3365 Mcf/D with a calculated AOF of 3393 Mcf/D.

The Rosa Dakota Unit #101 well is located 1760 feet from the South line and 1850 feet from the West line, Section 24, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 19, 1983, and completed in the Dakota formation on August 1, 1984. The Dakota formation was perforated with 192 holes between the following depths:

7838' to 7988'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 2248 psig. On August 22, 1984, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 1733 Mcf/D with a calculated AOF of 1785 Mcf/D.

The Rosa Dakota Unit #102 well is located 900 feet from the East line and 1790 feet from the South line, Section 30, Township 31 North, Range 5 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on December 15, 1983, and completed in the Dakota formation on August 22, 1984. The Dakota formation was perforated with 56 holes between the following depths:

7948' to 8110'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with a SIPT of 2566 psig. On October 3, 1984, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 2627 Mcf/D with a calculated AOF of 3442 Mcf/D.

The Rosa Dakota Unit #118 well is located 1850 feet from the North line and 790 feet from the East line of Section 35, Township 32 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on August 13, 1984, and completed in the Dakota formation on October 19, 1984. The Dakota formation was perforated with 156 holes between the following depths:

8210' to 8477'

These perforations were sand/water fractured. This well has a 2-3/8 inch tubing string. The well was shut-in with s SIPT of 2900 psig. On February 11, 1985, the well was tested and after flowing for three hours through a 3/4 inch variable choke on the 2-3/8 inch tubing, the well gauged 2438 Mcf/D with a calculated AOF of 2488 Mcf/D.

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

Darrell L. Gillen
Land Manager

DLG/kh

Attachments

cc: Working Interest Owners
W. O. Curtis
P. C. Thompson
L. G. Loving
C. N. Potter
M. H. Johnson
M. V. Polanchek
R. L. Glenn
J. K. Nielsen
L. L. Fullmer
N. K. Zunino

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 Roy E. Johnson DATE 3-12-90
Oil Conservation Commission
Subject to like 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 Wells for the Rosa Unit #59, #87, #97, #98, #99Y, #101, #102, and #118 Wells, Dakota formation.

U56N2650
03/06/90

WORKING INTEREST OWNERS
ROSA UNIT

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

COASTAL OIL & GAS CORP.
ATTN: MR. JOHN R. KENNEDY
P.O. BOX 749
DENVER, CO 80201-0749

ELIZABETH T. CALLOWAY
4801 ST. JOHNS DRIVE
DALLAS, TX 75205

FRANK A. SCHULTZ
LINCOLN PLAZA, SUITE 2160 LB-1
500 NORTH AKARD
DALLAS, TX 75201

FRED F. 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 BRENNAND, EXECUTOR OF
ESTATE OF J.R. BRENNAND
P.O. BOX 6616
SANTA BARBARA, CA 93160

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

LOIS J. WILLARD
P.O. BOX 5205
SANTA FE, NM 87502

MARY FRANCIS TURNER, JR.
C/O MERCANTILE NAT'L BANK AT DALLAS
P.O. BOX 2320
DALLAS, TX 75221

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

MITCHELL ENERGY CORPORATION
ATTN: MR. JERRY TAYLOR
555 SEVENTEENTH STREET, SUITE 3500
DENVER, CO 80202

PATRICIA PENROSE SCHIEFFER, TRUSTEE
1640 1ST CITY BANK TOWER
201 MAIN STREET
FORT WORTH, TX 76102

PHILLIPS PETROLEUM COMPANY
ATTN: JAY KIEKE
300 WEST ARRINGTON, SUITE 200
FARMINGTON, NM 87401

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

WILLIAM G. WEBB
2200 ROSS AVENUE, SUITE 2200
DALLAS, TX 75201-6776

U56N2650
03/06/90

WORKING INTEREST OWNERS
ROSA UNIT

WINIFRED K. PONDER
C/O TEXAS COMMERCE BANK OF EL PASO
ATTN: JULIA E. MERKT
P.O. DRAWER 140
EL PASO, TX 79980

WELL ECONOMICS PROGRAM (GASROR)

INPUT DATA

Date: 11/17/89
Time: 12:33 pm

PROJECT:	ROSA #59 DK	
INITIAL RATE	MCF/DAY	825
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	740.1760
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #59 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	586	1.000	586	214	806	1.67	357	.1300	311	4.2	.00	11.00	38.4	1.000	272
2	.16	206	1.000	206	75	592	1.52	114	.1300	99	4.2	.00	11.00	15.1	1.000	84
3	.16	173	1.000	173	63	517	1.28	81	.1300	70	4.2	.00	11.00	11.9	1.000	58
4	.11	149	1.000	149	54	454	1.36	74	.1300	64	4.2	.00	11.00	11.2	1.000	53
5	.11	132	1.000	132	48	400	1.49	72	.1300	63	4.2	.00	11.00	11.1	1.000	52
6	.11	118	1.000	118	43	352	1.58	68	.1300	59	4.2	.00	11.00	10.7	1.000	49
7	.11	105	1.000	105	38	309	1.86	71	.1300	62	4.2	.00	11.00	11.0	1.000	51
8	.09	94	1.000	94	34	270	2.23	77	.1300	67	4.2	.00	11.00	11.5	1.000	55
9	.09	86	1.000	86	31	236	2.49	78	.1300	68	4.2	.00	11.00	11.7	1.000	56
10	.09	78	1.000	78	29	204	2.73	78	.1300	68	4.2	.00	11.00	11.7	1.000	56
11	.09	71	1.000	71	26	176	2.96	77	.1300	67	4.2	.00	11.00	11.5	1.000	55
12	.09	65	1.000	65	24	150	3.21	76	.1300	66	4.2	.00	11.00	11.4	1.000	54
13	.09	59	1.000	59	21	126	3.28	70	.1300	61	4.2	.00	11.00	10.9	1.000	50
14	.09	54	1.000	54	20	105	3.34	65	.1300	57	4.2	.00	11.00	10.5	1.000	46
15	.09	49	1.000	49	18	85	3.41	61	.1300	53	4.2	.00	11.00	10.0	1.000	43
16	.09	44	1.000	44	16	68	3.48	56	.1300	49	4.2	.00	11.00	9.6	1.000	39
17	.09	40	1.000	40	15	51	3.56	52	.1300	46	4.2	.00	11.00	9.2	1.000	36
18	.09	37	1.000	37	13	37	3.63	49	.1300	42	4.2	.00	11.00	8.9	1.000	33
19	.09	33	1.000	33	12	23	3.71	45	.1300	39	4.2	.00	11.00	8.5	1.000	31
20	.09	30	1.000	30	11	11	3.79	42	.1300	37	4.2	.00	11.00	8.2	1.000	28
OTALS ===>		806			806			1663		1447				243		1204

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #59 DK

Date:11/17/89
Time:12:33 pm

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	740		-481	-192	-548	-548	-548	-548	-548	-548	-548	-548
1	272	0	69	203	81	191	186	178	171	164	158	149	-357
2	84	0	24	60	24	60	56	49	43	38	34	28	-297
3	58	0	20	38	15	43	38	30	25	20	17	12	-254
4	53	0	17	35	14	39	33	24	18	14	11	7	-215
5	52	0	16	36	14	37	30	20	14	10	7	4	-178
6	49	0	14	35	14	35	26	16	10	7	4	2	-143
7	51	0	12	39	16	36	26	14	8	5	3	1	-108
8	55	0	11	44	18	38	26	13	7	4	2	1	-70
9	56	0	10	46	18	38	25	11	6	3	2	1	-32
10	56	0	9	47	19	37	24	10	4	2	1	0	5
11	55	0	8	47	19	36	22	8	4	2	1	0	41
12	54	0	8	47	19	36	20	7	3	1	0	0	77
13	50	0	7	43	17	33	18	6	2	1	0	0	110
14	46	0	6	40	16	30	16	5	1	1	0	0	140
15	43	0	6	37	15	28	14	4	1	0	0	0	168
16	39	0	5	34	14	26	12	3	1	0	0	0	194
17	36	0	5	32	13	24	11	2	1	0	0	0	218
18	33	0	4	29	12	22	9	2	0	0	0	0	240
19	31	0	4	27	11	20	8	2	0	0	0	0	260
20	28	0	4	25	10	18	7	1	0	0	0	0	278
TOTALS	1204	740	259	464	185	278	59	-143	-229	-276	-306	-342	

RATE OF RETURN (%) = 8

WELL ECONOMICS PROGRAM (GASROR)
INPUT DATA

Date: 11/13/89
Time: 3:54 pm

PROJECT:	ROSA #87 DK	
INITIAL RATE	MCF/DAY	415
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	1643.1780
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #87 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	295	1.000	295	108	406	2.82	303	.1300	264	4.2	.00	11.00	33.2	1.000	231
2	.16	104	1.000	104	38	298	2.90	110	.1300	95	4.2	.00	11.00	14.7	1.000	81
3	.16	87	1.000	87	32	260	2.74	87	.1300	76	4.2	.00	11.00	12.5	1.000	63
4	.11	75	1.000	75	27	228	1.83	50	.1300	44	4.2	.00	11.00	9.0	1.000	35
5	.11	67	1.000	67	24	201	1.30	32	.1300	28	4.2	.00	11.00	7.2	1.000	20
6	.11	59	1.000	59	22	177	1.28	28	.1300	24	4.2	.00	11.00	6.9	1.000	17
7	.11	53	1.000	53	19	155	1.11	21	.1300	19	4.2	.00	11.00	6.2	1.000	12
8	.09	47	1.000	47	17	136	1.49	26	.1300	22	4.2	.00	11.00	6.7	1.000	16
9	.09	43	1.000	43	16	119	1.58	25	.1300	22	4.2	.00	11.00	6.6	1.000	15
10	.09	39	1.000	39	14	103	1.86	27	.1300	23	4.2	.00	11.00	6.8	1.000	17
11	.09	36	1.000	36	13	89	2.23	29	.1300	25	4.2	.00	11.00	7.0	1.000	18
12	.09	33	1.000	33	12	75	2.49	30	.1300	26	4.2	.00	11.00	7.0	1.000	19
13	.09	30	1.000	30	11	64	2.73	30	.1300	26	4.2	.00	11.00	7.0	1.000	19
14	.09	27	1.000	27	10	53	2.96	29	.1300	25	4.2	.00	11.00	7.0	1.000	18
15	.09	25	1.000	25	9	43	3.21	29	.1300	25	4.2	.00	11.00	6.9	1.000	18
16	.09	22	1.000	22	8	34	3.28	27	.1300	23	4.2	.00	11.00	6.8	1.000	16
17	.09	20	1.000	20	7	26	3.34	25	.1300	22	4.2	.00	11.00	6.6	1.000	15
18	.09	18	1.000	18	7	18	3.41	23	.1300	20	4.2	.00	11.00	6.4	1.000	14
19	.09	17	1.000	17	6	12	3.48	21	.1300	19	4.2	.00	11.00	6.2	1.000	12
20	.09	15	1.000	15	6	6	3.56	20	.1300	17	4.2	.00	11.00	6.1	1.000	11

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #87 DK

Date:11/13/89
Time: 3:55 pm

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	1643		-1068	-427	-1216	-1216	-1216	-1216	-1216	-1216	-1216	-1216
1	231	0	152	78	31	199	195	186	178	172	166	155	-1017
2	81	0	54	27	11	70	65	57	50	45	40	33	-947
3	63	0	45	18	7	56	49	39	32	26	22	16	-891
4	35	0	39	-4	-2	36	31	22	17	13	10	6	-855
5	20	0	34	-14	-6	26	21	14	10	7	5	3	-829
6	17	0	31	-13	-5	23	17	10	7	4	3	1	-806
7	12	0	27	-15	-6	18	13	7	4	3	2	1	-788
8	16	0	25	-9	-4	19	13	7	4	2	1	0	-768
9	15	0	22	-7	-3	18	12	5	3	1	1	0	-750
10	17	0	20	-4	-2	18	11	5	2	1	1	0	-732
11	18	0	19	-0	-0	18	11	4	2	1	0	0	-714
12	19	0	17	2	1	18	10	4	1	1	0	0	-696
13	19	0	15	3	1	17	9	3	1	0	0	0	-679
14	18	0	14	4	2	17	9	3	1	0	0	0	-662
15	18	0	13	5	2	16	8	2	1	0	0	0	-646
16	16	0	12	5	2	14	7	2	0	0	0	0	-632
17	15	0	11	4	2	13	6	1	0	0	0	0	-619
18	14	0	10	4	2	12	5	1	0	0	0	0	-607
19	12	0	9	4	1	11	4	1	0	0	0	0	-596
20	11	0	8	3	1	10	4	1	0	0	0	0	-586
TOTALS	667	1643	575	-976	-391	-586	-715	-842	-903	-940	-965	-1000	

