

DISTRICT I
P.O. Box 1980, Hobbs NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107-A
New 3-12-96

DISTRICT II
811 South First St., Artesia, NM 88210-2835

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPROVAL PROCESS:

☐ Administrative ☐ Hearing

DISTRICT III
1000 Rio Brazos Rd. Aztec, NM 87410-1693

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE
☒ YES ☐ NO

Amoco Production Company

PO Box 800 Denver, CO 80201

Operator
WARREN LS

#2

Address
K12-28N-09W

San Juan

Lease

Well No.

Unit Ltr. - Sec Twp - Rge

County

OGRID NO. 000778 Property Code 001212 API NO. 300450756800 Spacing Unit Lease Types: (check 1 or more)
Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Pictured Cliffs 72359		Blanco Mesaverde 72319
2. Top and Bottom of Pay Section (Perforations)	2162'-2222'		4368'-4600'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated or Measured Original	a. (Current) 275 psi b. (Original) 936 psi	RECEIVED DEC 21 1998 OIL CON. DIV. DIST. 3	a. 567 psi b. 1154 psi
6. Oil Gravity (* API) or Gas BTU Content	1157 btu		1329.6 btu
7. Producing or Shut-In?	Shut In		Producing
Production Marginal? (yes or no)	Yes		No
• If Shut-In, give data and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates: est 35 mcf / 0 bopd	Date: Rates:	Date: Rates:
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates: 11/98 138 mcf/1bopd
8. Fixed Percentage Allocation Formula -% for each zone	Oil: 0 % Gas 21 %	Oil: % Gas %	Oil: 100 % Gas 79 %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones?

If not, have all working, overriding, and royalty interests been notified by certified mail?

Have all offset operators been given written notice of the proposed downhole commingling?

☒ Yes ☐ No
☐ Yes ☐ No
☒ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No SF-077123

15. NMOCD Reference Cases for Rule 303(D) Exceptions:

ORDER NO(S) _____

16. ATTACHMENTS:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of all offset operators.
- Notification list of working, overriding, and royalty interests for uncommon interest cases.
- Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Regulatory Affairs Engineer

DATE 12/15/98

TYPE OR PRINT NAME

Pamela W. Staley

TELEPHONE NO. (303) 830-5344

WELL LOCATION AND/OR GAS PRORATION PLAT

DATE **FEBRUARY 21, 1957**

OPERATOR **EL PASO NATURAL GAS COMPANY** **WARREN** **SF 077123**

WELL NO. **2 (PM)** SECTION **12** TOWNSHIP **28 N** RANGE **9 W** ZONE

DISTANCE **1460** FEET FROM **SOUTH** CORNER **1730** FEET FROM **WEST** LINE

SAN JUAN COUNTY, NEW MEXICO **Aztec** ELEVATION **5774**

WELL TYPE **P.C. & M.V.** **BLANCO M.V.** ACRES **269.88 AC. MV.**
201.44 AC. PC.
(1919 PLAT)

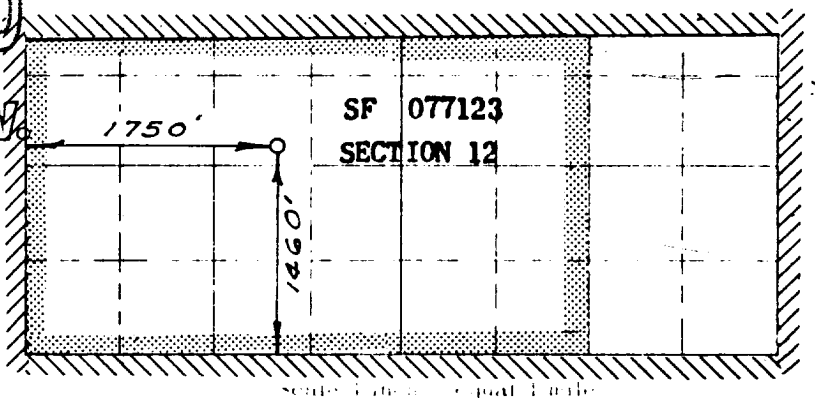
Note: All distances must be from outer boundaries of section.

Correct Dedication to:

Mesa Verde - Lots 1, 2, 3, & 4, S/2 S/2 (all) Sec 12

Pictured Cliffs - Lots 3 & 4, S/2 SW/4 (SW/4) Sec 12

RECEIVED
DEC 21 1958
OIL CON. DIV.
DIST. 3



NOTE

This section of
form is to be used
for gas wells only

This is to certify that the above plat was prepared from
field notes of actual surveys made by me or under my
supervision and that the same are true and correct to the
best of my knowledge and belief.

Date Surveyed **FEBRUARY 6, 1957**

E. O. Walker
Registered Professional Engineer and/or Land Surveyor

(Seal)

Farmington, New Mexico

1. Is this well a Dual Comp.
Yes **X** No
2. If the answer to Question 1
is yes, are there any other dually
completed wells within the
dedicated acreage.
Yes No **X**

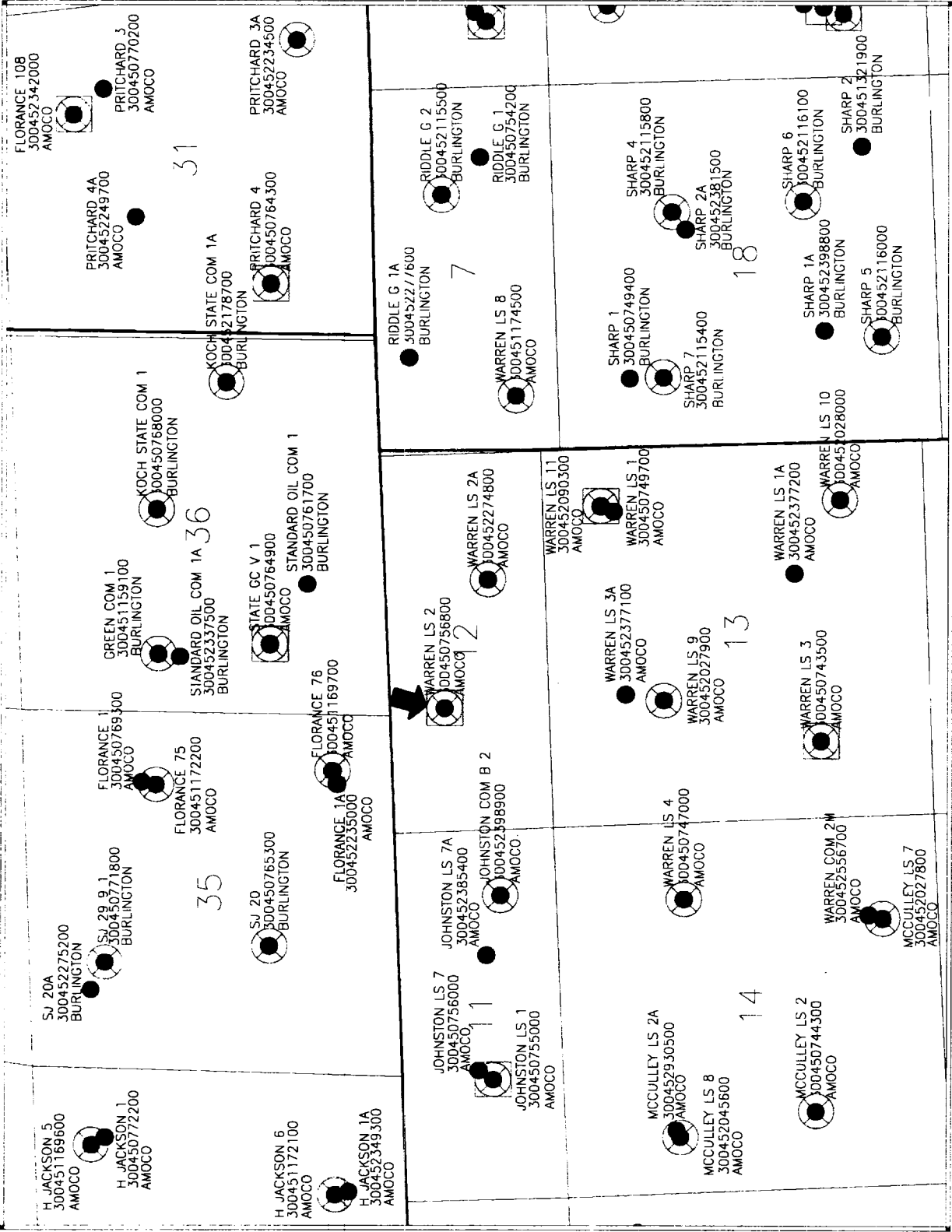
Name **Original Signed EWELL N. WALSH**

Position **Petroleum Engineer**

Representing **El Paso Natural Gas**

Address **Box 997 - Farmington, N.M.**

**NOTE: THIS PLAT IS RE-ISSUED TO SHOW CORRECTED
ACREAGE DEDICATION**



AMOCO PRODUCTION COMPANY

WARREN LS #2 COMMINGLE PACKAGE
PICTURE CLIFFS/MESAVERDE NINE SECTION P
K17-2BN-09W

ALC

Scale 1:24,000 AS

11/15/98

LEGEND

- ACTIVE MESAVERDE WELLS
- ◻ INACTIVE MESAVERDE WELLS
- ⊗ ACTIVE PICTURE CLIFF WELLS
- ⊠ INACTIVE PICTURE CLIFF WELLS

AMOCO PRODUCTION COMPANY		
WARREN LS #2 COMMINGLE PACKAGE		
PICTURE CLIFFS/MESAVERDE NINE SECTION P		
K17-2BN-09W		
ALC	Scale 1:24,000 AS	11/15/98

WarrenLS 2

DK	0.08	PC	0.04
MV	0.07	FT	0.04
		CK	0.04

WELL NAME: WARREN LS #2
FORMATION: MV

SURFACE PRESS:	253
PERFS TOP:	4368
BOTTOM:	4600

(4368 + 4600) / 2 = 4484 Mid Perf
4484 x 0.07 = 314
313.88 + 253 = 567 Bottom Hole Pressure

Initial Bottom Hole Pressure 1154

WELL NAME: WARREN LS #2
FORMATION: PC INACTIVE

Initial Bottom Hole Pressure 936
Bottom Hole Pressure: (253 + 296) / 2 = 275 est. from offsets

WELL NAME: WARREN LS #2A
FORMATION: PC

SURFACE PRESS:	166
PERFS TOP:	2155
BOTTOM:	2214
TOP	BOTTOM

(2155 + 2214) / 2 = 2185 Mid Perf
2184.5 x 0.04 = 87
87.38 + 166 = 253 Bottom Hole Pressure

WELL NAME: JOHNSTON COM B #2
FORMATION: PC

SURFACE PRESS:	206
PERFS TOP:	2230
BOTTOM:	2280
TOP	BOTTOM

(2230 + 2280) / 2 = 2255 Mid Perf
2255 x 0.04 = 90
90.2 + 206 = 296 Bottom Hole Pressure

WARREN LS 2A/JOHNSTON COM B 2 MCF(30088 + 19646) / 2 = 24867 est.

