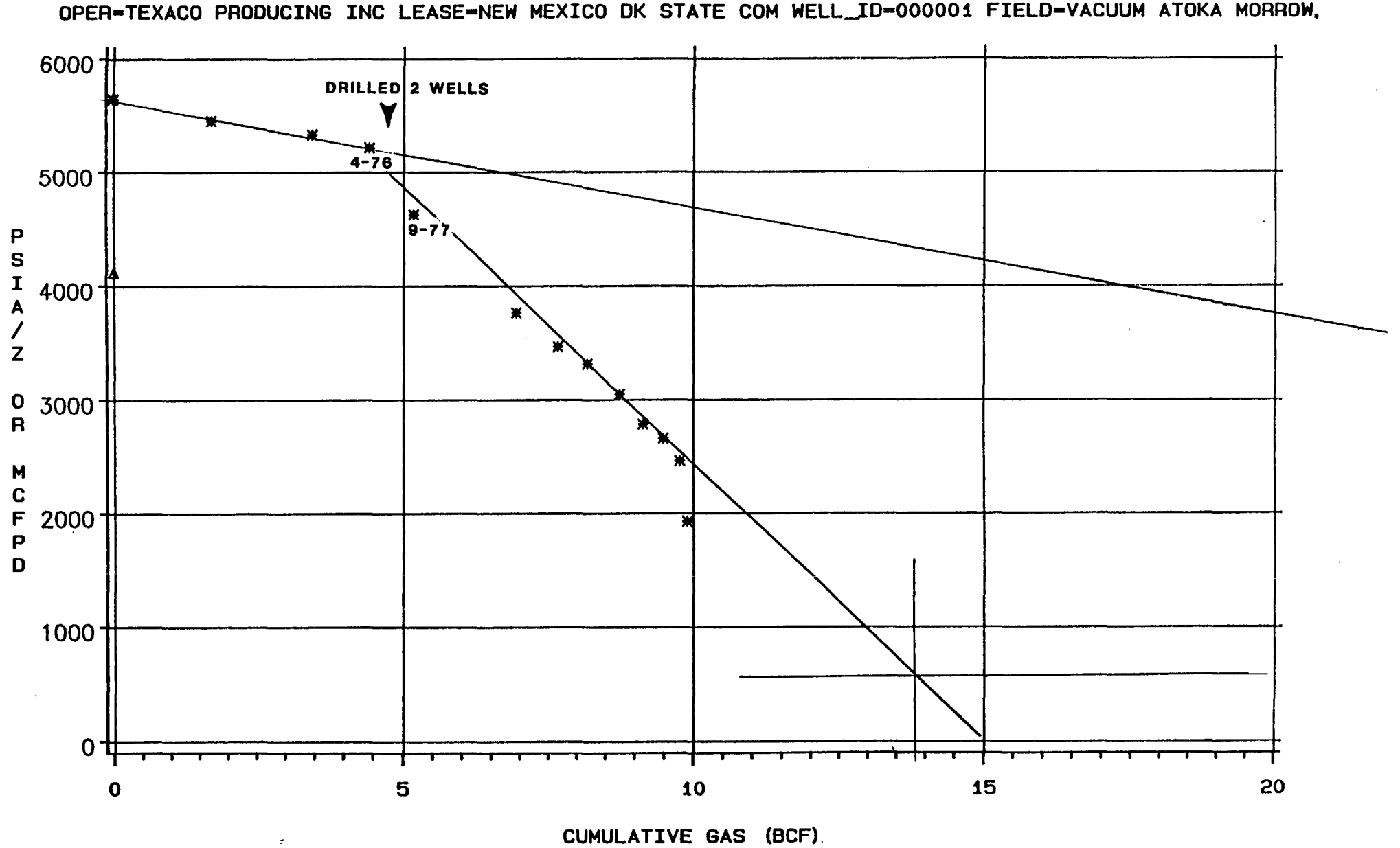
PRESSURE HISTORY

SHOE BAR ATOKA FIELD

Date	Well	Cum Gas (MMCF) Well	Cum Gas (MMCF) Reservoir	Static BHP (psia)	SITP (psia)
11-84	Shoe Bar 14 State Comm #1	0	0	5806	
01-86	New Mexico AC State #1	0	132	5469	
12-08-87	Shoe Bar State Comm #1	0	3600	2879	2097
02-27-88	Shoe Bar State Comm #1	0	4140		1923
04-04-88	Shoe Bar State Comm #1	0	4320	2564	

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 9331, 9429, 9430 Exhibit No. 1
Submitted by SUN
Hearing Date JULY 14, 1988


