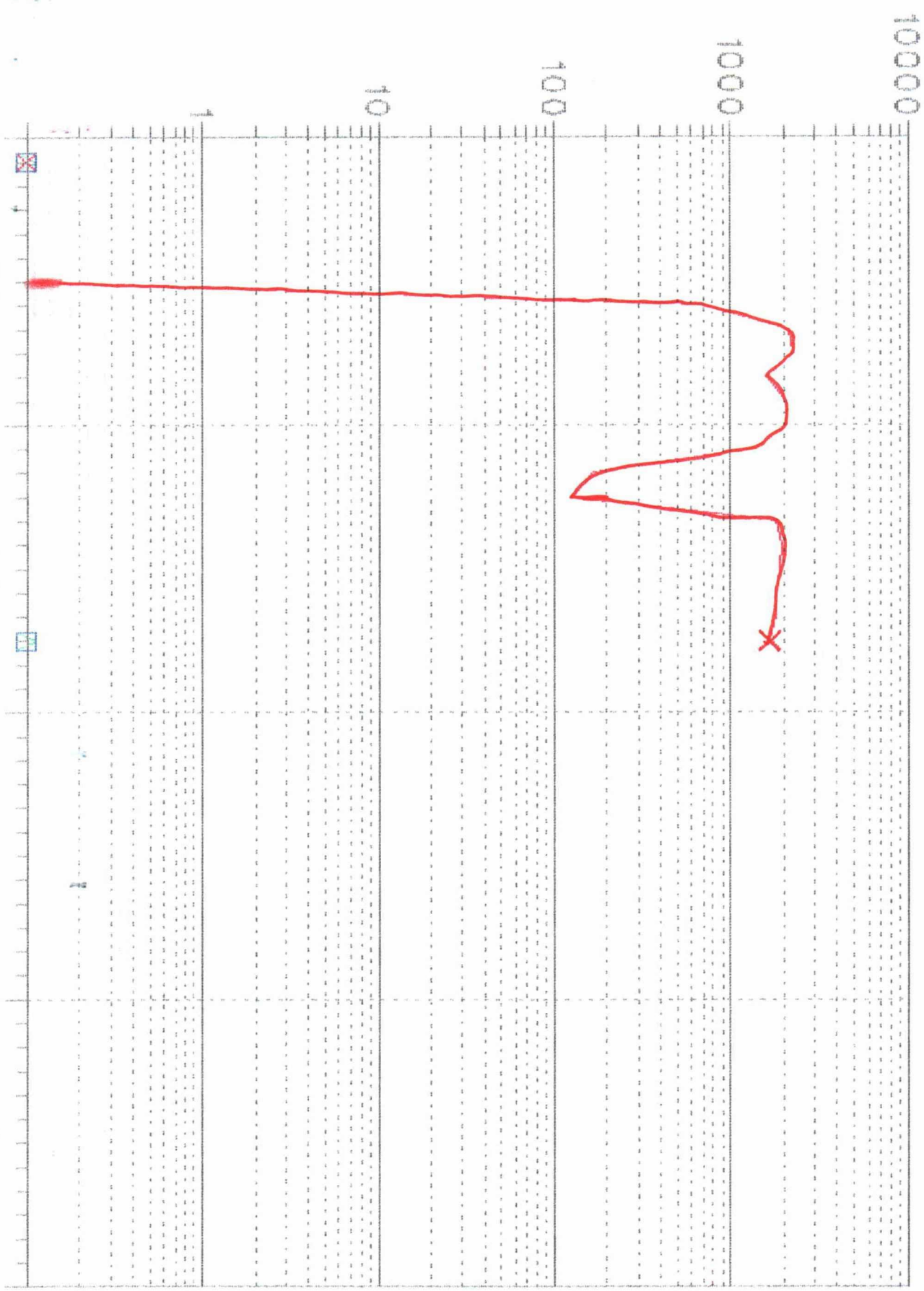


PRODUCTION VS TIME

STATE: NEW MEXICO
FIELD: MALAGA ATOKA gas
SPOT: E, T-243, R-28-E, Sec. 13
PROPERTY: CRAFT
PROPERTY NO: 148180
OPER.: SANTA FE ENERGY CO.



BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

Applicant EXHIBIT NO. 7

CASE NO. 8580

d = 19% Exp decline

Gas produced (9/84) = 15,846 mcf

Gas remaining = 3,219,684 mcf

(1776 MCF/d - 100 mcf/d)

ULTIMATE = 3,935,530 MCF

21 APR 85

△ CRUDE (BBLs)

× GAS (MCF)

□ WATER (BBLs)

DRAINAGE CALCULATIONS
SANTA FE ENERGY COMPANY
CRAFT WELL NO. 1
MALAGA (ATOKA) GAS POOL
EDDY COUNTY, NEW MEXICO

INITIAL SURFACE SHUT-IN PRESSURE - 4937 psi
INITIAL BOTTOM HOLE PRESSURE - 6214 psi
GAS GRAVITY .57
ABANDONMENT PRESSURE - 1000 psi
TEMPERATURE @ FORMATION - 165.4° F

$$B_{gi} = .003184 \text{ FT}^3/\text{SCF} = 314.1 \text{ SCF/FT}^3$$

$$B_{gab} = .016779 \text{ FT}^3/\text{SCF} = 59.6 \text{ SCF/FT}^3$$

RECOVERY FACTOR = 81%

$$\text{Recoverable Gas-in-Place} = \frac{43,560 (A) (h) (\phi) (1-SW) (RF)}{B_g}$$

$$\text{Recoverable Gas-in-Place} = \frac{43,560 (320) (15') (.055) (1-.3) (.81)}{(.003184)}$$

(Standard 320 Acre Unit)

$$\text{Recoverable Gas-in-Place} = 2,047,867 \text{ MCF}$$

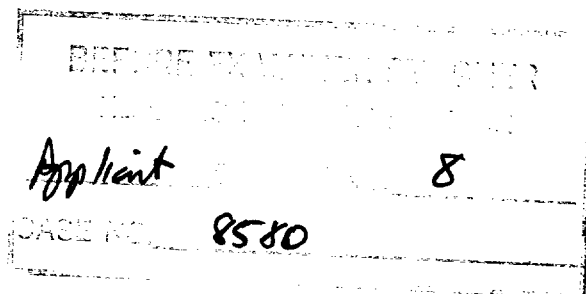
AREA ULTIMATELY DRAINED

ESTIMATED ULTIMATE RECOVERY = 3,935,530 mcf

$$\text{Area Ultimately Drained} = \frac{3,935,530,000 (.003184)}{43,560 (15) (.055) (1-.3) (.81)}$$

Area Ultimately Drained = 615.0 Acres

Ultimate Drainage Radius = 2,920'