FM	BBL	%	GAS	%
PC	0	0%	24867	21%
MV	6	100%	95630	79%

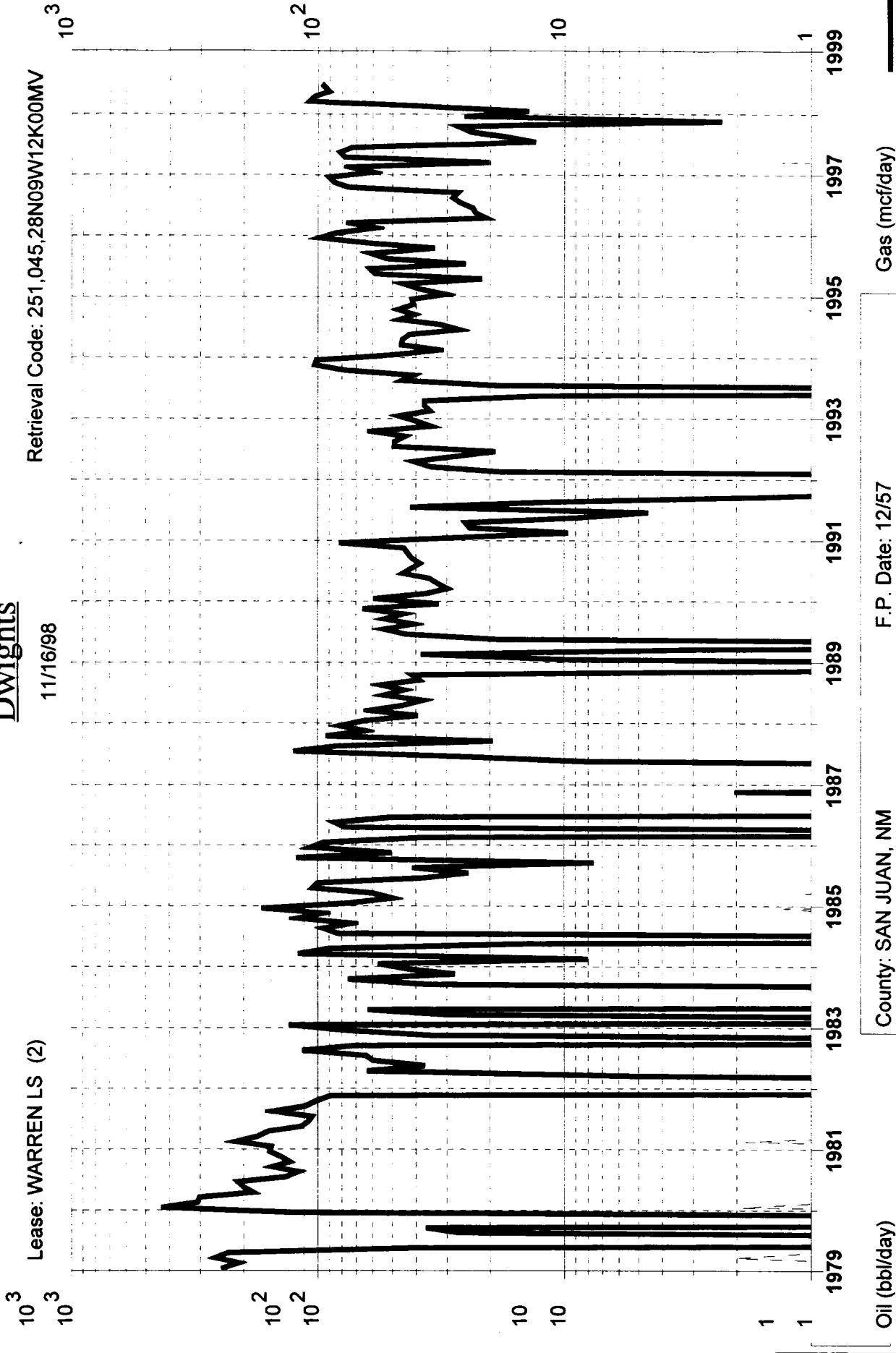
- Why MV = 95,630?
- Global Compression Project has increased MV production to approximately 130 mcf/d average.
 - MV Pay-add, which is oncurrent with the DHC, is expected to add approximately 132 mcf/d to prod.
 - DHC is expected to bring back approximately 68 mcf/d of PC production.

Dwights

11/16/98

Lease: WARREN LS (2)

Retrieval Code: 251,045,28N09W12K00MV



County: SAN JUAN, NM	F.P. Date: 12/57
API #: 30-045-0756800	Oil Cum: 14.85 mbbl
Reservoir: MESAVERDE	Gas Cum: 2800 mmcf
Operator: AMOCO PRODUCTION CO	Location: 12K 28N 9W

WELLNAME	API	METER	RECDATE	AVG LINE P	AVG TUBING P	AVG CASING	GASVOL
WARREN LS 002-MV	300450756800	71933	5/1/98	218.6	225.6		88
WARREN LS 002-MV	300450756800	71933	5/2/98	204.7	204.9		108
WARREN LS 002-MV	300450756800	71933	5/3/98	195.7	190.9		128
WARREN LS 002-MV	300450756800	71933	5/4/98	194.6	190.3		119
WARREN LS 002-MV	300450756800	71933	5/5/98	201	204.8		85
WARREN LS 002-MV	300450756800	71933	5/6/98	208.6	206.5		104
WARREN LS 002-MV	300450756800	71933	5/7/98	206.9	203.9		93
WARREN LS 002-MV	300450756800	71933	5/8/98	203.8	199.7		108
WARREN LS 002-MV	300450756800	71933	5/9/98	198.7	193.8		112
WARREN LS 002-MV	300450756800	71933	5/10/98	199	194.1		109
WARREN LS 002-MV	300450756800	71933	5/11/98	198.5	193.9		109
WARREN LS 002-MV	300450756800	71933	5/12/98	205.7	201.4		89
WARREN LS 002-MV	300450756800	71933	5/13/98	214.4	217		78
WARREN LS 002-MV	300450756800	71933	5/14/98	207.8	204.4		101
WARREN LS 002-MV	300450756800	71933	5/15/98	201.5	195.8		111
WARREN LS 002-MV	300450756800	71933	5/16/98	203.9	198.2		104
WARREN LS 002-MV	300450756800	71933	5/17/98	208.6	229.6		41
WARREN LS 002-MV	300450756800	71933	5/18/98	234.3	252.6		24
WARREN LS 002-MV	300450756800	71933	5/19/98	227.9	277.7		0
WARREN LS 002-MV	300450756800	71933	5/20/98	244	282.7		0
WARREN LS 002-MV	300450756800	71933	5/21/98	234.9	285.4		0
WARREN LS 002-MV	300450756800	71933	5/22/98	234.4	253.2		82
WARREN LS 002-MV	300450756800	71933	5/23/98	233.7	227.9		91
WARREN LS 002-MV	300450756800	71933	5/24/98	225.1	219.1		99
WARREN LS 002-MV	300450756800	71933	5/25/98	222.3	219.6		88
WARREN LS 002-MV	300450756800	71933	5/26/98	231.6	227.5		83
WARREN LS 002-MV	300450756800	71933	5/27/98	229.5	224		81
WARREN LS 002-MV	300450756800	71933	5/28/98	232	234.2		67
WARREN LS 002-MV	300450756800	71933	5/29/98	225.9	224.8		84
WARREN LS 002-MV	300450756800	71933	5/30/98	231.1	227.5		75
WARREN LS 002-MV	300450756800	71933	5/31/98	225.7	221		89
WARREN LS 002-MV	300450756800	71933	6/1/98	223.2	222.6		84
WARREN LS 002-MV	300450756800	71933	6/2/98	226.9	225.2		76
WARREN LS 002-MV	300450756800	71933	6/3/98	219.9	214.7		91
WARREN LS 002-MV	300450756800	71933	6/4/98	228.7	226.8		66
WARREN LS 002-MV	300450756800	71933	6/5/98	223.2	216.5		87
WARREN LS 002-MV	300450756800	71933	6/6/98	219.6	213		94
WARREN LS 002-MV	300450756800	71933	6/7/98	215.5	208.9		98
WARREN LS 002-MV	300450756800	71933	6/8/98	216.8	209.8		90
WARREN LS 002-MV	300450756800	71933	6/9/98	217.5	211		91
WARREN LS 002-MV	300450756800	71933	6/10/98	220.5	215.7		83
WARREN LS 002-MV	300450756800	71933	6/11/98	226.4	224.1		69
WARREN LS 002-MV	300450756800	71933	6/12/98	207.7	204.4		102
WARREN LS 002-MV	300450756800	71933	6/13/98	220.1	218.3		75
WARREN LS 002-MV	300450756800	71933	6/14/98	215.1	208.4		94
WARREN LS 002-MV	300450756800	71933	6/15/98	219.3	216.1		84
WARREN LS 002-MV	300450756800	71933	6/16/98	223.7	217.9		73
WARREN LS 002-MV	300450756800	71933	6/17/98	221.2	214.6		90
WARREN LS 002-MV	300450756800	71933	6/18/98	215.8	208.6		93
WARREN LS 002-MV	300450756800	71933	6/19/98	217	209.9		86
WARREN LS 002-MV	300450756800	71933	6/20/98	220.6	213.8		83
WARREN LS 002-MV	300450756800	71933	6/21/98	220.5	213.6		85
WARREN LS 002-MV	300450756800	71933	6/22/98	218.5	211.3		87
WARREN LS 002-MV	300450756800	71933	6/23/98	218.7	211.1		87
WARREN LS 002-MV	300450756800	71933	6/24/98	216	209.5		90
WARREN LS 002-MV	300450756800	71933	6/25/98	215.8	209.5		85
WARREN LS 002-MV	300450756800	71933	6/26/98	210.7	206.5		104
WARREN LS 002-MV	300450756800	71933	6/27/98	200.1	194.2		109
WARREN LS 002-MV	300450756800	71933	6/28/98	204.8	202.1		98
WARREN LS 002-MV	300450756800	71933	6/29/98	195.8	191.8		114
WARREN LS 002-MV	300450756800	71933	6/30/98	193.4	191.9		118
WARREN LS 002-MV	300450756800	71933	7/1/98	203.2	202.6		83
WARREN LS 002-MV	300450756800	71933	7/2/98	221.3	217.8		67
WARREN LS 002-MV	300450756800	71933	7/3/98	218	212.6		85
WARREN LS 002-MV	300450756800	71933	7/4/98	214.1	209.3		85