RATE OF RETURN (%) =   LESS THAN ZERO

WELL ECONOMICS PROGRAM (GASROR)
INPUT DATA

Date: 11/17/89
Time: 10:06 am

PROJECT:	ROSA #97 DK	
INITIAL RATE	MCF/DAY	700
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	1066.1140
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #97 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	497	1.000	497	181	684	1.83	332	.1300	289	4.2	.00	11.00	36.0	1.000	253
2	.16	175	1.000	175	64	503	1.30	83	.1300	72	4.2	.00	11.00	12.1	1.000	60
3	.16	147	1.000	147	54	439	1.28	69	.1300	60	4.2	.00	11.00	10.8	1.000	49
4	.11	126	1.000	126	46	385	1.11	51	.1300	45	4.2	.00	11.00	9.1	1.000	35
5	.11	112	1.000	112	41	339	1.49	61	.1300	53	4.2	.00	11.00	10.1	1.000	43
6	.11	100	1.000	100	37	298	1.58	58	.1300	50	4.2	.00	11.00	9.7	1.000	41
7	.11	89	1.000	89	32	262	1.86	61	.1300	53	4.2	.00	11.00	10.0	1.000	43
8	.09	80	1.000	80	29	229	2.23	65	.1300	57	4.2	.00	11.00	10.4	1.000	46
9	.09	73	1.000	73	27	200	2.49	66	.1300	57	4.2	.00	11.00	10.5	1.000	47
10	.09	66	1.000	66	24	174	2.73	66	.1300	58	4.2	.00	11.00	10.5	1.000	47
11	.09	60	1.000	60	22	149	2.96	65	.1300	57	4.2	.00	11.00	10.4	1.000	46
12	.09	55	1.000	55	20	127	3.21	64	.1300	56	4.2	.00	11.00	10.4	1.000	46
13	.09	50	1.000	50	18	107	3.28	60	.1300	52	4.2	.00	11.00	9.9	1.000	42
14	.09	45	1.000	45	17	89	3.34	55	.1300	48	4.2	.00	11.00	9.5	1.000	39
15	.09	41	1.000	41	15	72	3.41	52	.1300	45	4.2	.00	11.00	9.1	1.000	36
16	.09	38	1.000	38	14	57	3.48	48	.1300	42	4.2	.00	11.00	8.8	1.000	33
17	.09	34	1.000	34	12	44	3.56	44	.1300	39	4.2	.00	11.00	8.5	1.000	30
18	.09	31	1.000	31	11	31	3.63	41	.1300	36	4.2	.00	11.00	8.1	1.000	28
19	.09	28	1.000	28	10	20	3.71	38	.1300	33	4.2	.00	11.00	7.9	1.000	26
20	.09	26	1.000	26	9	9	3.90	37	.1300	32	4.2	.00	11.00	7.7	1.000	24
TOTALS ===>		684			684			1416		1232				220		1012

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #97 DK

Date:11/17/89
Time:10:06 am

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	1066		-693	-277	-789	-789	-789	-789	-789	-789	-789	-789
1	253	0	99	154	62	191	187	178	171	165	159	149	-598
2	60	0	35	25	10	50	46	40	36	32	29	24	-548
3	49	0	29	20	8	41	36	29	23	19	16	12	-507
4	35	0	25	10	4	31	26	19	14	11	9	5	-476
5	43	0	22	21	8	35	28	19	13	9	7	4	-441
6	41	0	20	21	8	32	25	15	9	6	4	2	-408
7	43	0	18	25	10	33	24	13	8	5	3	1	-376
8	46	0	16	30	12	34	24	12	6	4	2	1	-342
9	47	0	14	32	13	34	22	10	5	3	1	0	-308
10	47	0	13	34	14	33	21	9	4	2	1	0	-274
11	46	0	12	34	14	33	20	8	3	1	1	0	-242
12	46	0	11	35	14	32	18	6	2	1	0	0	-210
13	42	0	10	32	13	29	16	5	2	1	0	0	-181
14	39	0	9	30	12	27	14	4	1	0	0	0	-154
15	36	0	8	27	11	25	12	3	1	0	0	0	-129
16	33	0	7	25	10	23	11	3	1	0	0	0	-106
17	30	0	7	23	9	21	9	2	1	0	0	0	-86
18	28	0	6	22	9	19	8	2	0	0	0	0	-66
19	26	0	6	20	8	18	7	1	0	0	0	0	-49
20	24	0	5	19	8	17	6	1	0	0	0	0	-32
TOTALS	1012	1066	373	-54	-21	-32	-228	-409	-487	-530	-557	-590	

RATE OF RETURN (%) = -1

WELL ECONOMICS PROGRAM (GASROR)
INPUT DATA

Date: 11/13/89
Time: 11:35 am

PROJECT:	ROSA #98 DK	
INITIAL RATE	MCF/DAY	1384
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	1066.5990
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #98 DX

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	982	1.000	982	359	1352	1.36	488	.1300	424	4.2	.00	11.00	50.9	1.000	373
2	.16	345	1.000	345	126	994	1.30	164	.1300	143	4.2	.00	11.00	19.9	1.000	123
3	.16	290	1.000	290	106	868	1.27	134	.1300	117	4.2	.00	11.00	17.1	1.000	100
4	.11	250	1.000	250	91	762	1.11	101	.1300	88	4.2	.00	11.00	13.9	1.000	74
5	.11	222	1.000	222	81	671	1.49	121	.1300	105	4.2	.00	11.00	15.8	1.000	89
6	.11	198	1.000	198	72	590	1.58	114	.1300	99	4.2	.00	11.00	15.1	1.000	84
7	.11	176	1.000	176	64	518	1.86	120	.1300	104	4.2	.00	11.00	15.7	1.000	89
8	.09	158	1.000	158	58	453	2.23	129	.1300	112	4.2	.00	11.00	16.5	1.000	95
9	.09	144	1.000	144	53	396	2.49	131	.1300	114	4.2	.00	11.00	16.7	1.000	97
10	.09	131	1.000	131	48	343	2.73	131	.1300	114	4.2	.00	11.00	16.7	1.000	97
11	.09	119	1.000	119	44	295	2.96	129	.1300	112	4.2	.00	11.00	16.5	1.000	96
12	.09	108	1.000	108	40	252	3.21	127	.1300	111	4.2	.00	11.00	16.4	1.000	94
13	.09	99	1.000	99	36	212	3.28	118	.1300	103	4.2	.00	11.00	15.5	1.000	87
14	.09	90	1.000	90	33	176	3.34	110	.1300	95	4.2	.00	11.00	14.7	1.000	81
15	.09	82	1.000	82	30	143	3.41	102	.1300	89	4.2	.00	11.00	13.9	1.000	75
16	.09	74	1.000	74	27	113	3.48	95	.1300	82	4.2	.00	11.00	13.2	1.000	69
17	.09	68	1.000	68	25	86	3.56	88	.1300	77	4.2	.00	11.00	12.6	1.000	64
18	.09	62	1.000	62	22	62	3.63	82	.1300	71	4.2	.00	11.00	12.0	1.000	59
19	.09	56	1.000	56	20	39	3.71	76	.1300	66	4.2	.00	11.00	11.5	1.000	55
20	.09	51	1.000	51	19	19	3.79	70	.1300	61	4.2	.00	11.00	10.9	1.000	50

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #98 DK

Date:11/13/89
Time:11:35 am

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	1067		-693	-277	-789	-789	-789	-789	-789	-789	-789	-789
1	373	0	99	274	110	264	257	246	236	227	219	205	-526
2	123	0	35	88	35	88	81	71	63	56	50	41	-438
3	100	0	29	71	28	72	63	51	41	34	28	20	-367
4	74	0	25	49	20	55	46	33	25	19	15	9	-312
5	89	0	22	67	27	63	50	33	23	16	12	7	-249
6	84	0	20	64	26	59	45	27	17	11	8	4	-191
7	89	0	18	71	28	60	44	24	14	9	5	2	-131
8	95	0	16	79	32	64	44	22	12	7	4	1	-67
9	97	0	15	82	33	64	42	20	10	5	3	1	-3
10	97	0	13	84	34	64	40	17	8	4	2	1	60
11	96	0	12	84	33	62	37	14	6	3	1	0	123
12	94	0	11	83	33	61	35	12	5	2	1	0	183
13	87	0	10	77	31	56	31	10	3	1	1	0	240
14	81	0	9	72	29	52	27	8	3	1	0	0	292
15	75	0	8	66	27	48	24	6	2	1	0	0	340
16	69	0	7	61	25	44	21	5	1	0	0	0	384
17	64	0	7	57	23	41	18	4	1	0	0	0	425
18	59	0	6	53	21	38	16	3	1	0	0	0	463
19	55	0	6	49	20	35	14	3	1	0	0	0	498
20	50	0	5	45	18	32	12	2	0	0	0	0	530
TOTALS	1951	1067	373	884	354	530	159	-177	-319	-394	-440	-497	

RATE OF RETURN (%) = 10

WELL ECONOMICS PROGRAM (GASRJR)
INPUT DATA

Date: 11/17/89
Time: 11:05 am

PROJECT:	ROSA #101 DX	
INITIAL RATE	MCF/DAY	512
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	669.4890
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #101 DX

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	363	1.000	363	133	500	1.83	243	.1300	211	4.2	.00	11.00	27.4	1.000	184
2	.16	128	1.000	128	47	368	1.30	61	.1300	53	4.2	.00	11.00	10.0	1.000	43
3	.16	107	1.000	107	39	321	1.28	50	.1300	44	4.2	.00	11.00	9.0	1.000	35
4	.11	92	1.000	92	34	282	1.36	46	.1300	40	4.2	.00	11.00	8.6	1.000	31
5	.11	82	1.000	82	30	248	1.49	45	.1300	39	4.2	.00	11.00	8.5	1.000	30
6	.11	73	1.000	73	27	218	1.58	42	.1300	37	4.2	.00	11.00	8.2	1.000	29
7	.11	65	1.000	65	24	191	1.86	44	.1300	39	4.2	.00	11.00	8.4	1.000	30
8	.09	59	1.000	59	21	168	2.23	48	.1300	41	4.2	.00	11.00	8.8	1.000	33
9	.09	53	1.000	53	19	146	2.49	48	.1300	42	4.2	.00	11.00	8.8	1.000	33
10	.09	48	1.000	48	18	127	2.73	48	.1300	42	4.2	.00	11.00	8.8	1.000	33
11	.09	44	1.000	44	16	109	2.96	48	.1300	41	4.2	.00	11.00	8.8	1.000	33
12	.09	40	1.000	40	15	93	3.21	47	.1300	41	4.2	.00	11.00	8.7	1.000	32
13	.09	37	1.000	37	13	78	3.28	44	.1300	38	4.2	.00	11.00	8.4	1.000	30
14	.09	33	1.000	33	12	65	3.34	41	.1300	35	4.2	.00	11.00	8.1	1.000	27
15	.09	30	1.000	30	11	53	3.41	38	.1300	33	4.2	.00	11.00	7.8	1.000	25
16	.09	28	1.000	28	10	42	3.48	35	.1300	30	4.2	.00	11.00	7.5	1.000	23
17	.09	25	1.000	25	9	32	3.56	33	.1300	28	4.2	.00	11.00	7.3	1.000	21
18	.09	23	1.000	23	8	23	3.63	30	.1300	26	4.2	.00	11.00	7.1	1.000	19
19	.09	21	1.000	21	8	14	3.71	28	.1300	24	4.2	.00	11.00	6.9	1.000	18
20	.09	19	1.000	19	7	7	3.79	26	.1300	23	4.2	.00	11.00	6.7	1.000	16
TOTALS ===>		500			500			1043		908				184		724

