



RECEIVED

MAR 11 1996

OIL CONSERVATION DIV.  
SANTA FE

Southern

Rockies

Business

Unit

March 4, 1996

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87505

**Application for Exception to Rule 303-C**

**Downhole Commingling**

**Heaton LS #8 Well**

**990' FNL & 1650' FEL, Unit B Section 30-T31N-R11W**

**Aztec Pictured Cliffs (Pool IDN 71280) and Blanco Mesaverde (Pool IDN 72319) Pools  
San Juan County, New Mexico**

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Aztec Pictured Cliffs and Blanco Mesaverde Pools in the Heaton LS #8 well referenced above. The Heaton LS #8 is currently a dual completion in the Pictured Cliffs and Mesaverde formations. We plan to complete the well with both the Pictured Cliffs and Mesaverde formations being downhole commingled in the wellbore. This well will benefit from downhole commingling because of the reduced costs of operation offered by commingling. The two zones are expected to produce at a total commingled rate of about 52 MCFD with less than 1 BCPD. The ownership (WI, RI, ORI) of these pools is common in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. Offset operators to this well will receive a copy of this application by certified mail.

The allocation method that we plan to use for this commingled well is as follows. Both formations have been producing at stabilized rates for some time. We recommend that the Mesaverde and Pictured Cliffs formations gas and condensate be allocated based on current rates. The Mesaverde is currently producing at 42 MCFD with 0.19 BCPD while the Pictured Cliffs is currently producing 10 MCFD with no condensate. The recommended allocation percentages after downhole commingling would be set as a percentage of the total rate with the Mesaverde attributing 80% of gas production and 100% of condensate production. The Pictured Cliffs would be allocated at 20% of gas production and no condensate production. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formation, a historical and recent production plot and a C-102 for each formation. This spacing unit

is located on a federal lease (SF-078097) and we will send a copy of the application to the BLM as their notice. Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,



Pamela W. Staley

Enclosures

cc: Khanh Vu  
Gail Jefferson

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

Duane Spencer  
Bureau of Land Management  
1235 La Plata Hwy.  
Farmington, NM 87401

## **Application for Exception to Rule 303: SEGREGATION OF PRODUCTION FROM POOLS**

### **Requirements**

- (1) Name and address of the operator:

Amoco Production Company  
P.O. Box 800  
Denver, CO 80201

- (2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name: Heaton LS  
  
Well Number: 8  
Well Location: 990' FNL & 1650' FEL  
Unit B Section 30-T31N-R11W  
San Juan County, New Mexico  
  
Pools Commingled: Blanco Mesaverde Pool  
Aztec Pictured Cliffs Pool

- (3) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

Attached

- (4) A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each zone.

The Blanco Mesaverde produced an average stabilized rate of 42 MCFD and 0.19 BCPD. The Aztec Pictured Cliffs zone produced at an average rate of about 10 MCFD and no condensate.

- (5) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes.

Blanco Mesaverde Completion:	Historical production curve attached.
Aztec Pictured Cliffs Completion:	Historical production curve attached.

- (6) Estimated bottomhole pressure for each zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.

Bottomhole pressures were estimated from 72 hour shut-in pressures during a packer leakage test for the well. Estimated bottomhole pressure in the Pictured Cliffs formation is 566 PSI while the estimated bottomhole pressure in the Mesaverde is 640 PSI. See attached calculations.

- (7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore.

The two formations do not produce any measurable amount of fluids and therefore are not expected to any effect that would prohibit commingling, or promote the creation of emulsions or scale .

- (8) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams:

Since the BTU content of the produced gasses are very similar, we would expect the commingled production to have a similar value as the sum of the individual streams.

