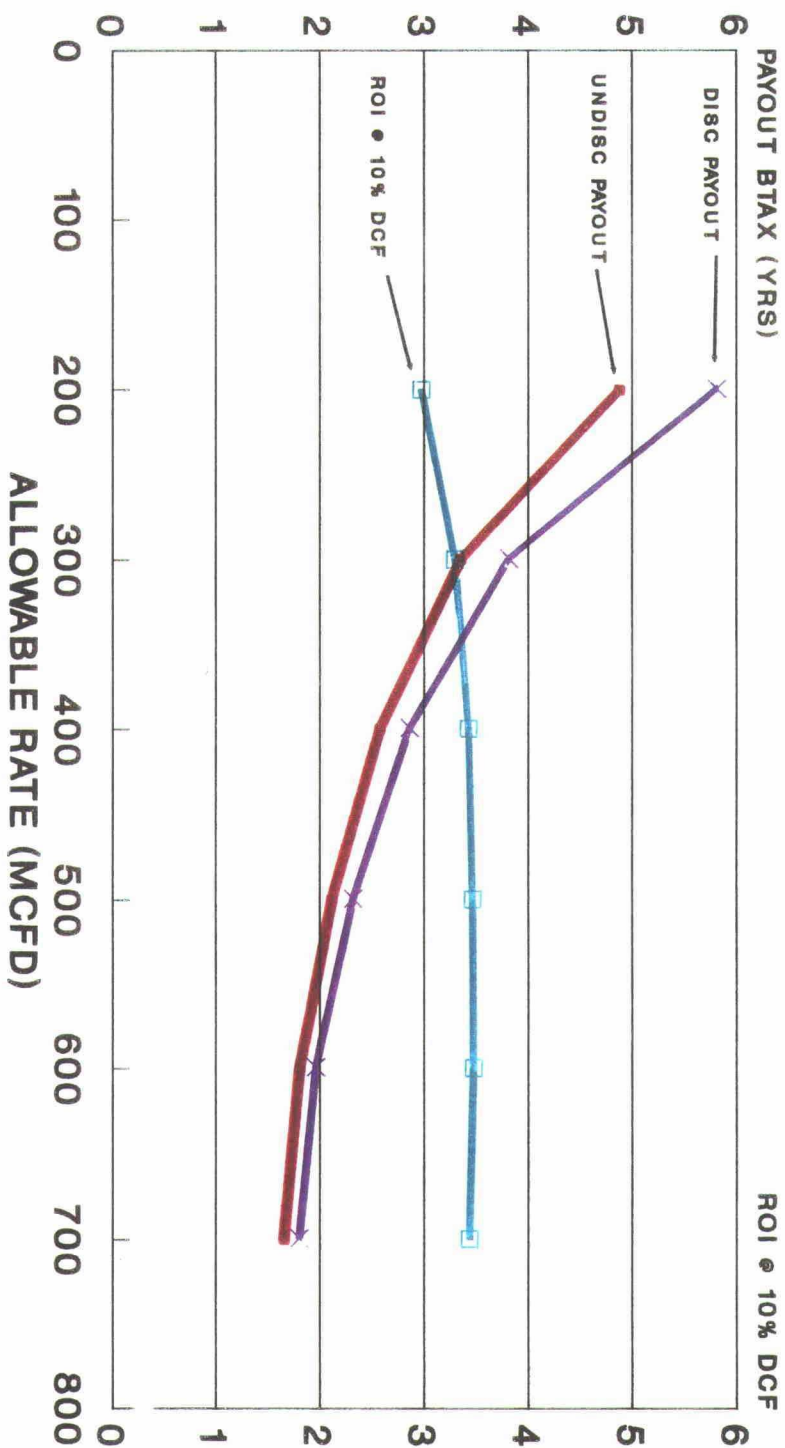


TYPICAL MODERN JALMAT-EUMONT WELL ALLOWABLE VS. ECONOMIC RESULTS 32 WELL STUDY / AVG AF-1.091



BEFORE EXAMINER CATANACH **PAYOUT**

Oil Conservation Division

H Exhibit No. 8

Case No. 10036

modern/17-Sep-90/557

TYPICAL MODERN JALMAT-EUMONT WELL
ALLOWABLE VS. ECONOMIC RESULTS
32 WELL STUDY / AVG AF=1.091

ALLOWABLE RATE (MCFPD)	PAYOUT UNDISC (YRS)	PAYOUT DISC @10% (YRS)	PROJECTED LIFE (YRS)	ROI @ 10% DISC
200	4.89	5.82	37	2.97
300	3.36	3.82	28	3.29
400	2.59	2.87	23	3.42
500	2.13	2.33	20	3.46
600	1.83	1.98	18	3.46
700	1.67	1.81	17	3.43

BEFORE EXAMINER CATANACH
Oil Conservation Division

____ Exhibit No. ____

Case No. 10036

"GAS PROSPECT EVALUATION DATA SHEET"

Prospect: 1 Loc: Sec Twp Rge
Well: Typical Modern Well Pool: Jalmat/Eumont
Producing Zone: Yates-7R-Queen First Production: 1-1-90

I. ENGINEERING/GEOLOGICAL

1. Acreage Factor 1.091/well 2. Initial SIWHP (psig) 142
3. Line Pressure (psig) 43 init 4. Coeff. "C" (SCFPD/psia²) 49
5. P/z Slope (MCF/psia) 12,209 6. Reserves (BCF) 1.6 BCF
7. Compressor (Years) 1.38
8. Initial Allowable 600 Allowable Decline Rate 0
Qw equals MRA @ Time 1.91 Qi = 600
Decline Rate: 16.5%
9. GOR/Yield
10. Economic Parameters:
Discount Rate 10% Start Date 1-1-90 As-Of Date 9-15-90
11. Comments:

II. LAND

1. P.U. Description --
2. Date Acquired -- 3. Gross Acres 175 (AF=1.091)
4. Initial Ownership: WI NRI
5. Additional Ownership: WI -- NRI --
6. Total Participation: WI 100% NRI 81.6745
Net WI Acres 175 Acreage Price (\$/Ac) \$811.37
Net Acreage Cost (\$) 141,990 Acreage Cost @ 100% WI (\$) 141,990

III. GAS PRICING

1. Gatherer Spot Marketing Contract No. None
2. Contract Pricing None Spot Pricing Major Pipeline
3. FERC Pricing Section 103 4. Average WHBTU 1,170
5. Comments: Major Pipeline + DRI + AGA

6. Average Annual Price (\$/MCF, inclusive of taxes):
1989 -- 1990 1.900 1991 2.574 1992 2.808
1993 3.064 1994 3.331 1995 3.608 1996 3.842
1997 4.082 1998 4.329 1999 4.583 2000 4.844
7. Escalation Rate Beyond 2000 (%/Year) 5.4%/yr to life

IV. OIL PRICING

1. Average Annual Price (\$/BBL):
1989 -- 1990 -- 1991 -- 1992 --
1993 -- 1994 -- 1995 -- 1996 --
2. Escalation Rate Beyond 1996 (%/Year) N/A

V. INVESTMENT COSTS/OPERATING COSTS

Tangible Cost 84,216
Intangible Cost 310,779

Completed Well Cost 394,995
Leasehold (100%) Cost 141,990
Compression Cost 43,071 (Gath) + 49,617* (Comp) = 92,688 (Total)

Total Well Cost 629,673

Operating/Overhead Cost (\$/Mo.) \$1300/mo. initial increasing to 2844/mo. @ 1.38 yrs

Escalation Rate (%/Year) 4%/yr

Beginning Escalation Date 1-1-90

*Cost of well compression installation at 1.38 years

OFFICE EXAMINER
Oil Conservation Division
H Exhibit No. 9
Case No. 10036
540: TYPMODWL

Pa(pisia) = 23
 Pi(pisia) = 155.2
 M(mcf/pisia) = 12209
 C(scf/d/pisia^2) = 49
 PRORAT-FAC = 1.091 MONTHS= EUMONT & JALMAT WELL
 Q(ai)(mcf/d) = 600 12 LEA COUNTY, NEW MEXICO
 LP(pisia) = 43 EWAS= P17G
 D%/year = 0 DEL DATE: 1-1-90

YEAR	dt	qa	da	YEARLY	SUM da	dp	SUM dp	Pe	ad(lp)	ad(10)
1990	1	655	238929	238929	19.6	19.6	135.6	747	875	**
1991	2	655	238929	477858	19.6	39.1	116.1	505	634	**
1992	3	655	238929	716787	19.6	58.7	96.5	301	430	
1993	4	655	238929	955716	19.6	78.3	76.9	135	264	
1994	5	655	238929	1194645	19.6	97.8	57.4	6	135	
1995	6	655	238929	1433574	19.6	117.4	37.8	0	44	
1996	7	655	238929	1672503	19.6	137.0	18.2	0	0	
1997	8	655	238929	1911432	19.6	0.0	0.0	0	0	
1998	9	655	238929	2150361	19.6	0.0	0.0	0	0	
1999	10	655	238929	2389290	19.6	0.0	0.0	0	0	
2000	11	655	238929	2628219	19.6	0.0	0.0	0	0	
2001	12	655	238929	2867148	19.6	0.0	0.0	0	0	

* CALCULATED TIME COMPRESSION NEEDED:
 = 1 YR + ((747 MCFPD - 655 MCFPD)/(747 MCFPD - 505 MCFPD))
 = 1.38 YRS

COMPRESSION LOE COST:
 = \$1300/MO + (655 MCFPD * \$.07/MCF ELECTRIC COST * 30.4 DAYS/MO)
 = \$2694/MO

ADJUSTED FOR FUTURE VALUE:
 = \$2694/MO * (1.04)
 = \$2884/MO

** CALCULATED TIME @ WHICH WELL BECOMES CAPACITY:
 = 1 YR + ((875 MCFPD - 655 MCFPD)/(875 MCFPD - 634 MCFPD))
 = 1.91 YRS

BEFORE EXAMINER CATANACH

Oil Conservation Division

H Exhibit No. 9-A

Case No. 10036

ANALYSIS OF PROJECTED AND ACTUAL DRILLING & COMPLETION COSTS TOTAL OF 8 WELLS DRILLED BY DOYLE HARTMAN 1989 AND 1990 EUMONT & JALMAT FIELDS - LEA COUNTY, NEW MEXICO

LEASE	FINAL AFE 100% WI	ACTUAL COST 100% WI	LEASE	FINAL AFE 100% WI	ACTUAL COST 100% WI
1 TURNER STATE #3			5 ARNOTT RAMSAY NCT-B #13		
SPUD DATE 7-31-89			SPUD DATE 9-6-89		
TANGIBLE COST \$	\$97,782.00	\$93,400.33	TANGIBLE COST \$	\$97,782.00	\$62,095.18
INTANGIBLE COST \$	\$277,990.00	\$269,148.88	INTANGIBLE COST \$	\$277,990.00	\$271,995.87
COMPLETED WELL COST \$ ¹	\$375,772.00	\$362,549.21	COMPLETED WELL COST \$ ¹	\$375,772.00	\$334,091.05
GATHERING/COMP. COST \$	\$35,000.00	\$42,464.15	GATHERING/COMP. COST \$	\$35,000.00	\$23,895.69
TOTAL WELL COST \$	\$410,772.00	\$405,013.36	TOTAL WELL COST \$	\$410,772.00	\$357,986.74
2 STATE E COM. #4			6 A.L. CHRISTMAS #1		
SPUD DATE 8-9-89			SPUD DATE 10-12-89		
TANGIBLE COST \$	\$97,782.00	\$58,458.48	TANGIBLE COST \$	\$97,782.00	\$96,499.92
INTANGIBLE COST \$	\$277,990.00	\$273,743.97	INTANGIBLE COST \$	\$277,990.00	\$268,267.39
COMPLETED WELL COST \$ ^{1,2}	\$375,772.00	\$332,202.45	COMPLETED WELL COST \$ ¹	\$375,772.00	\$364,767.31
GATHERING/COMP. COST \$	\$35,000.00	\$35,399.53	GATHERING/COMP. COST \$	\$35,000.00	\$10,827.34
TOTAL WELL COST \$	\$410,772.00	\$367,601.98	TOTAL WELL COST \$	\$410,772.00	\$375,594.65
3 LIBERTY ROYALTIES #6			7 JACK "A-20" #11		
SPUD DATE 8-19-89			SPUD DATE 10-24-89		
TANGIBLE COST \$	\$97,782.00	\$97,449.02	TANGIBLE COST \$	\$97,782.00	\$71,414.68
INTANGIBLE COST \$	\$277,990.00	\$247,778.94	INTANGIBLE COST \$	\$277,990.00	\$278,113.13
COMPLETED WELL COST \$ ^{1,2}	\$375,772.00	\$345,227.96	COMPLETED WELL COST \$ ^{1,2}	\$375,772.00	\$349,527.81
GATHERING/COMP. COST \$	\$35,000.00	\$70,947.69	GATHERING/COMP. COST \$	\$35,000.00	\$43,988.86
TOTAL WELL COST \$	\$410,772.00	\$416,175.65	TOTAL WELL COST \$	\$410,772.00	\$393,516.67
4 DABBS #3			8 HANSEN STATE #7		
SPUD DATE 8-28-89			SPUD DATE 3-29-90		
TANGIBLE COST \$	\$97,782.00	\$70,103.11	TANGIBLE COST \$	\$97,782.00	\$54,070.35
INTANGIBLE COST \$	\$277,990.00	\$268,620.35	INTANGIBLE COST \$	\$277,990.00	\$257,596.98
COMPLETED WELL COST \$ ¹	\$375,772.00	\$338,723.46	COMPLETED WELL COST \$ ^{1,2}	\$375,772.00	\$311,667.33
GATHERING/COMP. COST \$	\$35,000.00	\$74,468.53	GATHERING/COMP. COST \$	\$35,000.00	\$11,500.00 ³
TOTAL WELL COST \$	\$410,772.00	\$413,191.99	TOTAL WELL COST \$	\$410,772.00	\$323,167.33

