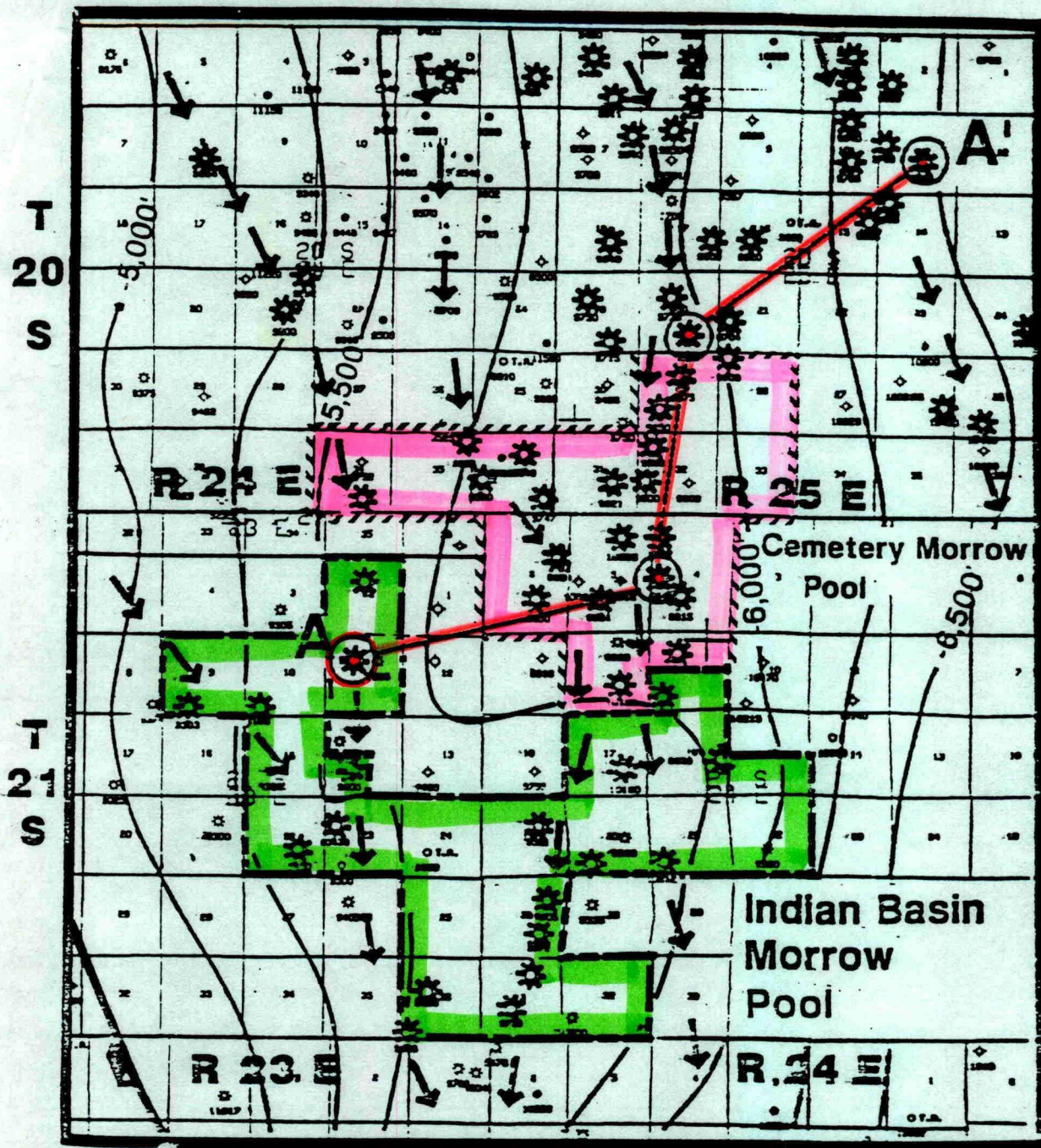




Lower Morrow
Regional Structure Contours
Contour interval = 250 ft

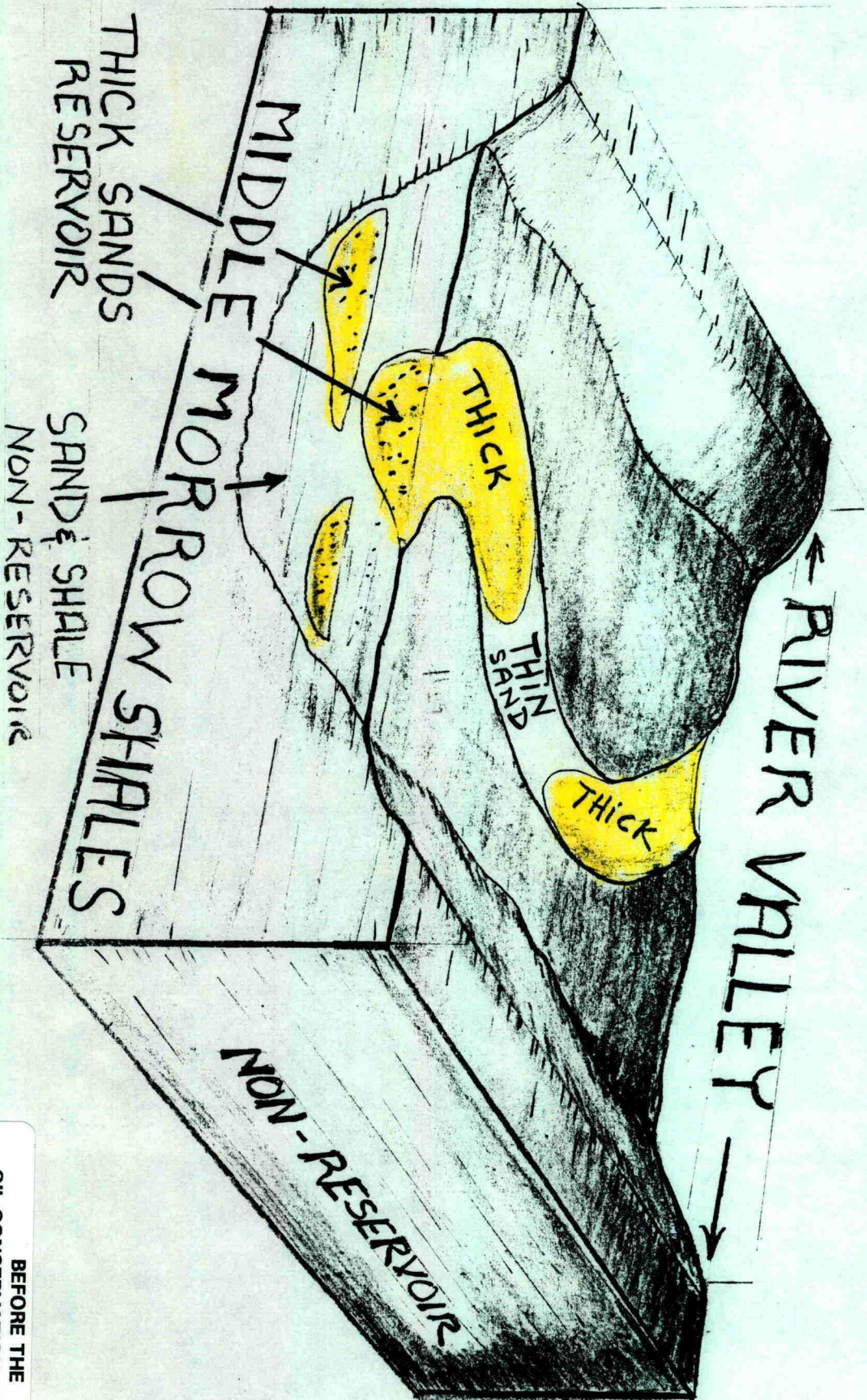
-  Morrow producer
-  Morrow channel axis
-  Fault (teeth on down-thrown side)