- (9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

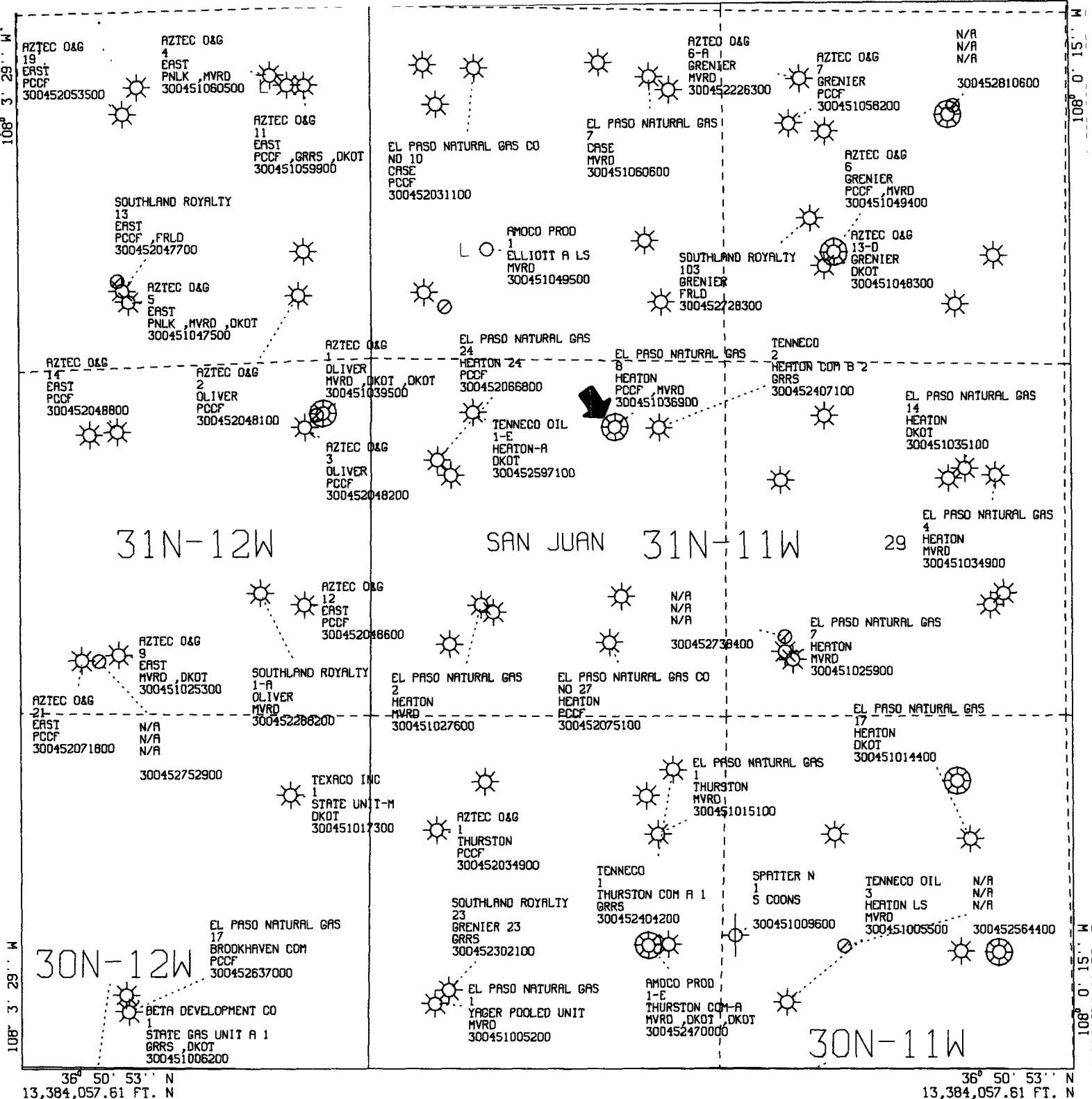
The allocation method that we plan to use for this commingled well is as follows. Both formations have been producing at stabilized rates for some time. We recommend that the Mesaverde and Pictured Cliffs formations gas and condensate be allocated based on current rates. The Mesaverde is currently producing at 42 MCFD with 0.19 BCPD while the Pictured Cliffs is currently producing 10 MCFD with no condensate. The recommended allocation percentages after downhole commingling would be set as a percentage of the total rate with the Mesaverde attributing 80% of gas production and 100% of condensate production. The Pictured Cliffs would be allocated at 20% of gas production and no condensate production. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

- (10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.

- (11) Referencing NMOCD Order No. 10470 Rule 303 (D) (11): In a case where there is diversity of ownership between the zones to be commingled (including working royalty, or overriding royalty interest), the applicant shall submit a statement that all such interest owners have been notified in writing of the proposed commingling.

All interest owners in the two formations will receive a copy of this application by certified mail.