TOTAL EIGHT WELLS

TANGIBLE COST \$	\$782,256.00	\$603,491.07	\$75,436.38
INTANGIBLE COST \$	\$2,223,920.00	\$2,135,265.51	\$266,908.19
COMPLETED WELL COST \$	\$3,006,176.00	\$2,738,756.58	\$342,344.57
GATHERING/COMP. COST \$	\$280,000.00	\$313,491.79	\$39,186.47
TOTAL WELL COST \$	\$3,286,176.00	\$3,052,248.37	\$381,531.05
PERCENT OF ACTUAL %	107.66%	100.00%	

AVERAGE ACTUAL COST 8 WELLS

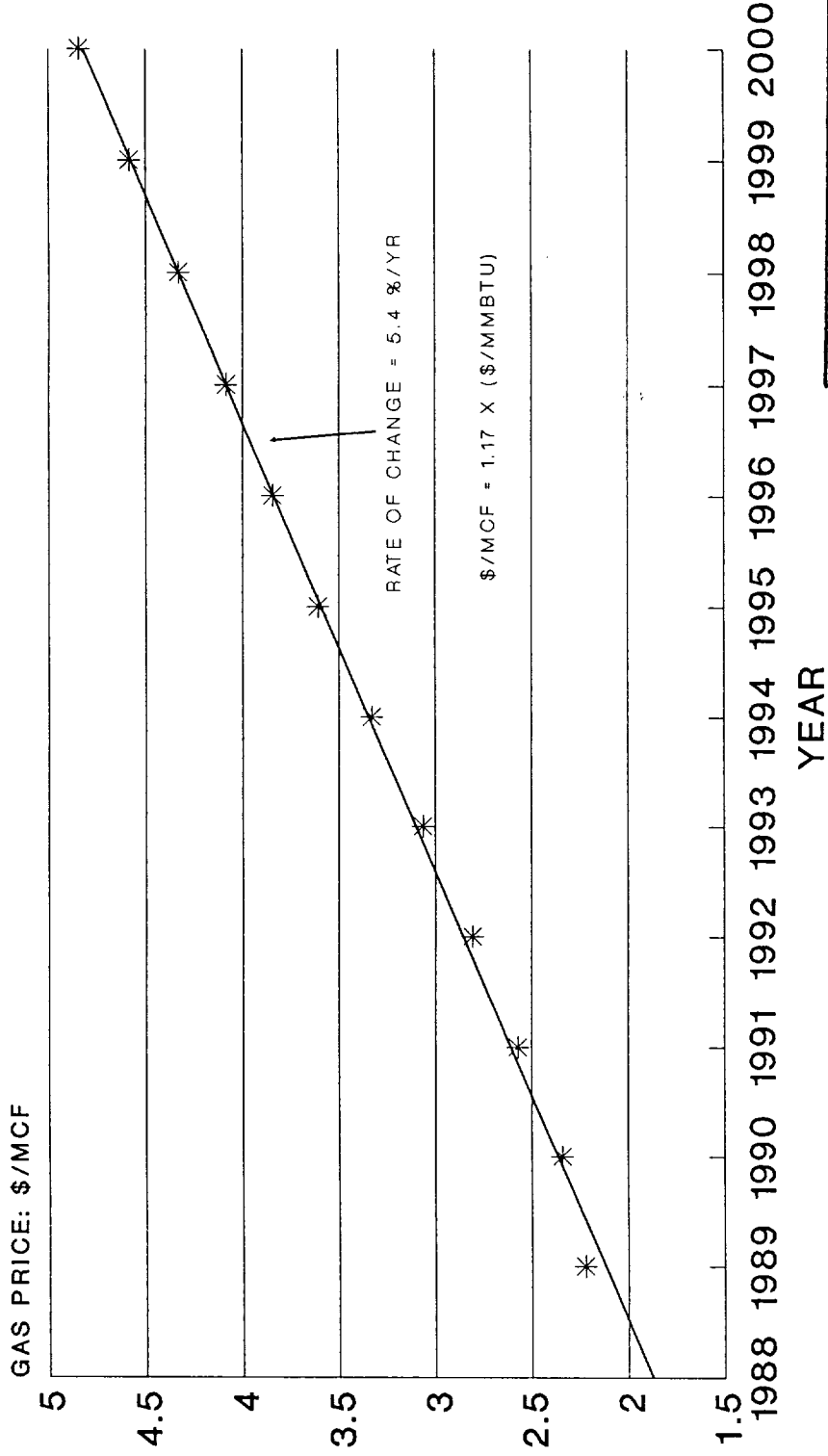
¹INCLUDED CONTINGENCY AMOUNT FOR FINAL AFE
²DUE TO 100% HARTMAN OWNERSHIP, UTILIZED TURNER STATE #3 AFE FOR STATE "E" COM. #4, LIBERTY ROYALTIES #6, JACK A-20 #11 AND HANSEN STATE #7
³ESTIMATED DUE TO CONSTRUCTION IN PROGRESS

Case No. 10036

H Exhibit No. 10

STATE EXAMINER CATANACH
Conservation Division

MAJOR GAS PIPELINE COMPANY SPOT PRICING SCENARIO



—*— \$/MCF

BEFORE EXAMINER CATANACH

Oil Conservation Division

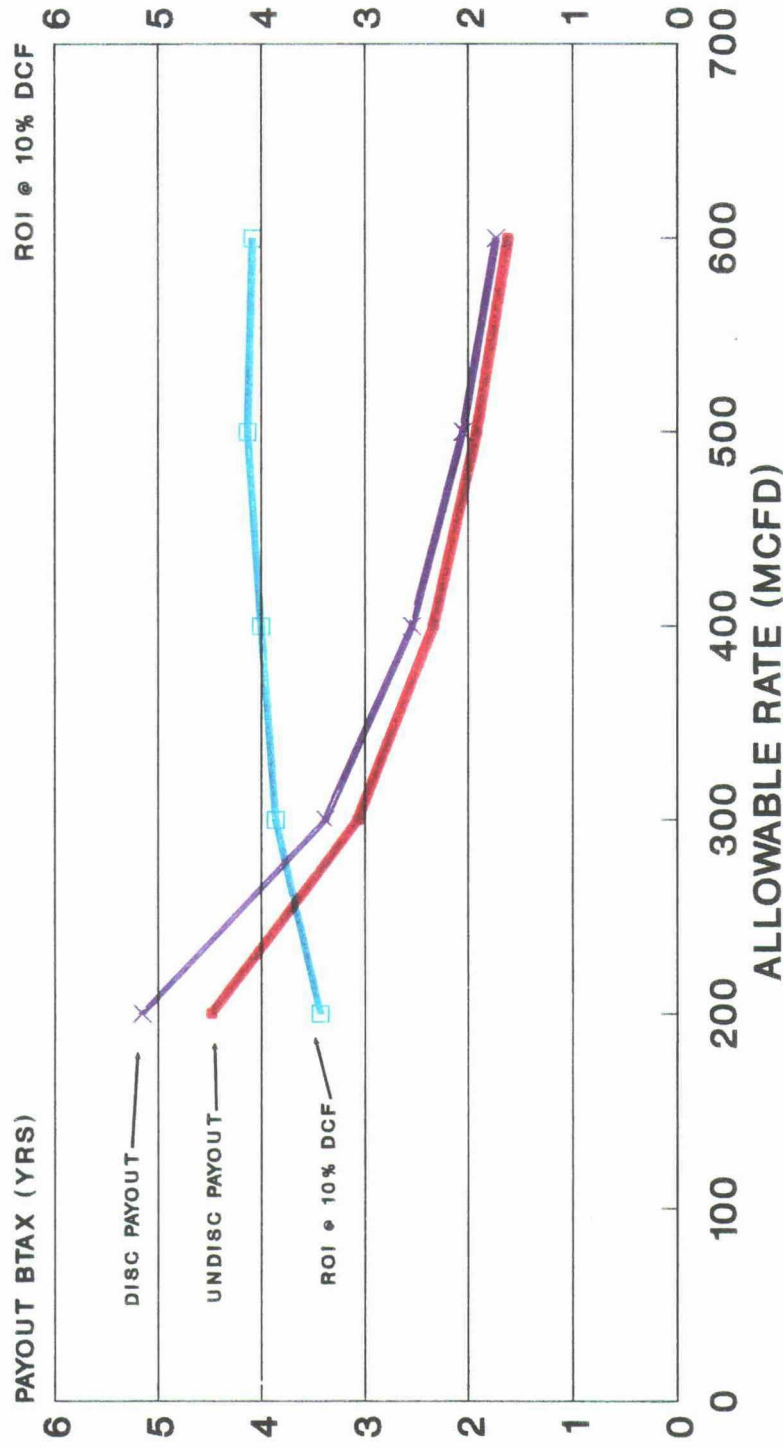
H^{SPOTBUY 1/7-6-00/561} Exhibit No. 11

Case No. 10036

TURNER STATE #3

ALLOWABLE VS. ECONOMIC RESULTS

EUMONT AF=1.0



— PAYOUT BTAX (YRS) — ROI @ 10% — DISC PAYOUT BTAX YRS

BEFORE EXAMINER CATANACH

Oil Conservation Division

Exhibit No. 12

Case No. 10036

TURNECON/17-Sep-90/557

TURNER STATE #3
ALLOWABLE VS. ECONOMIC RESULTS
AF=1.00

ALLOWABLE RATE (MCFPD)	PAYOUT UNDISC (YRS)	PAYOUT DISC @10% (YRS)	PROJECTED LIFE (YRS)	ROI @ 10% DISC
200	4.49	5.16	27	3.43
300	3.08	3.39	20	3.86
400	2.35	2.55	17	4.00
500	1.93	2.06	13	4.13
600	1.63	1.74	13	4.08

BEFORE EXAMINER CATANACH
Oil Conservation Division

Exhibit No. _____

Case No. 10036

"GAS PROSPECT EVALUATION DATA SHEET"

Prospect: _____ Loc: Sec 32 Twp 20S Rge 37E
Well: _____ Turner State No. 3 Actual Pool: Eumont (Gas)
Producing Zone: Eumont (Y-7R-Qn) First Production: 1-90

I. ENGINEERING/GEOLOGICAL

1. Acreage Factor 1.0 2. Initial SIWHP (psig) 114
3. Line Pressure (psig) 55 4. Coeff. "C" (SCFPD/psia²) 49
5. P/z Slope (MCF/psia) 15,000 6. Reserves (BCF) 1.56 BCF
7. Compressor (Years) 2.26
8. Initial Allowable 600 Allowable Decline Rate 0
Q_w equals MRA @ Time 3.98 Yrs Q_i - 600
Decline Rate: 27.05
9. GOR/Yield _____
10. Economic Parameters:
Discount Rate 10% Start Date 1-1-90 As-Of Date 9-15-90
11. Comments: _____

II. LAND

1. P.U. Description E/2 NW/4 and W/2 NE/4 Section 32, T-20-S, R-37-E
2. Date Acquired -- 3. Gross Acres 160
4. Initial Ownership: WI NRI
5. Additional Ownership: WI -- NRI --
6. Total Participation: WI 100% NRI 71.875%
Net WI Acres 160 Acreage Price (\$/Ac) \$200.89
Net Acreage Cost (\$) 32,142.86 Acreage Cost @ 100% WI (\$) 32,142.86

