

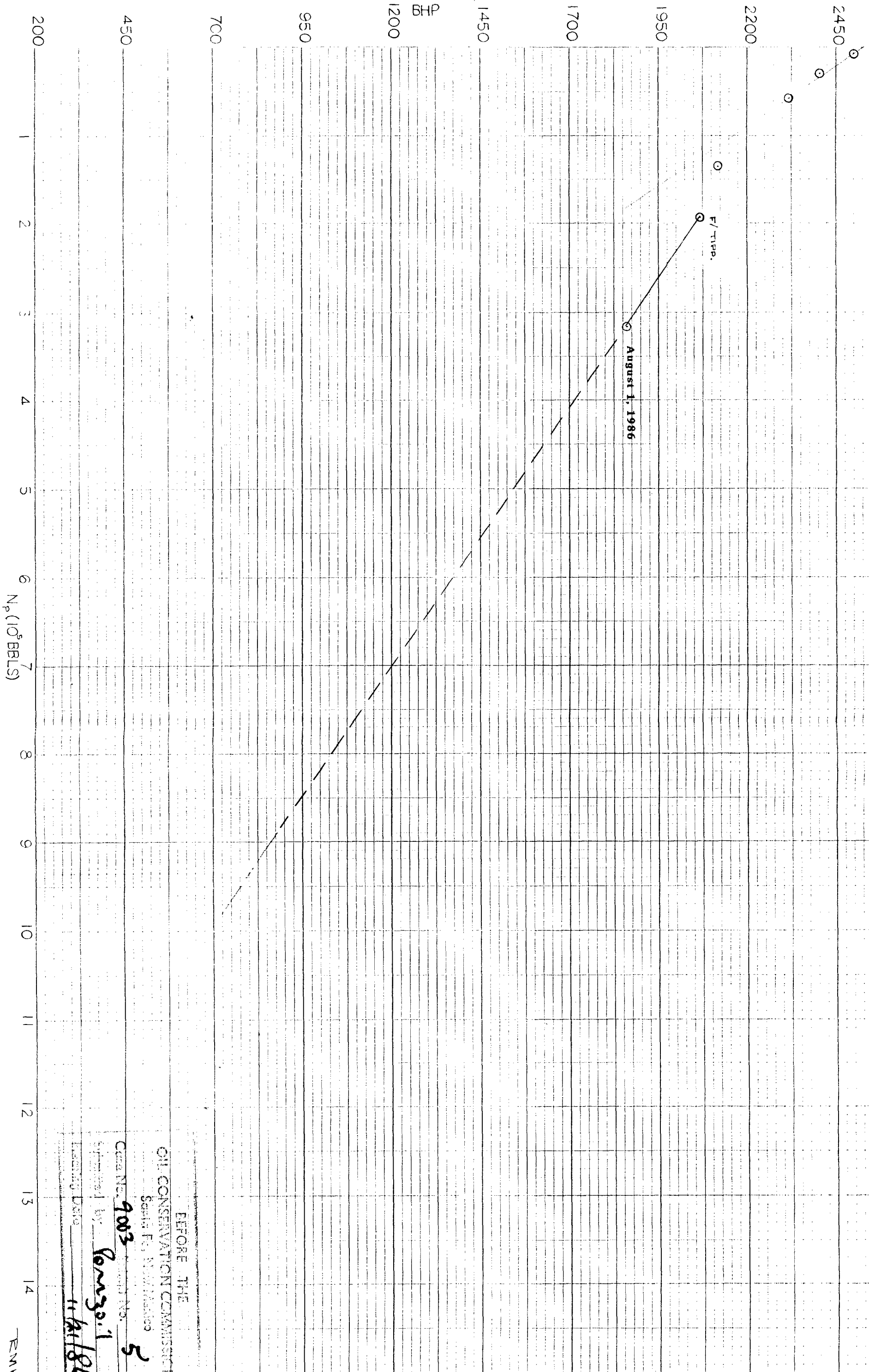
BE SHIP NO. 1 RESERVOIR

BHP VS. N_p

2700
October 28, 1985

47 0780

10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.