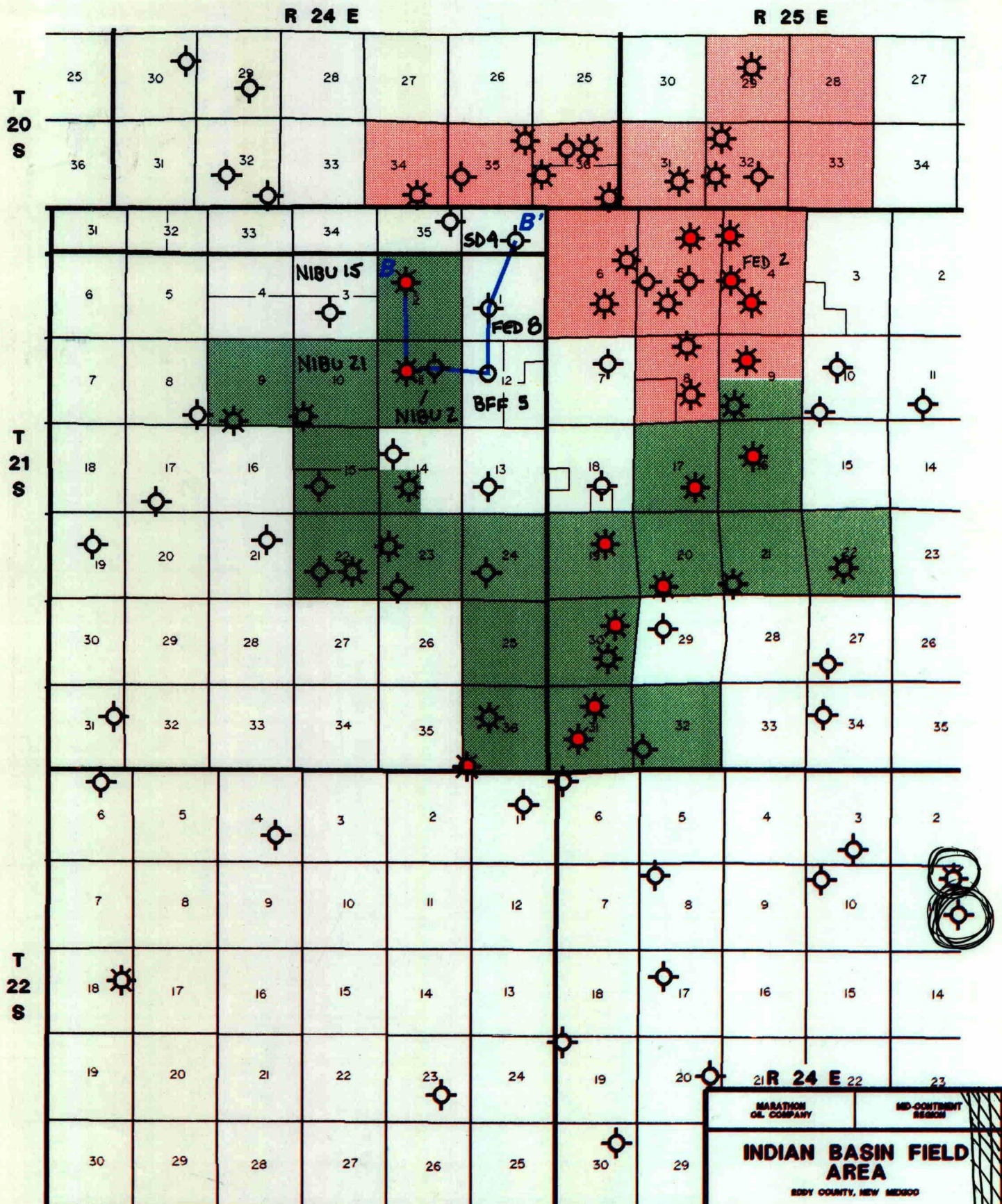
BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11512 Exhibit No. 1
Submitted By:
MARATHON OIL COMPANY
Hearing Date: May 2, 1996

Map shows wells deeper than 9,000 ft.

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

MORROW DEPOSITIONAL MODEL





- MORROW GAS PRODUCING
- MORROW GAS DEPLETED
- MORROW PENETRATION (DRY)

CEMETERY MORROW
INDIAN BASIN MORROW

BEFORE THE
OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO
MARATHON OIL CO. EXHIBIT NO. **4**
CASE NO. **11512**
MAY 2, 1996

MARATHON OIL COMPANY		IND-CONTINENT REGION	
INDIAN BASIN FIELD AREA			
EDDY COUNTY, NEW MEXICO			
MORROW PRODUCTION			
ORIGINAL SCALE 1" = 1000'		DATE 4/96	
AUTHOR		REVISED 4/96	
DRAFTED BY:		PROJECT	
FILE LOC./REVISIONS		FILE LOC./REVISIONS	
DON - BFMORPD.BMP EXPL			