III. GAS PRICING

1. Gatherer Spot Marketing NNG Contract No. None
2. Contract Pricing None Spot Pricing Major Pipeline
3. FERC Pricing Section 103 4. Average WHBTU
5. Comments: Major Pipeline + DRI + AGA

6. Average Annual Price (\$/MCF, inclusive of taxes):
1989 -- 1990 1.900 1991 2.574 1992 2.808
1993 3.064 1994 3.331 1995 3.608 1996 3.842
1997 4.082 1998 4.329 1999 4.583 2000 4.844
7. Escalation Rate Beyond 2000 (%/Year) 5.4%/yr to life

IV. OIL PRICING

1. Average Annual Price (\$/BBL):
1989 -- 1990 -- 1991 -- 1992 --
1993 -- 1994 -- 1995 -- 1996 --
2. Escalation Rate Beyond 1996 (%/Year) N/A

V. INVESTMENT COSTS/OPERATING COSTS

Tangible Cost \$93,400
Intangible Cost \$269,149
Completed Well Cost \$362,549
Leasehold (100%) Cost \$32,143
Compression Cost 42,464 (Gath) + 51,360* (Comp) = 93,824 (Total)
Total Well Cost \$488,516
Operating/Overhead Cost (\$/Mo.) \$1300/mo. initial increasing to 2816/mo. @ 2.26 yrs
Escalation Rate (%/Year) 4%/yr
Beginning Escalation Date 1-1-90

*Cost of well compression installation at 2.26 years

Oil Conservation Division
BETHE EXAMINER
Case No. 10036
Exhibit No. 13
540:TRNSTGPE

COMPUTATION OF RESERVES
 DOYLE HARTMAN - TURNER STATE NO. 3
 F-32-20S-37E
 EUMONT GAS POOL
 LEA COUNTY, NEW MEXICO

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>WELL LOCATION</u>	<u>M=</u> <u>SLOPE</u> <u>MCF/psi</u>
MERIDIAN	Shell State #7	K-32-20-37	17,500
MERIDIAN	Shell State #6	I-32-20-37	24,615
TEXACO	State AY #1	H-32-20-37	14,348
ARCO	State "O" #2	D-32-20-37	8,888
CHEVRON	Bell Ramsey NCT-8 #1	M-29-20-37	10,476
AVERAGE OF ALL WELLS			15,165
AVERAGE USED FOR CALCULATION			15,000

RECOVERABLE RESERVES = 15,000 x (127-23) = 1,560,000 MCF

1838:OCDTBL

BEFORE EXAMINER CATANACH
 Oil Conservation Division
H Exhibit No. 13-A
 Case No. 10036

TURNER STATE # 3
WELL DELIVERABILITY VS. MARKET RATEABLE TAKE
EUMONT FIELD
LEA COUNTY, NEW MEXICO
DEL DATE: 1-1-90

17-Sep-90
P17-COM4

Pa(psi a)= 23
Pi(psi a)= 127
M(mcf/psi a)= 15000
C(scfd/psi a^2)= 142
PRORAT-FAC= 1.00
Q(a1)(mcf d)= 600
LP(psig)= 55
D(%/year)= 0
MONTHS= 12
EUMAS(%)= 0
LOE(\$/MO)= 1300
LOE(\$/MCF)= 0.07

YEAR	dt	qa	YEARLY dq	YEARLY SUM dq	dp	SUM dp	Pe	qd(lp)	qd(10)	dt	SUM dt	dt(YRS) CAPACITY	dt(YRS) NON-CAP	TOTAL YEARS
1990	1	600	219000	219000	14.6	14.6	112.4	1134	1719	0	0	0.0	1.0	1.0
1991	2	600	219000	438000	14.6	29.2	97.8	698	1283	0	0	0.0	2.0	2.0
1992	3	600	219000	657000	14.6	43.8	83.2	322	908	0	0	0.0	3.0	3.0
1993	4	600	219000	876000	14.6	58.4	68.6	8	593	235	235	0.6	0.0	3.6
1994	5	600	219000	1095000	14.6	73.0	54.0	0	339	452	687	1.9	0.0	4.9
1995	6	600	219000	1314000	14.6	87.6	39.4	0	145	1390	2077	5.7	0.0	8.7
1996	7	600	219000	1533000	14.6	102.2	24.8	0	12	17925	0	0.0	0.0	0.0
1997	8	600	219000	1752000	14.6	116.8	10.2	0	0	0	0	0.0	0.0	0.0
1998	9	600	219000	1971000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
1999	10	600	219000	2190000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2000	11	600	219000	2409000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2001	12	600	219000	2628000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2002	13	600	219000	2847000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2003	14	600	219000	3066000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2004	15	600	219000	3285000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2005	16	600	219000	3504000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2006	17	600	219000	3723000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2007	18	600	219000	3942000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2008	19	600	219000	4161000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2009	20	600	219000	4380000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2010	21	600	219000	4599000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2011	22	600	219000	4818000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2012	23	600	219000	5037000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2013	24	600	219000	5256000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2014	25	600	219000	5475000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2015	26	600	219000	5694000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2016	27	600	219000	5913000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2017	28	600	219000	6132000	14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0
2018	29	600	219000		14.6	0.0	0.0	0	0	0	0	0.0	0.0	0.0

* COMPRESSION (YRS) = 2.26

** CAPACITY (YRS) = 3.98

LOE @ COMPRESSION(\$/MO) = \$2,816

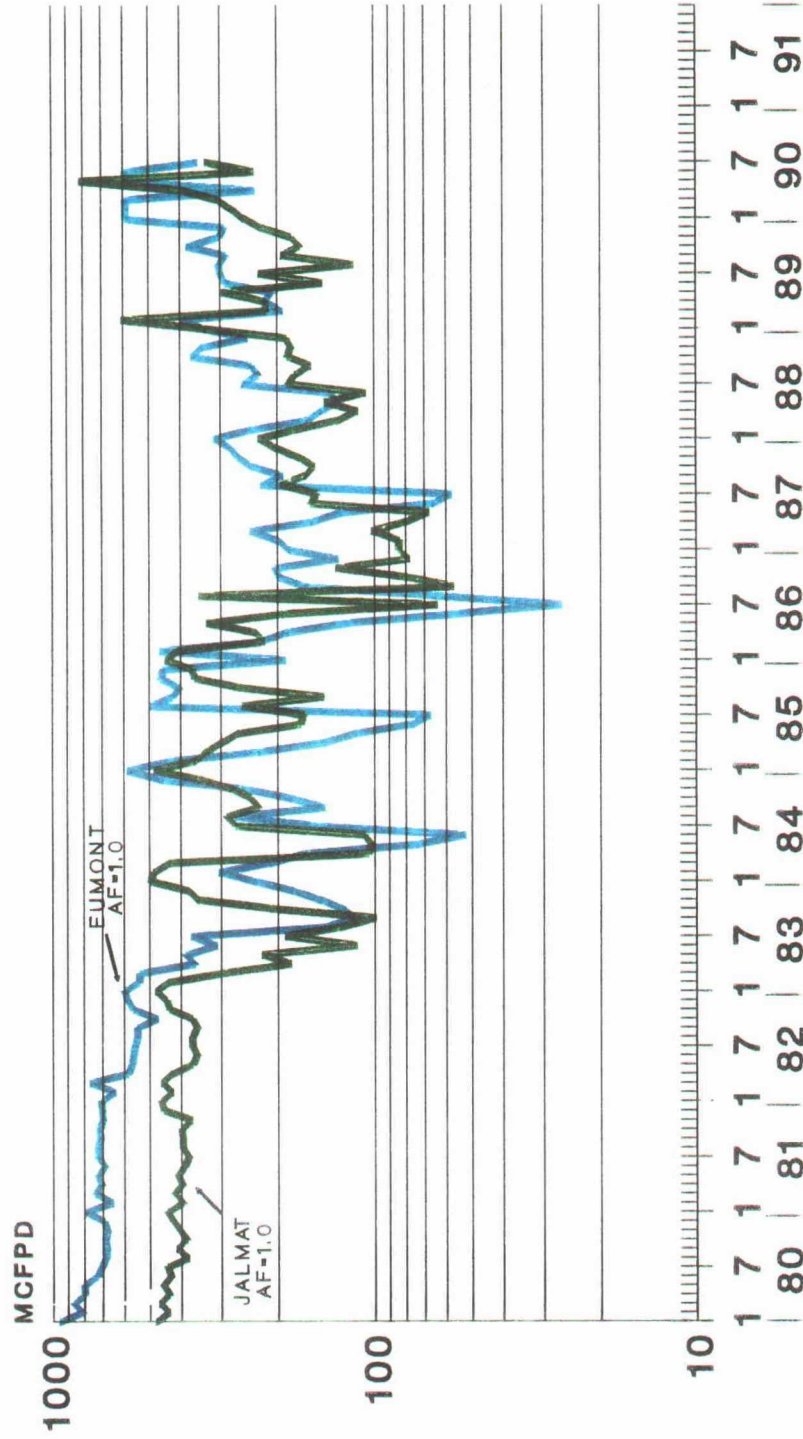
BEFORE EXAMINER CATANACH

Oil Conservation Division

H Exhibit No. 13-B

Case No. 16036

EUMONT AND JALMAT NON-MARGINAL ALLOWABLE ACREAGE FACTOR = 1.0



BEFORE EXAMINER CANTANACH **EUMONT** — **JALMAT**

Oil Conservation Division

H Exhibit No. 14

Case No. 10036

10000.0

100000.0

8AS (MCF)

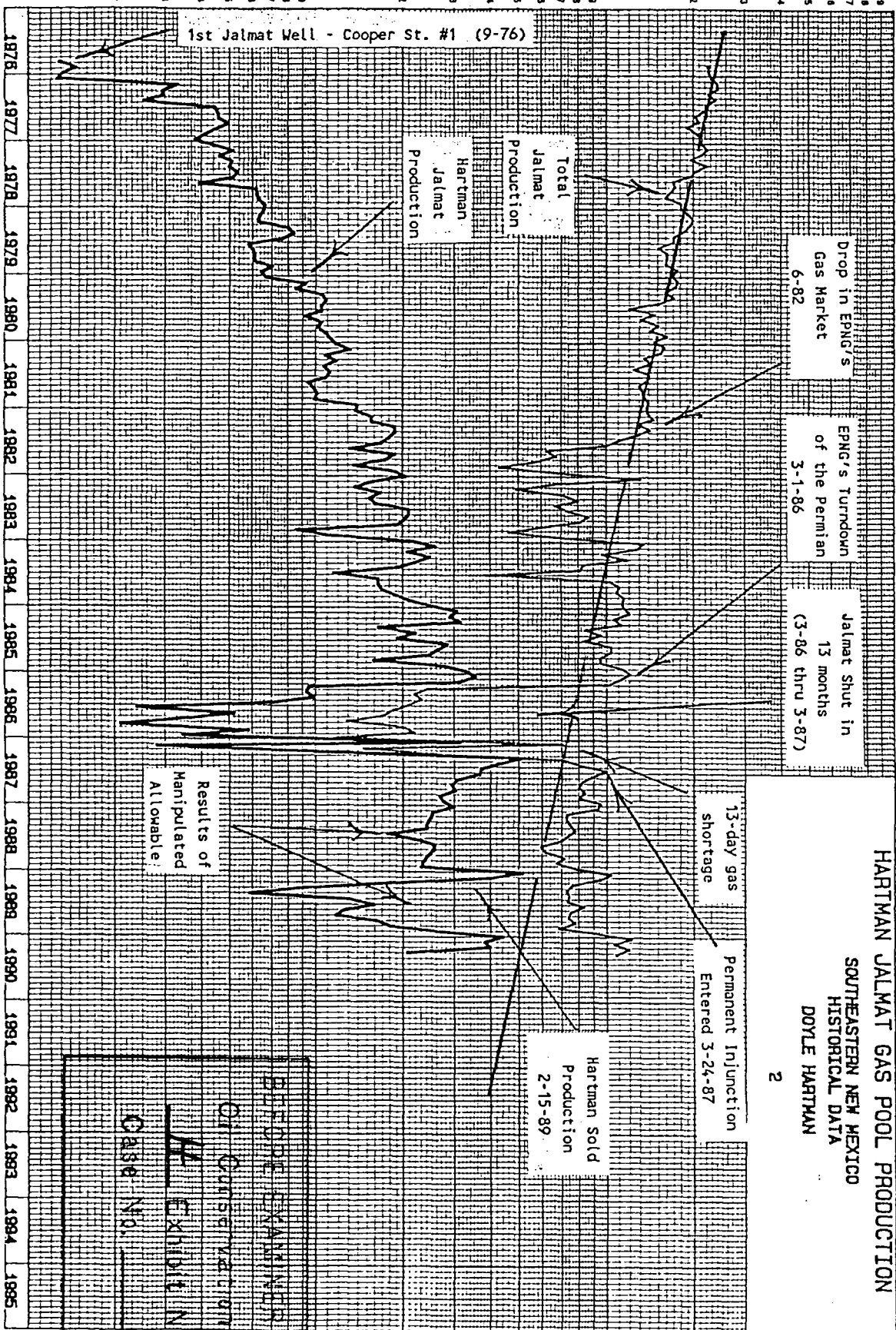
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10000000.0