AMOCO PRODUCTION COMPANY  
PLAT MAP

Heaton LS 8  
Offset Wells

POLYCONIC CENTRAL MERIDIAN - 108° 1' 52'' W LONG  
SPHEROID - 6

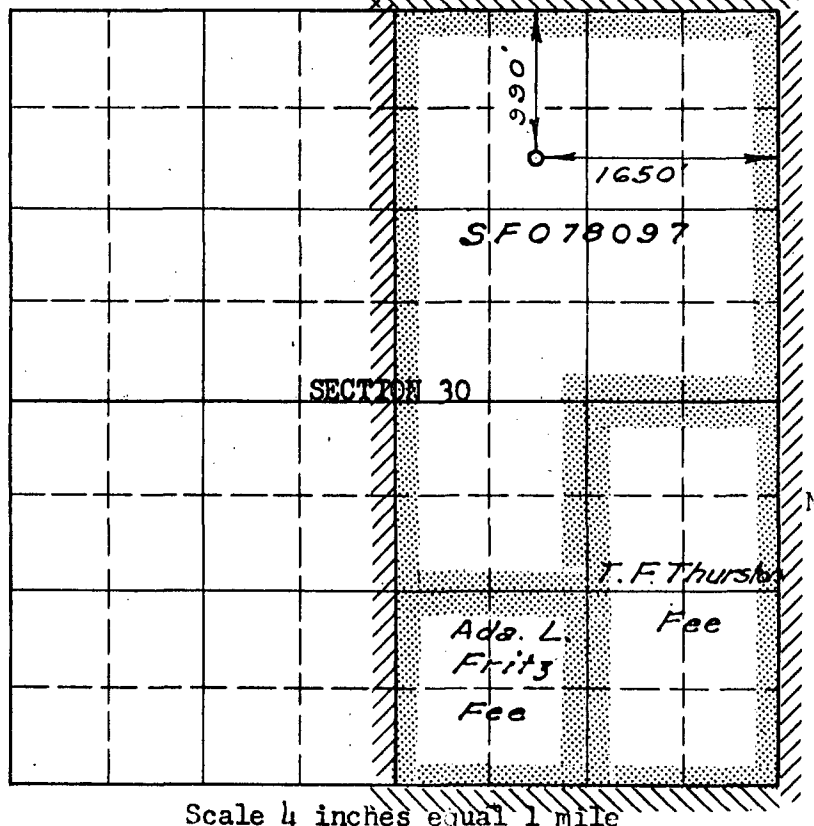
SCALE 1 IN. = 2,000 FT. APR 28, 1995

## OIL CONSERVATION COMMISSION

## WELL LOCATION AND/OR GAS PROPRATION PLAT

DATE March 1, 1956OPERATOR EL PASO NATURAL GAS COMPANY LEASE HEATON SF 078097WELL NO. 8 SECTION 30 TOWNSHIP 31N RANGE 11W NMPMLOCATED 990 FEET FROM NORTH LINE 1650 FEET FROM EAST LINESAN JUAN COUNTY, NEW MEXICOG. L. ELEVATION 5910NAME OF PRODUCING FORMATION MESA VERDE POOL BLANCO DEDICATED ACREAGE 320 ACRES  
(1880 PLAT)

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



RECEIVED  
MAR 3 1956  
OIL CONSERVATION SURVEY  
SAN JUAN COUNTY, NEW MEXICO

## 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 21, 1956

C. O. Walpe  
Registered Professional Engineer and/or  
Land Surveyor

(Seal)

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

Name C. O. WalpePosition Petroleum EngineerRepresenting El Paso Natural GasAddress Box 997, Farmington, N.M.

MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator <b>EL PASO NATURAL GAS COMPANY</b>		Lease <b>HEATON (SF 078097)</b>		Well No. <b>8</b>
Unit Letter <b>B</b>	Section <b>30</b>	Township <b>31-N</b>	Range <b>11-W</b>	County <b>SAN JUAN</b>
Actual Footage Location of Well: <b>990</b> feet from the <b>N</b> line and <b>1650</b> feet from the <b>E</b> line				
Ground Level Elev. <b>5930 DF</b>	Producing Formation <b>PICTURED CLIFFS &amp; MESA VERDE</b>	Pool <b>AZTEC PC BLANCO MV</b>	Dedicated Acreage: <b>320.00 MV 160.00 PC</b> Acres	

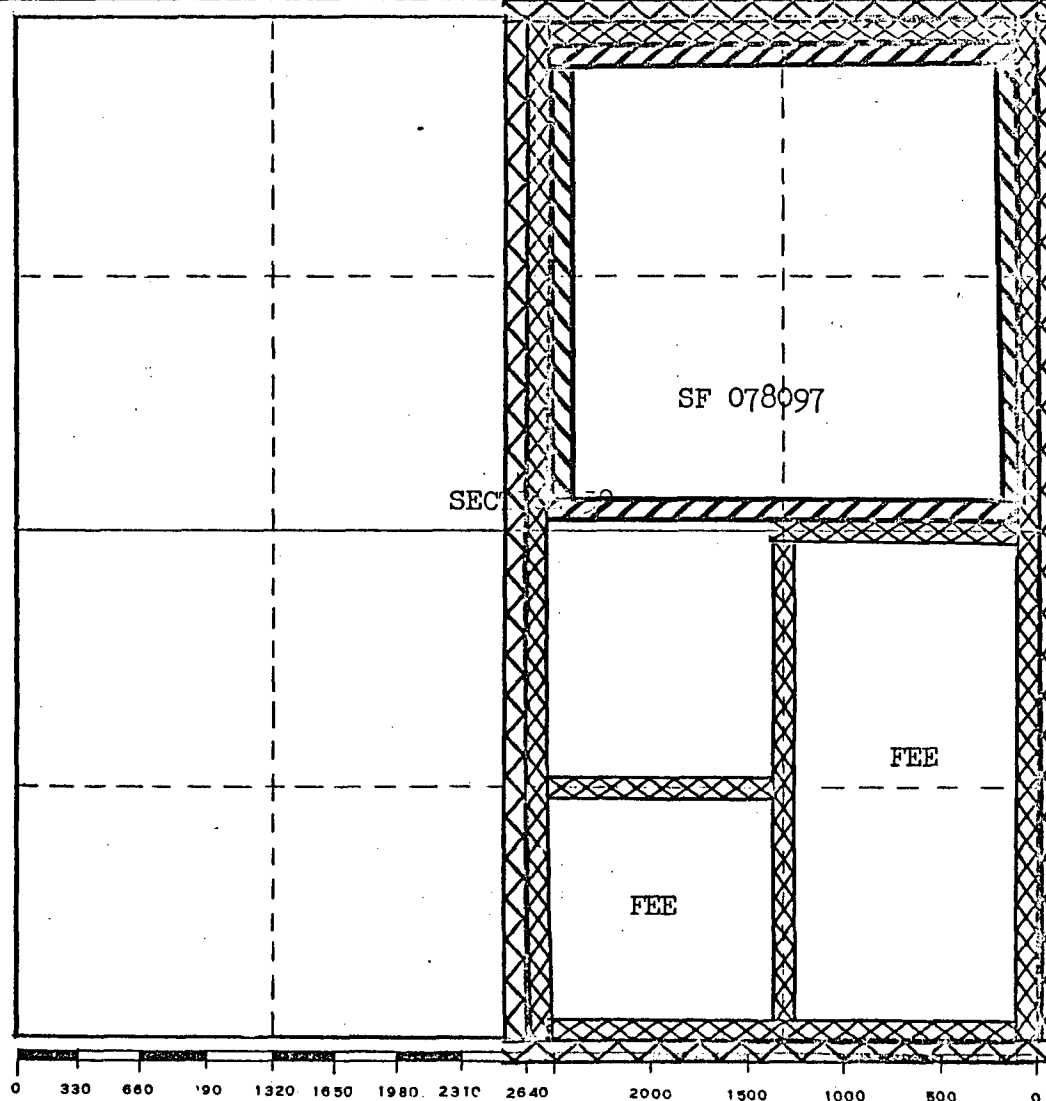
1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. **1.00**
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Communitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