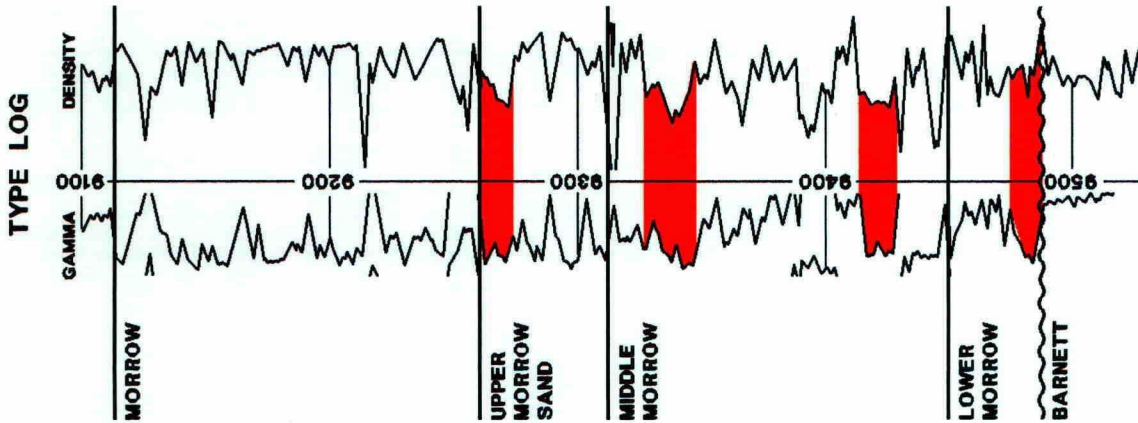
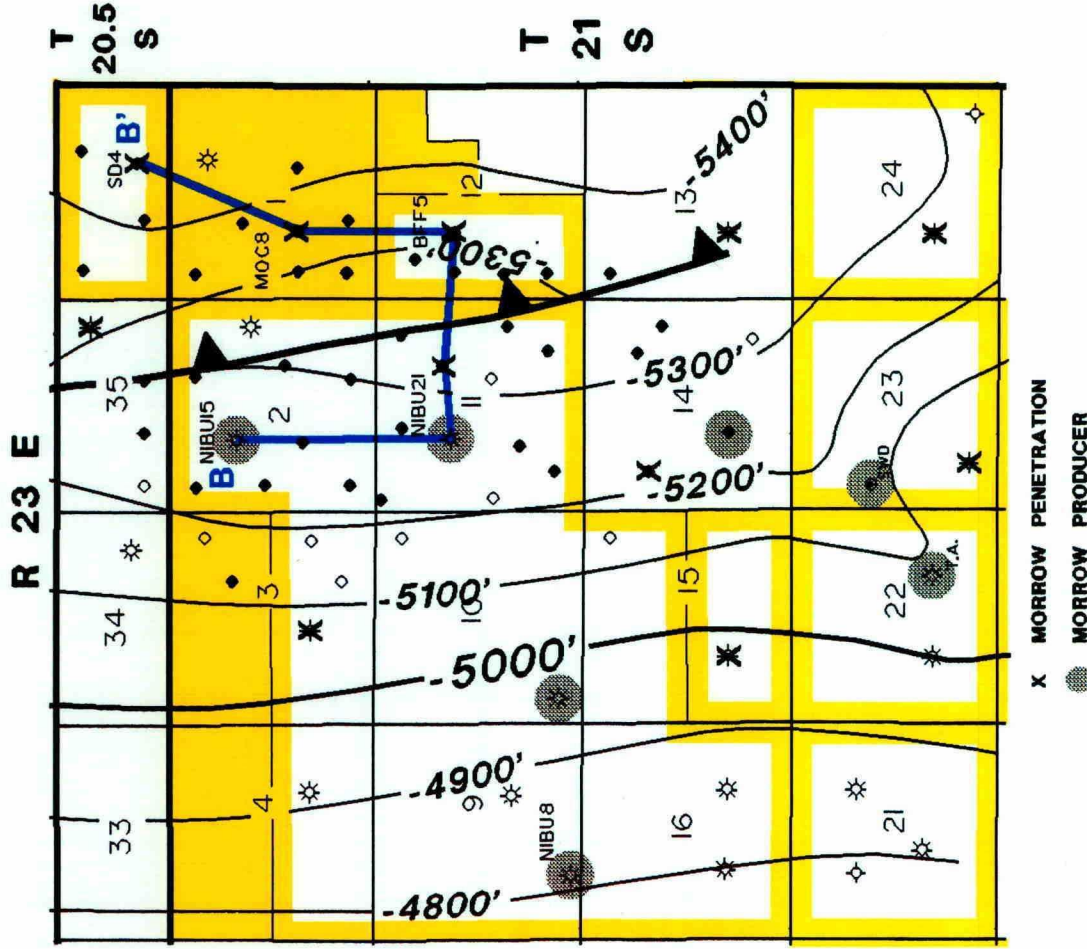
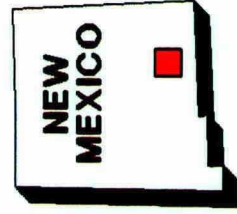
MARATHON OIL COMPANY
MID-CONTINENT REGION

INDIAN BASIN FIELD AREA

EDDY COUNTY, NEW MEXICO

TOP OF MORROW STRUCTURE MAP

C.I.: 100'



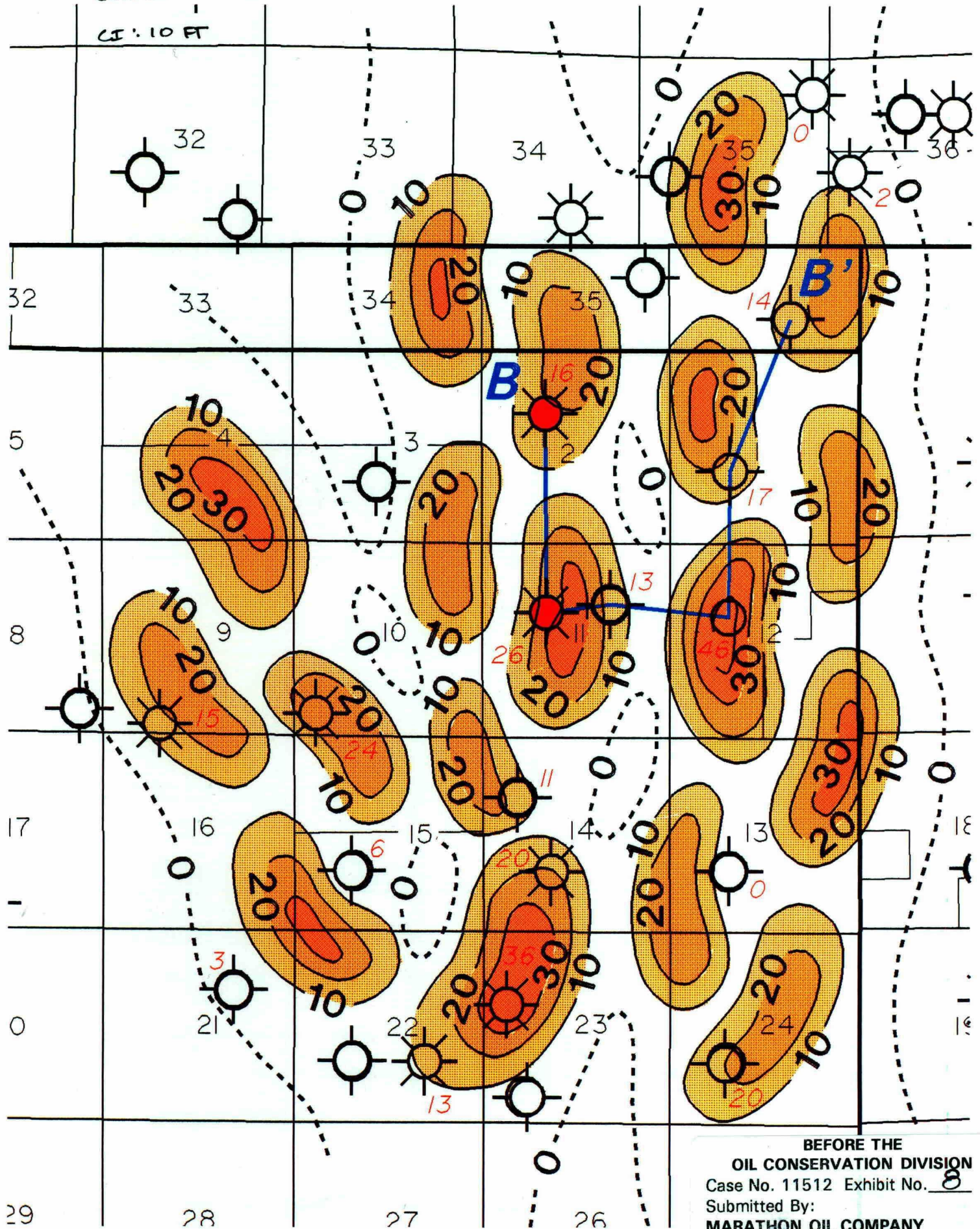
Before the
OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO

Submitted by MARATHON OIL CO. EXHIBIT NO. 5
Hearing Date: May 2, 1996 CASE NO. 11512

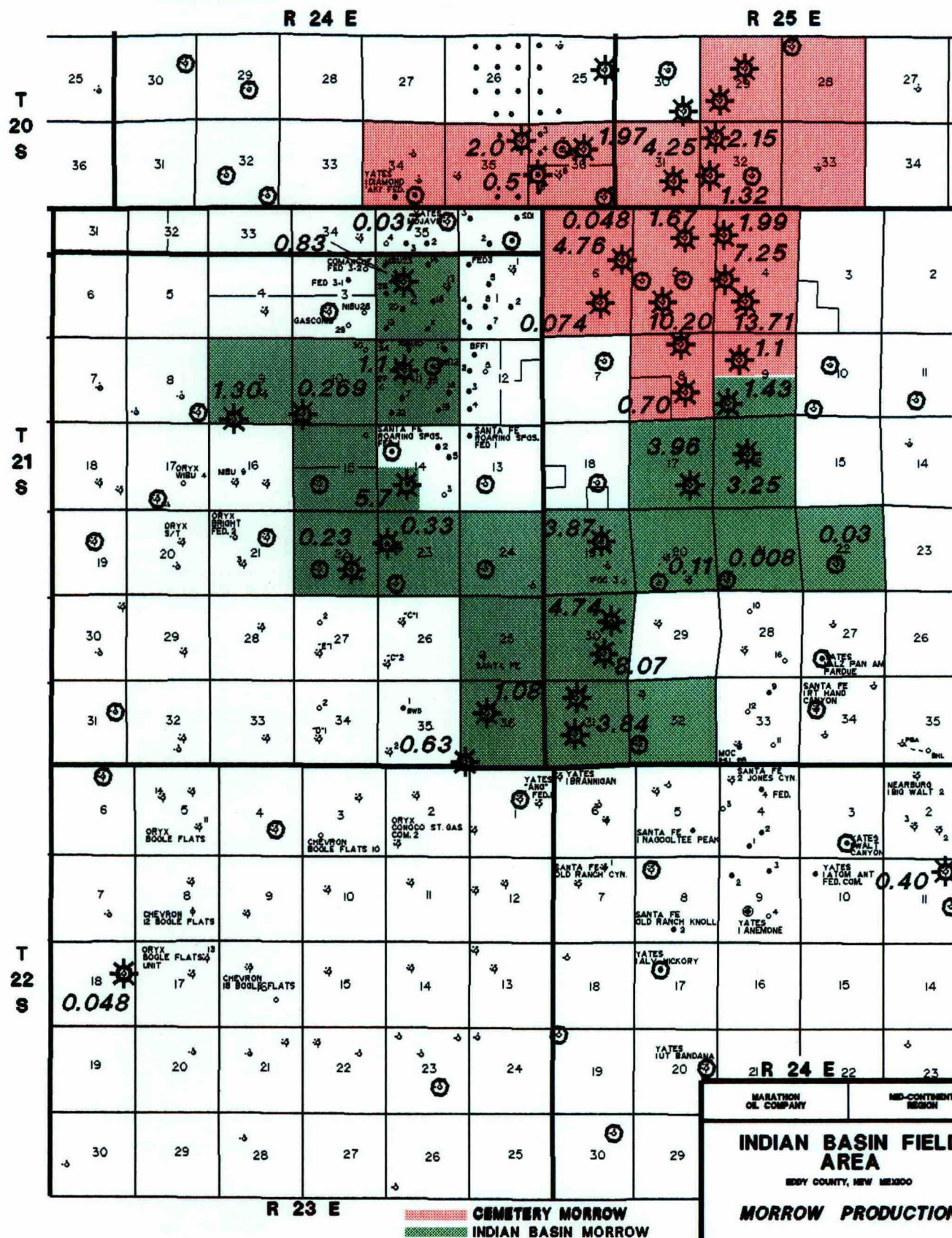
LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

INDIAN BASIN FIELD AREA LOWER MORROW NET SAND ISOPACH

CI: 10 FT



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11512 Exhibit No. 8
Submitted By:
MARATHON OIL COMPANY
Hearing Date: May 2, 1996



- MORROW PRODUCER

2.15 - CUM. PRODUCTION IN BCFG



- MORROW PENETRATION (DRY)

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11512 Exhibit No. 9
Submitted By:
MARATHON OIL COMPANY
Hearing Date: May 2, 1996

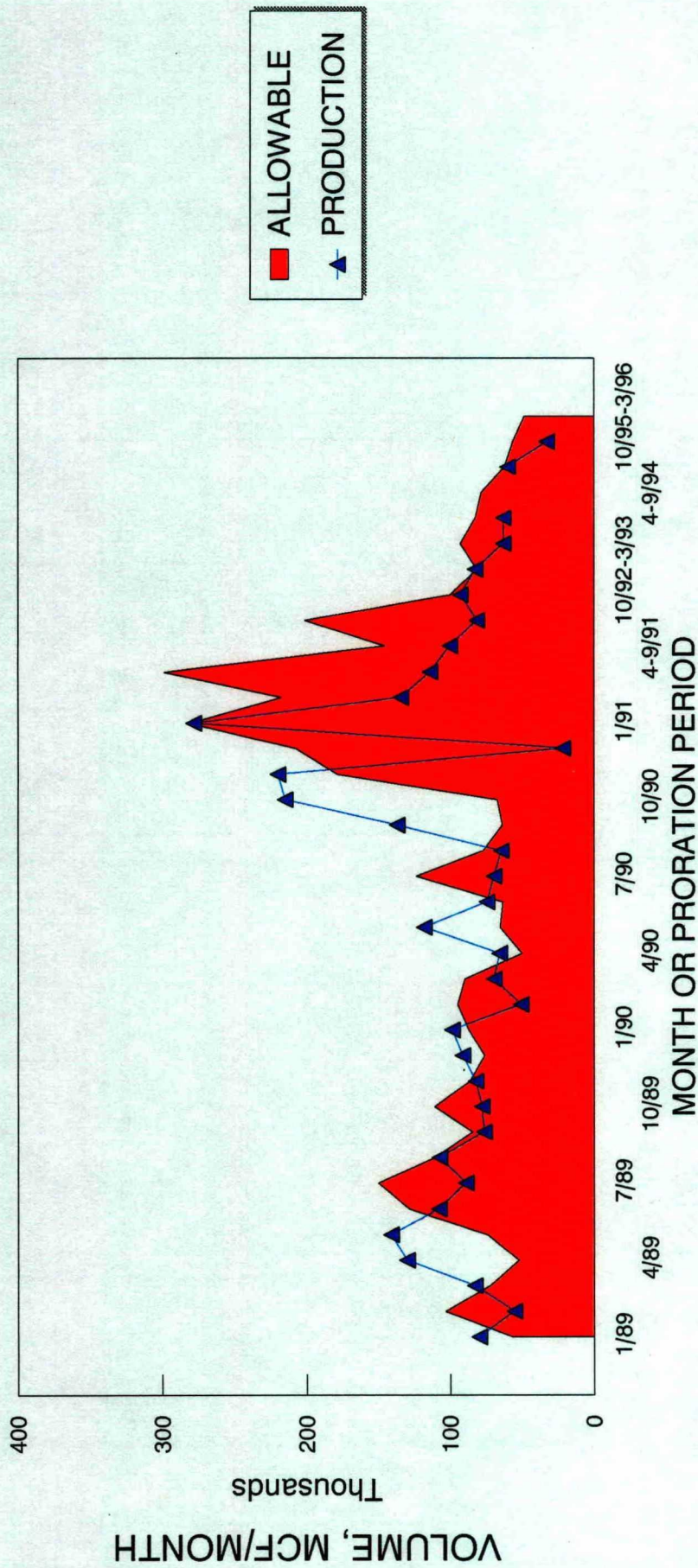
MARATHON OIL COMPANY	MID-CONTINENT REGION
INDIAN BASIN FIELD AREA	
BEEY COUNTY, NEW MEXICO	
MORROW PRODUCTION	
ORIGINAL SCALE 1" = 1000'	
AUTHOR:	DATE: 4/84
DRAFTED BY:	REVISED: 4/84
PROJECT:	FILE LOC: BFGSMP EXPL
DON - BFGSMP EXPL	