WELLNAME	API	METER	RECDATE	AVG LINE P	AVG TUBING P	AVG CASING	GASVOL
WARREN LS 002-MV	300450756800	71933	7/5/98	215.1	210.4		83
WARREN LS 002-MV	300450756800	71933	7/6/98	209.1	208.2		98
WARREN LS 002-MV	300450756800	71933	7/7/98	212.1	206.7		81
WARREN LS 002-MV	300450756800	71933	7/8/98	218.4	214		75
WARREN LS 002-MV	300450756800	71933	7/9/98	218.4	212.3		84
WARREN LS 002-MV	300450756800	71933	7/10/98	208	205.4		92
WARREN LS 002-MV	300450756800	71933	7/11/98	221.2	215.8		75
WARREN LS 002-MV	300450756800	71933	7/12/98	211.3	205.8		96
WARREN LS 002-MV	300450756800	71933	7/13/98	205.1	206.6		95
WARREN LS 002-MV	300450756800	71933	7/14/98	189.1	187.2		116
WARREN LS 002-MV	300450756800	71933	7/15/98	169.5	170.8		153
WARREN LS 002-MV	300450756800	71933	7/16/98	161.7	201.6		59
WARREN LS 002-MV	300450756800	71933	7/17/98	229.2	224.4		65
WARREN LS 002-MV	300450756800	71933	7/18/98	215.1	211.3		89
WARREN LS 002-MV	300450756800	71933	7/19/98	207.1	203		97
WARREN LS 002-MV	300450756800	71933	7/20/98	206.9	203.4		90
WARREN LS 002-MV	300450756800	71933	7/21/98	211.9	208.6		79
WARREN LS 002-MV	300450756800	71933	7/22/98	205.9	208		95
WARREN LS 002-MV	300450756800	71933	7/23/98	206	212.3		72
WARREN LS 002-MV	300450756800	71933	7/24/98	195.7	193.9		117
WARREN LS 002-MV	300450756800	71933	7/25/98	191.6	189.9		105
WARREN LS 002-MV	300450756800	71933	7/26/98	186.7	183.7		115
WARREN LS 002-MV	300450756800	71933	7/27/98	186	184.5		118
WARREN LS 002-MV	300450756800	71933	7/28/98	184.8	181.3		116
WARREN LS 002-MV	300450756800	71933	7/29/98	188.6	185.6		104
WARREN LS 002-MV	300450756800	71933	7/30/98	188.5	185.3		111
WARREN LS 002-MV	300450756800	71933	7/31/98	189.3	185.6		103
WARREN LS 002-MV	300450756800	71933	8/1/98	192.2	188.9		100
WARREN LS 002-MV	300450756800	71933	8/2/98	186.6	183.9		110
WARREN LS 002-MV	300450756800	71933	8/3/98	184.1	180.8		108
WARREN LS 002-MV	300450756800	71933	8/4/98	172.5	172.1		124
WARREN LS 002-MV	300450756800	71933	8/5/98	191.3	192.3		75
WARREN LS 002-MV	300450756800	71933	8/6/98	214.5	225.2		53
WARREN LS 002-MV	300450756800	71933	8/7/98	195.1	191.3		107
WARREN LS 002-MV	300450756800	71933	8/8/98	188.5	211.5		57
WARREN LS 002-MV	300450756800	71933	8/9/98	207.1	220.6		84
WARREN LS 002-MV	300450756800	71933	8/10/98	189.2	194.2		93
WARREN LS 002-MV	300450756800	71933	8/11/98	217.5	212.5		67
WARREN LS 002-MV	300450756800	71933	8/12/98	217.7	213		71
WARREN LS 002-MV	300450756800	71933	8/13/98	216	210.9		72
WARREN LS 002-MV	300450756800	71933	8/14/98	219.4	215.4		64
WARREN LS 002-MV	300450756800	71933	8/15/98	220.3	215.2		68
WARREN LS 002-MV	300450756800	71933	8/16/98	218	213		74
WARREN LS 002-MV	300450756800	71933	8/17/98	222.4	217.8		58
WARREN LS 002-MV	300450756800	71933	8/18/98	224.4	220.3		66
WARREN LS 002-MV	300450756800	71933	8/19/98	227.5	223.2		55
WARREN LS 002-MV	300450756800	71933	8/20/98	227.8	227.4		57
WARREN LS 002-MV	300450756800	71933	8/21/98	224.7	220.9		65
WARREN LS 002-MV	300450756800	71933	8/22/98	223.2	222.8		70
WARREN LS 002-MV	300450756800	71933	8/23/98	220.1	215.5		76
WARREN LS 002-MV	300450756800	71933	8/24/98	221.3	217		66
WARREN LS 002-MV	300450756800	71933	8/25/98	222.3	227.5		52
WARREN LS 002-MV	300450756800	71933	8/26/98	228.5	226		56
WARREN LS 002-MV	300450756800	71933	8/27/98	230.1	224.6		62
WARREN LS 002-MV	300450756800	71933	8/28/98	227.1	221.8		69
WARREN LS 002-MV	300450756800	71933	8/29/98	222.3	217.9		71
WARREN LS 002-MV	300450756800	71933	8/30/98	221.2	216.2		74
WARREN LS 002-MV	300450756800	71933	8/31/98	224.4	219.5		62
WARREN LS 002-MV	300450756800	71933	9/1/98	230.3	233.6		34
WARREN LS 002-MV	300450756800	71933	9/2/98	233.8	230.2		55
WARREN LS 002-MV	300450756800	71933	9/3/98	234.5	229.9		61
WARREN LS 002-MV	300450756800	71933	9/4/98	226.9	221.9		66
WARREN LS 002-MV	300450756800	71933	9/5/98	225.6	220.6		70
WARREN LS 002-MV	300450756800	71933	9/6/98	220.8	215.9		76
WARREN LS 002-MV	300450756800	71933	9/7/98	221.3	216.1		75