OPER=TEXACO PRODUCING INC LEASE=NEW MEXICO DK STATE COM WELL_ID=000001 FIELD=VACUUM ATOKA MORROW.
DRILLED 2 WELLS
4-76
9-77
PSIA/Z OR MCFPD
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
CUMULATIVE GAS (BCF)
**** BHP/Z
ΔΔΔΔ CAP. MCFPD
XXXX WHP

DRAINAGE CALCULATIONS

NEW MEXICO DK STATE COM #1
VACUUM ATOKA MORROW FIELD
T-17-S, R-37-E, Sec. 18

.Estimates prior to drilling State Sec. 7 Com #1 and State NN Com #1 (1976):

P/Z vs. Cum Gas Plot: Ult. Rec. = 57 BCF

Drainage Volume = 57 BCF/1070 MCF/A·F = 53,271 A·F

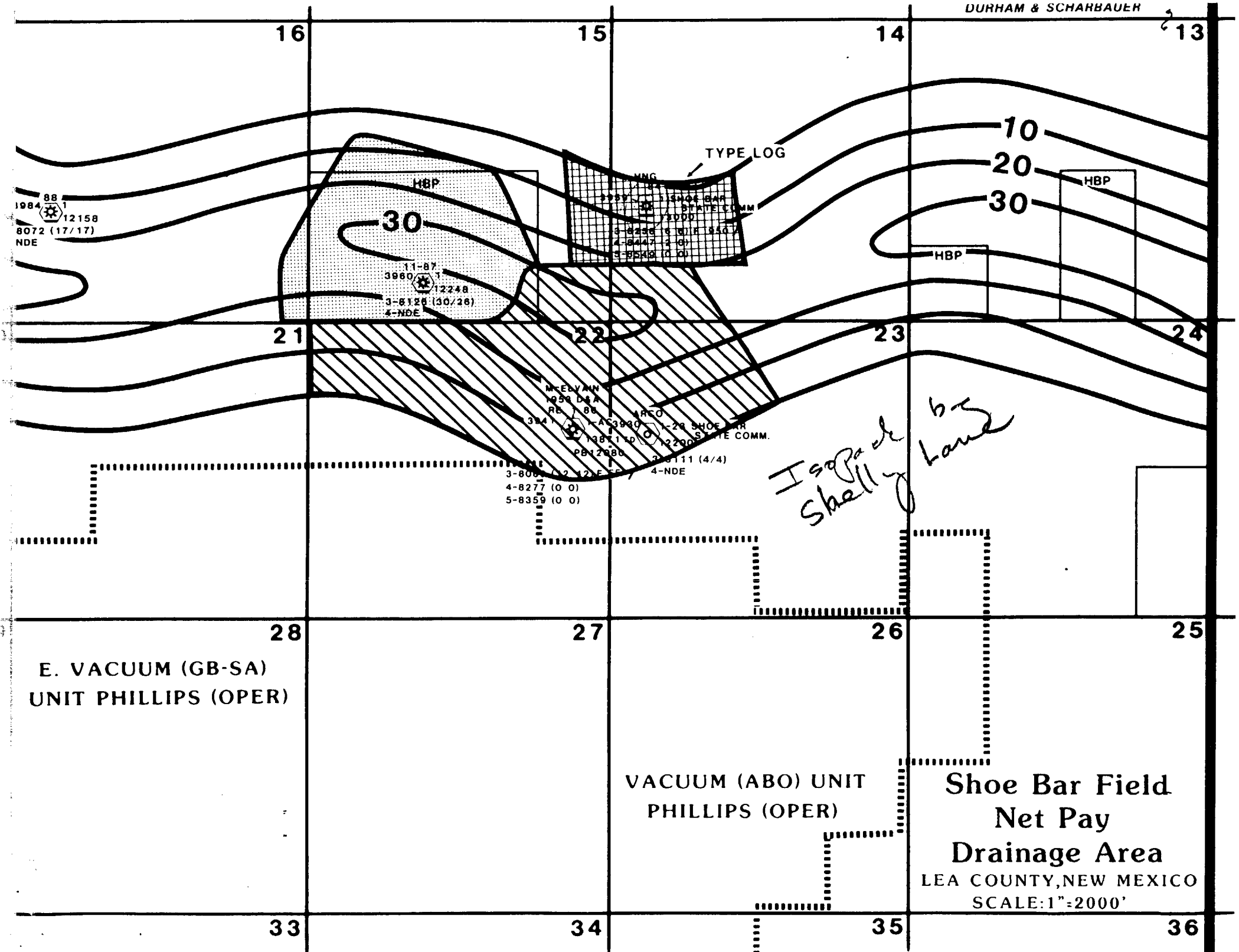
Drainage Area w/30' Avg. Net Pay = 1776 Acres