POOL/OPERATOR/PROPERTY/Well	APINUM	MEL U	SE THN	RAM STA	TRANS	ACRG	ACRG	AVG HTH SALES	OVER PROD	OVER/UNDER	OLD OVER	MONTHLY
		MUM L	CT	SMP GE	TUS		FACT	APR95-JUN95	LIMIT	PRODUCTION	PROD	ALLOWABLE
									JAN 96	JUN 95	MAR 95	
078960 INDIAN BASIN MORRIS (PRO GAS)												
001621 BARBARA FASKEN												
004294 INDIAN HILLS UNIT												
12-20149 007 F					16 215 24E M	1616	640.00	1.00				5,890
OTHER TRANSPORTER						15629						
004297 INDIAN HILLS UNIT COM A												
12-20004 004 F					17 215 24E M	1616	640.00	1.00				2,507
OTHER TRANSPORTER						15629						
OPERATOR TOTALS							1,280.00	2.00				8,397
012223 KERR-MCGEE CORP												
002254 MARTHA CREEK GAS COM												
12-25174 002 J					30 215 24E M	14021	688.89	1.08	16,872	187,236	1,224	31,206
OTHER TRANSPORTER						14035						
002270 WINSTON GAS COM												
12-10363 001 K					31 215 24E M	8503	640.00	1.00				4,789
OTHER TRANSPORTER						14021						
OTHER TRANSPORTER						14035						
OTHER TRANSPORTER						21924						
OPERATOR TOTALS							1,328.89	2.08	21,661			35,995
014021 MARATHON OIL CO												
004104 INDIAN BASIN A												
12-00034 001 J					22 215 23E M	14021	640.00	1.00				0
014293 INDIAN FED GAS COM												
12-10355 001 G					19 215 24E M	8503	640.00	1.00				513
OTHER TRANSPORTER						14021						
OTHER TRANSPORTER						14035						
004409 INDIAN HILLS UNIT												
12-25827 004 M					20 215 24E M	14021	640.00	1.00				451
OTHER TRANSPORTER						14035						
OTHER TRANSPORTER						14609						
004411 NORTH INDIAN BASIN UNIT												
12-10065 001 M					10 215 23E M	14021	640.00	1.00				0
12-26324 008 N					09 215 23E M	14021	550.40	1.86				0
OPERATOR TOTALS							3,110.40	4.86				964
016287 ORYX ENERGY CO												
004261 LONE STATE												
12-25624 002 M					36 215 23E M	15629	640.00	1.00				1,568
004262 LONE STATE GAS COM												
12-10342 001 F					36 215 23E M	14021	640.00	1.00				0
OPERATOR TOTALS							1,280.00	2.00				1,568
025578 YATES PETROLEUM CORPORATION												
012224 LONE STATE AMR FEDERAL COM												
12-10040 001 A					22 215 24E M	0	651.47	1.02				0
OPERATOR TOTALS							651.47	1.02				0
*** P O O L TOTALS ***							7,650.76	11.96	32,590		1,224	48,492
NON MARGINAL POOL TOTALS							688.89	1.08	16,872		1,224	31,206
*****END OF PAGE*****												

Before the
OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO
Submitted by MARATHON OIL CO. EXHIBIT NO. 10
Hearing Date: May 2, 1996 CASE NO. 11512

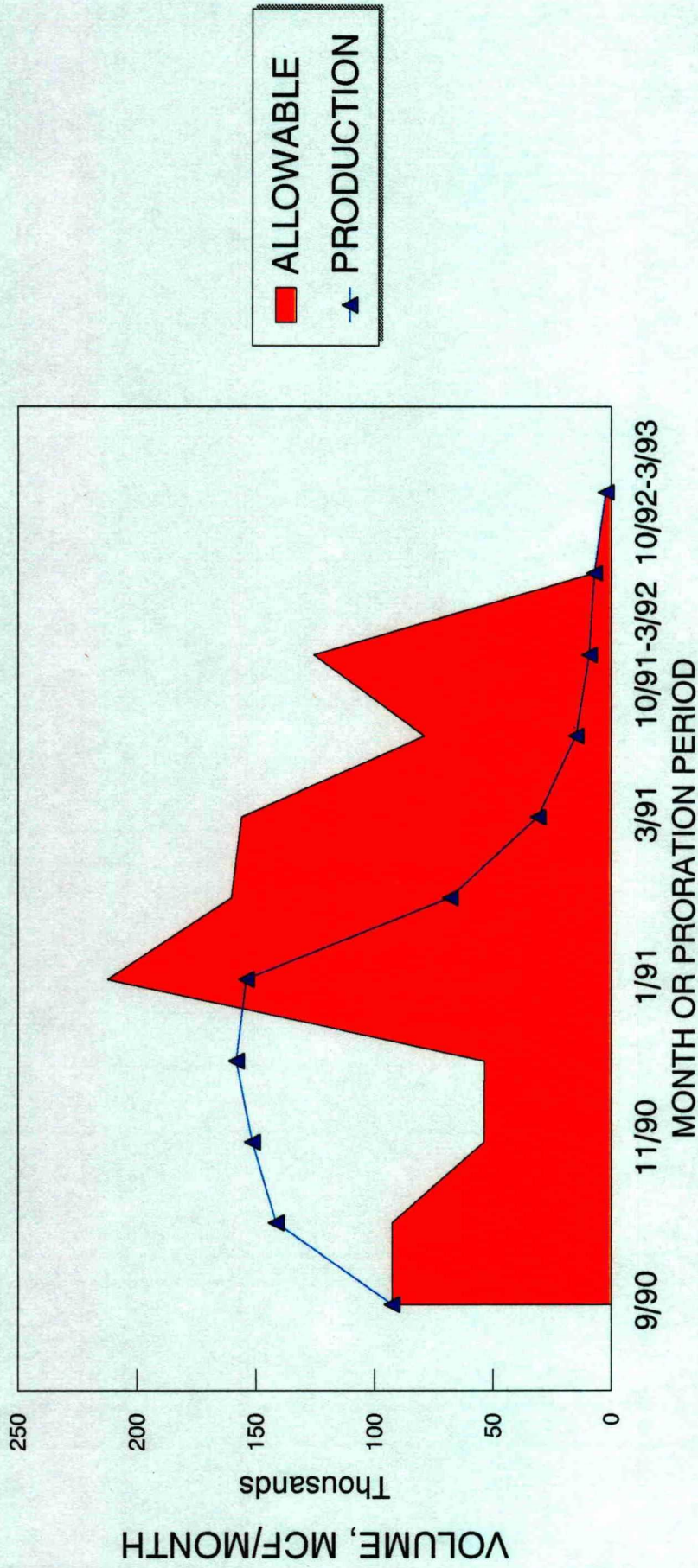
INDIAN BASIN MORROW GAS POOL

HISTORICAL TRENDS



Before the OIL CONSERVATION DIVISION SANTA FE, NEW MEXICO
Submitted by: MARATHON OIL CO. EXHIBIT NO. 11 MAY 2, 1996 CASE NO. 11512