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #99Y DK

Date:11/17/89
Time:12:21 pm

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	676		-439	-176	-500	-500	-500	-500	-500	-500	-500	-500
1	179	0	63	117	47	133	129	124	119	114	110	103	-367
2	42	0	22	20	8	34	31	27	24	22	19	16	-333
3	34	0	19	15	6	28	24	19	16	13	11	8	-306
4	30	0	16	14	6	25	21	15	11	9	7	4	-281
5	30	0	14	15	6	23	19	13	9	6	4	2	-258
6	28	0	13	15	6	22	17	10	6	4	3	1	-236
7	29	0	11	18	7	22	16	9	5	3	2	1	-214
8	32	0	10	22	9	23	16	8	4	2	1	1	-191
9	32	0	9	23	9	23	15	7	3	2	1	0	-168
10	32	0	8	24	10	23	14	6	3	1	1	0	-145
11	32	0	8	24	10	22	13	5	2	1	0	0	-123
12	31	0	7	24	10	22	12	4	2	1	0	0	-101
13	29	0	6	23	9	20	11	3	1	0	0	0	-82
14	26	0	6	21	8	18	9	3	1	0	0	0	-63
15	24	0	5	19	8	17	8	2	1	0	0	0	-47
16	22	0	5	17	7	15	7	2	0	0	0	0	-31
17	20	0	4	16	6	14	6	1	0	0	0	0	-17
18	19	0	4	15	6	13	5	1	0	0	0	0	-5
19	17	0	4	13	5	12	5	1	0	0	0	0	7
20	16	0	3	12	5	11	4	1	0	0	0	0	18
TOTALS	705	676	236	29	12	18	-115	-238	-291	-321	-339	-362	

RATE OF RETURN (%) = 1

WELL ECONOMICS PROGRAM (GASROR)

INPUT DATA

Date: 11/17/89

Time: 11:05 am

PROJECT:	ROSA #101 DK	
INITIAL RATE	MCF/DAY	512
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	669.4890
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #101 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	363	1.000	363	133	500	1.83	243	.1300	211	4.2	.00	11.00	27.4	1.000	184
2	.16	128	1.000	128	47	368	1.30	61	.1300	53	4.2	.00	11.00	10.0	1.000	43
3	.16	107	1.000	107	39	321	1.28	50	.1300	44	4.2	.00	11.00	9.0	1.000	35
4	.11	92	1.000	92	34	282	1.36	46	.1300	40	4.2	.00	11.00	8.6	1.000	31
5	.11	82	1.000	82	30	248	1.49	45	.1300	39	4.2	.00	11.00	8.5	1.000	30
6	.11	73	1.000	73	27	218	1.58	42	.1300	37	4.2	.00	11.00	8.2	1.000	29
7	.11	65	1.000	65	24	191	1.86	44	.1300	39	4.2	.00	11.00	8.4	1.000	30
8	.09	59	1.000	59	21	168	2.23	48	.1300	41	4.2	.00	11.00	8.8	1.000	33
9	.09	53	1.000	53	19	146	2.49	48	.1300	42	4.2	.00	11.00	8.8	1.000	33
10	.09	48	1.000	48	18	127	2.73	48	.1300	42	4.2	.00	11.00	8.8	1.000	33
11	.09	44	1.000	44	16	109	2.96	48	.1300	41	4.2	.00	11.00	8.8	1.000	33
12	.09	40	1.000	40	15	93	3.21	47	.1300	41	4.2	.00	11.00	8.7	1.000	32
13	.09	37	1.000	37	13	78	3.28	44	.1300	38	4.2	.00	11.00	8.4	1.000	30
14	.09	33	1.000	33	12	65	3.34	41	.1300	35	4.2	.00	11.00	8.1	1.000	27
15	.09	30	1.000	30	11	53	3.41	38	.1300	33	4.2	.00	11.00	7.8	1.000	25
16	.09	28	1.000	28	10	42	3.48	35	.1300	30	4.2	.00	11.00	7.5	1.000	23
17	.09	25	1.000	25	9	32	3.56	33	.1300	28	4.2	.00	11.00	7.3	1.000	21
18	.09	23	1.000	23	8	23	3.63	30	.1300	26	4.2	.00	11.00	7.1	1.000	19
19	.09	21	1.000	21	8	14	3.71	28	.1300	24	4.2	.00	11.00	6.9	1.000	18
20	.09	19	1.000	19	7	7	3.79	26	.1300	23	4.2	.00	11.00	6.7	1.000	16

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #101 DK

Date:11/17/89
Time:11:05 am

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	669		-435	-174	-495	-495	-495	-495	-495	-495	-495	-495
1	184	0	62	122	49	135	132	126	121	116	112	105	-360
2	43	0	22	21	8	34	32	28	25	22	20	16	-326
3	35	0	18	16	7	28	25	20	16	13	11	8	-298
4	31	0	16	15	6	25	21	15	11	9	7	4	-273
5	30	0	14	16	7	24	19	13	9	6	4	3	-249
6	29	0	13	16	6	22	17	10	6	4	3	1	-227
7	30	0	11	19	8	23	16	9	5	3	2	1	-204
8	33	0	10	23	9	24	16	8	4	2	1	1	-181
9	33	0	9	24	10	24	16	7	4	2	1	0	-157
10	33	0	8	25	10	23	15	6	3	1	1	0	-134
11	33	0	8	25	10	23	14	5	2	1	0	0	-111
12	32	0	7	25	10	22	13	4	2	1	0	0	-89
13	30	0	6	23	9	20	11	4	1	0	0	0	-69
14	27	0	6	22	9	19	10	3	1	0	0	0	-50
15	25	0	5	20	8	17	8	2	1	0	0	0	-33
16	23	0	5	18	7	16	7	2	0	0	0	0	-18
17	21	0	4	17	7	14	6	1	0	0	0	0	-3
18	19	0	4	15	6	13	6	1	0	0	0	0	10
19	18	0	4	14	6	12	5	1	0	0	0	0	22
20	16	0	3	13	5	11	4	1	0	0	0	0	33
TOTALS	724	669	234	54	22	33	-103	-229	-283	-313	-332	-356	

RATE OF RETURN (%) = 1

WELL ECONOMICS PROGRAM (GASROR)
INPUT DATA

Date: 11/13/89
Time: 3:28 pm

PROJECT:	ROSA #102 DK	
INITIAL RATE	MCF/DAY	790
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	679.0710
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #102 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	561	1.000	561	205	772	1.95	399	.1300	347	4.2	.00	11.00	42.4	1.000	305
2	.16	197	1.000	197	72	567	1.30	94	.1300	81	4.2	.00	11.00	13.2	1.000	68
3	.16	166	1.000	166	60	495	1.28	77	.1300	67	4.2	.00	11.00	11.6	1.000	56
4	.11	143	1.000	143	52	435	1.11	58	.1300	50	4.2	.00	11.00	9.7	1.000	41
5	.11	127	1.000	127	46	383	1.49	69	.1300	60	4.2	.00	11.00	10.8	1.000	49
6	.11	113	1.000	113	41	337	1.58	65	.1300	57	4.2	.00	11.00	10.4	1.000	46
7	.11	100	1.000	100	37	295	1.86	68	.1300	59	4.2	.00	11.00	10.7	1.000	49
8	.09	90	1.000	90	33	259	2.23	73	.1300	64	4.2	.00	11.00	11.2	1.000	53
9	.09	82	1.000	82	30	226	2.49	75	.1300	65	4.2	.00	11.00	11.3	1.000	54
10	.09	75	1.000	75	27	196	2.73	75	.1300	65	4.2	.00	11.00	11.3	1.000	54
11	.09	68	1.000	68	25	169	2.96	74	.1300	64	4.2	.00	11.00	11.2	1.000	53
12	.09	62	1.000	62	23	144	3.21	73	.1300	63	4.2	.00	11.00	11.1	1.000	52
13	.09	56	1.000	56	21	121	3.28	67	.1300	59	4.2	.00	11.00	10.7	1.000	48
14	.09	51	1.000	51	19	101	3.34	63	.1300	54	4.2	.00	11.00	10.2	1.000	44
15	.09	47	1.000	47	17	82	3.41	58	.1300	51	4.2	.00	11.00	9.8	1.000	41
16	.09	42	1.000	42	16	65	3.48	54	.1300	47	4.2	.00	11.00	9.4	1.000	38
17	.09	39	1.000	39	14	49	3.56	50	.1300	44	4.2	.00	11.00	9.0	1.000	35
18	.09	35	1.000	35	13	35	3.63	47	.1300	41	4.2	.00	11.00	8.7	1.000	32
19	.09	32	1.000	32	12	22	3.71	43	.1300	38	4.2	.00	11.00	8.3	1.000	29
20	.09	29	1.000	29	11	11	3.90	41	.1300	36	4.2	.00	11.00	8.2	1.000	28
OTALS ===>		772			772			1623		1412				239		1172

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #102 DK

Date:11/13/89
Time: 3:29 pm

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	679		-441	-177	-503	-503	-503	-503	-503	-503	-503	-503
1	305	0	63	242	97	208	203	194	186	179	173	162	-294
2	68	0	22	46	18	50	46	40	36	32	29	23	-245
3	56	0	19	37	15	41	36	29	23	19	16	12	-204
4	41	0	16	24	10	31	26	19	14	11	8	5	-173
5	49	0	14	35	14	35	28	19	13	9	7	4	-138
6	46	0	13	34	13	33	25	15	10	6	4	2	-105
7	49	0	11	37	15	34	25	14	8	5	3	1	-71
8	53	0	10	42	17	36	25	12	7	4	2	1	-36
9	54	0	9	44	18	36	24	11	5	3	2	1	0
10	54	0	8	45	18	36	22	9	4	2	1	0	36
11	53	0	8	45	18	35	21	8	3	1	1	0	70
12	52	0	7	45	18	34	19	7	3	1	0	0	104
13	48	0	6	42	17	31	17	5	2	1	0	0	136
14	44	0	6	39	15	29	15	4	1	1	0	0	165
15	41	0	5	36	14	27	13	4	1	0	0	0	191
16	38	0	5	33	13	24	11	3	1	0	0	0	216
17	35	0	4	30	12	23	10	2	1	0	0	0	238
18	32	0	4	28	11	21	9	2	0	0	0	0	259
19	29	0	4	26	10	19	8	1	0	0	0	0	278
20	28	0	3	25	10	18	7	1	0	0	0	0	296
TOTALS	1172	679	238	493	197	296	88	-102	-184	-228	-256	-291	

RATE OF RETURN (%) = 10

W E L L   E C O N O M I C S   P R O G R A M

(GASROR)

INPUT DATA

PROJECT:	Rosa Unit #118 (DK)	
INIT GAS RATE	MCF/DAY	260
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXX	0.5000
GAS PRICE	$/MCF	see table
ROYALTY	.XXXXX	0.1363
FIXED COST	M$/YR	4.2000
VARIABLE COST	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)M$		371.6700
INC. TAX RATE	.XXXX	0.2800
TAN/TOT INV. RATIO	.XXXX	0.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	0.0100
DCF FACTOR	.XXXX	0.1000
DCF FACTOR	.XXXX	0.2500
DCF FACTOR	.XXXX	0.5000
DCF FACTOR	.XXXX	0.7500
DCF FACTOR	.XXXX	1.0000