Current Estimates:

P/Z vs. Cum Gas Plot: Ult. Rec. = 13.7 BCF

Drainage Volume = 13.7 BCF/1070 MCF/A·F = 12,804 A·F

Drainage Area w/30' Avg. Net Pay = 427 Acres


DURHAM & SCHARBAUER
16
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HBP
TYPE LOG
E. VACUUM (GB-SA)
UNIT PHILLIPS (OPER)
VACUUM (ABO) UNIT
PHILLIPS (OPER)
Shoe Bar Field
Net Pay
Drainage Area
LEA COUNTY, NEW MEXICO
SCALE: 1"=2000'

DRAINAGE VOLUME CALCULATIONS

SHOE BAR ATOKA FIELD

P_i = 5806 psia Z_i = 1.065

$$B_{gi} = \frac{35.4\ (5806)}{1.065\ (662)} = 292\ SCF/ft^3$$

P_{ab} = 525 psia Z_{ab} = .96

$$B_{gab} = \frac{35.4\ (525)}{.96\ (662)} = 29\ SCF/ft^3$$

$$\text{Recovery Factor} = \frac{292-29}{292} = .90$$

Porosity = .11

S_w = .15

Recoverable GIP/A·F = 43,560 (.11)(1-.15)(292)(.9) = 1,070 MCF/A·F

New Mexico AC State No. 1

P/Z vs. Cum gas plot: Ult. Rec. = 7.4 BCF

Drainage Volume = 7.4 BCF/1,070 MCF/A·F = 6,916 A·F

Shoe Bar 14 State Comm #1

Cum = 289 MMCF

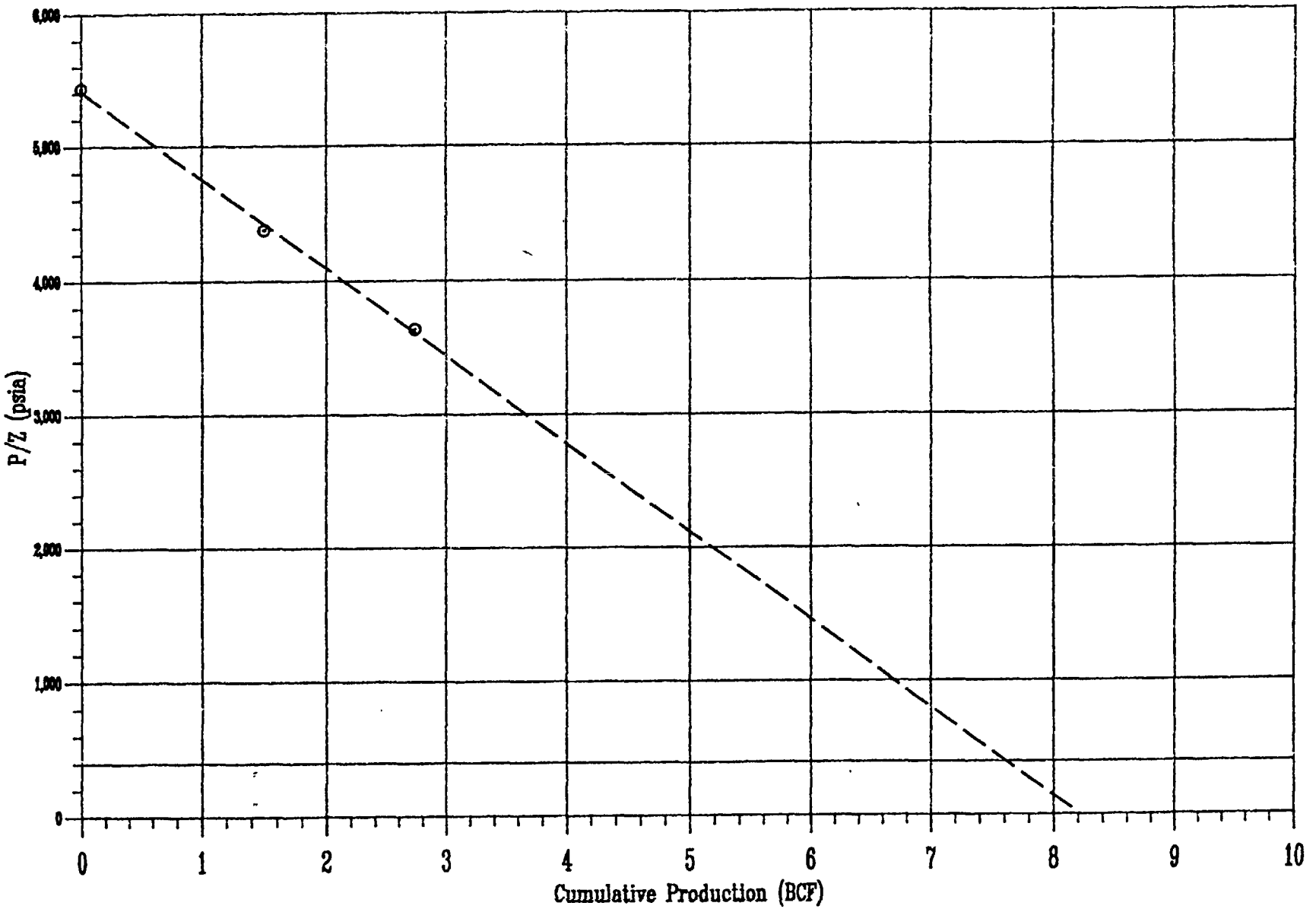
Q = 220 MCFD, Q_f = 20 MCFD, 9% decline, Reserves = 774 MMCF