NORTH INDIAN BASIN UNIT 8 HISTORICAL TRENDS



Before the OIL CONSERVATION DIVISION SANTA FE, NEW MEXICO
Submitted by: MARATHON OIL CO. EXHIBIT NO. **12** MAY 2, 1996 CASE NO. 11512

INDIAN BASIN MORROW GAS POOL

WESTERN AREA

<u>WELL</u>	<u>LOCATION SEC,T,R</u>	<u>INITIAL TEST DATE</u>	<u>Gp 03/31/96 MMCF</u>	<u>DEPLETION DATE</u>	<u>DRAINAGE AREA ACRES</u>
INDIAN BASIN GAS COM #1	23, 21, 23	10/28/62	330	1971	41
INDIAN BASIN A #1	22, 21, 23	12/27/62	228	PRE '70	19
INDIAN BASIN B GAS COM #1	14, 21, 23	03/25/63	5727	1984	315
NORTH INDIAN BASIN UNIT #1	10, 21, 23	07/30/63	269	PRE '70	17
LOWE STATE GAS COM #1	36, 21, 23	09/22/64	1081	1979	52
NORTH INDIAN BASIN UNIT #8	9, 21, 23	06/04/90	1307	1993	224
LOWE STATE GAS COM #2	36, 21, 23	07/08/91	633	1995	207
NORTH INDIAN BASIN UNIT #15	2, 21, 23	05/03/95	826	NA	169
NORTH INDIAN BASIN UNIT #21	11, 21, 23	10/17/95	1105	NA	288

BEFORE THE

OIL CONSERVATION DIVISION

SANTA FE, NEW MEXICO

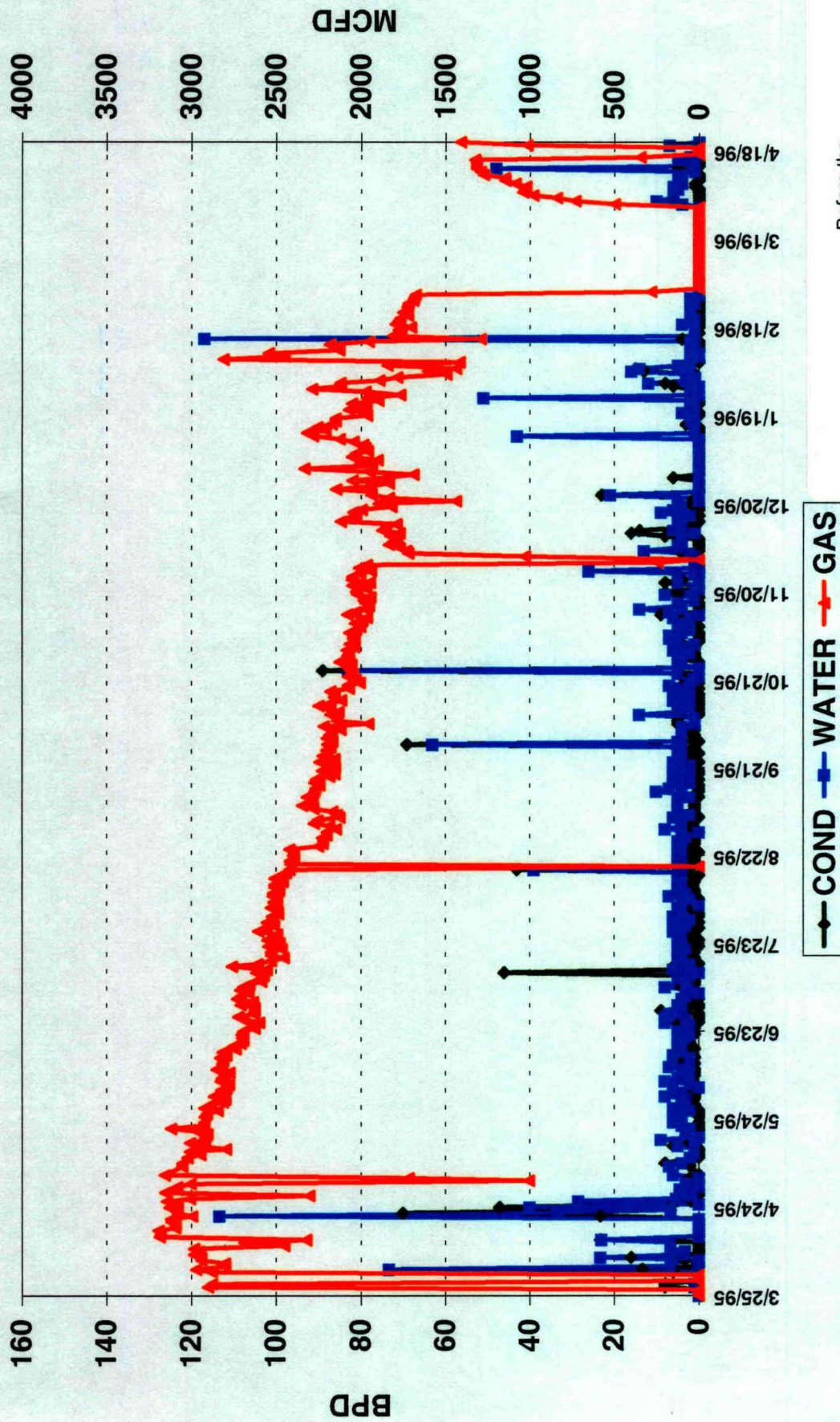
Submitted by:

MARATHON OIL CO.