Date: 08/23/90
Time: 13:39.19

PRODUCTION

File: ALC1.DSF
Set#: 40



Results of
Manipulated
Allowable:

Case No. 10036

EXHIBIT No. 15

Division

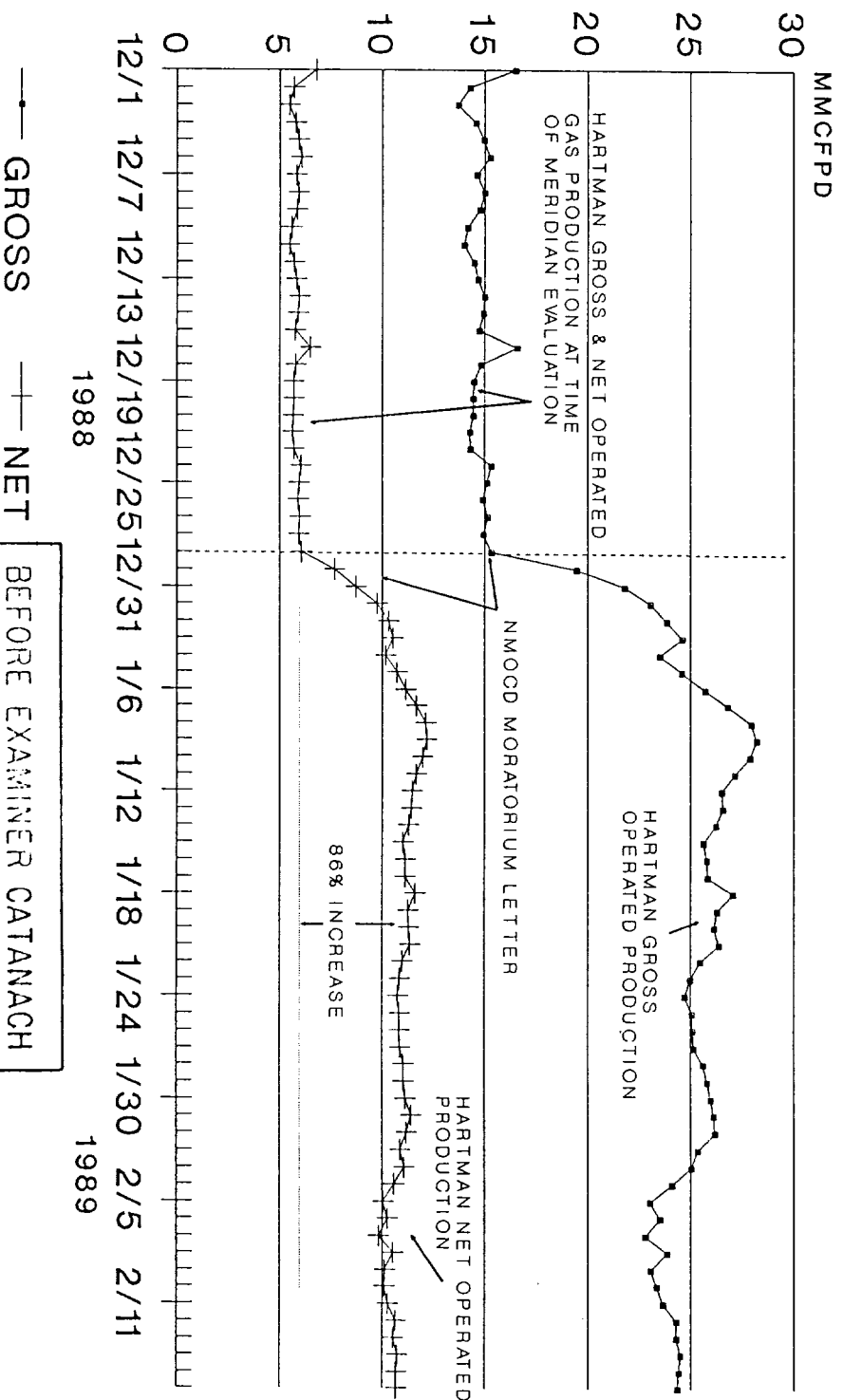
DOYLE HARTMAN

YEARS

DOYLE HARTMAN

Oil Operator

DOYLE HARTMAN OPERATED GROSS AND NET GAS PRODUCTION (12-88 - 2-89 FIELD ESTIMATE REPORT)



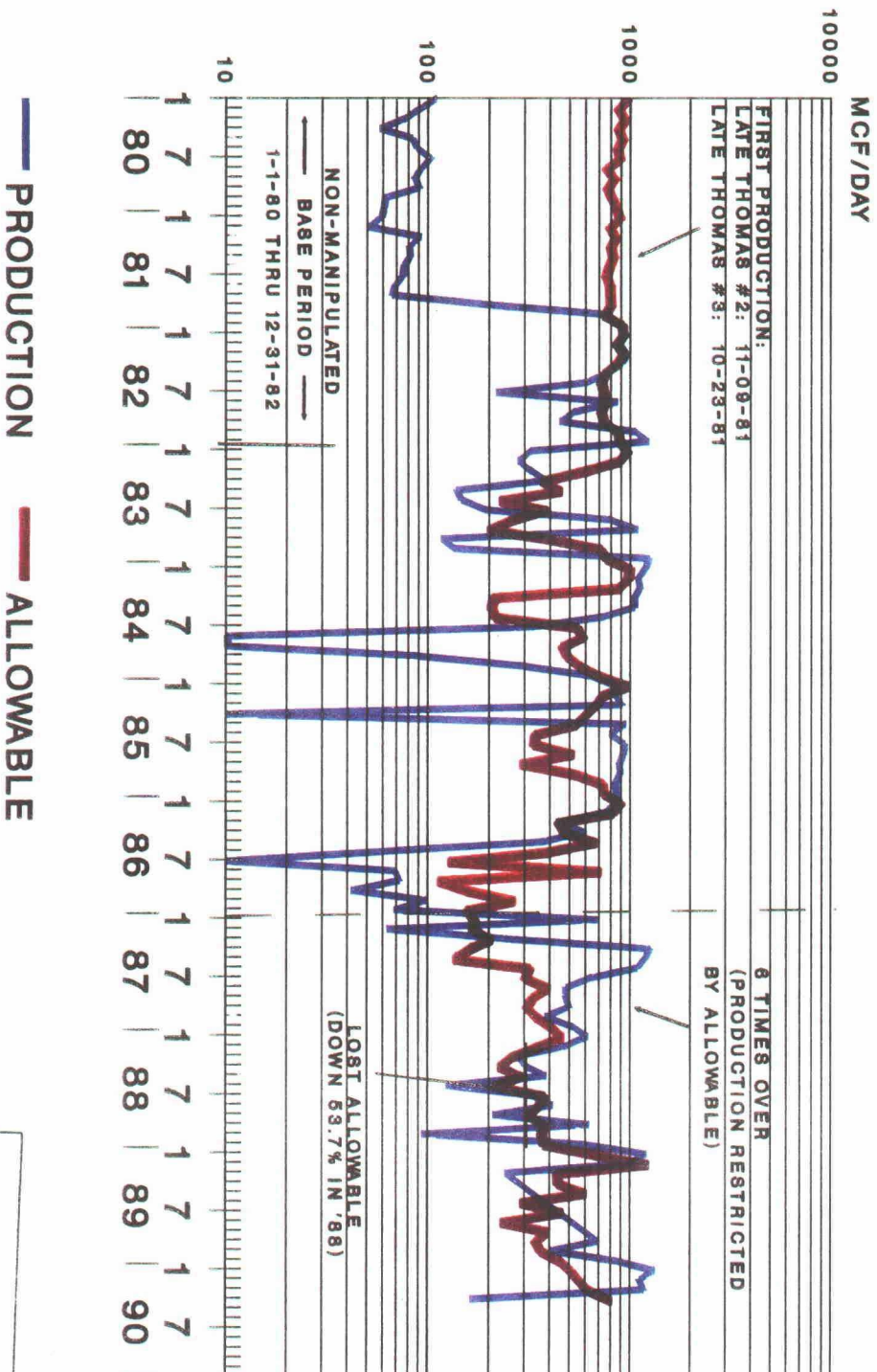
BEFORE EXAMINER CATANACH

Oil Conservation Division

H Exhibit No. 15-A

Case No. 10036

LATE THOMAS #1, #2, & #3 PRODUCTION VS. ALLOWABLE



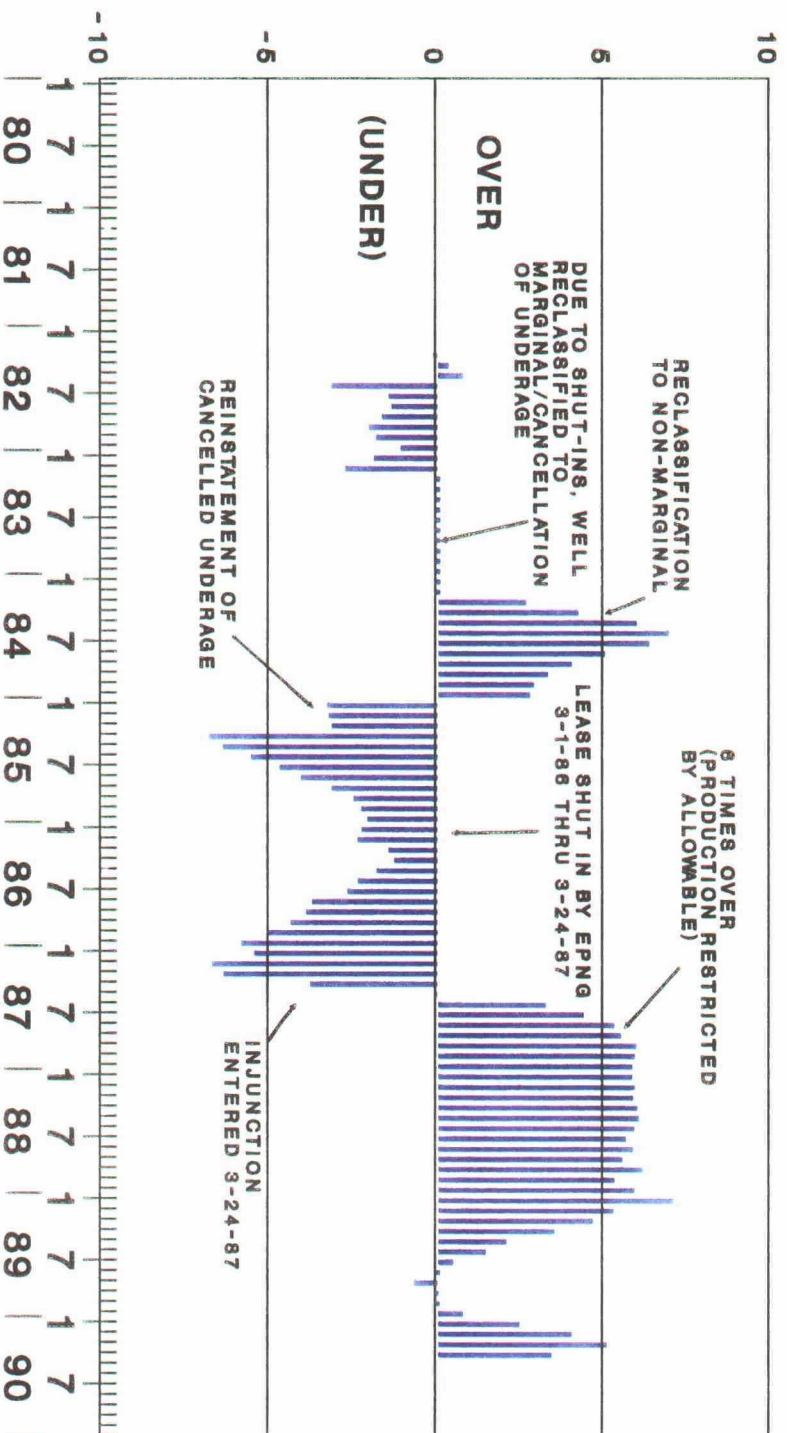
BEFORE EXAMINER CATANACH

Oil Conservation Division

H Exhibit No. 16

Case No. 10036

LATE THOMAS #1, #2 & #3 TIMES OVER/(UNDER) PRODUCED EPNG CONTRACT NO. 6075



TIMES OVER/(UNDER)