THIS PLAT REISSUED TO SHOW CORRECTED ACREAGE AS PER LETTER N.M.O.C. DATED 2-11-68.



CERTIFICATION

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

*Carl E. Matthews*  
Name

Petroleum Engineer

Position

El Paso Natural Gas Co.

Company

March 11, 1968

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

Engr: zdws22

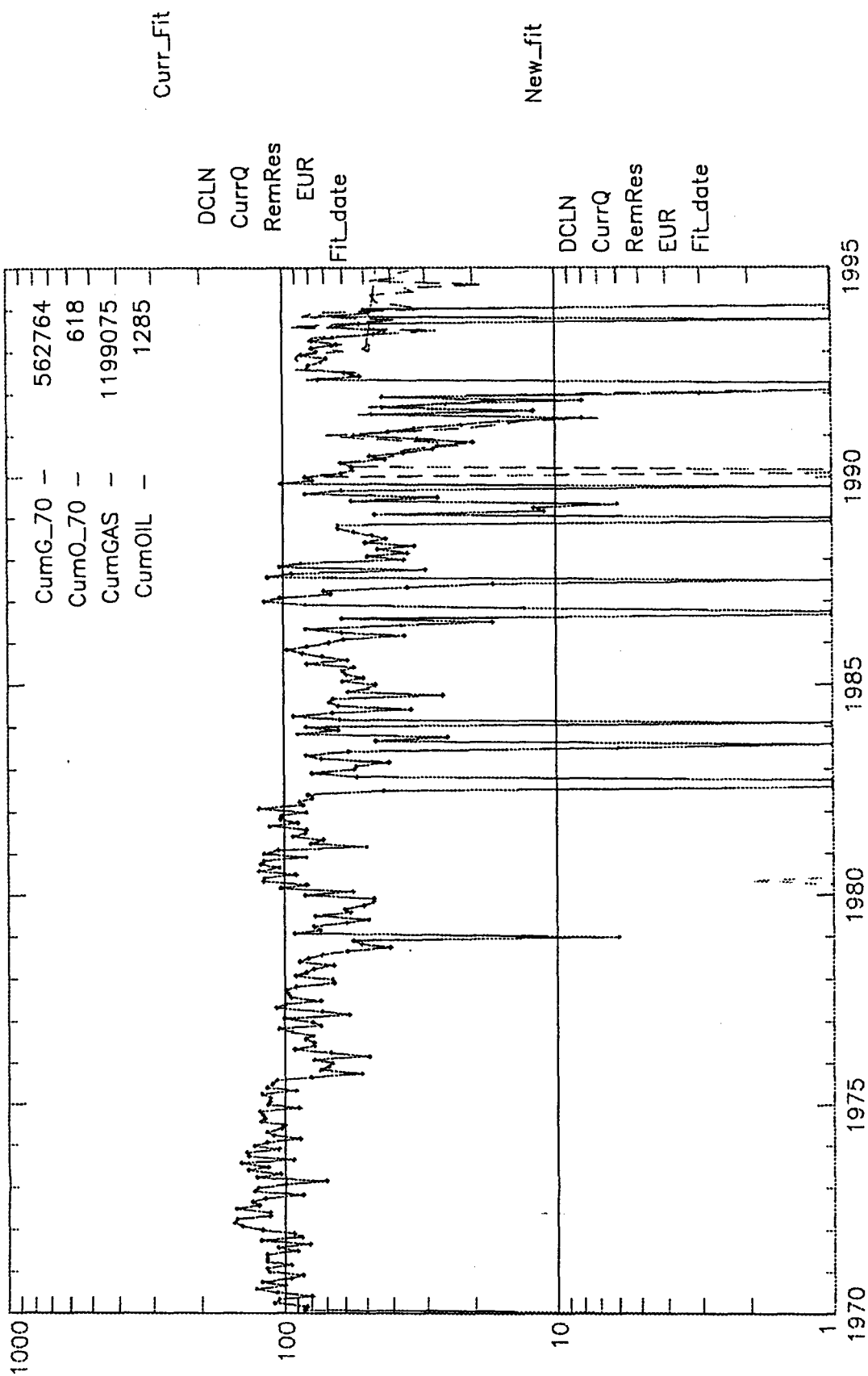
HEATON LS 8

Operator- AMOCO PRODUCTION CO

300451036900MV

B303111-008 MV

APC\_WI - 0.50000000



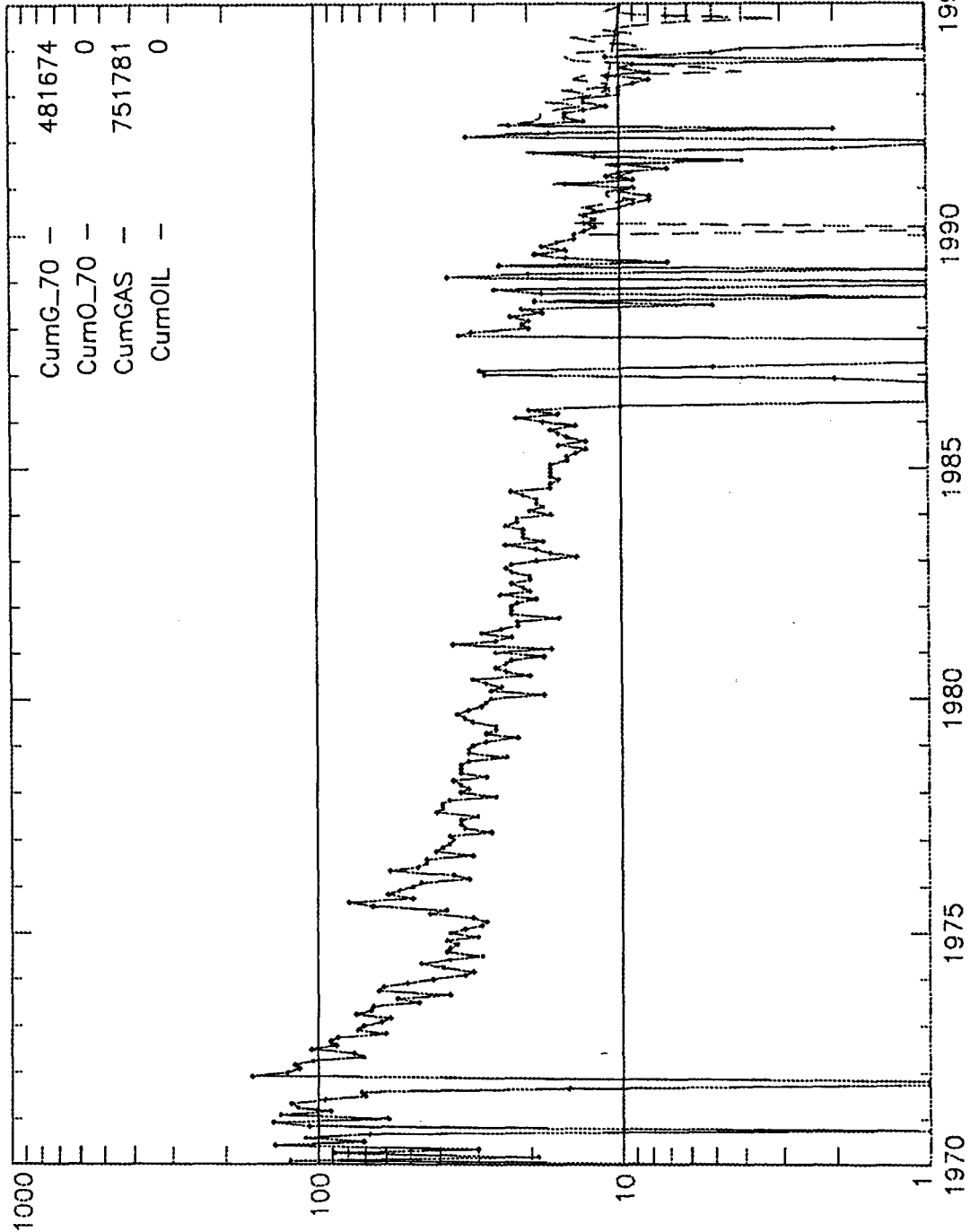


Engr: zdws22

HEATON LS 8

Operator- AMOCO PRODUCTION CO

300451036900PC B303111-008 PC APC\_WI - 0.500000000



STATE OF NEW MEXICO  
ENERGY and MINERALS DEPARTMENT

Location of Well: B303111 Page 1

OIL CONSERVATION DIVISION  
NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

B-30-31-11

Operator: AMOCO PRODUCTION COMPANY Lease/Well #: HEATON LS 008  
Meter #: 71380 RTU: 0-000-00 County: SAN JUAN

	NAME RESERVOIR OR POOL	TYPE PROD	METHOD PROD	MEDIUM PROD
UPR COMP	HEATON LS 008 BMV 71380 <i>PC</i>	GAS	FLOW	TBG
LWR COMP	HEATON LS 008 APC 71577 <i>MV</i>	GAS	FLOW	CSG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour/Date Shut-In	Length of Time Shut-In	SI Press. PSIG	Stabilized
UPR COMP	06/15/94	144 HRS. 6 DAYS	372	YES
LWR COMP	06/15/94	72	261	yes