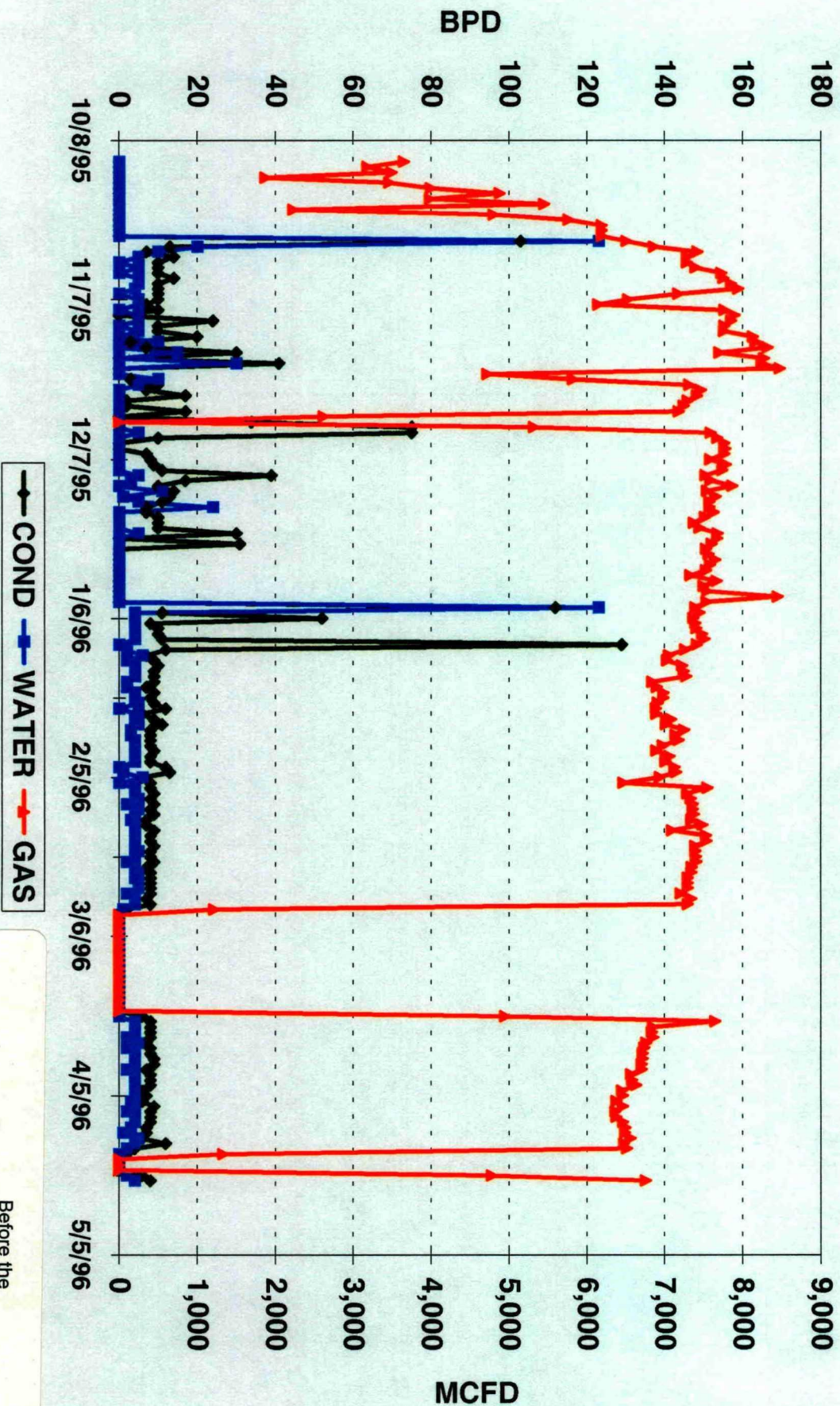
May 2, 1996 CASE NO. 11512

EXHIBIT NO. **13**

NORTH INDIAN BASIN UNIT NO. 15
SECTION 2, T-21-S, R-23-E

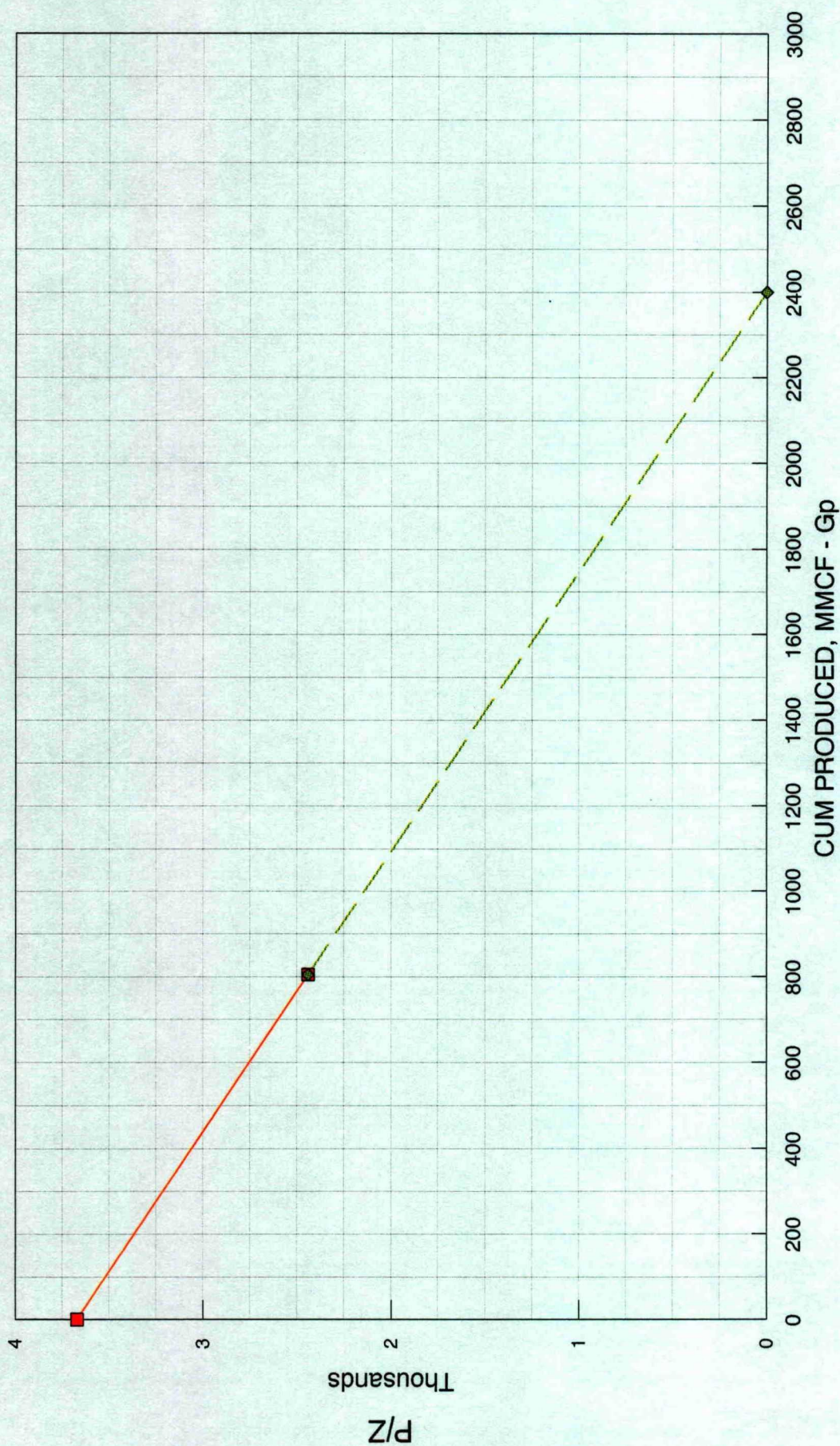


NORTH INDIAN BASIN UNIT NO. 21
SECTION 11, T-21-S, R-23-E



NORTH INDIAN BASIN UNIT 15

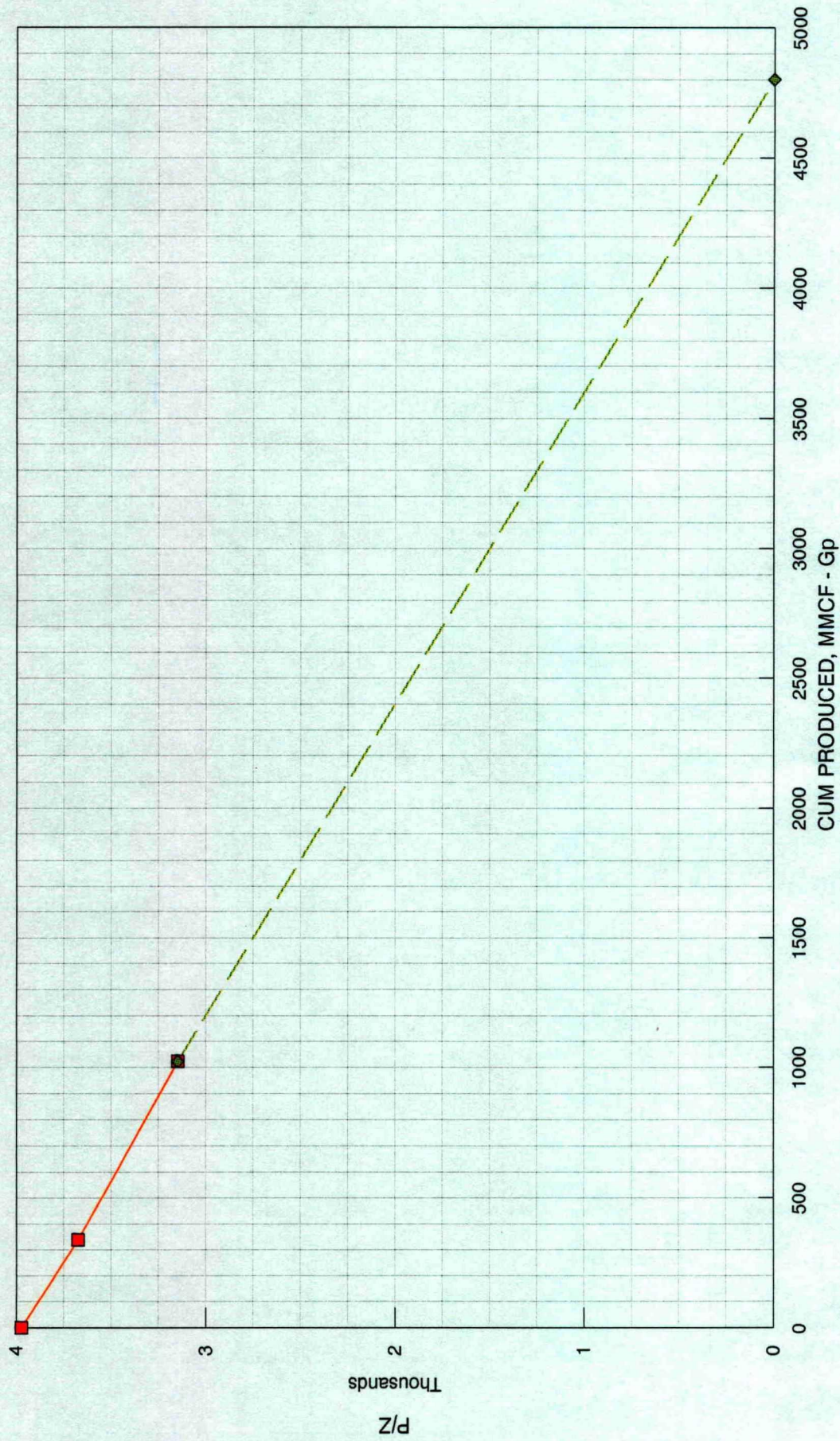
P/Z VS. Gp



Before the OIL CONSERVATION DIVISION, SANTA FE, NEW MEXICO
Submitted by MARATHON OIL CO. EXHIBIT NO. **16** MAY 2, 1996 CASE NO. 11512

NIBU 21 MORROW GAS WELL

P/Z VS. Gp



Before the OIL CONSERVATION DIVISION SANTA FE, NEW MEXICO
Submitted by MARATHON OIL CO. EXHIBIT NO. **17** MAY 2, 1996 CASE NO. 11512

INDIAN BASIN MORROW GAS POOL

VOLUMETRIC CALCULATIONS

<u>WELL</u>	<u>POR.</u>	<u>Sw</u>	<u>Pi</u>	<u>Z</u>	<u>I</u>	<u>Bgi</u> <u>SCF/CF</u>	<u>SG</u>	<u>RF</u>	<u>Gp</u> <u>03/31/96</u> <u>MMCF</u>	<u>OGIP</u> <u>MMCF</u>	<u>NET PAY</u> <u>h'</u>	<u>DRAINAGE</u> <u>AREA</u> <u>ACRES</u>
IBGC 1	7%	35%	3750	0.9243	165	229	0.58	85%	330	388	21	41
IBA 1	10%	35%	3610	0.9200	165	222	0.58	85%	228	268	22	19
IBBGC 1	11%	35%	3750	0.9265	165	229	0.58	85%	5727	6738	30	315
NIBU 1	12%	35%	3449	0.9140	165	213	0.58	85%	269	316	26	17
LSGC 1	10%	35%	3743	0.9265	165	228	0.58	85%	1081	1272	38	52
NIBU 8	12%	35%	3657	0.9220	165	224	0.58	85%	1307	1538	9	224
LSGC 2	7%	35%	2872	0.8969	163	182	0.58	85%	633	745	10	207
NIBU 15	8%	40%	3675	0.9243	160	227	0.58	86%	826	2400	30	169
NIBU 21	10%	35%	3672	0.9243	160	227	0.58	88%	1105	4800	26	288

$$\text{OGIP} = 43560 \times (\text{POROSITY}) \times (1 - S_w) \times B_{gi} \times \text{Ac-Ft}$$