BEFORE EXAMINER CATANACH

Oil Conservation Division

Exhibit No. _____

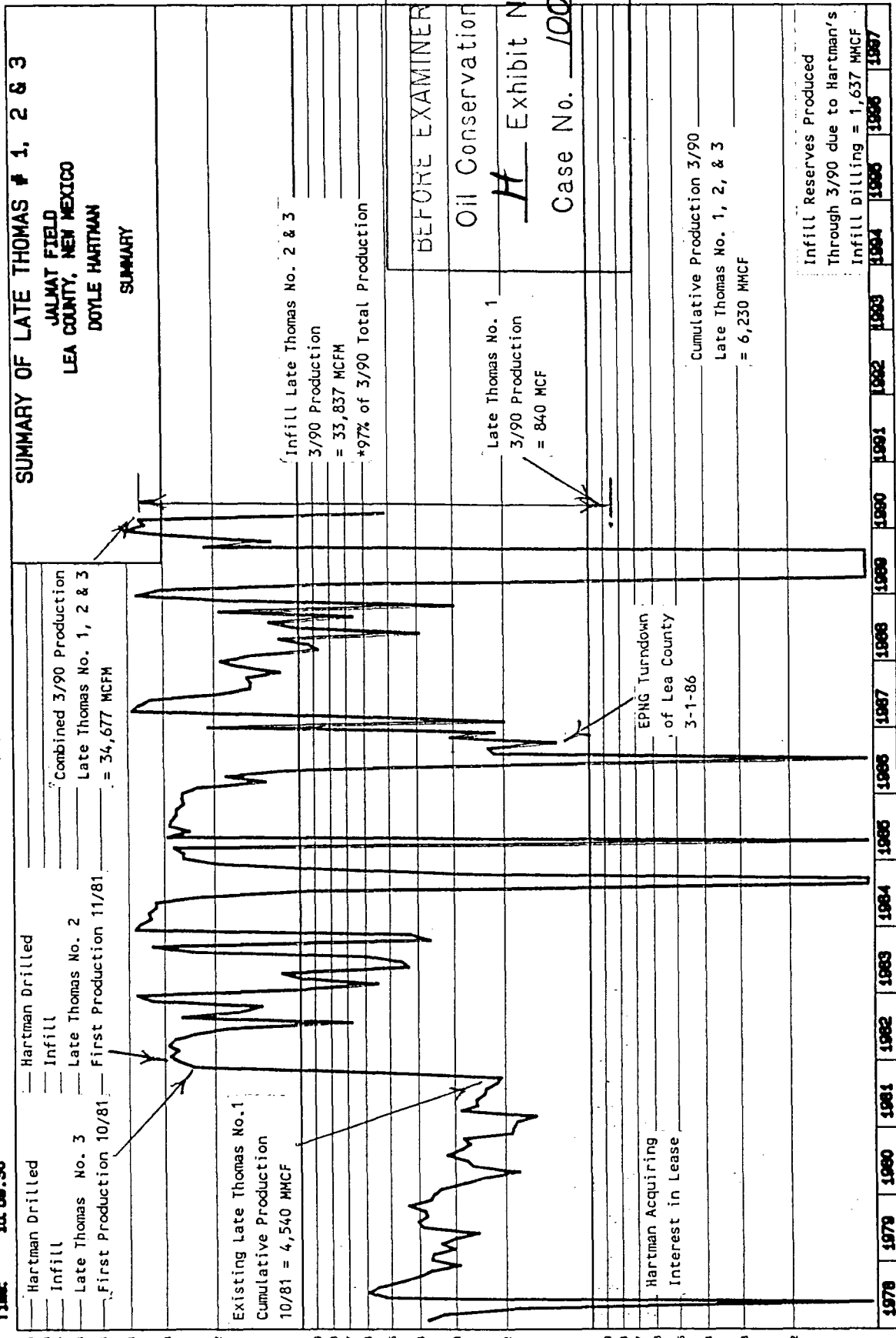
Case No. 10036

EXAMPLE OF A
HARTMAN DRILLED

File: TRIALPLT
Set# 0

INFILL WELL
PRODUCTION

Date: 09/14/90
Time: 10:59.96



BEFORE EXAMINER
Oil Conservation
Division
H Exhibit No. 17
Case No. 10036

DOYLE HARTMAN
Oil Operator

YEARS

100000.0

10000.0

848 (MCF)

1000.0

100.0

Date: 07/02/90
Time: 12.01.49

Lease Shut-in by EPNG
from 3-1-86 to 3-24-87

Injunction entered
3-24-87

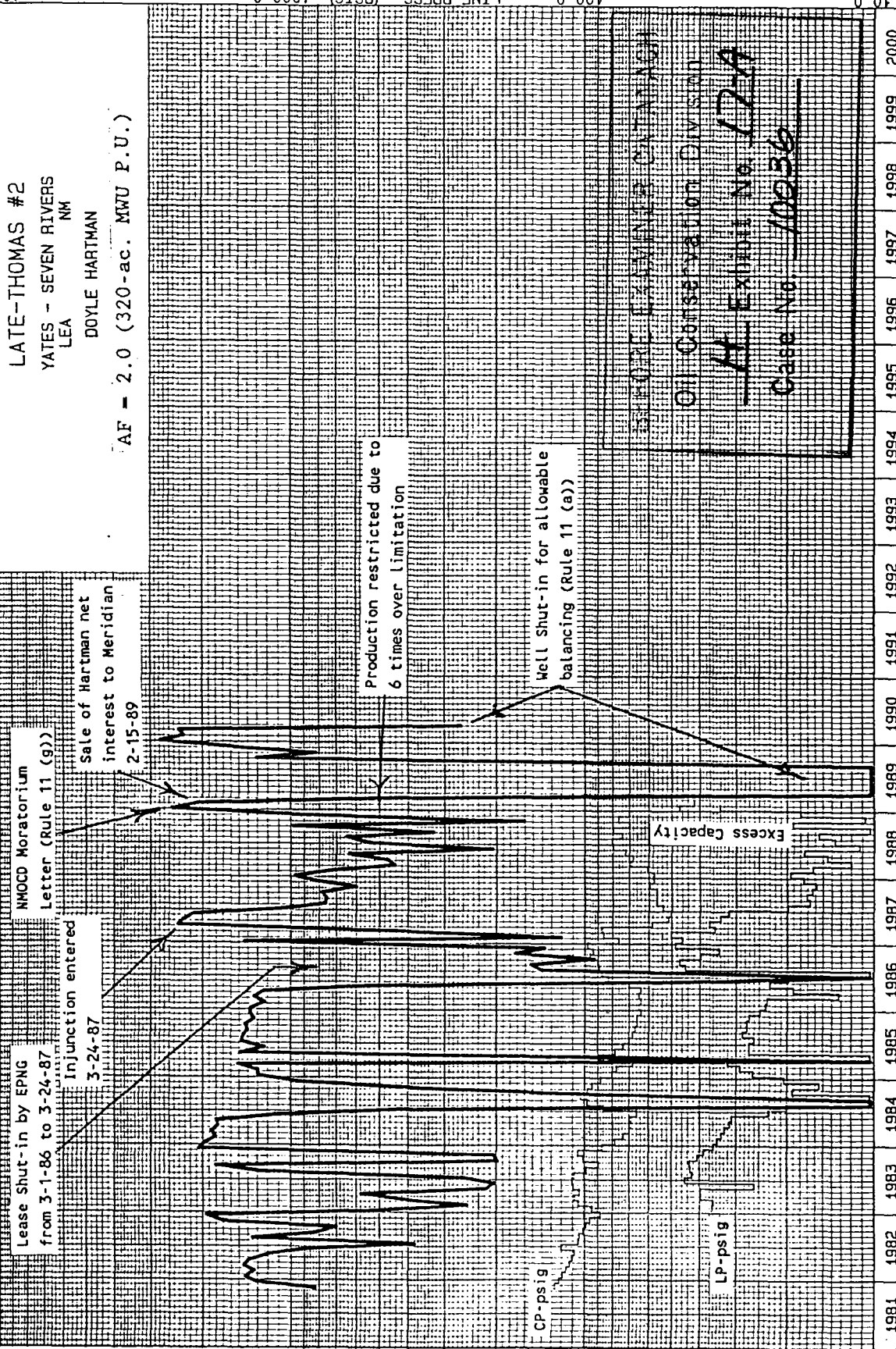
Sale of Hartman net
interest to Meridian
2-15-89

NMOC Moratorium
Letter (Rule 11 (g))

PRODUCTION

File: BSPROFDS
Get#: 2

LATE-THOMAS #2
YATES - SEVEN RIVERS
LEA NM
DOYLE HARTMAN
AF - 2.0 (320-ac. MWU P.U.)



YEARS

DOYLE HARTMAN
Oil Operator

100000.0

Date: 06/22/90
Time: 11:30.01

File: LATE3.DS
Get#: 1

10000.0
10000.0

PRODUCTION

LATE-THOMAS #3
YATES - SEVEN RIVERS
LEA NM
DOYLE HARTMAN
AF - 2.0 (320-ac. MWU P.U.)

Lease Shut-in by EPNG
from 3-1-86 to 3-24-87
NMOCD Moratorium
Letter (Rule 11 (g))

Injunction entered
3-24-87

Sale of Hartman net
interest to Meridian
2-15-89

Production restricted due to
6 times over limitation

Well Shut-in for allowable
balancing (Rule 11 (a))

Excess Capacity

CP-psig

LP-psig

10000.0

GAS (MCF)

1000.0

100.0

10000.0

AVB CP (PSIG)

100.0

10.0

LINE PRESS. (PSIG)

100.0

10.0

YEARS

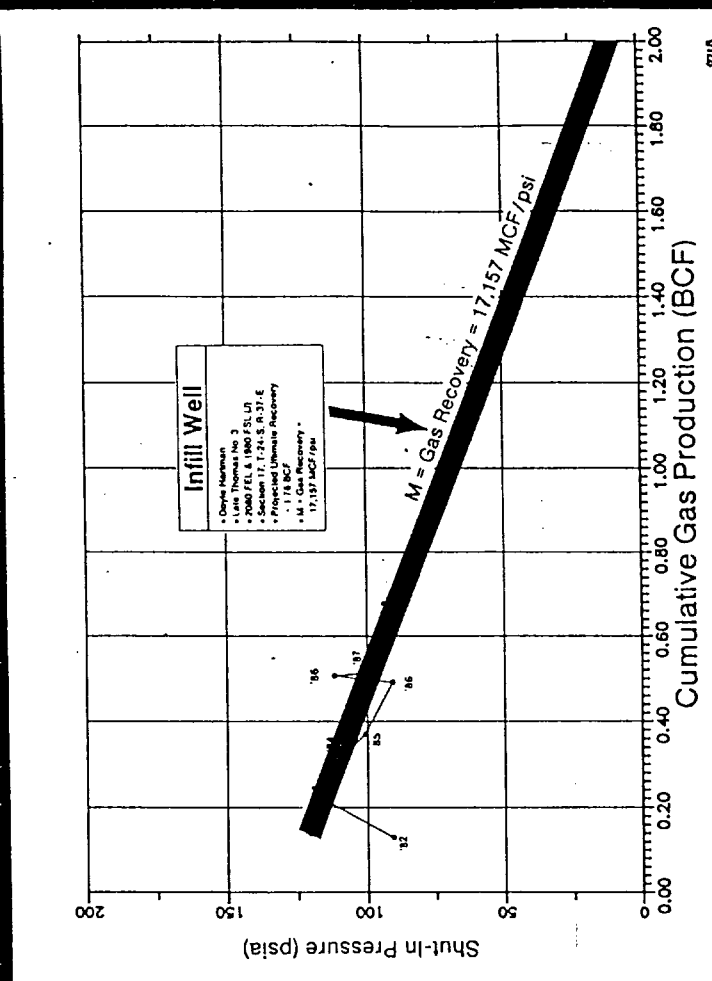
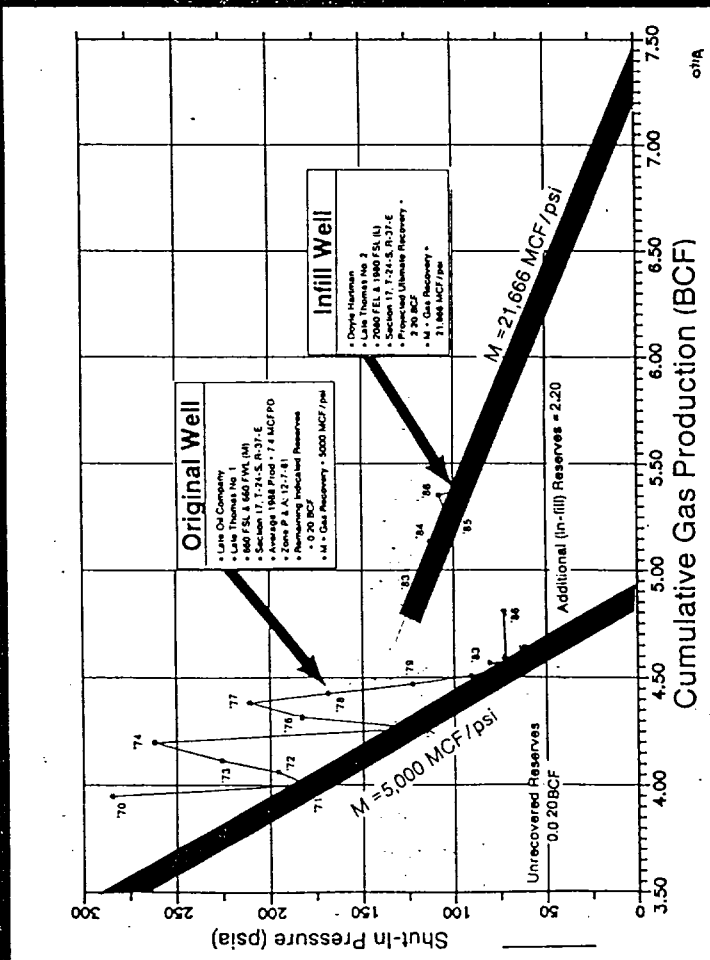
DOYLE HARTMAN
Oil Operator