Ult. Rec. = 1.1 BCF

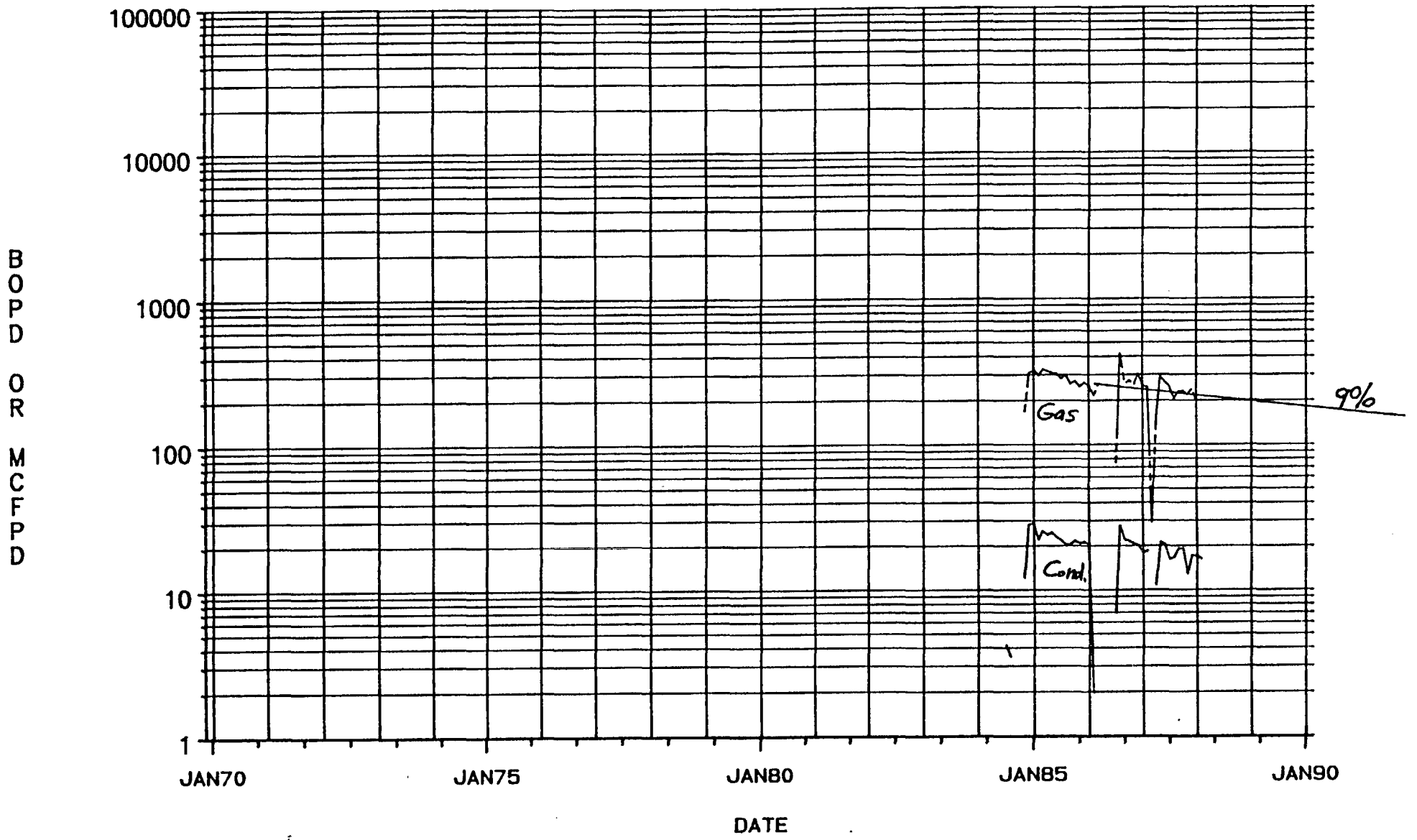
Drainage Volume = 1.1 BCF/1,070 MCF/A·F = 1,028 A·F

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
Phillips EXHIBIT NO. 9
CASE NO. 9331

T. H. McElvain New Mexico AC State No. 1
Lea County, New Mexico



OPER=ENRON OIL & GAS CO FIELD=SHOE BAR ATOKA, SOUTH (GAS) LEASE=SHOE BAR 14 STATE COM WELL_ID=000001



OIL WELLS GAS