O P E R A T I N G   I N C O M E

ECON MASTER

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	GAS PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	0.600	182	0.500	91	33	299	1.20	40	0.1363	34	4.2	0.00	11.00	8.0	1.000	25
2	0.300	88	0.500	44	16	266	1.32	21	0.1363	18	4.2	0.00	11.00	6.2	1.000	12
3	0.110	69	0.500	34	13	250	1.40	18	0.1363	15	4.2	0.00	11.00	5.9	1.000	9
4	0.110	61	0.500	31	11	237	1.65	18	0.1363	16	4.2	0.00	11.00	6.0	1.000	10
5	0.110	54	0.500	27	10	226	2.96	29	0.1363	25	4.2	0.00	11.00	7.0	1.000	18
6	0.110	48	0.500	24	9	216	3.23	29	0.1363	25	4.2	0.00	11.00	6.9	1.000	18
7	0.110	43	0.500	22	8	207	3.50	28	0.1363	24	4.2	0.00	11.00	6.8	1.000	17
8	0.110	38	0.500	19	7	199	3.74	26	0.1363	23	4.2	0.00	11.00	6.7	1.000	16
9	0.110	34	0.500	17	6	192	4.00	25	0.1363	22	4.2	0.00	11.00	6.6	1.000	15
10	0.110	30	0.500	15	6	186	4.11	23	0.1363	20	4.2	0.00	11.00	6.4	1.000	13
11	0.110	27	0.500	14	5	180	4.22	21	0.1363	18	4.2	0.00	11.00	6.2	1.000	12
12	0.110	24	0.500	12	4	175	4.33	19	0.1363	16	4.2	0.00	11.00	6.0	1.000	10
13	0.110	21	0.500	11	4	171	3.08	12	0.1363	10	4.2	0.00	11.00	5.3	1.000	5
14	0.110	19	0.500	10	3	167	3.15	11	0.1363	9	4.2	0.00	11.00	5.2	1.000	4
15	0.110	17	0.500	8	3	164	3.21	10	0.1363	9	4.2	0.00	11.00	5.1	1.000	3
16	0.110	15	0.500	8	3	161	3.28	9	0.1363	8	4.2	0.00	11.00	5.1	1.000	3
17	0.110	13	0.500	7	2	158	3.35	8	0.1363	7	4.2	0.00	11.00	5.0	1.000	2
18	0.110	12	0.500	6	2	155	3.42	7	0.1363	6	4.2	0.00	11.00	4.9	1.000	2
19	0.110	11	0.500	5	2	153	3.49	7	0.1363	6	4.2	0.00	11.00	4.8	1.000	1
20	0.110	9	0.500	5	2	151	3.57	6	0.1363	5	4.2	0.00	11.00	4.8	1.000	1
TOTALS		299			149			367		317				119		198

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S (Ross # 118 OK)

ECON MASTER

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> 0.010	0.100	0.250	0.500	0.750	1.000	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	372		-242	-68	-304	-304	-304	-304	-304	-304	-304	-304
1	26	0	14	12	3	23	23	22	21	19	17	16	-281
2	12	0	7	5	1	11	11	9	8	6	5	4	-270
3	9	0	5	4	1	8	8	6	5	3	2	1	-262
4	10	0	5	5	1	9	8	6	4	2	1	1	-253
5	18	0	4	14	4	14	14	9	5	2	1	1	-239
6	15	0	4	14	4	14	13	8	4	1	1	0	-225
7	17	0	3	14	4	13	12	7	3	1	0	0	-212
8	16	0	3	13	4	12	11	6	2	1	0	0	-200
9	15	0	3	12	3	12	11	5	2	0	0	0	-188
10	13	0	2	11	3	10	9	4	1	0	0	0	-178
11	12	0	2	10	3	9	8	3	1	0	0	0	-169
12	10	0	2	9	2	8	7	3	1	0	0	0	-161
13	5	0	2	3	1	4	4	1	0	0	0	0	-156
14	4	0	2	3	1	3	3	1	0	0	0	0	-153
15	3	0	1	2	1	3	2	1	0	0	0	0	-150
16	3	0	1	2	0	2	2	1	0	0	0	0	-148
17	2	0	1	1	0	2	2	0	0	0	0	0	-146
18	2	0	1	1	0	1	1	0	0	0	0	0	-145
19	1	0	1	0	0	1	1	0	0	0	0	0	-144
20	1	0	1	0	0	1	1	0	0	0	0	0	-143
TOTALS	195	372	65	-108	-30	-143	-153	-210	-247	-268	-276	-280	

RATE OF RETURN (%) = ERR

NORTHWEST PIPELINE CORPORATION
ONE OF THE WILLIAMS COMPANIES

LAND DEPARTMENT

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

114-90

February 26, 1990

Assistant District Manager, Minerals
Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, NM 87401

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: Rosa Unit I, Sec. No. 587
San Juan & Rio Arriba Counties, New Mexico
1990 Plan of Development

Gentlemen:

By letter dated March 3, 1989, Northwest Pipeline Corporation, as Unit Operator, filed the 1989 Plan of Development for the referenced unit. The drilling program indicated that fifty Fruitland Coal wells and three Salt Water Disposal Facilities for the disposal of water from the Fruitland Coal formation would be drilled under the 1989 Plan of Development. In August of 1989 Northwest Pipeline Corporation designated Meridian Oil Production Inc. as Suboperator of the Fruitland Coal formation within the Unit, therefore, Meridian Oil Production Inc. will provide an accounting of the wells drilled in 1989.

As of this date, the total number of wells drilled in the Rosa Unit on acreage committed to the unit is as follows:

Pictured Cliffs, plugged and abandoned	2
Pictured Cliffs/Mesaverde, (Pictured Cliffs non-commercial, Mesaverde commercial)	1
Mesaverde, commercial	27

Mesaverde, non-commercial	4
Mesaverde, plugged and abandoned	8
Mesaverde/Dakota, commercial	2
Dakota, commercial	3
Dakota, non-commercial	14
Dakota, undetermined	4
Dakota, plugged and abandoned	3
Mesaverde/Gallup/Dakota, (Gallup non-commercial, Dakota and Mesaverde commercial	1
Gallup/Dakota, (Gallup non-commercial, Dakota commercial)	2
Gallup/Dakota, commerciality undetermined	5
Gallup/Dakota, non-commercial	13
Gallup, non-commercial	1
Gallup/Dakota, (Gallup commerciality undetermined, Dakota plugged and abandoned)	1
Gallup/Dakota, (Gallup commerciality undetermined, Dakota non-commercial)	1
TOTAL	92

The Participating Areas which have been established in the Rosa Unit are as follows:

Formation	Revision	Effective
Mesaverde	Fourteenth	December 1, 1981
Dakota	Fifth	May 1, 1981

There have been no changes to the Participating Areas during 1989.

Pursuant to Section 9 of the Rosa Unit Agreement, Northwest Pipeline Corporation is submitting a Plan of Development for the calendar year 1990. No additional wells are proposed to be drilled during 1990.

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 Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet and return an approved copy to Northwest Pipeline Corporation.

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

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen by VA

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
February 26, 1990
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

APPROVED Roy E Johnson DATE 3-6-90
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 1990 Plan of Development for the Rosa Unit I, Sec. No. 587.

U56N2650
02/19/90

WORKING INTEREST OWNERS
ROSA UNIT

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

COASTAL OIL & GAS CORP.
ATTN: MR. JOHN R. KENNEDY
P.O. BOX 749
DENVER, CO 80201-0749

ELIZABETH T. CALLOWAY
4801 ST. JOHNS DRIVE
DALLAS, TX 75205

FRANK A. SCHULTZ
LINCOLN PLAZA, SUITE 2160 LB-1
500 NORTH AKARD
DALLAS, TX 75201

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 BRENNAND, EXECUTOR OF
ESTATE OF J.R. BRENNAND
P.O. BOX 6616
SANTA BARBARA, CA 93160

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

LOIS J. WILLARD
P.O. BOX 5205
SANTA FE, NM 87502

MARY FRANCIS TURNER, JR.
C/O MERCANTILE NAT'L BANK AT DALLAS
P.O. BOX 2320
DALLAS, TX 75221

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

MITCHELL ENERGY CORPORATION
ATTN: MR. JERRY TAYLOR
555 SEVENTEENTH STREET, SUITE 3500
DENVER, CO 80202

PATRICIA PENROSE SCHIEFFER, TRUSTEE
1640 1ST CITY BANK TOWER
201 MAIN STREET
FORT WORTH, TX 76102

PHILLIPS PETROLEUM COMPANY
ATTN: JAY KIEKE
300 WEST ARRINGTON, SUITE 200
FARMINGTON, NM 87401

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

WILLIAM G. WEBB
2200 ROSS AVENUE, SUITE 2200
DALLAS, TX 75201-6776

WORKING INTEREST OWNERS
ROSA UNIT

WINIFRED K. PONDER
C/O TEXAS COMMERCE BANK OF EL PASO
ATTN: JULIA E. MERKT
P.O. DRAWER 140
EL PASO, TX 79980

MERIDIAN OIL

February 27, 1990

Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, New Mexico 87401

Commissioner of Public Lands
State of New Mexico
P.O. Box 1148
Santa Fe, NM 87501

Oil Conservation Division
State of New Mexico
P.O. Box 2088
Santa Fe, NM 87501

Re: **Rosa Unit I Sec. No. 587**
Fruitland Formation
1990 Plan of Development
San Juan County, New Mexico &
Rio Arriba County, New Mexico

Gentlemen:

By letters dated March 3, 1989 and October 19, 1989, Northwest Pipeline Corporation as Unit Operator and Meridian Oil Inc. (Meridian) as Unit Sub-Operator, for the Rosa Unit, filed the Plan of Developments (POD) for the calendar year 1989. These programs provided for the drilling of fifty-four (54) Fruitland Coal wells and the establishment of three (3) salt water disposal facilities. Fruitland Coal wells actually drilled during 1989 were the Rosa Unit numbers 200, 201, 211, 213, 216, 222, 231, 257, 259 and 260 wells. The three salt water disposal facilities and the remainder of the Fruitland Coal wells proposed for 1989 were not drilled.

As of this date, the total number of wells in the Rosa Unit Fruitland formation are as follows:

Fruitland Coal, Commerciality undetermined	14
Salt Water Disposal Facility (Mesaverde formation)	1

A participating area for the Fruitland Coal formation has not been established to date.

Meridian Oil Inc., 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-327-0251

Pursuant to Section 9 of the Rosa Unit Agreement, Meridian, as Unit Sub-Operator, hereby submits the following wells for the 1990 Plan of Development.

WELL NAME	DRILL BLOCK	FORMATION
Rosa Unit #202	W/2 Sec. 23, T31N, R6W	Fruitland Coal
Rosa Unit #208	W/2 Sec. 15, T31N, R6W	Fruitland Coal
Rosa Unit #209	S/2 Sec. 24, T31N, R6W	Fruitland Coal
Rosa Unit #210	S/2 Sec. 13, T31N, R6W	Fruitland Coal
Rosa Unit #212	E/2 Sec. 14, T31N, R6W	Fruitland Coal
Rosa Unit #214	W/2 Sec. 14, T31N, R6W	Fruitland Coal
Rosa Unit #215	W/2 Sec. 26, T31N, R6W	Fruitland Coal
Rosa Unit #217	E/2 Sec. 11, T31N, R6W	Fruitland Coal
Rosa Unit #218	S/2 Sec. 25, T31N, R6W	Fruitland Coal
Rosa Unit #219	S/2 Sec. 19, T31N, R5W	Fruitland Coal
Rosa Unit #220	N/2 Sec. 13, T31N, R6W	Fruitland Coal
Rosa Unit #221	N/2 Sec. 18, T31N, R5W	Fruitland Coal
Rosa Unit #223	N/2 Sec. 30, T31N, R5W	Fruitland Coal
Rosa Unit #224	N/2 Sec. 8, T31N, R6W	Fruitland Coal
Rosa Unit #225	S/2 Sec. 12, T31N, R6W	Fruitland Coal
Rosa Unit #226	N/2 Sec. 12, T31N, R6W	Fruitland Coal
Rosa Unit #227	S/2 Sec. 7, T31N, R5W	Fruitland Coal
Rosa Unit #228	N/2 Sec. 7, T31N, R5W	Fruitland Coal
Rosa Unit #229	W/2 Sec. 29, T31N, R5W	Fruitland Coal
Rosa Unit #232	S/2 Sec. 20, T31N, R5W	Fruitland Coal
Rosa Unit #233	S/2 Sec. 30, T31N, R5W	Fruitland Coal
Rosa Unit #234	W/2 Sec. 9, T31N, R6W	Fruitland Coal
Rosa Unit #235	E/2 Sec. 9, T31N, R6W	Fruitland Coal
Rosa Unit #236	ALL Sec. 5, T31N, R6W	Fruitland Coal
Rosa Unit #237	ALL Sec. 4, T31N, R6W	Fruitland Coal
Rosa Unit #238	ALL Sec. 3, T31N, R6W	Fruitland Coal
Rosa Unit #239	ALL Sec. 2, T31N, R6W	Fruitland Coal
Rosa Unit #240	ALL Sec. 1, T31N, R6W	Fruitland Coal
Rosa Unit #241	ALL Sec. 6, T31N, R5W	Fruitland Coal
Rosa Unit #242	W/2 Sec. 33, T32N, R6W	Fruitland Coal
Rosa Unit #243	W/2 Sec. 36, T32N, R6W	Fruitland Coal
Rosa Unit #256	N/2 Sec. 25, T31N, R6W	Fruitland Coal
Rosa Unit #258	W/2 Sec. 22, T31N, R5W	Fruitland Coal
Rosa Unit #261	W/2 Sec. 10, T31N, R6W	Fruitland Coal
Rosa Unit #262	E/2 Sec. 21, T31N, R5W	Fruitland Coal
Rosa Unit #263	W/2 Sec. 21, T31N, R5W	Fruitland Coal
Rosa Unit #264	E/2 Sec. 22, T31N, R5W	Fruitland Coal
Rosa Unit #265	E/2 Sec. 27, T31N, R5W	Fruitland Coal
Rosa Unit #266	E/2 Sec. 28, T31N, R5W	Fruitland Coal
Rosa Unit #267	W/2 Sec. 28, T31N, R5W	Fruitland Coal
Rosa Unit #268	N/2 Sec. 33, T31N, R5W	Fruitland Coal
Rosa Unit #269	E/2 Sec. 34, T31N, R5W	Fruitland Coal
Rosa Unit #270	W/2 Sec. 34, T31N, R5W	Fruitland Coal
Rosa Unit #271	E/2 Sec. 35, T31N, R5W	Fruitland Coal
Rosa Unit #272	W/2 Sec. 35, T31N, R5W	Fruitland Coal
Rosa Unit #273	S/2 Sec. 8, T31N, R6W	Fruitland Coal
Rosa Unit #274	N/2 Sec. 16, T31N, R6W	Fruitland Coal
Rosa Unit #275	S/2 Sec. 16, T31N, R6W	Fruitland Coal
Rosa Unit #276	E/2 Sec. 17, T31N, R6W	Fruitland Coal
Rosa Unit #277	W/2 Sec. 17, T31N, R6W	Fruitland Coal