Case No. 10036
Exhibit No. 17-B

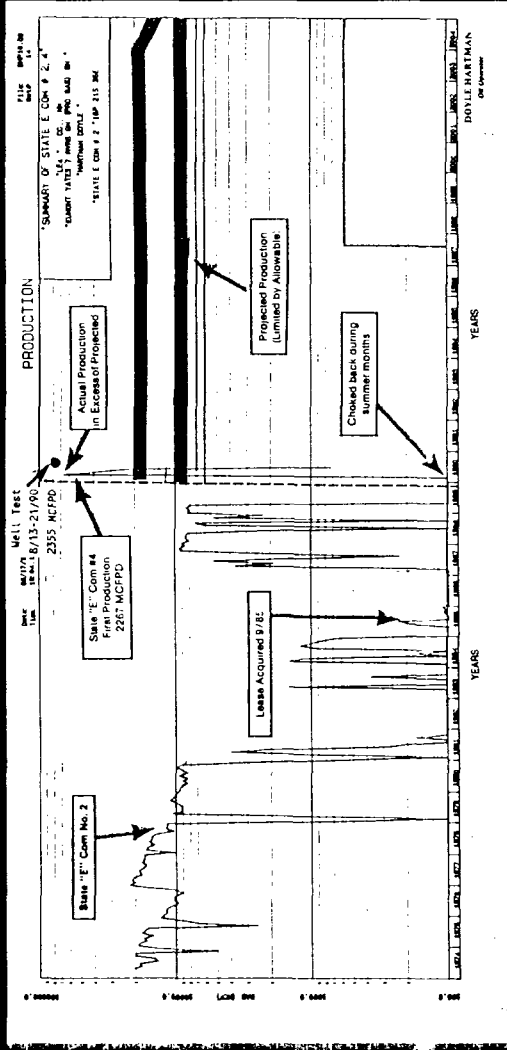
RECOVERY OF GAS RESERVES IN PLACE HARTMAN IN-FILL WELLS VS. ORIGINAL WELL (320 ACRE PRORATION UNIT, JALMAT GAS POOL)

LATE THOMAS #1 & #2

LATE THOMAS #3



RESULT OF INFILL DRILLING (STATE "E" COM #2, 4)

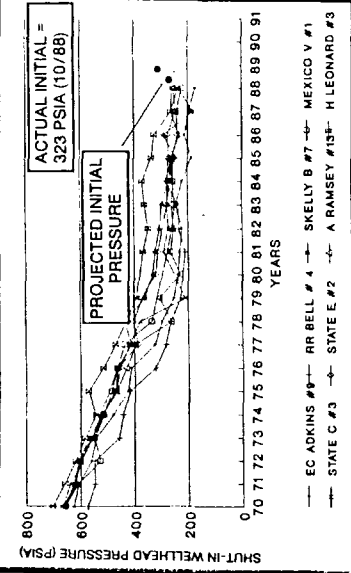


Projected Production
300 MCF/day
Allowable Limit

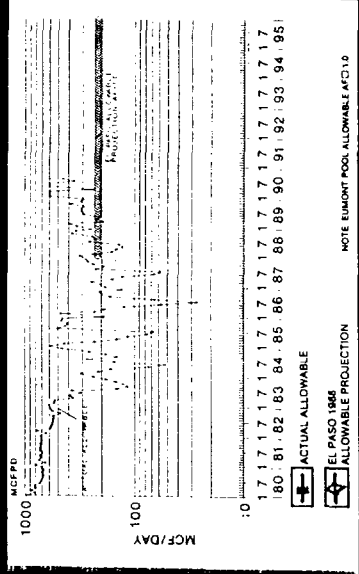
Projected Production
600 MCF/day
Allowable Limit

BEFORE EXAMINER CATANACH
Oil Conservation Division
Exhibit No. _____
Case No. 10036

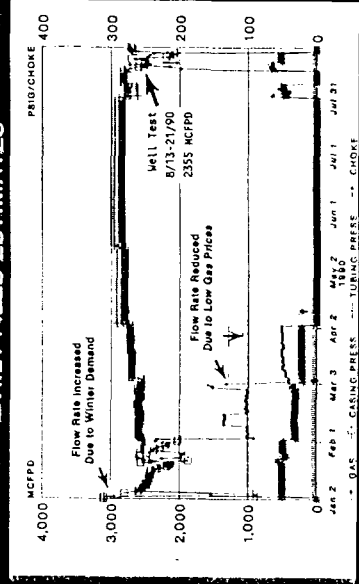
ANNUAL SHUT-IN PRESSURES VS. TIME



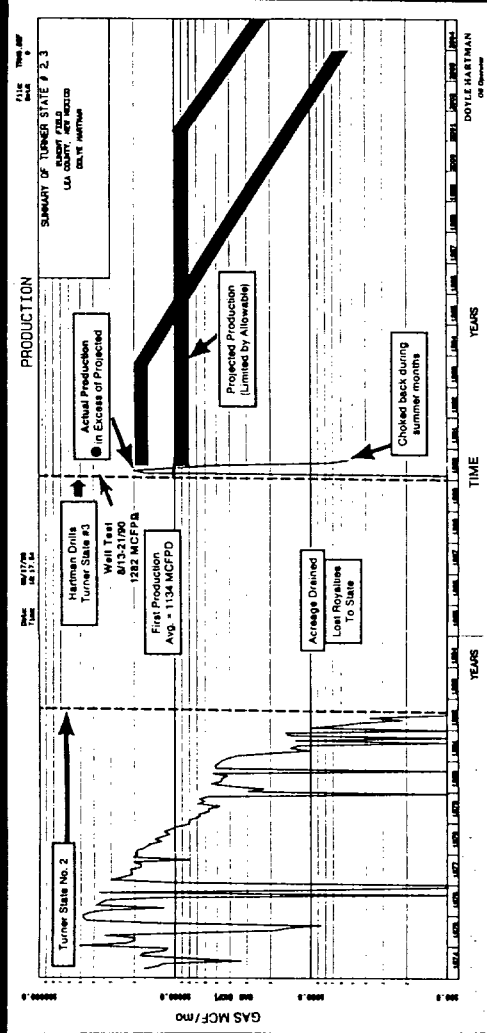
ALLOWABLE PROJECTIONS



PRODUCTION HISTORY FROM DAILY FIELD ESTIMATES

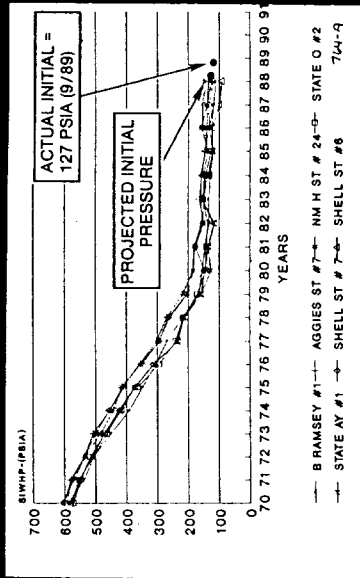


RESULT OF INFILL DRILLING (TURNER STATE #2, 3)

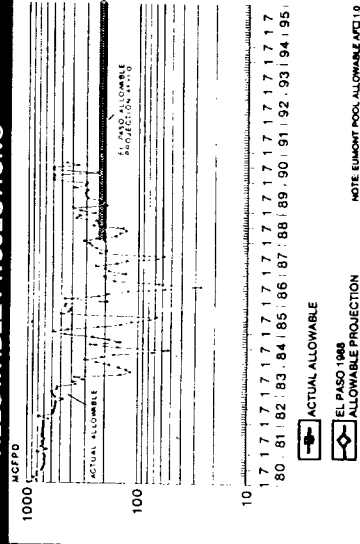


BEFORE EXAMINER CATANACH
Oil Conservation Division
Exhibit No. _____
Case No. 10036