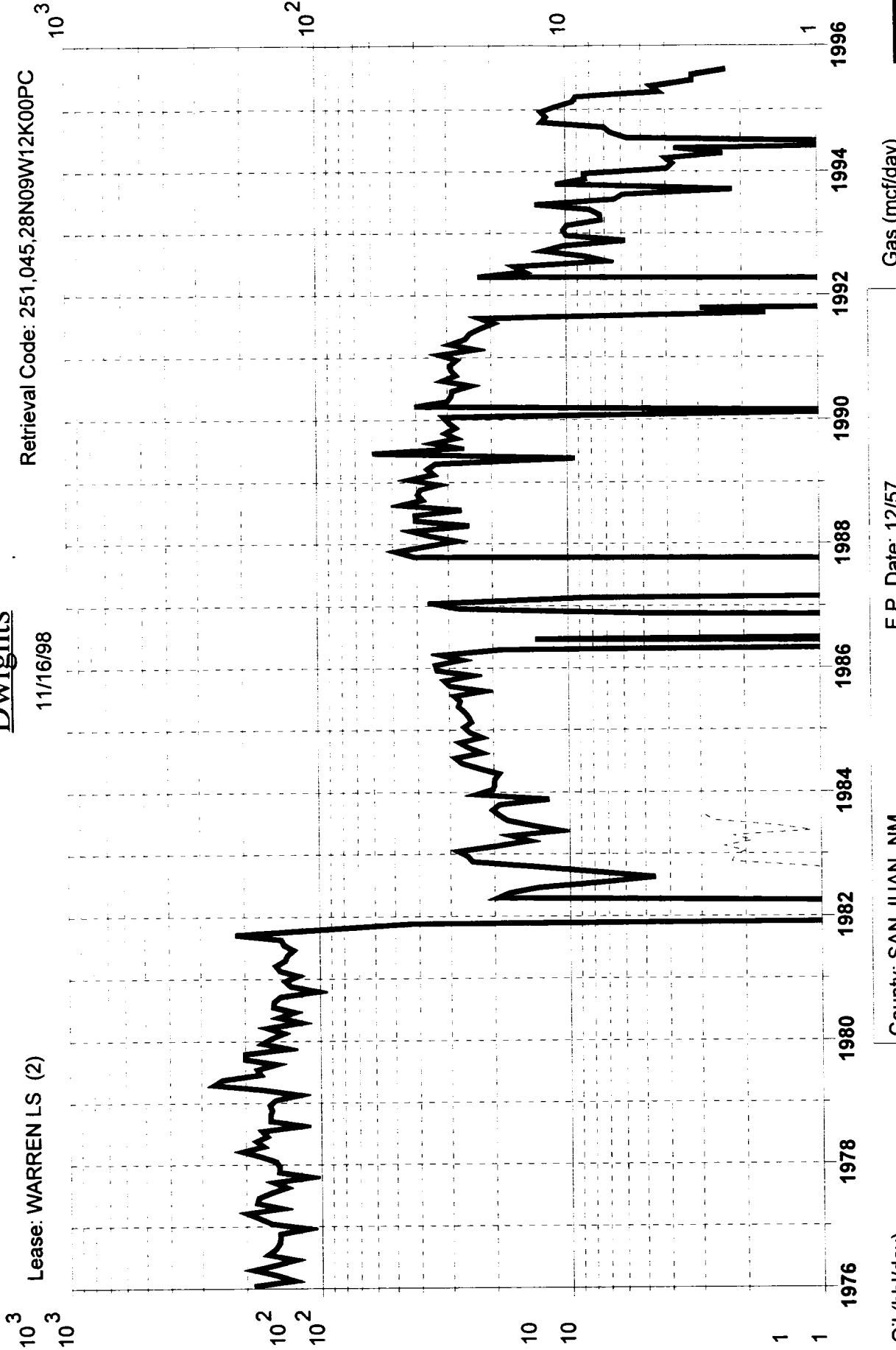
WELLNAME	API	METER	RECDATE	AVG_LINE_P	AVG_TUBING_P	AVG_CASING	GASVOL
WARREN LS 002-MV	300450756800	71933	9/8/98	222.3	218.6		63
WARREN LS 002-MV	300450756800	71933	9/9/98	222.6	217.8		75
WARREN LS 002-MV	300450756800	71933	9/10/98	211.5	209.4		87
WARREN LS 002-MV	300450756800	71933	9/11/98	218.1	220.2		63
WARREN LS 002-MV	300450756800	71933	9/12/98	228	222.8		60
WARREN LS 002-MV	300450756800	71933	9/13/98	225.4	220.3		70
WARREN LS 002-MV	300450756800	71933	9/14/98	220.1	215.4		75
WARREN LS 002-MV	300450756800	71933	9/15/98	223.5	218.6		63
WARREN LS 002-MV	300450756800	71933	9/16/98	223.1	217.5		73
WARREN LS 002-MV	300450756800	71933	9/17/98	222.3	216.9		74
WARREN LS 002-MV	300450756800	71933	9/18/98	222.4	217.4		66
WARREN LS 002-MV	300450756800	71933	9/19/98	226.3	221		66
WARREN LS 002-MV	300450756800	71933	9/20/98	222.6	216.9		71
WARREN LS 002-MV	300450756800	71933	9/21/98	223.9	218.2		68
WARREN LS 002-MV	300450756800	71933	9/22/98	224.2	218.7		66
WARREN LS 002-MV	300450756800	71933	9/23/98	191.5	193.8		121
WARREN LS 002-MV	300450756800	71933	9/24/98	168.2	167.3		147
WARREN LS 002-MV	300450756800	71933	9/25/98	165.6	162.8		141
WARREN LS 002-MV	300450756800	71933	9/26/98	161.9	161.3		133
WARREN LS 002-MV	300450756800	71933	9/27/98	164.7	171.4		104
WARREN LS 002-MV	300450756800	71933	9/28/98	154	154.1		150
WARREN LS 002-MV	300450756800	71933	9/29/98	152.9	151.8		140
WARREN LS 002-MV	300450756800	71933	9/30/98	150.5	150.1		140
WARREN LS 002-MV	300450756800	71933	10/1/98	150.8	148.3		130
WARREN LS 002-MV	300450756800	71933	10/2/98	142.7	146.1		157
WARREN LS 002-MV	300450756800	71933	10/3/98	126	125.9		117
WARREN LS 002-MV	300450756800	71933	10/4/98	123.5	129.4		145
WARREN LS 002-MV	300450756800	71933	10/5/98	124.2	129.5		140
WARREN LS 002-MV	300450756800	71933	10/6/98	134.9	134.8		131
WARREN LS 002-MV	300450756800	71933	10/7/98	139.7	144.4		115
WARREN LS 002-MV	300450756800	71933	10/8/98	156	154.4		139
WARREN LS 002-MV	300450756800	71933	10/9/98	150.6	151.6		118
WARREN LS 002-MV	300450756800	71933	10/10/98	150.3	150.5		131
WARREN LS 002-MV	300450756800	71933	10/11/98	147.5	146		130
WARREN LS 002-MV	300450756800	71933	10/12/98	144	195.5		30
WARREN LS 002-MV	300450756800	71933	10/13/98	222.8	225.9		20
WARREN LS 002-MV	300450756800	71933	10/14/98	240.8	235.6		10
WARREN LS 002-MV	300450756800	71933	10/15/98	248.9	240.6		10
WARREN LS 002-MV	300450756800	71933	10/16/98	214.5	218.4		80
WARREN LS 002-MV	300450756800	71933	10/17/98	183.6	183.6		120
WARREN LS 002-MV	300450756800	71933	10/18/98	175.9	171.8		123
WARREN LS 002-MV	300450756800	71933	10/19/98	169.9	179.7		112
WARREN LS 002-MV	300450756800	71933	10/20/98	144.5	148.3		125
WARREN LS 002-MV	300450756800	71933	10/21/98	136.4	137.4		157
WARREN LS 002-MV	300450756800	71933	10/22/98	135.1	137.4		136
WARREN LS 002-MV	300450756800	71933	10/23/98	134.9	136.7		136
WARREN LS 002-MV	300450756800	71933	10/24/98	134.1	133.8		136
WARREN LS 002-MV	300450756800	71933	10/25/98	131.9	133.4		136
WARREN LS 002-MV	300450756800	71933	10/26/98	129.6	130.9		132
WARREN LS 002-MV	300450756800	71933	10/27/98	131.5	132.5		132
WARREN LS 002-MV	300450756800	71933	10/28/98	134.9	135.9		127
WARREN LS 002-MV	300450756800	71933	10/29/98	138.3	137.3		137
WARREN LS 002-MV	300450756800	71933	10/30/98	139.7	138.7		134
WARREN LS 002-MV	300450756800	71933	10/31/98	137.7	138.7		121
WARREN LS 002-MV	300450756800	71933	11/1/98	135	136		137
WARREN LS 002-MV	300450756800	71933	11/2/98	137.7	139.4		125
WARREN LS 002-MV	300450756800	71933	11/3/98	127.6	132.7		118
WARREN LS 002-MV	300450756800	71933	11/4/98	130.2	131.2		142
WARREN LS 002-MV	300450756800	71933	11/5/98	128.4	130.1		126
WARREN LS 002-MV	300450756800	71933	11/6/98	137.3	143.4		117
WARREN LS 002-MV	300450756800	71933	11/7/98	129.8	131.7		133
WARREN LS 002-MV	300450756800	71933	11/8/98	123.8	126.1		125
WARREN LS 002-MV	300450756800	71933	11/9/98	127	128		122
WARREN LS 002-MV	300450756800	71933	11/10/98	145.1	159.7		92
WARREN LS 002-MV	300450756800	71933	11/11/98	139.8	138.9		144

Dwights

11/16/98

Lease: WARREN LS (2)

Retrieval Code: 251,045,28N09W12K00PC



F.P. Date: 12/57

County: SAN JUAN, NM

Oil Cum: 0 bbl

API #: 30-045-0756800

Gas Cum: 1685 mmcf

Reservoir: PICTURED CLIFFS

Location: 12K 28N 9W

Operator: AMOCO PRODUCTION CO

Dwights

Lease: JOHNSTON COM B (2)

11/17/98

Retrieval Code: 251,045,0452398972359

10³
10³
10³

10²
10²

10²

10
10

10

1
1

1
1999

Oil (bbl/day)

Water (bbl/day)

Gas (mcf/day)