FLOW TEST DATE NO. 1

Commenced at (hour, date)\*

10:20 A.M. - 6-15-94

143179 METER\*

Zone Producing (Upr/Lwr)

TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE		Prod Temp.	REMARKS
		Upper <i>MV</i>	Lower <i>PC</i>		
06/15/94	Day 1	220 #	259 #		Both Zones SI
06/16/94	Day 2	320 #	259 #		Both Zones SI
06/17/94	Day 3	359 #	281 #		Both Zones SI
06/18/94	Day 4	372	261		flowed lower zone
06/19/94	Day 5	381	134		"
06/20/94	Day 6	381 #	120 #		"

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ BBLs in \_\_\_\_\_ Hrs \_\_\_\_\_ Grav \_\_\_\_\_ GOR \_\_\_\_\_  
Gas: \_\_\_\_\_ MFCPD: Tested thru (Orifice or Meter): METER \_\_\_\_\_  
MID-TEST SHUT-IN PRESSURE DATA

RECEIVED

	Hour, Date SI	Length of Time SI	SI Press. PSIG	Stabilized (yes/no)
UPR COMP				YES
LWR COMP				

OIL CON. DIV.  
DIST. 3

(Continue on reverse side)

LOOSENED HUB ON GAOCH CN VENT CONTROLLER.

***ESTIMATED BOTTOMHOLE PRESSURES BY FORMATION***

Heaton LS #8

PC Perforations at 2412-2448' midperf at 2430'  
MV Perforations at 4706-4778' midperf at 4742'