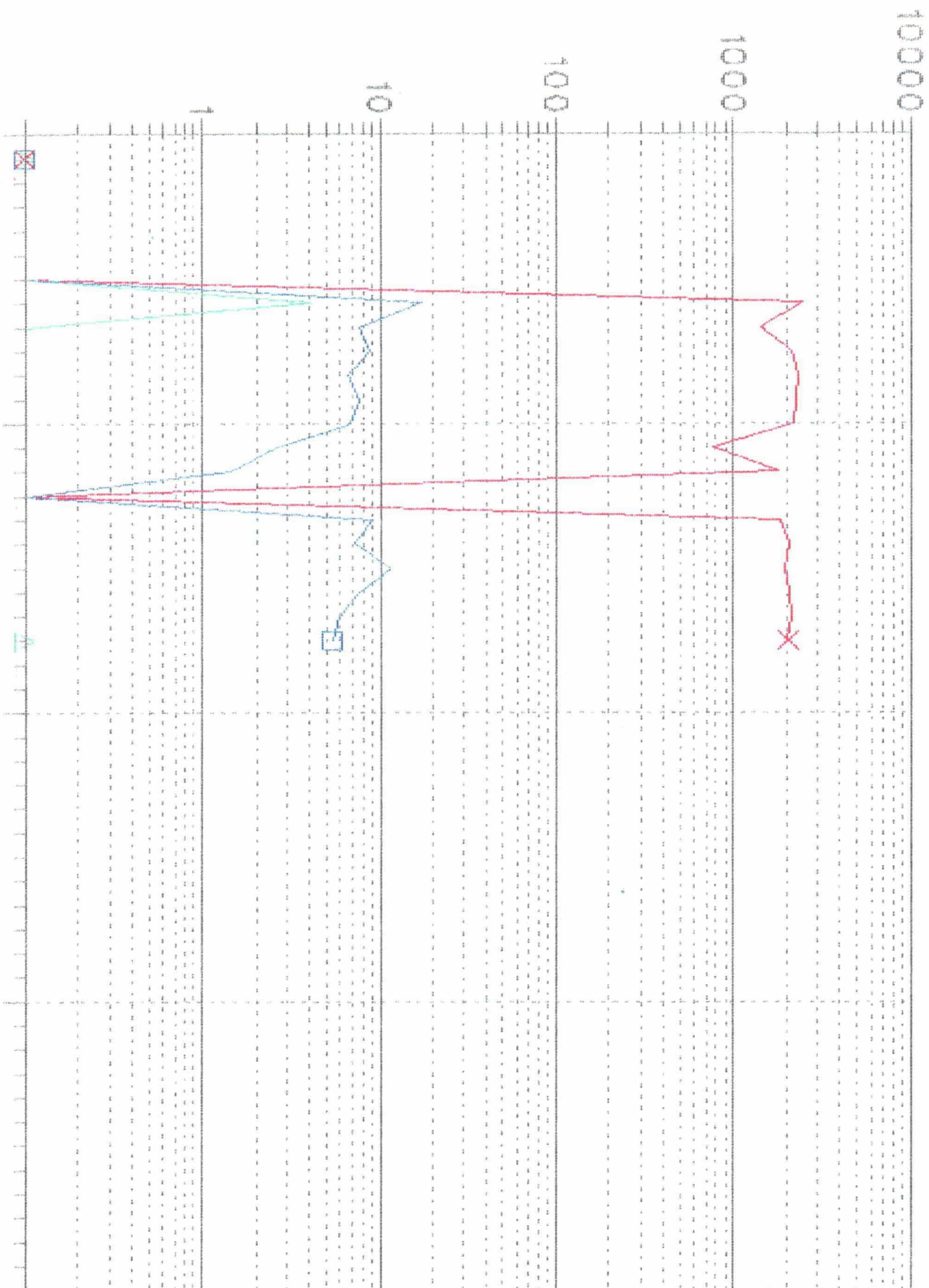


PRODUCTION PER DAY

STATE: NEW MEXICO
FIELD: EDDY UNDES ATOKA gas
SPOT: G

PRODUCTION VS TIME

PROPERTY: QUEEN LAKE 19 FEDERAL
PROPERTY NO: 596040
OPER.: HNG OIL COMPANY



BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

Applicant EXHIBIT NO. 9
CASE NO. 8580

18 APR 85

△ CRUDE (BBLS)
× GAS (MCF)
□ WATER (BBLS)

SUPPORTIVE DATA - P/Z PLOT
HNG OIL COMPANY'S
QUEEN LAKE 19 FEDERAL LEASE
WELL NO. 1
EDDY UNDESIGNATED ATOKA FIELD
EDDY COUNTY, NEW MEXICO