F.P. Date: 04/96

County: SAN JUAN, NM

Oil Cum: 0 bbl

API #: 30-045-2398900

Gas Cum: 94.34 mmcf

Reservoir: PICTURED CLIFFS

Location: 11P 28N 9W

Operator: AMOCO PRODUCTION CO

WELLNAME	API	METER	RECDATE	AVG LINE P	AVG TUBING P	AVG CASING	GASVOL
JOHNSTON COM B 002-PC	300452398900	97824	8/1/98	190.8	192.1	208.2	125
JOHNSTON COM B 002-PC	300452398900	97824	8/2/98	187.6	188.1	209.2	143
JOHNSTON COM B 002-PC	300452398900	97824	8/3/98	186.4	186.5	201	195
JOHNSTON COM B 002-PC	300452398900	97824	8/4/98	173.1	179.3	196.4	229
JOHNSTON COM B 002-PC	300452398900	97824	8/5/98	185	194	205.3	64
JOHNSTON COM B 002-PC	300452398900	97824	8/6/98	208.1	210.9	222.5	23
JOHNSTON COM B 002-PC	300452398900	97824	8/7/98	196.9	197.3	213.2	157
JOHNSTON COM B 002-PC	300452398900	97824	8/8/98	190.9	195.6	217.3	71
JOHNSTON COM B 002-PC	300452398900	97824	8/9/98	201.7	205.6	225.7	84
JOHNSTON COM B 002-PC	300452398900	97824	8/10/98	188.1	194.1	210.5	153
JOHNSTON COM B 002-PC	300452398900	97824	8/11/98	217	211.3	229.3	2
JOHNSTON COM B 002-PC	300452398900	97824	8/12/98	216.6	215.5	233.8	37
JOHNSTON COM B 002-PC	300452398900	97824	8/13/98	215.5	214.9	234.3	51
JOHNSTON COM B 002-PC	300452398900	97824	8/14/98	217.1	217	237.9	35
JOHNSTON COM B 002-PC	300452398900	97824	8/15/98	220.1	218.5	240.4	43
JOHNSTON COM B 002-PC	300452398900	97824	8/16/98	218.7	217.6	230.8	141
JOHNSTON COM B 002-PC	300452398900	97824	8/17/98	217.6	221.2	235.8	40
JOHNSTON COM B 002-PC	300452398900	97824	8/18/98	220.4	224.5	240.5	66
JOHNSTON COM B 002-PC	300452398900	97824	8/19/98	225	224.3	242.1	34
JOHNSTON COM B 002-PC	300452398900	97824	8/20/98	223.2	224.5	244.2	37
JOHNSTON COM B 002-PC	300452398900	97824	8/21/98	224.2	224.3	238.4	111
JOHNSTON COM B 002-PC	300452398900	97824	8/22/98	221	222.4	235.3	107
JOHNSTON COM B 002-PC	300452398900	97824	8/23/98	220.5	219.8	235.7	109
JOHNSTON COM B 002-PC	300452398900	97824	8/24/98	219.4	220.2	240.1	50
JOHNSTON COM B 002-PC	300452398900	97824	8/25/98	216	219.5	242.2	55
JOHNSTON COM B 002-PC	300452398900	97824	8/26/98	223.3	229.3	241.4	76
JOHNSTON COM B 002-PC	300452398900	97824	8/27/98	230.1	230.1	241.8	92
JOHNSTON COM B 002-PC	300452398900	97824	8/28/98	226.8	226.3	241.3	86
JOHNSTON COM B 002-PC	300452398900	97824	8/29/98	221.7	221.5	240.4	88
JOHNSTON COM B 002-PC	300452398900	97824	8/30/98	221.7	220.5	240.1	109
JOHNSTON COM B 002-PC	300452398900	97824	8/31/98	223.2	224	235.5	102
JOHNSTON COM B 002-PC	300452398900	97824	9/1/98	226.6	228	242.6	43
JOHNSTON COM B 002-PC	300452398900	97824	9/2/98	226.6	228	242.6	43
JOHNSTON COM B 002-PC	300452398900	97824	9/3/98	231.4	233.1	249.6	66
JOHNSTON COM B 002-PC	300452398900	97824	9/4/98	225.9	226	245.6	77
JOHNSTON COM B 002-PC	300452398900	97824	9/5/98	226.3	224.9	237.1	159
JOHNSTON COM B 002-PC	300452398900	97824	9/6/98	221	220.4	235.2	122
JOHNSTON COM B 002-PC	300452398900	97824	9/7/98	221.7	220.5	239.3	85
JOHNSTON COM B 002-PC	300452398900	97824	9/8/98	219.4	221.1	243.5	48
JOHNSTON COM B 002-PC	300452398900	97824	9/9/98	222.9	222.8	234.7	164
JOHNSTON COM B 002-PC	300452398900	97824	9/10/98	212.7	213.6	230.9	153
JOHNSTON COM B 002-PC	300452398900	97824	9/11/98	215	216.8	238.2	56
JOHNSTON COM B 002-PC	300452398900	97824	9/12/98	225	223.2	245.8	30
JOHNSTON COM B 002-PC	300452398900	97824	9/13/98	226.6	225.2	237.3	151
JOHNSTON COM B 002-PC	300452398900	97824	9/14/98	220.1	219.6	235.2	107
JOHNSTON COM B 002-PC	300452398900	97824	9/15/98	223.1	222.4	241.3	57
JOHNSTON COM B 002-PC	300452398900	97824	9/16/98	223.6	222.1	243.1	75
JOHNSTON COM B 002-PC	300452398900	97824	9/17/98	223.3	221.6	236.3	145
JOHNSTON COM B 002-PC	300452398900	97824	9/18/98	221.4	221.9	237.2	79
JOHNSTON COM B 002-PC	300452398900	97824	9/19/98	227.2	225.4	242.5	73
JOHNSTON COM B 002-PC	300452398900	97824	9/20/98	224	222.3	243	70
JOHNSTON COM B 002-PC	300452398900	97824	9/21/98	225.6	223.8	238.3	132
JOHNSTON COM B 002-PC	300452398900	97824	9/22/98	225.7	224.7	238.4	93
JOHNSTON COM B 002-PC	300452398900	97824	9/23/98	192.8	205.8	221.4	308
JOHNSTON COM B 002-PC	300452398900	97824	9/24/98	171.7	176	190.6	358
JOHNSTON COM B 002-PC	300452398900	97824	9/25/98	168.7	170.3	187.9	292
JOHNSTON COM B 002-PC	300452398900	97824	9/26/98	164.3	166.5	184.7	284
JOHNSTON COM B 002-PC	300452398900	97824	9/27/98	165	170.1	189.7	215
JOHNSTON COM B 002-PC	300452398900	97824	9/28/98	156	157.5	176	281
JOHNSTON COM B 002-PC	300452398900	97824	9/29/98	155.3	156.3	174.2	271

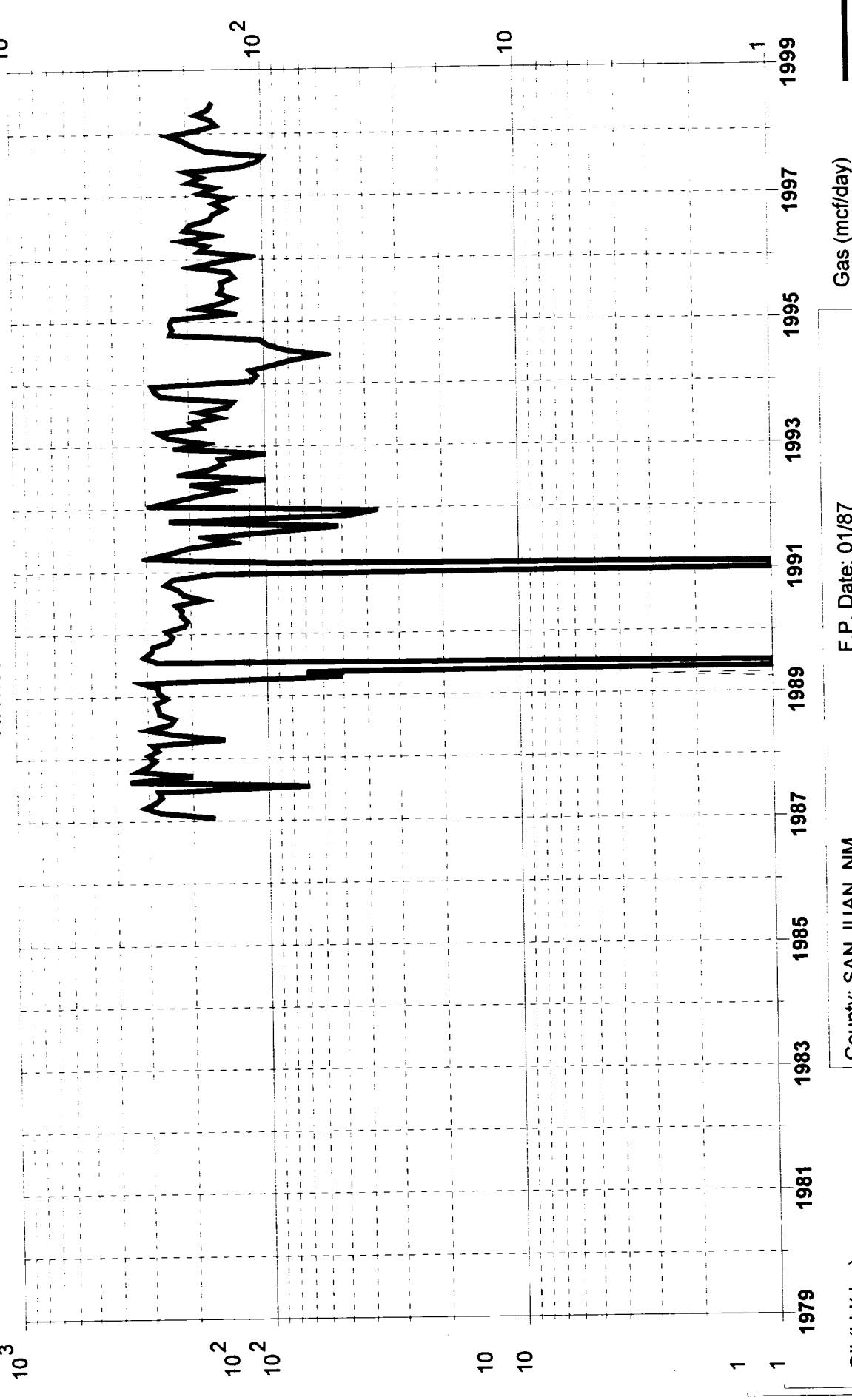
WELLNAME	API	METER	RECDATE	AVG LINE P	AVG TUBING P	AVG CASING	GASVOL
JOHNSTON COM B 002-PC	300452398900	97824	9/30/98	152.3	153.3	171.5	283
JOHNSTON COM B 002-PC	300452398900	97824	10/1/98	152.3	153.2	171.3	257
JOHNSTON COM B 002-PC	300452398900	97824	10/2/98	145.8	149.4	167.7	313
JOHNSTON COM B 002-PC	300452398900	97824	10/3/98	132.4	135	153.5	341
JOHNSTON COM B 002-PC	300452398900	97824	10/4/98	127.4	130.4	148.8	340
JOHNSTON COM B 002-PC	300452398900	97824	10/5/98	127.5	128.9	148.5	294
JOHNSTON COM B 002-PC	300452398900	97824	10/6/98	135.2	135.5	154.1	239
JOHNSTON COM B 002-PC	300452398900	97824	10/7/98	137.4	140.6	159.8	203
JOHNSTON COM B 002-PC	300452398900	97824	10/8/98	151.7	154	173	176
JOHNSTON COM B 002-PC	300452398900	97824	10/9/98	149.9	150.5	170.7	191
JOHNSTON COM B 002-PC	300452398900	97824	10/10/98	148.5	149.3	168.6	201
JOHNSTON COM B 002-PC	300452398900	97824	10/11/98	147.8	147.5	165.7	236
JOHNSTON COM B 002-PC	300452398900	97824	10/12/98	145.3	168	181.7	62
JOHNSTON COM B 002-PC	300452398900	97824	10/13/98	241.1	188.7	200.4	0
JOHNSTON COM B 002-PC	300452398900	97824	10/14/98	244.9	198.7	210	0
JOHNSTON COM B 002-PC	300452398900	97824	10/15/98	249.1	205.6	216.7	0
JOHNSTON COM B 002-PC	300452398900	97824	10/16/98	198.9	205.7	217.7	65
JOHNSTON COM B 002-PC	300452398900	97824	10/17/98	179.5	183.9	201.9	206
JOHNSTON COM B 002-PC	300452398900	97824	10/18/98	175.8	175	191.3	233
JOHNSTON COM B 002-PC	300452398900	97824	10/19/98	167.7	173.6	190.3	211
JOHNSTON COM B 002-PC	300452398900	97824	10/20/98	148	152.7	168.9	360
JOHNSTON COM B 002-PC	300452398900	97824	10/21/98	138.4	140.2	159.9	309
JOHNSTON COM B 002-PC	300452398900	97824	10/22/98	137.4	138.7	157.6	291
JOHNSTON COM B 002-PC	300452398900	97824	10/23/98	137.1	137.9	156.8	272
JOHNSTON COM B 002-PC	300452398900	97824	10/24/98	135.8	136.2	156.1	260
JOHNSTON COM B 002-PC	300452398900	97824	10/25/98	133.8	134.3	153.6	269
JOHNSTON COM B 002-PC	300452398900	97824	10/26/98	131.3	131.6	150.7	268
JOHNSTON COM B 002-PC	300452398900	97824	10/27/98	133	132.8	152.8	238
JOHNSTON COM B 002-PC	300452398900	97824	10/28/98	136.1	135.5	155.6	216
JOHNSTON COM B 002-PC	300452398900	97824	10/29/98	138.8	137.5	158.3	203
JOHNSTON COM B 002-PC	300452398900	97824	10/30/98	139.8	138.9	159.1	201
JOHNSTON COM B 002-PC	300452398900	97824	10/31/98	139.3	138.3	158.4	217
JOHNSTON COM B 002-PC	300452398900	97824	11/1/98	136.3	135.9	155.3	231
JOHNSTON COM B 002-PC	300452398900	97824	11/2/98	136.9	138.9	157.3	210
JOHNSTON COM B 002-PC	300452398900	97824	11/3/98	129.3	132.2	150.2	236
JOHNSTON COM B 002-PC	300452398900	97824	11/4/98	132.4	132.1	151.2	251
JOHNSTON COM B 002-PC	300452398900	97824	11/5/98	130.2	129.7	149.3	234
JOHNSTON COM B 002-PC	300452398900	97824	11/6/98	134.2	136.4	155.8	174
JOHNSTON COM B 002-PC	300452398900	97824	11/7/98	131.9	131.8	151	246
JOHNSTON COM B 002-PC	300452398900	97824	11/8/98	126.2	126.1	145.8	253
JOHNSTON COM B 002-PC	300452398900	97824	11/9/98	126.5	128.1	148.4	195
JOHNSTON COM B 002-PC	300452398900	97824	11/10/98	135	146.6	163	102
JOHNSTON COM B 002-PC	300452398900	97824	11/11/98	139	140.2	159	228
JOHNSTON COM B 002-PC	300452398900	97824	11/12/98	136.2	141.8	161.4	130
JOHNSTON COM B 002-PC	300452398900	97824	11/13/98	139.4	141.9	161.3	225
JOHNSTON COM B 002-PC	300452398900	97824	11/14/98	128.4	128.3	148.6	257