6/94 shut in pressures --- MV =261 PSIG  
PC =372 PSIG

GRADIENT = 0.08 PSI/FT

MV BHP = 261 PSIG + 4742' X 0.08 PSIG  
= 640 PSIG

PC BHP = 372 PSIG +2430' X 0.08 PSIG  
=566 PSIG

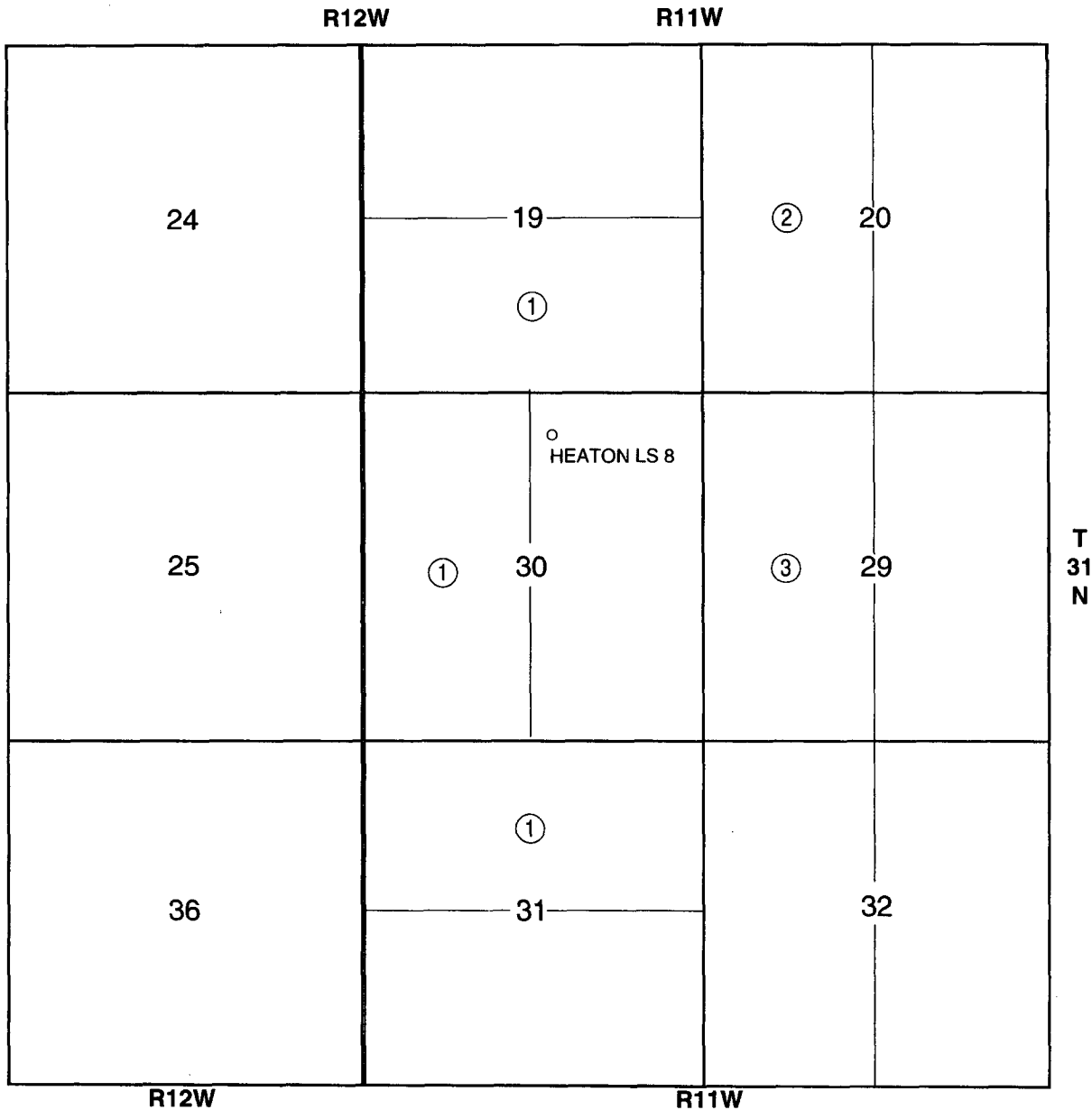
**Amoco Production Company**

Offset Operator Plat

Heaton LS 8

T31N-R11W Sec. 30

Blanco Mesaverde Formation



- ① Amoco Production Company
- ② Southland Royalty Company
- ③ Meridian Oil Production Inc.

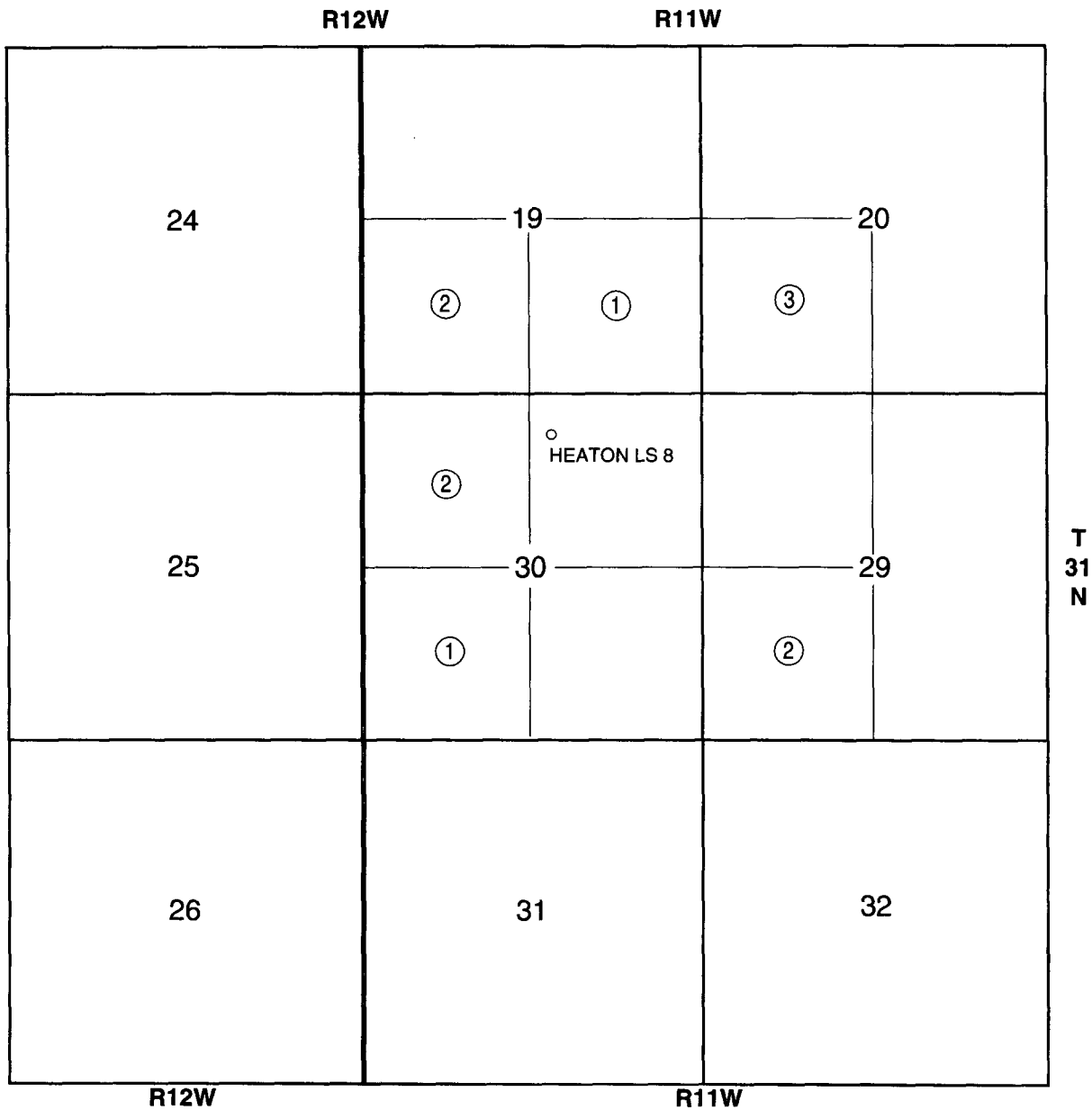
**Amoco Production Company**

Offset Operator Plat

Heaton LS 8

T31N-R11W Sec. 30

Aztec Pictured Cliffs Formation



- ① Amoco Production Company
- ② Meridian Oil Production Inc.
- ③ Southland Royalty Company