Original Shut-in Wellhead Pressure (7-25-83) = 5850 psi

Estimated Bottom-hole Pressure (@ 12,155') = 7404 psi

$Z = 1.19$ $P/Z = 6217.5$

Current Shut-in Wellhead Pressure (3-1-85) = 4300 psi

Estimated Bottom-hole Pressure (@ 12,155') = 5442 psi

$Z = 1.04$ $P/Z = 5209.4$

Estimate of Production to 3-1-85

Cummulative to 1-1-85 - 936,972 MCF

Jan. 1985 and Feb. 1985 Production

Estimated @ 1.9 mmscf/d = 112,100 MCF

Estimated Cummulative to 3-1-85 = 1,049,072

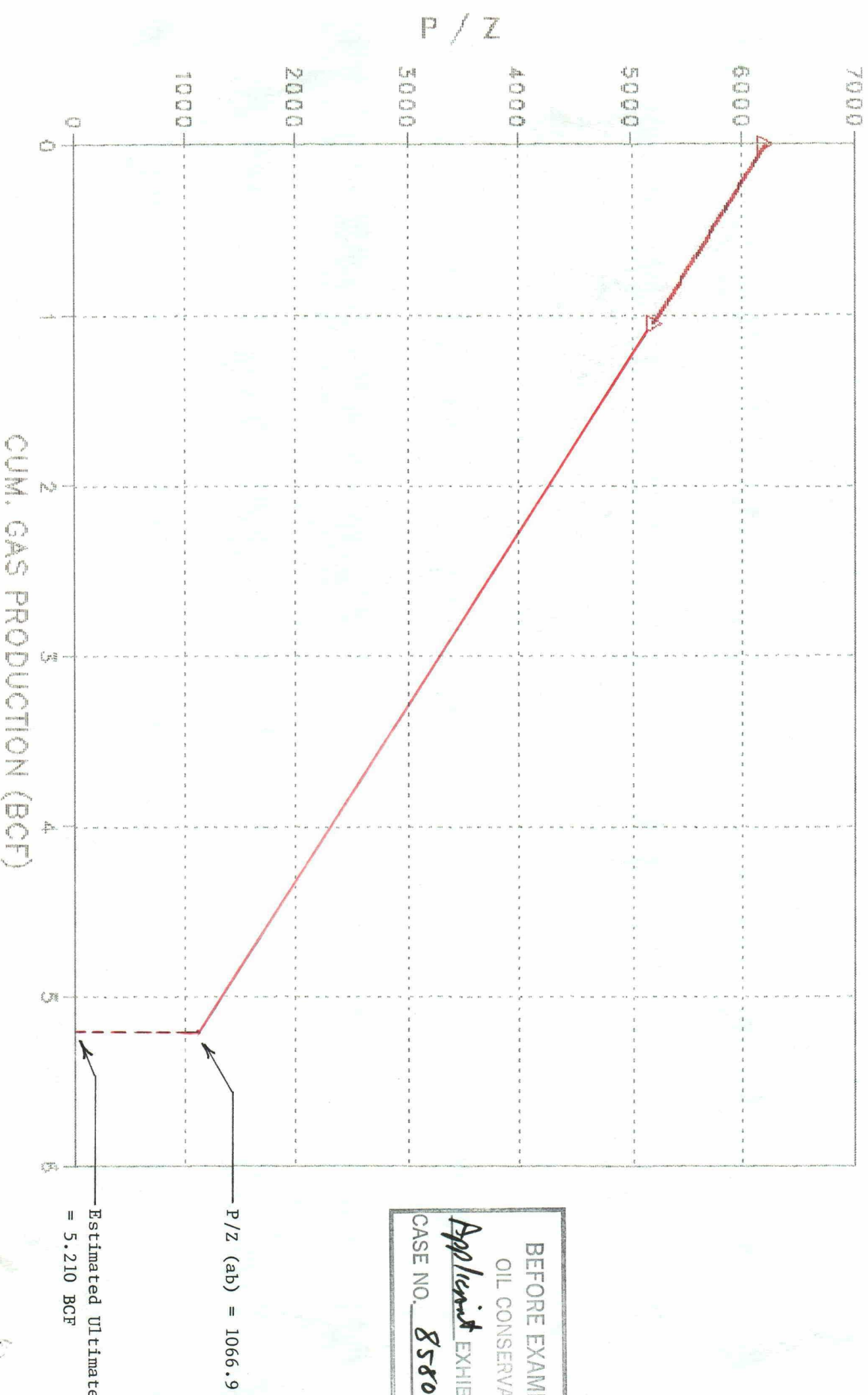
Estimated Abandonment Pressure - 1000 psi

$Z (ab) = .94$

Abandonment $P/Z = 1066.9$

Applicant 10
8580

P/Z VS CUM. GAS PRODUCTION
 SEC 19 T24S 29E SPOT G
 FIELD: EDDY UNDESIGNATED ATOKA
 RESERVOIR: ATOKA
 PROPERTY: QUEEN LAKE 19 FEDERAL NO 1
 OPER.: HNG OIL CO INC.



BEFORE EXAMINER STOGNER
 OIL CONSERVATION DIVISION
 Applicant EXHIBIT NO. 11
 CASE NO. 8580

HNG OIL COMPANY
QUEEN LAKE 19 FEDERAL WELL NO. 1
UNDESIGNATED ATOKA GAS
EDDY COUNTY, NEW MEXICO

BEFORE EXAMINER STOPHER
CLERK OF THE DISTRICT COURT

Applicant

CASE NO. *8580*