WELL NAME	DRILL BLOCK	FORMATION
Rosa Unit #278	E/2 Sec. 33, T32N, R6W	Fruitland Coal
Rosa Unit #279	E/2 Sec. 35, T31N, R6W	Fruitland Coal
Rosa Unit #280	S/2 Sec. 1, T31N, R4W	Fruitland Coal
Rosa Unit #281	N/2 Sec. 1, T31N, R4W	Fruitland Coal
Rosa Unit #282	S/2 Sec. 2, T31N, R4W	Fruitland Coal
Rosa Unit #283	N/2 Sec. 2, T31N, R4W	Fruitland Coal
Rosa Unit #284	N/2 Sec. 3, T31N, R4W	Fruitland Coal
Rosa Unit #285	S/2 Sec. 3, T31N, R4W	Fruitland Coal
Rosa Unit #286	N/2 Sec. 21, T31N, R6W	Fruitland Coal
Rosa Unit #287	E/2 Sec. 4, T31N, R4W	Fruitland Coal
Rosa Unit #288	W/2 Sec. 4, T31N, R4W	Fruitland Coal
Rosa Unit #289	E/2 Sec. 6, T31N, R4W	Fruitland Coal
Rosa Unit #290	W/2 Sec. 6, T31N, R4W	Fruitland Coal
Rosa Unit #291	E/2 Sec. 8, T31N, R4W	Fruitland Coal
Rosa Unit #292	W/2 Sec. 8, T31N, R4W	Fruitland Coal
Rosa Unit #293	E/2 Sec. 10, T31N, R4W	Fruitland Coal
Rosa Unit #294	W/2 Sec. 10, T31N, R4W	Fruitland Coal
Rosa Unit #295	E/2 Sec. 12, T31N, R4W	Fruitland Coal
Rosa Unit #296	W/2 Sec. 12, T31N, R4W	Fruitland Coal
Rosa Unit #297	E/2 Sec. 14, T31N, R4W	Fruitland Coal
Rosa Unit #298	W/2 Sec. 14, T31N, R4W	Fruitland Coal
Rosa Unit #299	E/2 Sec. 16, T31N, R4W	Fruitland Coal
Rosa Unit #300	W/2 Sec. 16, T31N, R4W	Fruitland Coal
Rosa Unit #301	E/2 Sec. 18, T31N, R4W	Fruitland Coal
Rosa Unit #302	W/2 Sec. 18, T31N, R4W	Fruitland Coal
Rosa Unit #303	E/2 Sec. 20, T31N, R4W	Fruitland Coal
Rosa Unit #304	W/2 Sec. 20, T31N, R4W	Fruitland Coal
Rosa Unit #305	E/2 Sec. 22, T31N, R4W	Fruitland Coal
Rosa Unit #306	W/2 Sec. 22, T31N, R4W	Fruitland Coal
Rosa Unit #307	E/2 Sec. 24, T31N, R4W	Fruitland Coal
Rosa Unit #308	W/2 Sec. 24, T31N, R4W	Fruitland Coal
Rosa Unit #309	E/2 Sec. 26, T31N, R4W	Fruitland Coal
Rosa Unit #310	W/2 Sec. 26, T31N, R4W	Fruitland Coal
Rosa Unit #311	E/2 Sec. 28, T31N, R4W	Fruitland Coal
Rosa Unit #312	W/2 Sec. 28, T31N, R4W	Fruitland Coal
Rosa Unit #313	W/2 Sec. 29, T31N, R4W	Fruitland Coal
Rosa Unit #314	E/2 Sec. 30, T31N, R4W	Fruitland Coal
Rosa Unit #315	W/2 Sec. 30, T31N, R4W	Fruitland Coal
Rosa Unit #316	E/2 Sec. 12, T31N, R5W	Fruitland Coal
Rosa Unit #317	W/2 Sec. 12, T31N, R5W	Fruitland Coal
Rosa Unit #318	W/2 Sec. 13, T31N, R5W	Fruitland Coal
Rosa Unit #319	E/2 Sec. 14, T31N, R5W	Fruitland Coal
Rosa Unit #320	W/2 Sec. 14, T31N, R5W	Fruitland Coal
Rosa Unit #321	N/2 Sec. 20, T31N, R5W	Fruitland Coal
Rosa Unit #322	N/2 Sec. 23, T31N, R5W	Fruitland Coal
Rosa Unit #323	E/2 Sec. 24, T31N, R5W	Fruitland Coal
Rosa Unit #324	W/2 Sec. 24, T31N, R5W	Fruitland Coal
Rosa Unit #325	E/2 Sec. 25, T31N, R5W	Fruitland Coal
Rosa Unit #326	W/2 Sec. 25, T31N, R5W	Fruitland Coal
Rosa Unit #327	E/2 Sec. 36, T31N, R5W	Fruitland Coal
Rosa Unit #328	W/2 Sec. 36, T31N, R5W	Fruitland Coal
Rosa Unit #329	E/2 Sec. 34, T32N, R6W	Fruitland Coal
Rosa Unit #330	W/2 Sec. 34, T32N, R6W	Fruitland Coal
Rosa Unit #331	W/2 Sec. 35, T32N, R6W	Fruitland Coal

Meridian has contacted all of the working interest owners and has received the necessary concurrence to propose the drilling of the above listed wells during the calendar year 1990.

Meridian, as Unit Sub-Operator, plans to drill any offset Fruitland Formation wells required to prevent drainage of unitized substances and any other Fruitland Formation wells deemed necessary or desirable by the Unit Sub-Operator and the working interest owners.

If this POD is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided on the attached sheet and return an approved copy to the attention of the undersigned at the letterhead address.

Copies of this letter are being sent to the working interest owners shown on the attached sheet.

Very truly yours,

Kent Beers
Attorney-in-Fact AA

KOB:AA:gm
Enclosure

Rosa Unit, 3.0

63+

APPROVED: ______________________________ DATED: ____________________

Bureau of Land Management
(Subject to like approval by the
Commissioner of Public Lands and
the Oil Conservation Division)

APPROVED: ______________________________ DATED: ____________________

Commissioner of Public Lands
(Subject to like approval by the
Bureau of Land Management and the
Oil Conservation Division)

APPROVED: ______________________________ DATED: 3-1-90

Oil Conservation Division
(Subject to like approval by the
Bureau of Land Management and the
Commissioner of Public Lands)

The foregoing approvals are for the 1990 Plan of Development for the Fruitland Formation in Rosa Unit I, Sec. No. 587, San Juan & Rio Arriba Counties, New Mexico.

ROSA UNIT WORKING INTEREST OWNERS

Amoco Production Company

Coastal Oil & Gas Corp.

Elizabeth T. Calloway

Winifred K. Ponder

Frank A. Schultz

Fred E. Turner

J. Glenn Turner, Jr.

John Brennand, Executor

John L. Turner

Lois J. Willard

Mary Francis Truner, Jr.

Mitchell Energy Corporation

Northwest Pipeline Corporation

Patricia Penrose Schieffer, Trustee

Phillips Petroleum Company

The Wiser Oil Company

William G. Webb

NORTHWEST PIPELINE CORPORATION
ONE OF THE WILLIAMS COMPANIES

'90 FEB 28 AM 9 20

135-90

LAND DEPARTMENT

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

February 22, 1990

Assistant District Manager, Minerals
Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, NM 87401

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: Rosa Unit I Sec. No. 587
San Juan and Rio Arriba Counties, New Mexico
NOTICE OF COMPLETION OF NON-COMMERCIAL WELL
Gallup formation

Gentlemen:

Pursuant to the provisions of Section 10 of the Rosa Unit Agreement I Sec. No. 587, 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 Gallup formation.

The well data is as follows:

The Rosa Unit #118 well is located 1850 feet from the North line and 790 feet from the East line, Section 35 Township 32 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on August 13, 1984, and completed in the Gallup formation on November 19, 1984. The Gallup formation was perforated with 133 holes between the following depths:

7214' to 7602'

These perforations were sand/water fractured. This well has a 2-3/8" tubing string. The well was shut in with SIPT of 1790 psig. On February 11, 1985, the well was tested and after flowing for three hours through a 3/4" variable choke on the 2-3/8" tubing , the well gauged 1428 Mcf/D with a calculated AOF of 1437 Mcf/D.

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

Darrell L. Gillen
Land Manager

DLG/kh
Attachements

cc: Working Interest Owners
W. O. Curtis
L. G. Loving
C. N. Potter
R. L. Glenn
M. H. Johnson
M. V. Polanshek
N. K. Zunino
P. C. Thompson
J. K. Nielsen
L. L. Fullmer

Assistant District Manager, Minerals
Commissioner of Public Lands
Oil Conservation Commission
February 22, 1990
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 2-28-90
Oil Conservation Commission
Subject to like 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 Rosa Unit #118 Well, Gallup formation.