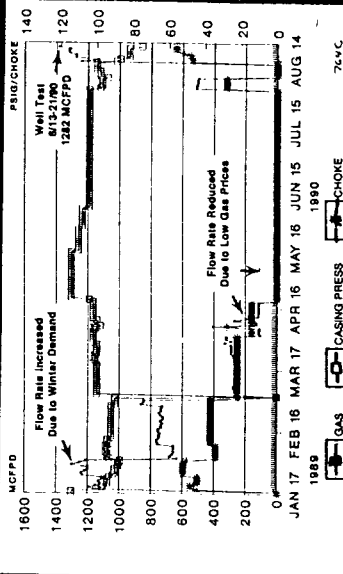
ANNUAL SHUT-IN PRESSURES



ALLOWABLE PROJECTIONS

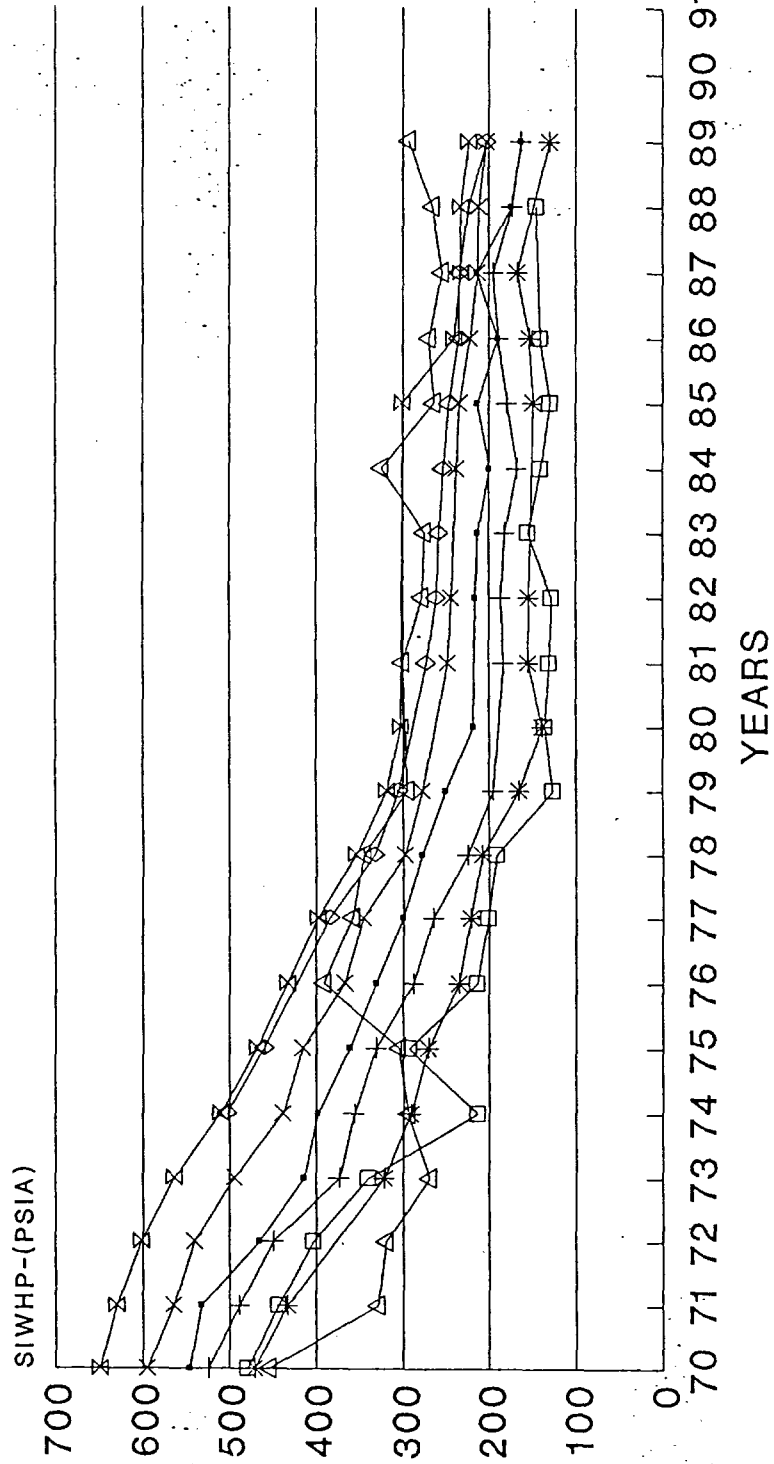


PRODUCTION HISTORY FROM DAILY FIELD ESTIMATES



H 20
10036

ANNUAL SHUT-IN PRESSURES VS. TIME JALMAT AND EUMONT POOL BOUNDARY



—●— WA RAMSEY 1 —+— H LEONARD 3 —*— HARRINGTON 1 —□— MATTIE JAMES 1
 —x— RAMSEY 14 —◇— RAMSEY 44 —△— SE FELTON 1 —x— LOCKHART B 6
 BEFORE EXAMINER CATANACH
 Oil Conservation Division
H Exhibit No. 21
 Case No. 10036

GAS COMPANY OF NEW MEXICO

DAVID N. KIRKLAND

DIRECTOR - SUPPLY CONTROL

September 18, 1990

Mr. William J. LeMay, Director
Energy, Minerals and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

RE: Application of Texaco, Inc. for amendment of Division Order No. R-8170, as amended, to establish a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico. Texaco is requesting a minimum natural gas allowable for a 3 year period equal to 600 mcf/d for an acreage factor of 1.00 or 2400 mcf/d of gas for a standard Eumont 640-acre gas spacing unit.

Dear Mr. LeMay:

The Gas Company of New Mexico (GCNM) respectfully requests that the following be considered in the decision for establishing a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico:

- the assignment of a minimum allowable is a departure from setting allowables based on market demand; this reflects economic forces rather than market forces;
- the setting of a minimum allowable limits the opportunity for all producers to equally share in the market based on a well's ability to produce thereby creating a disparity between producers and between producing elements.
- the reclassification of wells in response to production activity under the current rules minimizes allowable withheld from the market by non-producing non-marginal wells.

The Gas Company of New Mexico does not have contractual obligations with Texaco in the Eumont Pool, however the impact of the proposed minimum allowable precedent applied statewide would be increased cancelled allowables for wells unable to find a market for the increased production requirement associated with high minimum

allowables. This would have adverse economic implications for natural gas consumers in New Mexico.

The existing proration rules have provided adequate allowables in the Eumont Pool. Currently there is only one well shut in for over production in the Eumont Pool. Producing these wells would result in higher allowables, assuming that there is a demand for this increased supply. If allowables are assigned based on a minimum amount and not on market demand, the assigned allowables could be higher than that required by the market. With no market for this potential supply, higher allowables as set by the minimum are artificial and do not accurately reflect the market.

GCNM recommends that the Commission not approve the proposed application for minimum allowable proposed by Texaco.

David N. Kirkland

A handwritten signature in cursive script, appearing to read "D. Kirkland", written in black ink.

KEY ASPECTS OF EUMONT GAS PROCESSING, TRANSPORTATION AND MARKETING

1. ADDITIONAL PROCESSING CAPACITY EXISTS

- Phillips 66, Warren, Texaco, Northern Natural, and Sid Richardson (previously El Paso) have the capability to process additional Eumont production (See Exhibits 13–17).
- Favorable processing agreements are being offered to producers.

2. NONRATABLE TAKES ARE NO LONGER A KEY ISSUE

- Nearly all Eumont production is now permanently released via contract cancellations or deregulation.
- El Paso, for instance, only purchases 400 MCFPD as system supply from the Eumont pool.

3. DEMAND EXISTS FOR ADDITIONAL GAS

- Several new pipelines and expansions are planned to provide additional capacity to California proving additional demand is present.
- El Paso and Transwestern's mainlines operate near 100% of capacity virtually all year.
- When Eumont gas is shut-in due to allowable constraints, Texas and Oklahoma gas supplies the market thereby displacing Eumont production.

KEY ASPECTS OF EUMONT GAS PROCESSING, TRANSPORTATION AND MARKETING

4. MARKETING OF EUMONT PRODUCTION IS NOT A PROBLEM

- Larger operators such as Chevron and Conoco market smaller working interest owner's entitlements.
- Most independants already have an established Gas Department.
- Brokers are being used to market Eumont production.
- A company in Hobbs exists to help producers market Southeastern New Mexico (including Eumont) production.
- Low allowables force non-marginal wells to be shut-in periodically. This situation makes it very difficult to sell gas on a term (6 months or longer) basis.

5. THE LOWERING OF GATHERING SYSTEM PRESSURES HAS INCREASED PRODUCTION

- Sid Richardson is continuing to lower the pressure of the old El Paso 100# system.
- The installation of new low pressure gathering systems has allowed many Eumont wells to double their production.

TRANSPORTERS OF EUMONT GAS

**EL PASO NATURAL GAS COMPANY
(SID RICHARDSON)**

NORTHERN NATURAL

PHILLIPS 66 NATURAL GAS COMPANY

TEXACO PRODUCING,INC

WARREN PETROLEUM CORPORATION

ZIA ENERGY

ECONOMIC SUMMARY

EUMONT DRILLING PROJECT

Economic Parameters

\$300,000 Total Investment

6,000/Year in Operating Costs

\$1.25/MCF Wellhead Netback

Unrisked Economic Results

400 MCFPD Allowable
3.7 Year Discounted Payback

600 MCFPD Allowable
2.2 Year Discounted Payback

SUMMARY OF THE MAJOR POINTS

- Additional processing and pipeline capacity exists as does demand.**
- Eumont gas is being displaced by Texas and Oklahoma gas.**
- Low Eumont allowables are restricting the the number of drilling, recompletion, and even remedial projects.**
- If the low allowables continue, Eumont wells will not be drilled thus creating waste.**
- Correlative rights will still be protected via the proration unit (spacing) requirements and the overproduced limit.**



PHILLIPS 66 NATURAL GAS COMPANY

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK. PHONE: 915 367-1266

September 11, 1990

Increase in Allowable Eumont Field

Conoco, Inc.
10 Desta Drive, West
Midland, Texas 79705

Attn: Michael Zimmerman

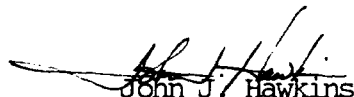
Dear Mr. Zimmerman:

The following information is submitted regarding increasing the allowable in the Eumont Field:

1. Phillips 66 Natural Gas Company (P66NGC) currently processes gas from the Eumont field in the Eunice/Lee Superplant Complex. Currently, there is no gas well gas or casinghead gas curtailed in the system. At the present time, the proposed increase will have no known effect with regard to additional curtailment or future curtailment.
2. P66NGC is greatly interested in gathering and processing any additional reserves from the Eumont Field.
3. P66NGC has capacity in the gathering system and plant to gather, treat and process additional gas reserves from the Eumont Field.

If further information is required, please contact me at (915) 368-1352 in Odessa, Texas.

Phillips 66 Natural Gas Company


John J. Hawkins
Agent

JJH:jjh - RC

MONUMENT-EUNICE-JALMAT TREND AMONG MAJOR NORTH AMERICAN GAS FIELDS

RANKED BY INITIAL RECOVERABLE RESERVES

TABLE 2-11 Initial Recoverable Reserves of Gas in the United States, 1965

Field	State	Initial Recoverable Reserves (Trillion Cubic Feet)
1. Panhandle-Hugoton	OK, TX	70.0
2. San Juan (All Pools)	N.M.-CO	13.7
3. *Monument-Eunice-Jalmat	N.M.	9.8
4. Monroe	LA	7.0
5. Carthage	TX	6.0

BEFORE EXAMINER CATANACH
Oil Conservation Division
H Exhibit No. 1
Case No. 10036

Field	Initial Recoverable Reserves	Trillion Cubic Feet
1. Panhandle-Hugoton (KAN-OK-TX)		70.0
2. San Juan (All Pools) (N.M.-CO)		13.7
3. *Monument-Eunice-Jalmat (N.M.)	9.8	
4. Monroe (LA)	7.0	
5. Carthage (TX)	6.0	

*Includes shallow Permian pays; Jal, Matlix, Eunice, Monument, and other combined smaller fields.

Source: NATURAL GASES OF NORTH AMERICA
Beeble, B.W. & Curtis, B.F.