Dwights

10³
10³
Lease: WARREN LS (2A)

Retrieval Code: 251,045,28N09W12O00PC

11/17/98



F.P. Date: 01/87

County: SAN JUAN, NM

Oil Cum: 231 bbl

API #: 30-045-2274800

Gas Cum: 788.8 mmcf

Reservoir: PICTURED CLIFFS

Location: 12O 28N 9W

Operator: AMOCO PRODUCTION CO

WELLNAME	API	METER	RECDATE	AVG LINE	PAVG TUBING P	AVG CASING	GASVOL
WARREN LS 002A-PC	300452274800	95978	8/1/98	148.1	150.3	155.2	129
WARREN LS 002A-PC	300452274800	95978	8/2/98	145.6	146.4	155.2	146
WARREN LS 002A-PC	300452274800	95978	8/3/98	147.8	151.6	155	125
WARREN LS 002A-PC	300452274800	95978	8/4/98	147	148.4	154.3	152
WARREN LS 002A-PC	300452274800	95978	8/5/98	146.1	150.6	153.8	147
WARREN LS 002A-PC	300452274800	95978	8/6/98	147.6	160.7	159.1	75
WARREN LS 002A-PC	300452274800	95978	8/7/98	148.6	153.2	156.2	144
WARREN LS 002A-PC	300452274800	95978	8/8/98	145.1	158.2	158.3	85
WARREN LS 002A-PC	300452274800	95978	8/9/98	149.8	163	162.3	83
WARREN LS 002A-PC	300452274800	95978	8/10/98	145.9	152.9	155.4	160
WARREN LS 002A-PC	300452274800	95978	8/11/98	148.3	148.9	155.1	139
WARREN LS 002A-PC	300452274800	95978	8/12/98	150.6	152.9	157.3	96
WARREN LS 002A-PC	300452274800	95978	8/13/98	151.8	163.8	162.3	43
WARREN LS 002A-PC	300452274800	95978	8/14/98	144.7	171.9	167.2	0
WARREN LS 002A-PC	300452274800	95978	8/15/98	139.6	173.8	169.3	0
WARREN LS 002A-PC	300452274800	95978	8/16/98	135.1	175.1	170.6	0
WARREN LS 002A-PC	300452274800	95978	8/17/98	132.7	176.2	171.6	0
WARREN LS 002A-PC	300452274800	95978	8/18/98	130.4	177	172.4	0
WARREN LS 002A-PC	300452274800	95978	8/19/98	151.6	177.8	173.2	0
WARREN LS 002A-PC	300452274800	95978	8/20/98	144.1	178.5	173.8	0
WARREN LS 002A-PC	300452274800	95978	8/21/98	156.2	178.2	173.5	10
WARREN LS 002A-PC	300452274800	95978	8/22/98	158.3	170.9	170.1	100
WARREN LS 002A-PC	300452274800	95978	8/23/98	150.1	152.5	159.1	211
WARREN LS 002A-PC	300452274800	95978	8/24/98	148.9	151.1	156.6	183
WARREN LS 002A-PC	300452274800	95978	8/25/98	153.1	163	162.5	81
WARREN LS 002A-PC	300452274800	95978	8/26/98	150.8	153.2	158.3	181
WARREN LS 002A-PC	300452274800	95978	8/27/98	153	153.7	159.4	119
WARREN LS 002A-PC	300452274800	95978	8/28/98	154.2	157.3	162.6	86
WARREN LS 002A-PC	300452274800	95978	8/29/98	150.6	152.4	159.1	162
WARREN LS 002A-PC	300452274800	95978	8/30/98	147.9	151.1	157	171
WARREN LS 002A-PC	300452274800	95978	8/31/98	145.6	149.2	153.9	191
WARREN LS 002A-PC	300452274800	95978	9/1/98	147.4	148.6	154.5	155
WARREN LS 002A-PC	300452274800	95978	9/2/98	150.9	153.6	157.6	130
WARREN LS 002A-PC	300452274800	95978	9/3/98	148.7	149.5	156.7	143
WARREN LS 002A-PC	300452274800	95978	9/4/98	147.2	151.2	156.4	151
WARREN LS 002A-PC	300452274800	95978	9/5/98	148.3	149.1	155.8	141
WARREN LS 002A-PC	300452274800	95978	9/6/98	147.9	149.7	159	98
WARREN LS 002A-PC	300452274800	95978	9/7/98	147.5	147.9	158.4	139
WARREN LS 002A-PC	300452274800	95978	9/8/98	146.8	148.7	158.2	112
WARREN LS 002A-PC	300452274800	95978	9/9/98	148.4	148.8	158.6	132
WARREN LS 002A-PC	300452274800	95978	9/10/98	146.1	149.3	155.5	171
WARREN LS 002A-PC	300452274800	95978	9/11/98	145.9	146.6	154.6	159
WARREN LS 002A-PC	300452274800	95978	9/12/98	143.7	146	156.3	119
WARREN LS 002A-PC	300452274800	95978	9/13/98	145.2	150	157.4	157
WARREN LS 002A-PC	300452274800	95978	9/14/98	139.8	141.9	148.9	232
WARREN LS 002A-PC	300452274800	95978	9/15/98	138.3	140.4	147.1	227
WARREN LS 002A-PC	300452274800	95978	9/16/98	137.9	140	146.4	220
WARREN LS 002A-PC	300452274800	95978	9/17/98	138.8	140.8	146.6	209
WARREN LS 002A-PC	300452274800	95978	9/18/98	138.4	140.4	146.3	210
WARREN LS 002A-PC	300452274800	95978	9/19/98	136.9	138.9	145.3	218
WARREN LS 002A-PC	300452274800	95978	9/20/98	137.8	140.7	146.2	191
WARREN LS 002A-PC	300452274800	95978	9/21/98	135.7	137.8	144.4	223
WARREN LS 002A-PC	300452274800	95978	9/22/98	136.9	139	144.5	203
WARREN LS 002A-PC	300452274800	95978	9/23/98	140.1	141.9	148	162
WARREN LS 002A-PC	300452274800	95978	9/24/98	144	145.7	152.8	103
WARREN LS 002A-PC	300452274800	95978	9/25/98	147.1	147.2	154.9	112
WARREN LS 002A-PC	300452274800	95978	9/26/98	148.4	150.9	154.9	120
WARREN LS 002A-PC	300452274800	95978	9/27/98	145.7	146.2	152.9	142
WARREN LS 002A-PC	300452274800	95978	9/28/98	144.1	158.1	157.8	73
WARREN LS 002A-PC	300452274800	95978	9/29/98	151	162.4	160.7	85