WORKING INTEREST OWNERS
ROSA UNIT

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

COASTAL OIL & GAS CORP.
ATTN: MR. JOHN R. KENNEDY
P.O. BOX 749
DENVER, CO 80201-0749

ELIZABETH T. CALLOWAY
4801 ST. JOHNS DRIVE
DALLAS, TX 75205

FRANK A. SCHULTZ
LINCOLN PLAZA, SUITE 2160 LB-1
500 NORTH AKARD
DALLAS, TX 75201

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 BRENNAND, EXECUTOR OF
ESTATE OF J.R. BRENNAND
P.O. BOX 6616
SANTA BARBARA, CA 93160

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

LOIS J. WILLARD
P.O. BOX 5205
SANTA FE, NM 87502

MARY FRANCIS TURNER, JR.
C/O MERCANTILE NAT'L BANK AT DALLAS
P.O. BOX 2320
DALLAS, TX 75221

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

MITCHELL ENERGY CORPORATION
ATTN: MR. JERRY TAYLOR
555 SEVENTEENTH STREET, SUITE 3500
DENVER, CO 80202

PATRICIA PENROSE SCHIEFFER, TRUSTEE
1640 1ST CITY BANK TOWER
201 MAIN STREET
FORT WORTH, TX 76102

PHILLIPS PETROLEUM COMPANY
ATTN: JAY KIEKE
300 WEST ARRINGTON, SUITE 200
FARMINGTON, NM 87401

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

WILLIAM G. WEBB
2200 ROSS AVENUE, SUITE 2200
DALLAS, TX 75201-6776

WINIFRED K. PONDER
C/O TEXAS COMMERCE BANK OF EL PASO
ATTN: JULIA E. MERKT
P.O. DRAWER 140
EL PASO, TX 79980

W E L L   E C O N O M I C S   P R O G R A M

(GASROR)

INPUT DATA

PROJECT:	Rosa Unit #118 (Gallup)	
INIT GAS RATE	MCF/DAY	110
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXX	0.5000
GAS PRICE	$/MCF	see table
ROYALTY	.XXXXX	0.1363
FIXED COST	M$/YR	4.2000
VARIABLE COST	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)M$		371.6700
INC. TAX RATE	.XXXX	0.2800
TAN/TOT INV. RATIO	.XXXX	0.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	0.0100
DCF FACTOR	.XXXX	0.1000
DCF FACTOR	.XXXX	0.2500
DCF FACTOR	.XXXX	0.5000
DCF FACTOR	.XXXX	0.7500
DCF FACTOR	.XXXX	1.0000

O P E R A T I N G   I N C O M E

ECON MASTER

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	GAS PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	0.600	77	0.500	39	14	126	1.20	17	0.1363	15	4.2	0.00	11.00	5.8	1.000	9
2	0.300	37	0.500	19	7	112	1.32	9	0.1363	8	4.2	0.00	11.00	5.1	1.000	3
3	0.110	29	0.500	15	5	106	1.40	7	0.1363	6	4.2	0.00	11.00	4.9	1.000	2
4	0.110	26	0.500	13	5	100	1.65	8	0.1363	7	4.2	0.00	11.00	4.9	1.000	2
5	0.110	23	0.500	12	4	96	2.96	12	0.1363	11	4.2	0.00	11.00	5.4	1.000	5
6	0.110	21	0.500	10	4	91	3.23	12	0.1363	10	4.2	0.00	11.00	5.3	1.000	5
7	0.110	18	0.500	9	3	88	3.50	12	0.1363	10	4.2	0.00	11.00	5.3	1.000	5
8	0.110	16	0.500	8	3	84	3.74	11	0.1363	10	4.2	0.00	11.00	5.3	1.000	4
9	0.110	14	0.500	7	3	81	4.00	11	0.1363	9	4.2	0.00	11.00	5.2	1.000	4
10	0.110	13	0.500	6	2	79	4.11	10	0.1363	8	4.2	0.00	11.00	5.1	1.000	3
11	0.110	11	0.500	6	2	76	4.22	9	0.1363	8	4.2	0.00	11.00	5.0	1.000	3
12	0.110	10	0.500	5	2	74	4.33	8	0.1363	7	4.2	0.00	11.00	5.0	1.000	2
13	0.110	9	0.500	5	2	72	3.08	5	0.1363	4	4.2	0.00	11.00	4.7	1.000	0
14	0.110	8	0.500	4	1	71	3.15	5	0.1363	4	4.2	0.00	11.00	4.6	1.000	-1
15	0.110	7	0.500	4	1	69	3.21	4	0.1363	4	4.2	0.00	11.00	4.6	1.000	-1
16	0.110	6	0.500	3	1	68	3.28	4	0.1363	3	4.2	0.00	11.00	4.6	1.000	-1
17	0.110	6	0.500	3	1	67	3.35	3	0.1363	3	4.2	0.00	11.00	4.5	1.000	-2
18	0.110	5	0.500	3	1	66	3.42	3	0.1363	3	4.2	0.00	11.00	4.5	1.000	-2
19	0.110	5	0.500	2	1	65	3.49	3	0.1363	2	4.2	0.00	11.00	4.5	1.000	-2
20	0.110	4	0.500	2	1	64	3.57	3	0.1363	2	4.2	0.00	11.00	4.4	1.000	-2
TOTALS		126			63			155		134				99		35

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S (Rosa #113 Gp)

ECON MASTER

YEAR	NET OPER INCOME	INVESTMENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED 0.010	CASH FLOW 0.100	(MID YEAR) 0.250	0.500	-----> 0.750	1.000	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	372		-242	-68	-304	-304	-304	-304	-304	-304	-304	-304
1	9	0	14	-6	-2	10	10	10	9	8	8	7	-294
2	3	0	7	-4	-1	4	4	3	3	2	2	1	-290
3	2	0	5	-4	-1	3	3	2	2	1	1	0	-287
4	2	0	5	-3	-1	3	3	2	1	1	0	0	-284
5	5	0	4	1	0	5	5	3	2	1	0	0	-279
6	5	0	4	1	0	5	4	3	1	1	0	0	-275
7	5	0	3	1	0	4	4	2	1	0	0	0	-270
8	4	0	3	1	0	4	4	2	1	0	0	0	-266
9	4	0	3	1	0	4	3	2	1	0	0	0	-263
10	3	0	2	1	0	3	3	1	0	0	0	0	-260
11	3	0	2	0	0	2	2	1	0	0	0	0	-257
12	2	0	2	0	0	2	2	1	0	0	0	0	-255
13	0	0	2	-2	-1	0	0	0	0	0	0	0	-255
14	-1	0	2	-2	-1	0	0	0	0	0	0	0	-255
15	-1	0	1	-2	-1	0	0	0	0	0	0	0	-255
16	-1	0	1	-2	-1	-1	0	0	0	0	0	0	-256
17	-2	0	1	-3	-1	-1	-1	0	0	0	0	0	-257
18	-2	0	1	-3	-1	-1	-1	0	0	0	0	0	-258
19	-2	0	1	-3	-1	-1	-1	0	0	0	0	0	-259
20	-2	0	1	-3	-1	-1	-1	0	0	0	0	0	-260
TOTALS	35	372	65	-271	-76	-260	-262	-273	-283	-290	-293	-294	

RATE OF RETURN (%) = ERR

NORTHWEST PIPELINE CORPORATION
ONE OF THE WILLIAMS COMPANIES

26-90

LAND DEPARTMENT

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

February 12, 1990

Assistant District Manager, Minerals
Bureau of Land Management
Farmington Resource Area
1235 La Plata Highway
Farmington, NM 87401

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: Rosa Unit I Sec. 587
San Juan & Rio Arriba Counties, New Mexico

APPLICATION FOR APPROVAL OF THE SIXTH PARTICIPATING AREA
Dakota formation
Effective November 1, 1984

APPLICATION FOR APPROVAL OF THE SEVENTH PARTICIPATING AREA
Dakota formation
Effective January 1, 1985

Gentlemen:

Pursuant to the provisions of Section 10 of the Rosa Unit Agreement I Sec. No. 587, approved January 24, 1948, Northwest Pipeline Corporation, as Unit Operator, hereby respectfully requests approval of the captioned participating areas for the Dakota formation.

These proposed participating areas for the Dakota formation are predicated upon the determination by Northwest Pipeline Corporation, as Unit Operator, that the following Rosa Unit Dakota wells are capable of producing unitized substances in paying quantities.

SIXTH PARTICIPATING AREA - Effective November 1, 1984

Description of Lands	No. of Acres
Township 31 North, Range 6 West, N.M.P.M. Section 21: S/2	320.00

The well data is as follows:

The Rosa Dakota Unit #100 well is located 890 feet from the south line and 1850 feet from the west line, Section 21, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on May 31, 1984 and completed in the Dakota formation on August 28, 1984. The Dakota formation was perforated with 122 holes between the following depths:

7877'-7980'

These perforations were sand/water fractured. This well has 2-3/8" tubing string. The well was shut-in with a SIPT of 2738 psig. On October 2, 1984, the Dakota formation was tested and after flowing for three hours through a 3/4" variable choke on the 2-3/8" tubing, the well gauged 1417 Mcf/d with a calculated AOF of 2650 Mcf/d.

SEVENTH PARTICIPATING AREA - Effective January 1, 1985

Description of Lands	No. of Acres
Township 31 North, Range 6 West, N.M.P.M. Section 24: E/2	223.92

The well data is as follows:

The Rosa Dakota Unit #116 well is located 790 feet from the east line and 1050 feet from the north line, Section 24, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on July 24, 1984 and completed in the Dakota formation on September 19, 1984. The Dakota formation was perforated with 328 holes between the following depths:

7832'-7988'

These perforations were sand/water fractured. This well has 2-3/8" tubing string. The well was shut-in with a SIPT of 2272 psig. On December 11, 1984, the Dakota formation was tested and after flowing for three hours through a 3/4" variable choke on the 2-3/8" tubing, the well gauged 1593 Mcf/d with a calculated AOF of 1599 Mcf/d.

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

Exhibit "A"

Ownership map reflecting the boundaries of the Unit and the proposed Dakota Participating Areas within the Rosa Unit.

Exhibit "B"

Geological Report on the proposed Participating Areas within the Rosa Unit.

Exhibit "C"

Figure No. 1: Structure Map
Figure No. 2: Net Sand Thickness Map Upper Dakota Sand
Figure No. 3: Gross Sand Thickness Map
Figure No. 4: Typical Well Log

Exhibit "D"

Rosa Unit Production Schedule.

Attached hereto are schedules showing the proposed Dakota Participating Areas. The schedules describe the Participating Areas, shows the percentage of unitized substances allocated to each unitized tract, and the percentage of ownership in the tracts.

If the proposed Participating Areas set forth herein meet 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, exhibits and schedules are being sent to the Working Interest Owners shown on the attached sheet.

Sincerely,

NORTHWEST PIPELINE CORPORATION

Darrell L. Gillen

Darrell L. Gillen
Land Manager

DLG/cg
Attachments

cc: Working Interest Owners
W. O. Curtis
L. L. Fullmer
R. L. Glenn
R. P. Gregory
M. H. Johnson
L. G. Loving
J. K. Nielsen
C. N. Potter
P. C. Thompson

Bureau of Land Management
Commissioner of Public Lands
Oil Conservation Commission
February 12, 1990
Page 5

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 3-12-90
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 SIXTH and SEVENTH PARTICIPATING AREAS in the Dakota formation of the Rosa Unit I Sec. 587.

U56N2650
02/15/90

WORKING INTEREST OWNERS
ROSA UNIT

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

COASTAL OIL & GAS CORP.
ATTN: MR. JOHN R. KENNEDY
P.O. BOX 749
DENVER, CO 80201-0749

ELIZABETH T. CALLOWAY
4801 ST. JOHNS DRIVE
DALLAS, TX 75205

FRANK A. SCHULTZ
LINCOLN PLAZA, SUITE 2160 LB-1
500 NORTH AKARD
DALLAS, TX 75201

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 BRENNAND, EXECUTOR OF
ESTATE OF J.R. BRENNAND
P.O. BOX 6616
SANTA BARBARA, CA 93160

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

LOIS J. WILLARD
P.O. BOX 5205
SANTA FE, NM 87502

MARY FRANCIS TURNER, JR.
C/O MERCANTILE NAT'L BANK AT DALLAS
P.O. BOX 2320
DALLAS, TX 75221

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

MITCHELL ENERGY CORPORATION
ATTN: MR. JERRY TAYLOR
555 SEVENTEENTH STREET, SUITE 3500
DENVER, CO 80202

PATRICIA PENROSE SCHIEFFER, TRUSTEE
1640 1ST CITY BANK TOWER
201 MAIN STREET
FORT WORTH, TX 76102

PHILLIPS PETROLEUM COMPANY
ATTN: JAY KIEKE
300 WEST ARRINGTON, SUITE 200
FARMINGTON, NM 87401

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

WILLIAM G. WEBB
2200 ROSS AVENUE, SUITE 2200
DALLAS, TX 75201-6776

U56N2650
02/15/90

WORKING INTEREST OWNERS
ROSA UNIT

WINIFRED K. PONDER
C/O TEXAS COMMERCE BANK OF EL PASO
ATTN: JULIA E. MERKT
P.O. DRAWER 140
EL PASO, TX 79980

UNIT AREA EXPANSION SCHEDULE

SCHEDULE VII
SIXTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
USA SF-078763	T-31-N, R-5-W Sec. 8: S/2	320.00	Royalty	12.500000%	12.500000%	14.285714%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
	T-31-N, R-5-W Sec. 10: N/2	320.00	Royalty	12.500000%	12.500000%	14.285714%
			Working Interest			
			Mitchell Energy Corp.	81.250000%	81.250000%	
			ORRI	6.250000%	6.250000%	
			Total	100.000000%	100.000000%	
			TRACT 14			
USA SF-078767	T-31-N, R-6-W Sec. 13: W/2	320.00	Royalty	12.500000%	12.500000%	14.285714%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 17			
USA SF-078769	T-31-N, R-5-W Sec. 17: W/2	320.00	Royalty	12.500000%	12.500000%	14.285714%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 28			
USA SF-078773	T-31-N, R-5-W Sec. 33: S/2	320.00	Royalty	12.500000%	12.500000%	14.285714%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	