**LIST OF ADDRESSES FOR OFFSET OPERATORS**

Heaton LS #8

- 1 Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87499

9440600 00001 17000 00 MOCO PRODUCTION COMPANY P O BOX 591 ULSA	ZJAM63	69884800 00001 129569 00 MITZI EASLEY 3900 DOMINION COVE AUSTIN	ZJAM63  TX 78759-7300
69884800 00001 129567 00 BETSY BRYANT 2201 BROOKHOLLOW ABILENE	ZJAM63  TX 79605-5507	69884800 00001 120851 00 GROVER BROTHERS PARTNERSHIP P O BOX 3666 MIDLAND	ZJAM63  TX 79702-3666
69884800 00001 924261 00 HARRIET BUCHENAU P O BOX 867585 PLANO	ZJAM63  TX 75086-7585	69884800 00001 910310 00 ALFRED LUKE FRITZ 33766 WHITE OAK ROAD CORVALLIS	ZJAM63  OR 97333-2436
69884800 00001 926545 00 WILLIAM J CAREY C/O COMERICA BANK TEXAS P O BOX 650282 DALLAS	ZJAM63  TX 75265-0282	69884800 00001 910311 00 JOHN CARL FRITZ 5342 N WOODSON FRESNO	ZJAM63  CA 93711-2763
69884800 00001 603416 25 CONOCO INC P O BOX 951063 DALLAS	ZJAM63  TX 75395-1063	69884800 00001 634423 00 ARDEN R GROVER P O BOX 3666 MIDLAND	ZJAM63  TX 79702-3666
69884800 00001 134698 00 CROSS TIMBERS OIL COMPANY P O BOX 840287 DALLAS	ZJAM63  TX 75284-0287	69884800 00001 923261 00 PAUL B AND SUSAN D HORTON C/O MCCALL PARKHURST AND HORTON 900 MAXUS ENERGY TOWER 717 NORTH HARWOOD SUITE 900 DALLAS	ZJAM63  TX 75201-6587
69884800 00001 923334 00 JULIA M CRUTCHER ESTATE WILLIAM CAREY CRUTCHER, EXECUTOR C/O COMMUNITY BANK P O BOX 737 KATY	ZJAM63  TX 77492-0737	69940600 00001 283401 00 RICHARD A JENNINGS TRUSTEE P O BOX 3759 MIDLAND	ZJAM63  TX 79702-3759
69884800 00001 114754 01 LOUIS DREYFUS NATURAL GAS CORP REMITTANCE ADDRESS P O BOX 850163 OKLAHOMA CITY	ZJAM63  OK 73185-0163	69884800 00001 252130 01 W L JENNINGS BILLY G EDWARDS ATTY IN FACT P O BOX 117 ABILENE	ZJAM63  TX 79604-0117

Heaton LS #8

69940600 00001 632077 00 W D KENNEDY 550 W TEXAS #1225 MIDLAND	ZJAM63 TX 79701-4266	69940600 00001 133354 00 HENRIETTA E SCHULTZ TRUSTEE LINCOLN PLAZA SUITE 2160 LB-1 500 NORTH AKARD DALLAS	ZJAM63 TX 75201-3360
69940600 00001 242970 00 JAMES R LEE JUN JR P O BOX 10561 MIDLAND	ZJAM63 TX 79702-7561	69884800 00001 924818 00 RICHARD L AND BEULAH THURSTON JT BOX 12 ROAD 2720 AZTEC	ZJAM63 NM 87410-0012
69940600 00001 268590 13 MARATHON OIL COMPANY P O BOX 890882 DALLAS	ZJAM63 TX 75389-0882	69940600 00001 128105 00 JULIA ELIZABETH WILLIAMS 1594 AVILA DRIVE TULARE	ZJAM63 CA 93274-2315
69940600 00001 926384 00 SARAH S MIMS TRUST WILLIAM L MADSEN AND SARAH S MIMS CUSTODIERS P O BOX 111846 CARROLLTON	ZJAM63 TX 75011-1846	69884800 00001 115015 00 JAMES B WOLFSON 2169 E HILLVIEW AVE FRESNO	ZJAM63 CA 93720-4104
69940600 00001 710000 01 MINERALS MANAGEMENT SERVICE ROYALTY MANAGEMENT PROGRAM PO BOX 5810 TA DENVER	ZJAM63 CO 80217-5810	69884800 00001 115016 00 WILLIAM F WOLFSON 7957 EAST COLETIE CIRCLE #186 TUCSON	ZJAM63 AZ 85710-2484
69884800 00001 929031 00 MOORE LOYAL TRUST LEE WAYNE MOORE TRUSTEE 403 NORTH MARIENFIELD MIDLAND	ZJAM63 TX 79701-4323		
69940600 00001 129568 00 SUSAN RITTER P O BOX 162606 AUSTIN	ZJAM63 TX 78716-2606		
69884800 00001 115018 00 CYMA B RUSSELL 6132 HIGHGATE LANE DALLAS	ZJAM63 TX 75214-2154		

Heaton LS # 8