Before the
OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO
Submitted by MARATHON OIL CO. EXHIBIT NO. **18**
Hearing Date: May 2, 1996 CASE NO. 11512



**Marathon
Oil Company**

P.O. Box 552
Midland, TX 79702-0552
Telephone 915/682-1626

April 30, 1996

Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Dept.
2040 South Pacheco
Santa Fe, New Mexico 87505

**Re: Indian Basin-Morrow Pool Gas Sales
Eddy County, New Mexico**

Dear Mr. LeMay:

I am employed by Marathon Oil Company in Midland, Texas, as Senior Natural Gas Property Development Representative. As part of my job, I am responsible for being familiar with the markets for gas produced by Marathon from the Indian Basin Field, including from the Indian Basin-Morrow Pool.

Even with Marathon's Morrow wells at Indian Basin currently flowing at capacity pending the outcome of Marathon's application to terminate prorationing, Marathon is able to market all of its Morrow production. In the event that Marathon's application is granted, I foresee no problem in marketing any additional production which may be made by Marathon as a result of the ending of prorationing.

Sincerely,

A handwritten signature in cursive script that reads 'Craig W. Chambers'.

Craig W. Chambers

TCL\MISCTCL\LEMAY\mlv

A handwritten signature in cursive script that reads 'Marathon Oil Company'.

A handwritten signature in cursive script that reads 'Exhibit No.'.

A handwritten signature in cursive script that reads 'Case 11512'.