SCHEDULE VII
SIXTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 39			
USA SF-078766	T-31-N, R-6-W	568.41	Royalty	12.500000%	12.500000%	25.375447%
	Sec. 21: S/2		Working Interest			
	Sec. 22: Lot 1,		Amoco Production Co.	87.500000%	87.500000%	
	E/2NW/4, SW/4		ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 43			
E-289-43	T-31-N, R-6-W	71.59	Royalty	12.500000%	12.500000%	3.195983%
	Sec. 22: portion		Working Interest			
	of Tract 40		Phillips Petroleum Co.	82.500000%	82.500000%	
	lying in W/2NW/4		ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	

SCHEDULE VII
SIXTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

R E C A P I T U L A T I O N

Description of lands in Dakota Participating Area:

Township 31 North, Range 5 West, N.M.P.M.
Section 8: S/2
Section 10: N/2
Section 17: W/2
Section 33: S/2

Township 31 North, Range 6 West, N.M.P.M.
Section 13: W/2
Section 21: S/2
Section 22: W/2

Total Number of Acres in Participating Area:	2,240.00
Total Number of Acres Committed to Participating Area:	2,240.00

SCHEDULE VIII
SEVENTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 13			
USA SF-078763	T-31-N, R-5-W Sec. 8: S/2	320.00	Royalty	12.500000%	12.500000%	12.987435%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
	T-31-N, R-5-W Sec. 10: N/2	320.00	Royalty	12.500000%	12.500000%	12.987435%
			Working Interest			
			Mitchell Energy Corp.	81.250000%	81.250000%	
			ORRI	6.250000%	6.250000%	
			Total	100.000000%	100.000000%	
			TRACT 14			
USA SF-078767	T-31-N, R-6-W Sec. 13: W/2 Sec. 24: Lots 1, 2, 3, 4, W/2E/2 (E/2)	543.92	Royalty	12.500000%	12.500000%	22.075392%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 17			
USA SF-078769	T-31-N, R-5-W Sec. 17: W/2	320.00	Royalty	12.500000%	12.500000%	12.987435%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 28			
USA SF-078773	T-31-N, R-5-W Sec. 33: S/2	320.00	Royalty	12.500000%	12.500000%	12.987435%
			Working Interest			
			Amoco Production Co.	87.500000%	87.500000%	
			ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	

Effective January 1, 1985

SCHEDULE VIII
SEVENTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

SERIAL NUMBER	DESCRIPTION	NUMBER OF ACRES	DRILLING BLOCK OWNERSHIP	PERCENTAGE	PERCENTAGE COMMITTED	PRESENT ACTUAL PARTICIPATION
			TRACT 39			
USA SF-078766	T-31-N, R-6-W	568.41	Royalty	12.500000%	12.500000%	23.069336%
	Sec. 21: S/2		Working Interest			
	Sec. 22: Lot 1,		Amoco Production Co.	87.500000%	87.500000%	
	E/2NW/4, SW/4		ORRI	0.000000%	0.000000%	
			Total	100.000000%	100.000000%	
			TRACT 43			
E-289-43	T-31-N, R-6-W	71.59	Royalty	12.500000%	12.500000%	2.905532%
	Sec. 22: portion		Working Interest			
	of Tract 40		Phillips Petroleum Co.	82.500000%	82.500000%	
	lying in W/2NW/4		ORRI	5.000000%	5.000000%	
			Total	100.000000%	100.000000%	

SCHEDULE VIII
SEVENTH PARTICIPATING AREA FOR THE DAKOTA FORMATION
ROSA UNIT

R E C A P I T U L A T I O N

Description of lands in Dakota Participating Area:

Township 31 North, Range 5 West, N.M.P.M.
Section 8: S/2
Section 10: N/2
Section 17: W/2
Section 33: S/2

Township 31 North, Range 6 West, N.M.P.M.
Section 13: W/2
Section 21: S/2
Section 22: W/2
Section 24: E/2

Total Number of Acres in Participating Area:	2,463.92
Total Number of Acres Committed to Participating Area:	2,463.92

EXHIBIT "B"

ROSA UNIT
RIO ARRIBA AND SAN JUAN COUNTIES, NEW MEXICO

GEOLOGIC REPORT
DAKOTA PRODUCING INTERVAL

PROPOSED INITIAL DAKOTA PARTICIPATING AREA AND
SIXTH AND SEVENTH EXPANSIONS OF THE DAKOTA
PARTICIPATING AREA

NORTHWEST PIPELINE CORPORATION

APPROVED BY: Warren Curtis
Warren O. Curtis
Manager, Administration

EXHIBIT "B"

ROSA UNIT
RIO ARRIBA AND SAN JUAN COUNTIES, NEW MEXICO

GEOLOGIC REPORT
DAKOTA PRODUCING INTERVAL

PROPOSED SIXTH AND SEVENTH DAKOTA PARTICIPATING AREAS

GENERAL INFORMATION

The Rosa Unit is located in the Northeast quadrant of the New Mexico portion of the San Juan Basin along the synclinal axis of the Basin. It is composed of 54,211.01 acres within the unit outline of which 53,733.30 acres are committed to the unit.

Within the Rosa Unit, the Dakota Producing Interval (NMOCC Order No. R 1670-C Rule 25) has been tested in 39 wells resulting in 27 non-commercial wells, 4 plugged and abandoned wells, and 8 commercial wells.

To date the producing sands within the Dakota Producing Interval are restricted to the Upper (Marine) and Middle (Fluviatile) Dakota Sands. There are no sands developed within the Graneros Shale interval above, and the Lower or Basal Dakota Sands below are apparently water-wet.

As to the producing Dakota Sands, the Upper Dakota Sand is littoral marine sand with depositional characteristics that range from deltaic to off-shore bar in the immediate vicinity of the Rosa Unit. Porosity, grain size and sorting generally increase upward in the Upper Dakota Sand. The sand interval is generally correlatable across the extent of the unit. The Middle Dakota sands are interpreted to be a network of localized fluvial channel deposits. These sands are generally tight, often siliceous, with low porosity in the 0 to 6% range. Local porosity development of greater than 6% and the presence, in some instances, of hi-angle natural fractures permit these sands to be productive. These Middle Dakota Sands are not individually correlatable across the unit.

Well testing information gathered to date does not differentiate the productive capabilities between the Upper and Middle Dakota producing sands. Experience dictates that evaluation of the mechanical logs on these wells can be misleading. The actual drainage pattern for any given well in the Rosa Unit is probably quite irregular and not possible, at this time, to map.

Included in the report are three maps entitled Exhibit "C", Figures 1 through 3.

Exhibit "C", Figure No. 1 shows the configuration of the subsurface structure of the Dakota interval using sea level as the datum plane, the top of the Graneros as the mapping horizon and a contour interval of 50 feet.

The structure map indicates a structural trough extending generally east-west across the Rosa Unit and rising toward the west. This trough is one limb of the synclinal axis of the San Juan Basin. It is apparent that here, as in much of the San Juan Basin, stratigraphy rather than structure controls the accumulation of hydrocarbons within the Dakota Producing Interval.

Exhibit "C", Figure No. 2 is a contour map of the thickness in feet of net reservoir sand which is interpreted from well logs to be present at each drilling site within the Upper Dakota Sand. Sand thickness trends in the San Juan 30-5 and 31-6 Units were extrapolated into the Rosa Unit, but because of limited data the contours should be considered as somewhat speculative.

Exhibit "C", Figure No. 3 indicates the gross sand development within the Middle Dakota interval at each drilling site as interpreted from well logs. No attempt has been made to contour the isopachous thickness of these gross sands.

Exhibit "C", Figure No. 4 is offered as a type log for the Rosa Unit. Completed intervals for this well, the Amoco Production Company's Rosa No. 68, SW/4 Section 17, Township 31 North, Range 5 West, Rio Arriba County, New Mexico, are indicated on the log track. Nomenclature, as used in this report, is indicated between the induction and porosity logs.

Exhibit "D", Table 1 is a tabulation of the Dakota gas production from the proposed Dakota Participating Area. The cumulative production through December 31, 1989 is shown. The Rosa Unit has produced a total of 8,259,763 Mcf from the proposed Dakota Participating Areas as of January 1, 1990.

It is apparent from these exhibits that continuity of reservoir sands across the unit is questionable in the case of the Upper Dakota Sand and apparently not possible in the case of the Middle Dakota Sands. However, we believe that a 320-acre spacing pattern can be used to effectively produce the Dakota reservoir system. Because of the practical limitations in mapping and predicting a drainage area, it is recommended that each 320-acre tract be designated as a drilling and producing area for the Dakota Formation in this unit at this time.

SIXTH DAKOTA PARTICIPATING AREA

Effective Date:	November 1, 1984
Proposed Acreage:	Township 31 North, Range 6 West, N.M.P.M. Section 21: South Half (320 Acres) Total acres: 320 Elevation: 6387' Base Greenhorn: 7744' Sand Thickness (A): 22' Gross Thickness (A & B): 40'

The Expansion of the "Dakota Participating Area" is based on log interpretation of the well logs, initial test results and production history of the Rosa Unit #100 well. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the "Dakota Producing Interval". This well is described as follows:

> The Rosa Dakota Unit #100 well is located 890 feet from the south line and 1850 feet from the west line, Section 21, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on May 31, 1984 and completed in the Dakota formation on August 28, 1984. The Dakota formation was perforated with 122 holes between the following depths:
>
> 7877'-7980'
>
> These perforations were sand/water fractured. This well has 2-3/8" tubing string. The well was shut-in with a SIPT of 2738 psig. On October 2, 1984, the Dakota formation was tested and after flowing for three hours through a 3/4" variable choke on the 2-3/8" tubing, the well gauged 1417 Mcf/d with a calculated AOF of 2650 Mcf/d.

On the basis of this well, the S/2 of Section 21, Township 31 North, Range 6 West (320 acres) is recommended as the 6th Expansion of the "Dakota Participating Area".

SEVENTH DAKOTA PARTICIPATING AREA

Effective Date:	January 1, 1985
Proposed Acreage:	Township 31 North, Range 6 West, N.M.P.M. Section 24: East Half (223.92 Acres) Total acres: 223.92 Elevation: 6280' Base Greenhorn: 7703' Sand Thickness (A): 5' Gross Thickness (A & B): 28'

The Expansion of the "Dakota Participating Area" is based on log interpretation of the well logs, initial test results and production history of the Rosa Unit #116 well. From this data, it is inferred that the proposed acreage is capable of producing unitized substances in commercial quantities from the "Dakota Producing Interval". This well is described as follows:

> The Rosa Dakota Unit #116 well is located 790 feet from the east line and 1050 feet from the north line, Section 24, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico. This well was spudded on July 24, 1984 and completed in the Dakota formation on September 19, 1984. The Dakota formation was perforated with 328 holes between the following depths:
>
> 7832'-7988'

These perforations were sand/water fractured. This well has 2-3/8" tubing string. The well was shut-in with a SIPT of 2272 psig. On December 11, 1984, the Dakota formation was tested and after flowing for three hours through a 3/4" variable choke on the 2-3/8" tubing, the well gauged 1593 Mcf/d with a calculated AOF of 1599 Mcf/d.

On the basis of this well, the E/2 of Section 24, Township 31 North, Range 6 West (223.92 acres) is recommended as the 7th Expansion of the "Dakota Participating Area".