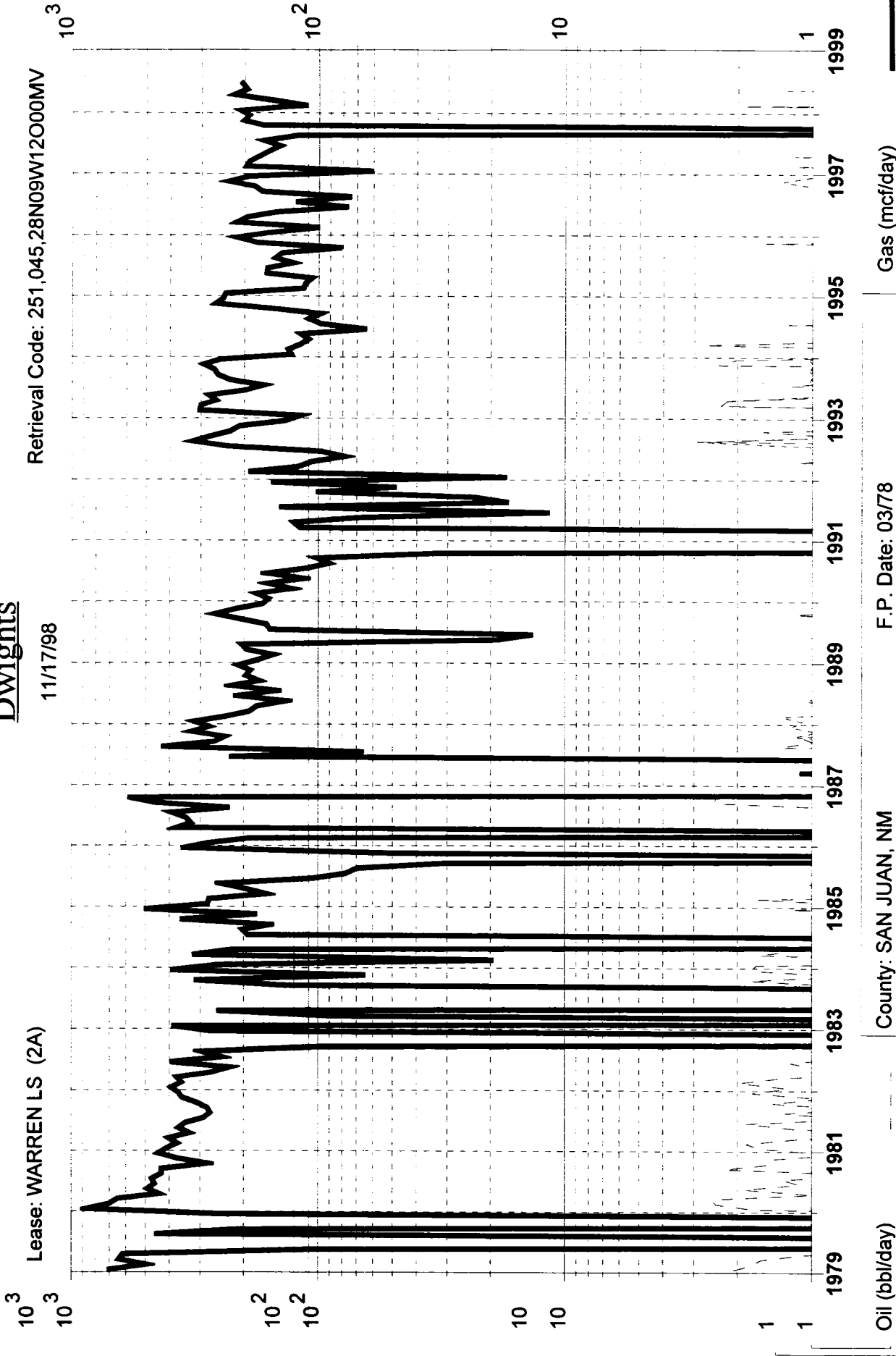
WELLNAME	API	METER	RECDATE	AVG LINE P	AVG TUBING P	AVG CASING	GASVOL
WARREN LS 002A-PC	300452274800	95978	9/30/98	145.7	148.8	153.6	156
WARREN LS 002A-PC	300452274800	95978	10/1/98	148.9	155	156.2	132
WARREN LS 002A-PC	300452274800	95978	10/2/98	145.1	144.4	152.6	155
WARREN LS 002A-PC	300452274800	95978	10/3/98	146.5	148.1	154.8	113
WARREN LS 002A-PC	300452274800	95978	10/4/98	145.4	144.6	154.8	137
WARREN LS 002A-PC	300452274800	95978	10/5/98	142.1	143.9	149.2	201
WARREN LS 002A-PC	300452274800	95978	10/6/98	144.6	143.6	150.8	151
WARREN LS 002A-PC	300452274800	95978	10/7/98	145.9	151.2	154.9	95
WARREN LS 002A-PC	300452274800	95978	10/8/98	148.9	154.3	156.6	130
WARREN LS 002A-PC	300452274800	95978	10/9/98	147.2	146.5	153	145
WARREN LS 002A-PC	300452274800	95978	10/10/98	149.7	155.1	158.4	73
WARREN LS 002A-PC	300452274800	95978	10/11/98	144.8	144.6	152.2	187
WARREN LS 002A-PC	300452274800	95978	10/12/98	140.8	158.1	156.3	83
WARREN LS 002A-PC	300452274800	95978	10/13/98	169.1	169.4	164.7	0
WARREN LS 002A-PC	300452274800	95978	10/14/98	167.2	171.9	167.4	0
WARREN LS 002A-PC	300452274800	95978	10/15/98	164	173.5	168.9	0
WARREN LS 002A-PC	300452274800	95978	10/16/98	164.7	174.4	169.7	0
WARREN LS 002A-PC	300452274800	95978	10/17/98	171.9	175.4	170.5	0
WARREN LS 002A-PC	300452274800	95978	10/18/98	170.1	176.2	171.3	0
WARREN LS 002A-PC	300452274800	95978	10/19/98	173.3	174.2	171.5	0
WARREN LS 002A-PC	300452274800	95978	10/20/98	176.3	177.2	172.5	0
WARREN LS 002A-PC	300452274800	95978	10/21/98	176.9	177.9	172.9	0
WARREN LS 002A-PC	300452274800	95978	10/22/98	166	178.5	173.5	0
WARREN LS 002A-PC	300452274800	95978	10/23/98	158.9	165.9	169.9	98
WARREN LS 002A-PC	300452274800	95978	10/24/98	155.3	156.4	164.2	114
WARREN LS 002A-PC	300452274800	95978	10/25/98	152.6	151.2	162.9	129
WARREN LS 002A-PC	300452274800	95978	10/26/98	148.1	149.3	157.9	173
WARREN LS 002A-PC	300452274800	95978	10/27/98	152.6	163.6	163.6	92
WARREN LS 002A-PC	300452274800	95978	10/28/98	148.9	147.7	158	161
WARREN LS 002A-PC	300452274800	95978	10/29/98	147.3	148.9	154	197
WARREN LS 002A-PC	300452274800	95978	10/30/98	147.6	155.9	158.4	113
WARREN LS 002A-PC	300452274800	95978	10/31/98	145.6	154.2	158.1	185
WARREN LS 002A-PC	300452274800	95978	11/1/98	139.8	141.2	149.1	242
WARREN LS 002A-PC	300452274800	95978	11/2/98	138.7	138.8	147.6	224
WARREN LS 002A-PC	300452274800	95978	11/3/98	138	142.7	147.6	203
WARREN LS 002A-PC	300452274800	95978	11/4/98	144	146.4	151.4	165
WARREN LS 002A-PC	300452274800	95978	11/5/98	144.7	145.8	152.7	143
WARREN LS 002A-PC	300452274800	95978	11/6/98	142.9	141.2	154	149
WARREN LS 002A-PC	300452274800	95978	11/7/98	140.4	141.7	148.1	220
WARREN LS 002A-PC	300452274800	95978	11/8/98	137.9	139.2	146.1	227
WARREN LS 002A-PC	300452274800	95978	11/9/98	133.7	156.6	154.5	76
WARREN LS 002A-PC	300452274800	95978	11/10/98	118.3	168.5	163.5	0
WARREN LS 002A-PC	300452274800	95978	11/11/98	112	137.2	153	275
WARREN LS 002A-PC	300452274800	95978	11/12/98	116	120.2	138.4	310
WARREN LS 002A-PC	300452274800	95978	11/13/98	131.9	141.1	145	169
WARREN LS 002A-PC	300452274800	95978	11/14/98	151.8	150.4	152.7	109

Dwights

Lease: WARREN LS (2A)

Retrieval Code: 251,045,28N09W12O00MV

11/17/98



Oil (bbl/day)

Water (bbl/day)

Gas (mcf/day)

County: SAN JUAN, NM

F.P. Date: 03/78

API #: 30-045-2274800

Oil Cum: 4608 bbl

Reservoir: MESAVERDE

Gas Cum: 1607 mmcf

Operator: AMOCO PRODUCTION CO

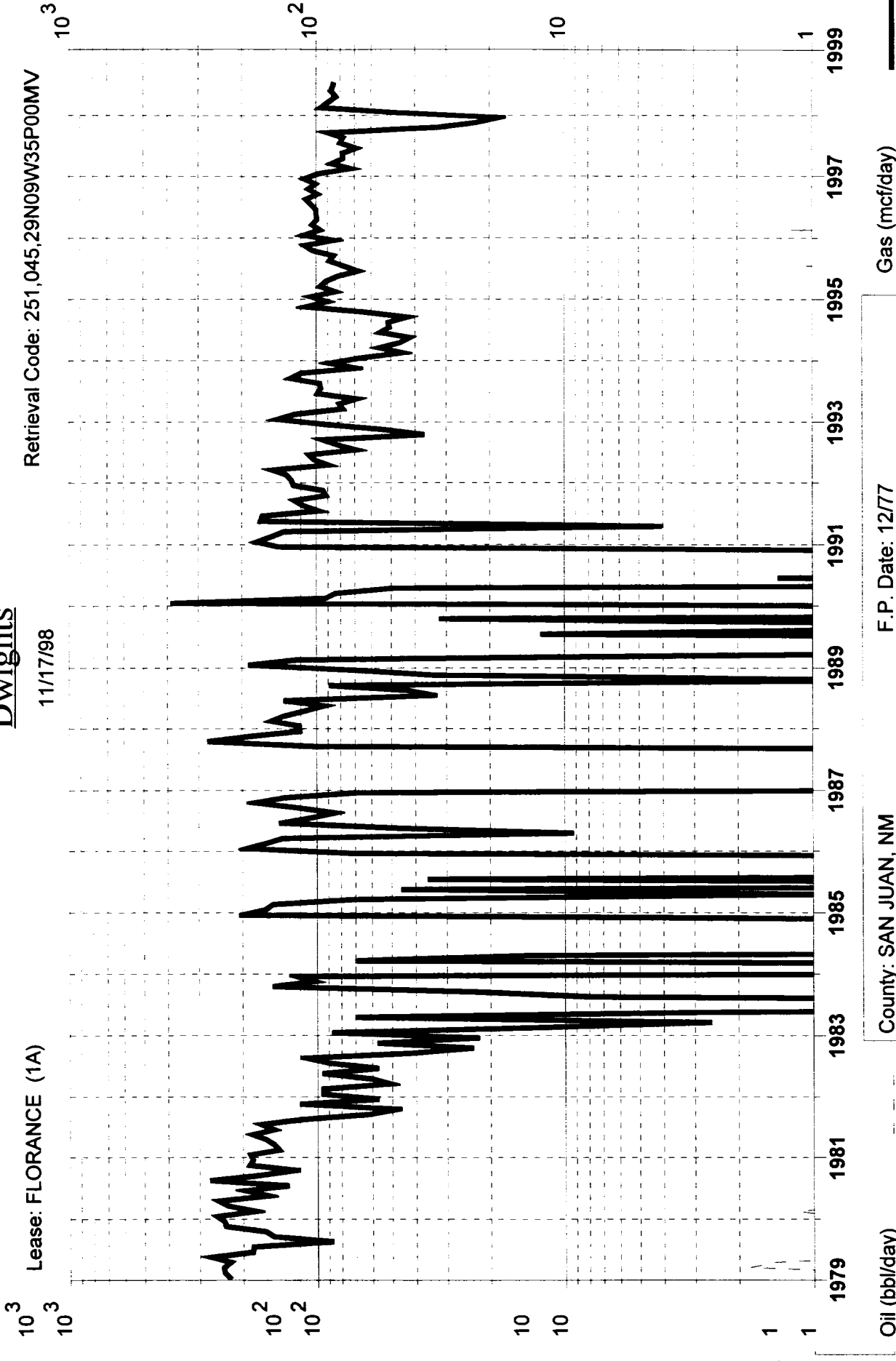
Location: 12O 28N 9W

Dwights

Lease: FLORANCE (1A)