NATURAL GASES OF NORTH AMERICA—A SUMMARY¹

B. W. BEEBE² AND BRUCE F. CURTIS³
Boulder, Colorado

TABLE XXI. GIANT GAS FIELDS⁴ OF NORTH AMERICA LISTED BY SIZE

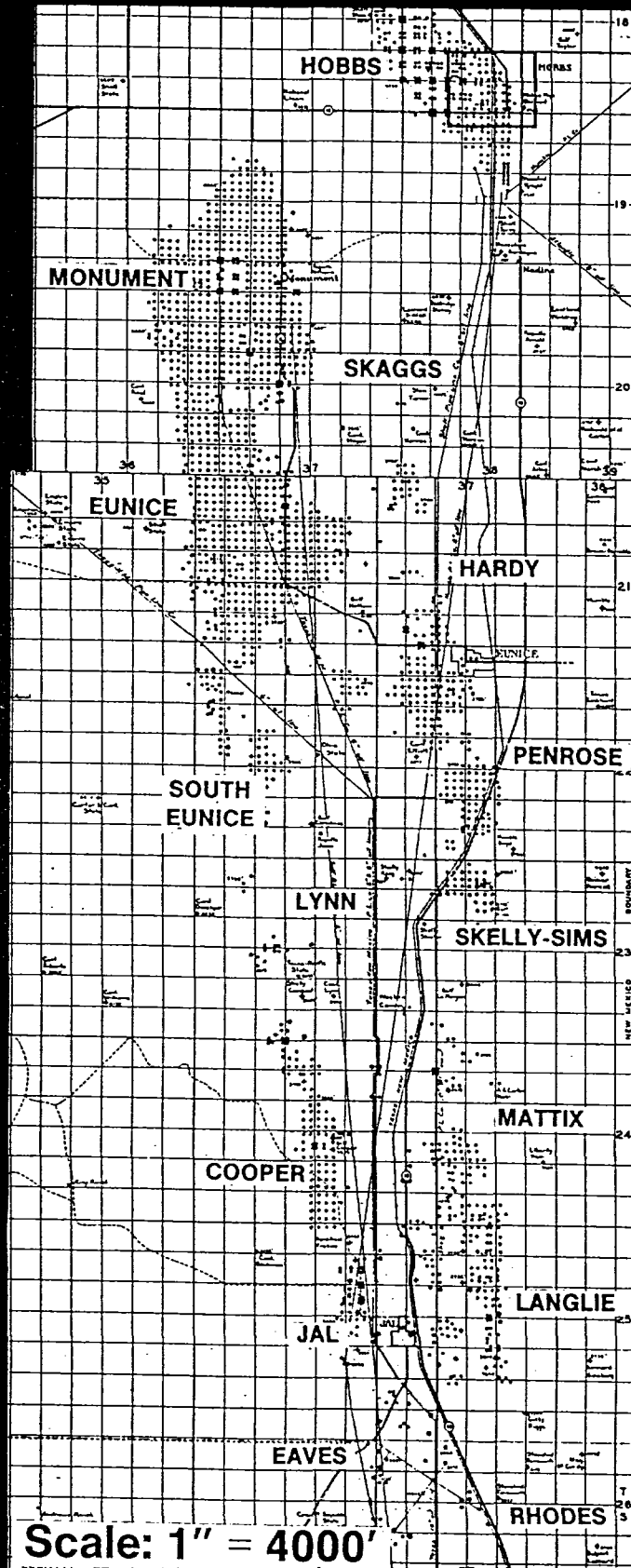
Field	State or Province	Date of Discovery	Producing Zones	Depth Range (ft)	1965 Production (Mcf)	Initial Rec. (Tcf)	Comm. Prod. 12/31/65 (Tcf)	Res. 12/31/65 (Tcf)	Type of Gas	Trap	No. of Gas Wells	Remarks
Panhandle-Flagston San Juan (all pools) Monument-Devence-Jalnet Trend	Kan.-Okla.-Texas New Mex.-Colo. New Mexico, S.E.	1918 1927 1927	Penn. (Wolf) U. Cret. U. Penn.	2,200-2,900 90-8,100 2,700-3,700	1,465 450 ⁵ 129	70.0 13.7 9.8	45.0 3.9 ⁵ 0.7	25.0 9.8 ⁵ 3.1	N-A Mostly N-A All	Struct. and struct. Strat. Anticline and comb.	9,423 6,516 840	Texas part is structural Little Cret. Includes shallow Perm. pays; Jal. Matrix, Dunbar, Altonnemy, and other smaller fields are combined
McIntire	La., N.	1916	L. Terf. Cret., Jur.	1,300-9,000	95	7.0	6.2	0.8	N-A	Dome	3,463	7 pays
Carthage	Texas, E.	1936	Cret.	2,100-6,500	178	6.0	5.1	0.9	Mostly N-A	Struct. and struct.	691	12 gas pays; permeability pinch-out on huge nose; gas cond.
Katy	Texas Gulf Coast	1935	L. Ter.	6,400-7,400	177	6.0	0.7	5.3	All	Anticline	55	Gas cond.; huge cycling project
Old Ocean	Texas Gulf Coast	1934	Ter.	8,500-11,200	111	5.0	1.6	3.4	Mostly N-A	Deep-seated salt dome	94	Faulted; 9 gas pays; considerable gas cond.
Delta, W., Bk. 27	La. offshore	1949	M. Ter.	8,100-15,800	86	4.3	0.1	4.2	Mostly N-A	Faulted anticline	56	12 pays; little Cret.; gas cond.
Comoz	Texas, W.	1963	Orl.	20,000-22,000	negl.	4.0	negl.	4.0	N-A	Faulted closed anticline	6	Development rapid; 17 wells end of 1966; proved reserves probably 1-1.5 Tcf
Laverne-Mocane	Okla., N.W., and Panh.	1952	Penn., Penn. Miss.	3,100-7,600	168	3.8	1.1	2.7	N-A	Struct.	1,037	Multiple pays
Crossfield	Alberia	1952	L. Cret., Miss., Dev.	6,700-8,500	60	3.4	0.2	3.2	N-A	Struct.	29	15 Mef sol.; gas cond.; 4 pays
Flotation Bay	La., S.	1941	M. Ter.	4,300-15,300	105	3.3	0.4	2.9	N-A	Faulted anticline	62	Several hundred oil wells; 900 Mef sol. Cret. from Cardium-U. Cret.; some N-A; 5 pays
Pembina	Alberia	1957	U. and L. Cret., Jur., Miss.	3,000-6,400	40	3.2	0.2	3.0	All	Struct.	12	Gas cond.; oil and gas field; 24 pays—14 dry, 10 Cret.
Rodessa	Ark.-La.-Texas	1930	Cret., Jur.	5,300-10,800	6.5	3.2	0.8	2.4	N-A	Faulted anticline	102	Gas cond.; oil and gas field; 24 pays—14 dry, 10 Cret.
Rio Vista	Calif., Cent.	1936	U. Cret., L. Ter.	3,700-9,000	53	3.1	2.3	0.8	N-A	Dome	157	8 pays
Coyne	Texas, W.	1959	Penn., Penn., Dev., Orl.	4,700-15,000	34	3.0	negl.	3.0	N-A	Closed anticline	30	First prod. in 1965
Golden Trend	Okla., S. Cent.	1945	Penn., Dev., Orl.	5,100-11,200	102 ⁵	3.0 ⁵	2.6	0.4 ⁵	Mostly Cret.	Mostly struct. some strat.	—	Some N-A; oil field
Cretal-Ton O'Connor	Texas, S.	1933	Ter.	1,700-7,800	94	3.0	1.5	1.5	N-A, Cret.	Deep-seated salt dome, struct.	219	43 pays N-A, 9 Cret.; 462 Mef Cret. included
Kettelman-N. Dome	Calif., Cent.	1928	Ter.	8,300-11,400	40	3.0	2.7	0.3	Cret.	Dome	—	Oil field
La Gloria	Texas, S.	1939	Ter.	5,200-9,800	91	2.9	1.0	1.9	All	Anticline	81	Oil prod. unimportant; anticlinal closure, N-S elongate with usoc. regional synclinal faults
Big Huey	Wyoming	1938	L. Ter., Cret.	900-9,700	41	2.8	0.4	2.4	N-A	Struct.	n.a.	Gas and oil field; probably deep-seated salt dome
Jose Colorado-Chihuahua	Mexico	1951	M. Ter.	5,200-8,000	185	2.8	1.0	1.8	Mostly N-A	Faulted salt dome	79	Gas and oil field
Lake Arthur	La., S.	1937	M. and L. Ter.	8,500-15,800	100	2.8	1.0	1.8	N-A, Cret.	Elongate dome	57	Oil prod. unimportant; anticlinal closure, N-S elongate with usoc. regional synclinal faults
Mateman Lake	La., S.	1937	Ter.	8,700-12,800	31	2.5	0.3	2.2	N-A, Cret.	Elongate dome	21	Gas and oil field; probably deep-seated salt dome
Bayou Sale	La., S.	1940	U. and M. Ter.	4,500-14,500	103	2.5	0.4	2.1	N-A, Cret.	Deep-seated salt dome	36	Gas and oil field
Bethany-Waskom	Texas, E., La., N.	1916	Cret., U. Jur.	1,000-6,500	89	2.5	1.8	0.7	N-A, Cret.	Dome	586	At least 30 gas or gas-cond. pays
Borjegos	Texas, S.	1945	Ter.	5,150-9,500	133	2.5	0.6	1.9	All	Deep-seated anticline	46	Dry gas prod. reported from 13 pays; Cret. from 6 pays, 1965
Chocolate Bayou	Texas Gulf Coast	1939	Ter.	8,700-14,800	67	2.5	1.7	0.8	All	Faulted anticline salt dome	68	Gas cond.; 2 pays
Edson	Alberia	1963	U. Cret., Miss.	5,800-9,100	3	2.5	negl.	2.5	N-A	Struct.	32	Gas cond.; 2 pays
Pocket	Texas, W.	1952	Penn., Penn., Dev., Orl.	10,400-14,600	64	2.5	0.6	1.9	N-A	Closed anticline	57	Gas cond.; 2 pays
Silpo	La., N.	1922	Cret., U. Jur.	830-7,900	77	2.5	1.7	0.8	N-A	Faulted dome	241	Gas and oil fields; some Cret.; 14 pays
Stratton	Texas, S.	1937	Ter.	500-7,800	74	2.5	1.9	0.6	All	Anticline	154	Gas and oil fields; some Cret.; 14 pays

¹ Initial recoverable reserves of 1 trillion cu ft or more.

² Estimated.

MONUMENT-EUNICE- JALMAT TREND

SOURCE: Lea County Operators
Committee
1938 Annual Report



10036

GAS POOLS,
SOUTHEASTERN LEA
COUNTY, NEW MEXICO

SID RICHARDSON

NORTHERN NATURAL
GAS PIPELINE

EUMONT POOL
(PRORATED)

JALMAT POOL
(PRORATED)

CUSTER & CUSTER
EAST POOLS

RHODES POOL
(NON-PRORATED)

LEGEND

- ☐ CUSTER & CUSTER
EAST POOLS
- ☐ EUMONT POOL
- ☐ JALMAT POOL
- ☐ RHODES POOL

SCALE: 1" = 4000'

Ownership Map
Southeast LEA COUNTY, NEW MEXICO
SCALE: 1" = 4000'

BEFORE EXAMINER CATANACH
Oil Conservation Division

Exhibit No. 3
Case No. 10036

HARTMAN JALMAT-EUMONT ACTIVITY 1989 & 1990

LEGEND



JALMAT POOL
RHODES POOL
EUMONT POOL



HARTMAN OPERATED
LEASES

DRILLING PROGRAM
1989-1990



DRILLED
PROPOSED

RHODES
POOLS

NON-PROFIT AREA

SCALE: 1" = 4000'

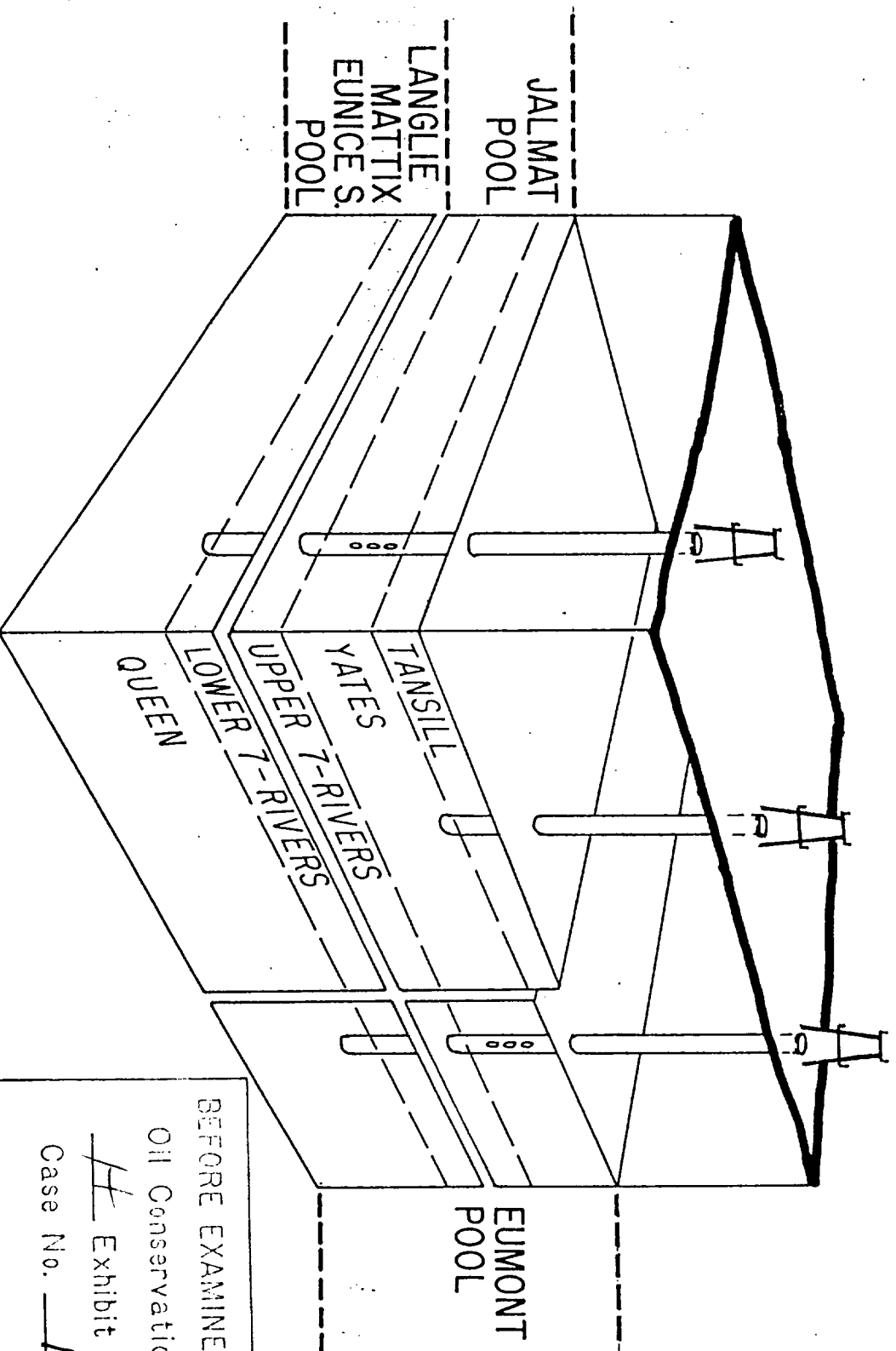
Ownership Map
Southeast LEA COUNTY, NEW MEXICO

BEFORE EXAMINER CATANACH
Oil Conservation Division

Exhibit No. 4

Case No. 10036

PARTIAL DIAGRAM OF LEA COUNTY OIL & GAS POOLS



BEFORE EXAMINER CATANACH

Oil Conservation Division

Exhibit No. 5

Case No. 10036