EXHIBIT "D"

TABLE NO. 1
ROSA UNIT: DAKOTA GAS PRODUCTION
SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO

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

UNIT WELL NO.	LOCATION	I.D. DATE	JAN 89	FEB 89	MAR 89	APR 89	MAY 89	JUN 89	JUL 89	AUG 89	SEP 89	OCT 89	NOV 89	DEC 89	CUMULATIVE PRODUCTION TO 1/01/90
#66	31N 6W 13L	4/79	0	0	0	0	0	0	0	0	0	11842	23367	0	3337771
#68	31N 5W 17L	8/80	4124	8213	6579	1066	0	3527	1231	0	0	0	465	0	592535
#70	31N 5W 10D	11/78	7186	5569	5498	1300	0	2742	6812	6454	6033	6086	2581	0	776555
#77	31N 5W 33L	4/82	3787	9661	5998	1772	0	0	0	0	0	0	8432	8775	355908
#79	31N 6W 22K	11/81	0	0	0	0	0	0	0	0	0	9843	20378	0	1791575
#80	31N 5W 8K	11/81	5642	7711	8031	1287	0	3388	1442	0	0	3138	4024	0	437193
#100	31N 6W 21N	4/86	0	21861	11439	2560	0	0	0	0	0	0	0	12128	561722
#116	31N 6W 24A	11/86	15666	39916	11139	0	0	0	2181	0	32141	44327	44325	30994	406504
														TOTAL	8259763

WELL ECONOMICS PROGRAM (GASROR)
INPUT DATA

Date: 11/09/89
Time: 10:37 am

PROJECT:	ROSA #100 DK	
INITIAL RATE	MCF/DAY	1400
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	622.3510
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.2000
DCF FACTOR	.XXXX	.5000
DCF FACTOR	.XXXX	1.0000
DCF FACTOR	.XXXX	1.5000
DCF FACTOR	.XXXX	2.0000
DCF FACTOR	.XXXX	2.5000

O P E R A T I N G   I N C O M E

ROSA #100 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	994	1.000	994	363	1368	1.83	664	.1300	577	4.2	.00	11.00	67.7	1.000	510
2	.16	349	1.000	349	127	1005	1.30	166	.1300	144	4.2	.00	11.00	20.1	1.000	124
3	.16	293	1.000	293	107	878	1.27	136	.1300	118	4.2	.00	11.00	17.2	1.000	101
4	.11	253	1.000	253	92	771	1.11	102	.1300	89	4.2	.00	11.00	14.0	1.000	75
5	.11	225	1.000	225	82	679	1.30	107	.1300	93	4.2	.00	11.00	14.4	1.000	78
6	.11	200	1.000	200	73	597	1.27	93	.1300	81	4.2	.00	11.00	13.1	1.000	68
7	.11	178	1.000	178	65	524	1.11	72	.1300	63	4.2	.00	11.00	11.1	1.000	52
8	.09	160	1.000	160	58	459	1.32	77	.1300	67	4.2	.00	11.00	11.6	1.000	56
9	.09	146	1.000	146	53	400	1.40	74	.1300	65	4.2	.00	11.00	11.3	1.000	53
10	.09	133	1.000	133	48	347	1.65	80	.1300	69	4.2	.00	11.00	11.8	1.000	58
11	.09	121	1.000	121	44	299	1.97	87	.1300	75	4.2	.00	11.00	12.5	1.000	63
12	.09	110	1.000	110	40	255	2.20	88	.1300	77	4.2	.00	11.00	12.6	1.000	64
13	.09	100	1.000	100	36	215	2.42	88	.1300	77	4.2	.00	11.00	12.6	1.000	64
14	.09	91	1.000	91	33	178	2.62	87	.1300	76	4.2	.00	11.00	12.5	1.000	63
15	.09	83	1.000	83	30	145	2.84	86	.1300	75	4.2	.00	11.00	12.4	1.000	62
16	.09	75	1.000	75	27	115	2.90	80	.1300	69	4.2	.00	11.00	11.8	1.000	57
17	.09	68	1.000	68	25	87	2.96	74	.1300	64	4.2	.00	11.00	11.3	1.000	53
18	.09	62	1.000	62	23	62	3.02	69	.1300	60	4.2	.00	11.00	10.8	1.000	49
19	.09	57	1.000	57	21	40	3.08	64	.1300	55	4.2	.00	11.00	10.3	1.000	45
20	.09	52	1.000	52	19	19	3.15	59	.1300	52	4.2	.00	11.00	9.9	1.000	42

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #100 DK

Date:11/09/89
Time:10:37 am

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .200	.500	1.000	1.500	2.000	2.500	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	622		-405	-162	-461	-461	-461	-461	-461	-461	-461	-461
1	510	0	58	452	181	329	300	269	233	208	190	176	-132
2	124	0	20	104	42	83	63	45	29	21	16	13	-49
3	101	0	17	84	34	67	43	24	12	7	4	3	18
4	75	0	15	60	24	51	27	12	4	2	1	1	69
5	78	0	13	65	26	52	23	8	2	1	0	0	122
6	68	0	12	56	22	45	17	5	1	0	0	0	167
7	52	0	10	41	17	35	11	3	0	0	0	0	202
8	56	0	9	46	18	37	9	2	0	0	0	0	239
9	53	0	8	45	18	35	8	1	0	0	0	0	274
10	58	0	8	50	20	38	7	1	0	0	0	0	312
11	63	0	7	56	22	41	6	1	0	0	0	0	353
12	64	0	6	58	23	41	5	0	0	0	0	0	394
13	64	0	6	58	23	41	4	0	0	0	0	0	434
14	63	0	5	58	23	40	3	0	0	0	0	0	474
15	62	0	5	57	23	39	3	0	0	0	0	0	514
16	57	0	4	53	21	36	2	0	0	0	0	0	550
17	53	0	4	49	20	33	2	0	0	0	0	0	583
18	49	0	4	45	18	31	1	0	0	0	0	0	614
19	45	0	3	42	17	28	1	0	0	0	0	0	643
20	42	0	3	39	15	26	1	0	0	0	0	0	669
TOTALS	1737	622	218	1115	446	669	74	-89	-178	-221	-249	-268	

RATE OF RETURN (%) = 34

WELL ECONOMICS PROGRAM (GASKOR)
INPUT DATA

Date: 11/13/89
Time: 3:40 pm

PROJECT:	ROSA #116 DK	
INITIAL RATE	MCF/DAY	1375
INIT DECLINE	%/YR	*
ACT./CAPACITY	.XXXXX	1.0000
NETBACK PRICE	$/MCF	SEE TABLE
ROYALTY	.XXXXX	.1300
FIXED COST FACTOR	M$/YR	4.2000
VARIABLE COST FACTOR	$/MCF	0.0000
PROD TAXES	% GROSS	11.0000
WORKING INT	.XXXX	1.0000
INVESTMENT (100% WI)	M$	734.6240
INC. TAX RATE	.XXXX	.4000
TAN/TOT INV. RATIO	.XXXX	.3500
INCOME ESC. FACTOR	.XXXX	0.0000
COST ESC. FACTOR	.XXXX	0.0000
DCF FACTOR	.XXXX	.0500
DCF FACTOR	.XXXX	.1500
DCF FACTOR	.XXXX	.2500
DCF FACTOR	.XXXX	.3500
DCF FACTOR	.XXXX	.4500
DCF FACTOR	.XXXX	.6500

O P E R A T I N G   I N C O M E

ROSA #116 DK

YEAR	DECLINE	DSPC	ACT./CAP.	ACTUAL PROD	ANNUAL PROD	R.RES YR - 1	NETBACK PRICE	GROSS INCOME	ROYALTY	INCOME AFT ROY	FIXED COST	VARIABLE COST	PROD TAXES	TOTAL COST	WORKING INTEREST	CASHFLOW 100%
	.XXX	MCF/D	MMCF	MCF/D	MMCF	MMCF	$/MCF	M$/YR	.XXX	M$/YR	M$/YR	$/MCF	% IAR	M$/YR	.XXX	M$/YR
1	.73	976	1.000	976	356	1344	1.30	463	.1300	403	4.2	.00	11.00	48.5	1.000	354
2	.16	343	1.000	343	125	987	1.28	160	.1300	139	4.2	.00	11.00	19.5	1.000	120
3	.16	288	1.000	288	105	862	1.11	117	.1300	102	4.2	.00	11.00	15.4	1.000	86
4	.11	248	1.000	248	91	757	1.49	135	.1300	117	4.2	.00	11.00	17.1	1.000	100
5	.11	221	1.000	221	81	667	1.58	127	.1300	111	4.2	.00	11.00	16.4	1.000	95
6	.11	196	1.000	196	72	586	1.86	134	.1300	116	4.2	.00	11.00	17.0	1.000	99
7	.11	175	1.000	175	64	514	2.23	142	.1300	124	4.2	.00	11.00	17.8	1.000	106
8	.09	157	1.000	157	57	450	2.49	143	.1300	124	4.2	.00	11.00	17.8	1.000	106
9	.09	143	1.000	143	52	393	2.73	143	.1300	124	4.2	.00	11.00	17.9	1.000	106
10	.09	130	1.000	130	48	341	2.96	141	.1300	122	4.2	.00	11.00	17.7	1.000	105
11	.09	118	1.000	118	43	293	3.21	139	.1300	121	4.2	.00	11.00	17.5	1.000	103
12	.09	108	1.000	108	39	250	3.28	129	.1300	112	4.2	.00	11.00	16.5	1.000	96
13	.09	98	1.000	98	36	211	3.34	120	.1300	104	4.2	.00	11.00	15.7	1.000	89
14	.09	89	1.000	89	33	175	3.41	111	.1300	97	4.2	.00	11.00	14.8	1.000	82
15	.09	81	1.000	81	30	142	3.48	103	.1300	90	4.2	.00	11.00	14.1	1.000	76
16	.09	74	1.000	74	27	113	3.56	96	.1300	84	4.2	.00	11.00	13.4	1.000	70
17	.09	67	1.000	67	25	86	3.63	89	.1300	77	4.2	.00	11.00	12.7	1.000	65
18	.09	61	1.000	61	22	61	3.71	83	.1300	72	4.2	.00	11.00	12.1	1.000	60
19	.09	56	1.000	56	20	39	3.79	77	.1300	67	4.2	.00	11.00	11.6	1.000	55
20	.09	51	1.000	51	19	19	3.84	71	.1300	62	4.2	.00	11.00	11.0	1.000	51
TOTALS -->	[illegible]				[illegible]			[illegible]		[illegible]				[illegible]		[illegible]

D I S C O U N T E D   C A S H F L O W   A N A L Y S I S

ROSA #116 DK

Date:11/13/89
Time: 3:40 pm

YEAR	NET OPER INCOME	INVEST MENT	DEPREC	TAXABLE INCOME	INCOME TAX	NET CASHFLOW	<----- DISCOUNTED CASH FLOW (MID YEAR) -----> .050	.150	.250	.350	.450	.650	CUM CASH FLOW
	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$	M$
	0	735		-478	-191	-544	-544	-544	-544	-544	-544	-544	-544
1	354	0	68	286	114	240	234	224	215	206	199	187	-304
2	120	0	24	96	38	82	76	66	58	52	47	38	-222
3	86	0	20	66	26	60	53	42	34	28	24	17	-162
4	100	0	17	83	33	67	57	41	31	23	18	12	-95
5	95	0	15	79	32	63	50	34	23	16	12	7	-32
6	99	0	14	86	34	65	50	30	19	12	8	4	33
7	106	0	12	94	37	68	50	28	16	10	6	3	101
8	106	0	11	95	38	68	47	24	13	7	4	2	169
9	106	0	10	96	39	68	45	21	10	5	3	1	237
10	105	0	9	96	38	66	42	18	8	4	2	1	303
11	103	0	8	95	38	65	39	15	6	3	1	0	369
12	96	0	8	88	35	60	34	12	5	2	1	0	429
13	89	0	7	82	33	56	30	10	3	1	1	0	485
14	82	0	6	76	30	52	27	8	3	1	0	0	537
15	76	0	6	70	28	48	24	6	2	1	0	0	584
16	70	0	5	65	26	44	21	5	1	0	0	0	628
17	65	0	5	60	24	41	18	4	1	0	0	0	669
18	60	0	4	56	22	38	16	3	1	0	0	0	707
19	55	0	4	51	21	35	14	3	1	0	0	0	742
20	51	0	4	47	19	32	12	2	0	0	0	0	773
TOTALS	2024	735	257	1289	516	773	395	51	-94	-170	-217	-272	

RATE OF RETURN (%) = 19