Retrieval Code: 251,045,29N09W35P00MV

11/17/98



Oil (bbl/day)

Water (bbl/day)

Gas (mcf/day)

County: SAN JUAN, NM

F.P. Date: 12/77

API #: 30-045-2235000

Oil Cum: 2015 bbl

Reservoir: MESAVERDE

Gas Cum: 752.3 mmcf

Operator: AMOCO PRODUCTION CO

Location: 35P 29N 9W

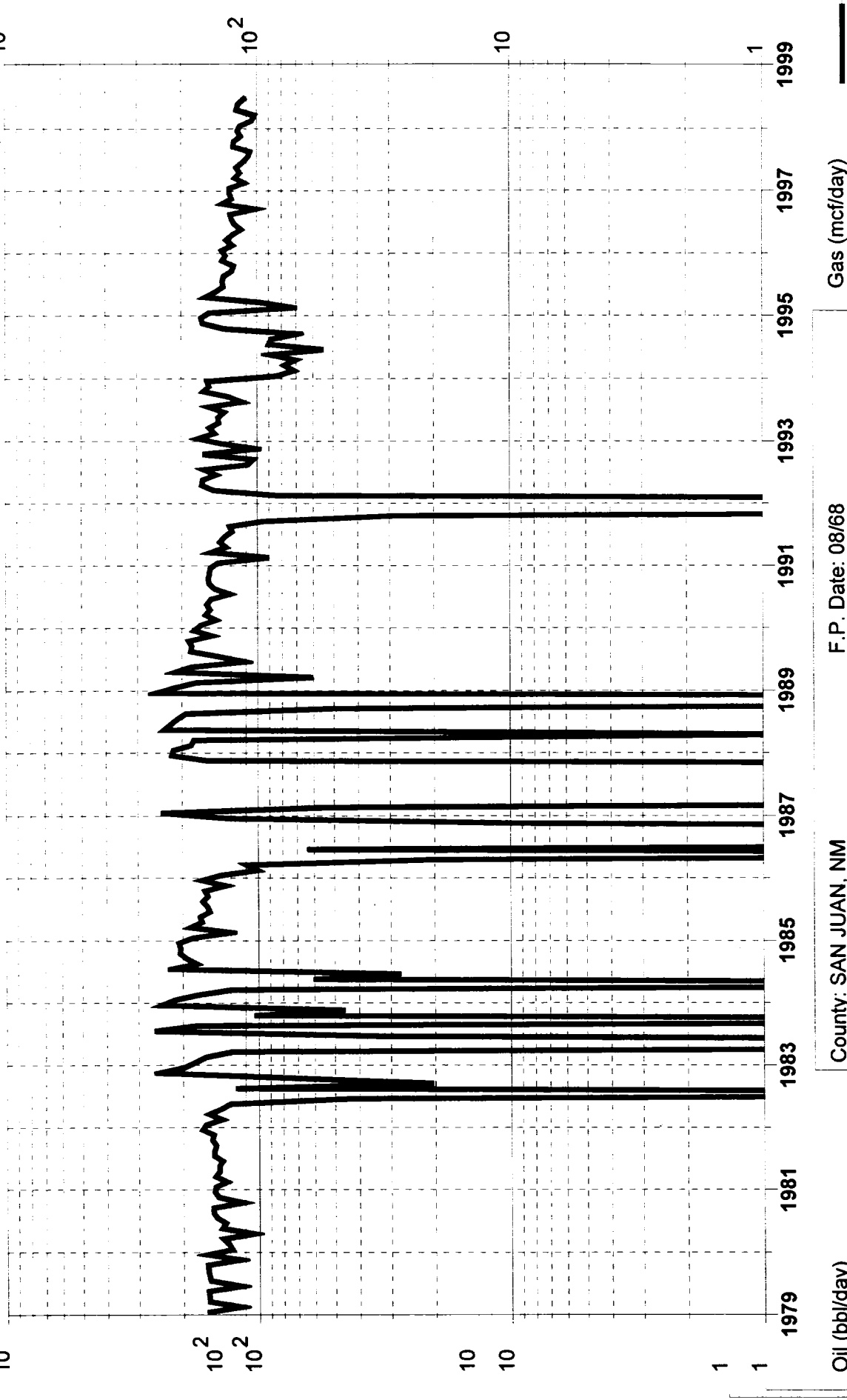
Dwights

10³ Lease: FLORANCE (76)
10³

Retrieval Code: 251,045,29N09W35P00PC

11/17/98

10³



F.P. Date: 08/68

County: SAN JUAN, NM

API #: 30-045-1169700

Oil (bbl/day)

Oil Cum: 0 bbl

Gas Cum: 1427 mmcf

Reservoir: PICTURED CLIFFS

Operator: AMOCO PRODUCTION CO

Location: 35P 29N 9W

SJOET Well Work Procedure

Warren LS #002

SAP:

Version: Final

Date: 11/13/98

Budget: Repair Well

Repair Type: Mill-Up Packer/Pay-Add/DH Commingle

- Objectives:
- 1. TOOH with 1 1/4" tbg. set at 2235'
 - 2. Unseat and TOOH with 2 3/8" tubing
 - 3. Using a work string, mill out Baker Model D packer set at 2280'
 - 4. Isolate, perf., and frac Menefee pay
 - 6. Re-land tubing, creating a DHC PC/MV wellbore
 - 5. Return well to production; run plunger and alter criteria if necessary.

Pertinent Information:

Location: Unit K, Section 12, T28N, R09W

County: San Juan

State: New Mexico

Lease: SF-077123

Well Flac: 978590

Lease Flac: 698454

Horizon: PC/MV

API #: 30-045-07568

Engr: Dean Tinsley

Phone: H--(303)426-5889

W-(303)830-6141

Economic Information:

APC WI: 50.00%

Estimated Cost: \$150,000

Payout:

Max Cost -12 Mo. P.O. \$

PV15: \$ M

Max Cost PV15: \$ M

PC/MV BWO: 130 MCFD

PC/MV AWO: 330 MCFD

Note: Economics will be run on all projects that have a payout exceeding ONE year.

Formation Tops: (Estimated formation tops)

Nacimiento:

Ojo Alamo:

Kirtland Shale:

Fruitland:

Pictured Cliffs: 2140'

Lewis Shale:

Cliff House:

Menefee: 3722'

Point Lookout: 4368'

Mancos Shale:

Gallup:

Graneros:

Dakota:

Morrison:

Bradenhead Test Information:

Test Date: 8/23/92 Csg. 176 Tbg: BH: 0

Time	BH	CSG	INT	CSG
5 min	0	176		
10 min	0	176		
15 min	0	176		

Comments: No Pressure or flow

1. Check anchors. MIRUSU.
2. Check and record tubing, casing, and bradenhead pressures.
3. Blow down wellhead, kill if necessary.
4. Nipple down wellhead, nipple up and pressure test BOP.
5. TOOH with 1 1/4" tubing set @ 2235'.
6. Unseat and TOOH with 2 3/8" tubing set @ 4554'. Model "G" seal assembly @ 2281'.
7. DO Baker Model "D" packer @ 2280' using air.
8. TOOH with work string.
9. TIH with composite BP to isolate PLO. Set @ +/-4300'.
10. RU DS Wireline Unit and Packoff.
11. Log the top of the Mesa Verde (4300'-3500') interval with CBL/GR/CCL to insure zonal isolation across MF and CH. Please fax logs to (303) 830-5388.
12. Perforate the following MF interval @ 120 deg. phasing using 3 1/8" HSC ported guns (12.5 GM, .34" EHD, 13.13 TTP, Select Fire). Correlate with Lane Wells' Radioactivity log dated 7/28/57:

4208, 4204, 4138, 4134, 4121, 4115, 4110, 4088, 4081, 4057, 4049, 4046,
4036, 4022, 4014, 3892, 3882, 3838, 3832, 3826
13. TIH with 3 1/2" frac string X packer to isolate PC. Pressure test BP. Set packer @ +/-3760'.
14. Break down and balloff perfs with 1.5 X's excess; 1.1 SG RCN balls.
15. TOOH with tbg x pkr.
16. Retrieve balls with WL junk basket. TIH w/ frac string x set packer @ +/-3760'.
17. Fracture Stimulate down tubing according to schedule 'A'.
18. Flow back immediately, untill well logs off.
19. TOH with frac string.
20. DO composite BP; c/o to PBTD.
21. TIH with 2 3/8" tubing and set @ +/-4460'.
22. Return commingled well to production; set plunger and alter criteria if necessary.

Amoco Production Company

ENGINEERING CHART

Sheet No _____ Of _____

File _____

Appn _____

Date 11/13/98

By DT

SUBJECT WARREN IS #2

CMT. w/ 150 SX

10 3/4"

161'

TOC = 1220'

2162

PC PERFS: 2162-54, 2202-22
(Frac w/ 40,000 = 10 1/20)

2222

2269'

BAKER MODEL 3' PERFS 2280'

2371'

TOC = ?

PLD PERFS: 4369-4400, 4416-31, 4440-70, 4500-14,
4530-40, 4546-33, 4550-4000

4369'

(FRAC w/ 60,000 = 20/10' 55,000 GPM GEL)

2 3/4" 47# SET @ 4554'

CMT. w/ 300 SX

5 1/2", 155# J-55

4600

4639'

(SQ. TOP OF LINER
w/ 200 SX)

TD = 4650'