2700

VIERSEN NO. 2

November 19, 1985

2450

2200

1950

1700

1450

BHP

1200

950

700

450

200

○

○ April 1, 1986

71,000

1

N (10⁵ BARRELS)

2

BEFORE THE
OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

Case No. 9003

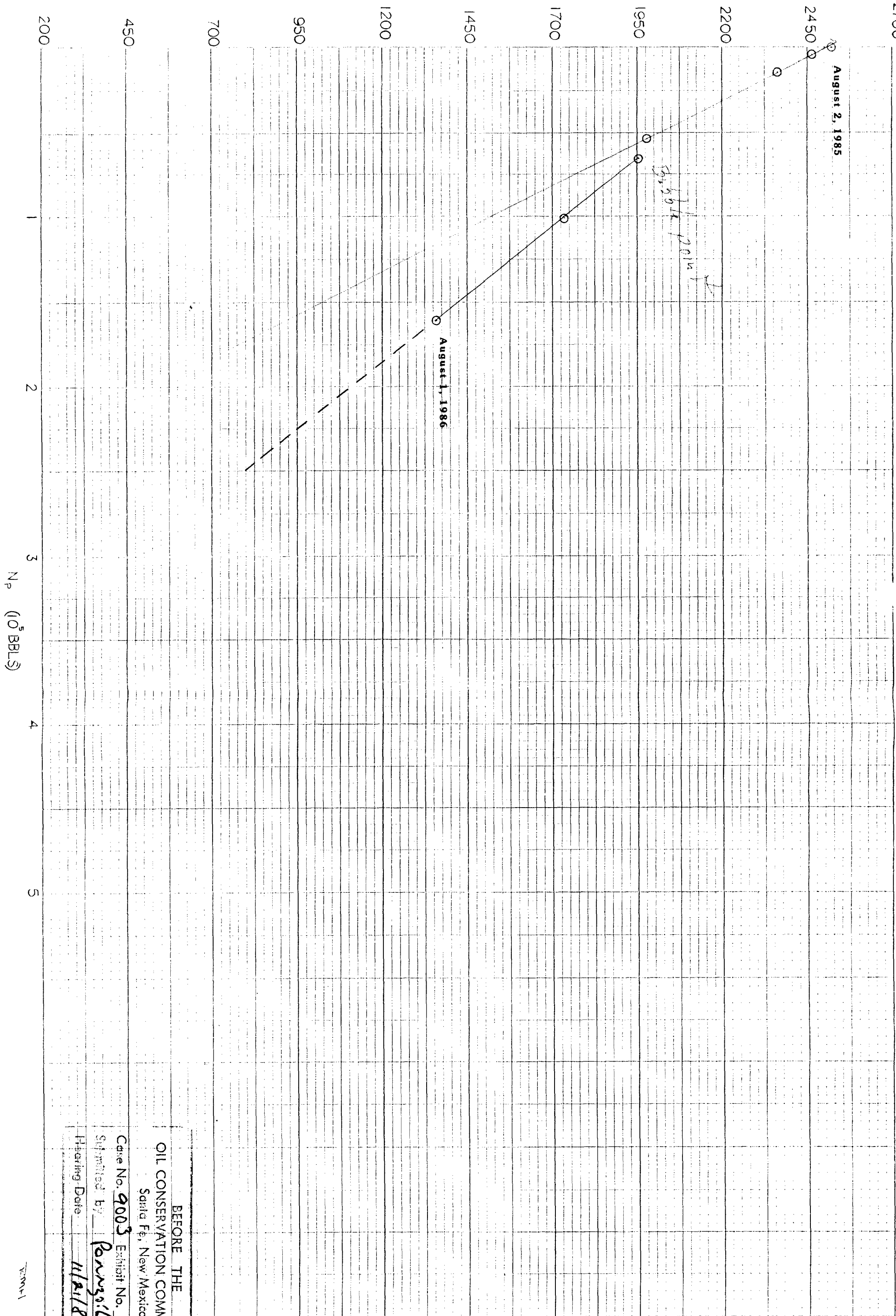
Page No. 4

Submitted by Pennzoil

Heard Date 11/21/86

47 0780

10 X 10 TO THE INCH • 10 X 15 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.



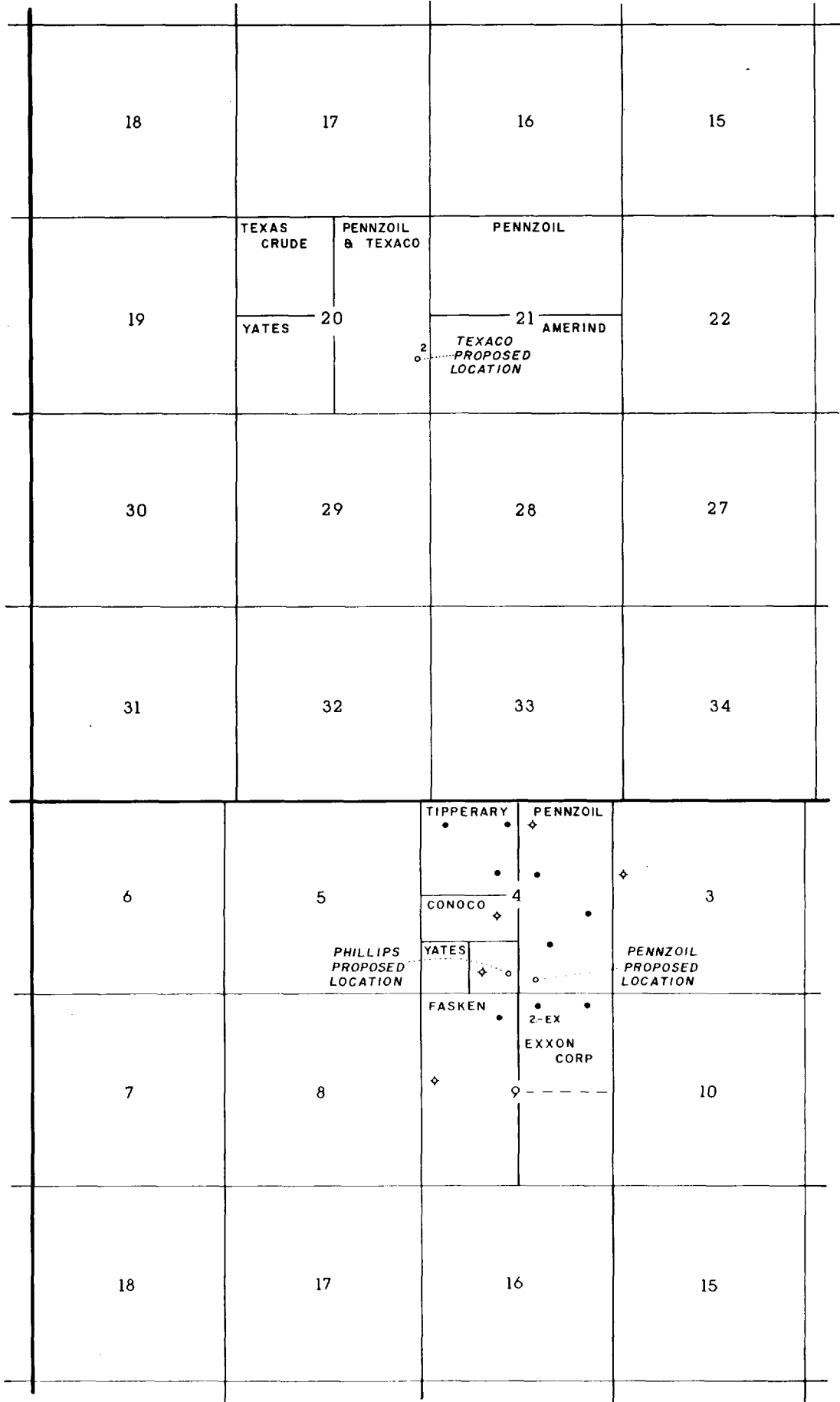
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Case No. 9003 Exhibit No. 3

Submitted by Petroval

Hearing Date 11/21/86

R-37-E



T
16
S

T
17
S

CASE 9003
11-20-86

N

EXXON

EXHIBIT NO. 1

EXXON CORPORATION		
SHIPP FIELD		
FIELD		
Land Map		
T-16&17-S, R-37-E	Lea	New Mexico
LOCATION	COUNTY	STATE
1" = 4000'		

1 A Yes, that's correct.

2 Q All right. What is your understanding of
3 the basis or justification for the minimum distance between
4 wells, Mr. Hair, and whether or not you recommend that that
5 basis be continued?

6 A At the hearing, when the -- for the
7 establishment of field rules, an engineer from Pennzoil
8 presented quite a bit of data having to do with the
9 permeability of these reservoirs.

10 We presented data based on our Viersen
11 No. 1, which has since been confirmed in our Viersen No. 2
12 and our Shipp No. 1, of the excellent permeability of these
13 reservoirs.

14 ~~We feel that wells spaced too closely~~
15 ~~would not effectively drain the reservoirs. They will~~
16 ~~interfere with one another because the permeability areas of~~
17 ~~drainage areas overlap significantly. We are trying to~~
18 ~~provide for orderly drainage by spacing those wells 990 feet~~
19 ~~apart to keep the area from overlapping so extensively.~~

20 Q What was the range of permeability in
21 millidarcies, Mr. Hair?

22 A I believe in that testimony the average
23 permeability was 42 millidarcies in this zone, which is
24 excellent.

25 Q Okay.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 9003 Exhibit No. 1-A
Submitted by: Exxon
Hearing Date: 11/21/86

VOLUMETRIC RESERVE ANALYSIS OF VIERSON #2 POD

Based upon Pennzoil's testimony:

A= 10 acres

ϕ = 8%

h_{avg} = unknown

S_w = 15%

RF= 25%

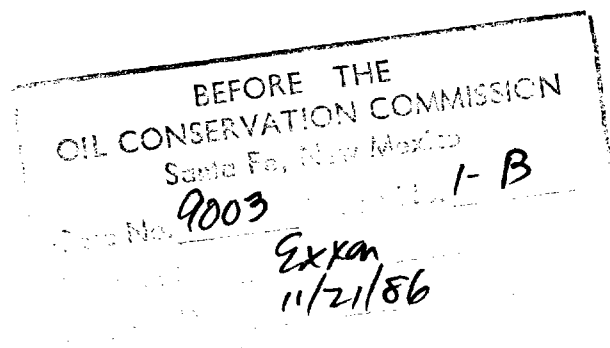
B_o = 1.5 RB/STB

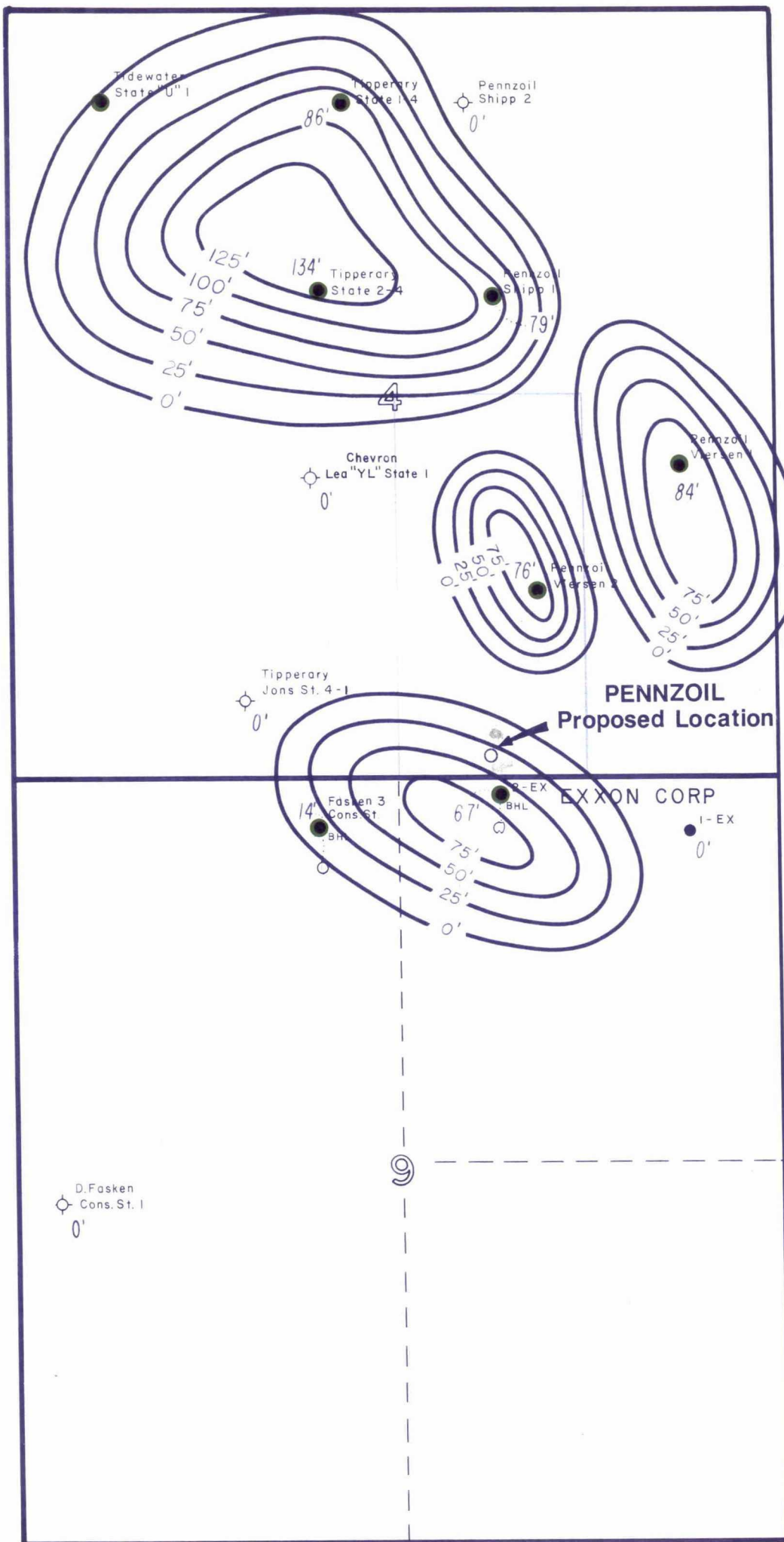
N= 71,000 STB

Solving for h:

$$71,000 = \frac{7758(10)(0.08)(1-0.15)(.25)(h)}{1.5}$$

$h = 80.7'$





EXXON

EXHIBIT NO. 2
 DOCKET NO. 9003
 HEARING DATE 11/20/86

EXXON CORPORATION, U.S.A.

SHIPP FIELD

Net Porosity Map - Strawn

HORIZON

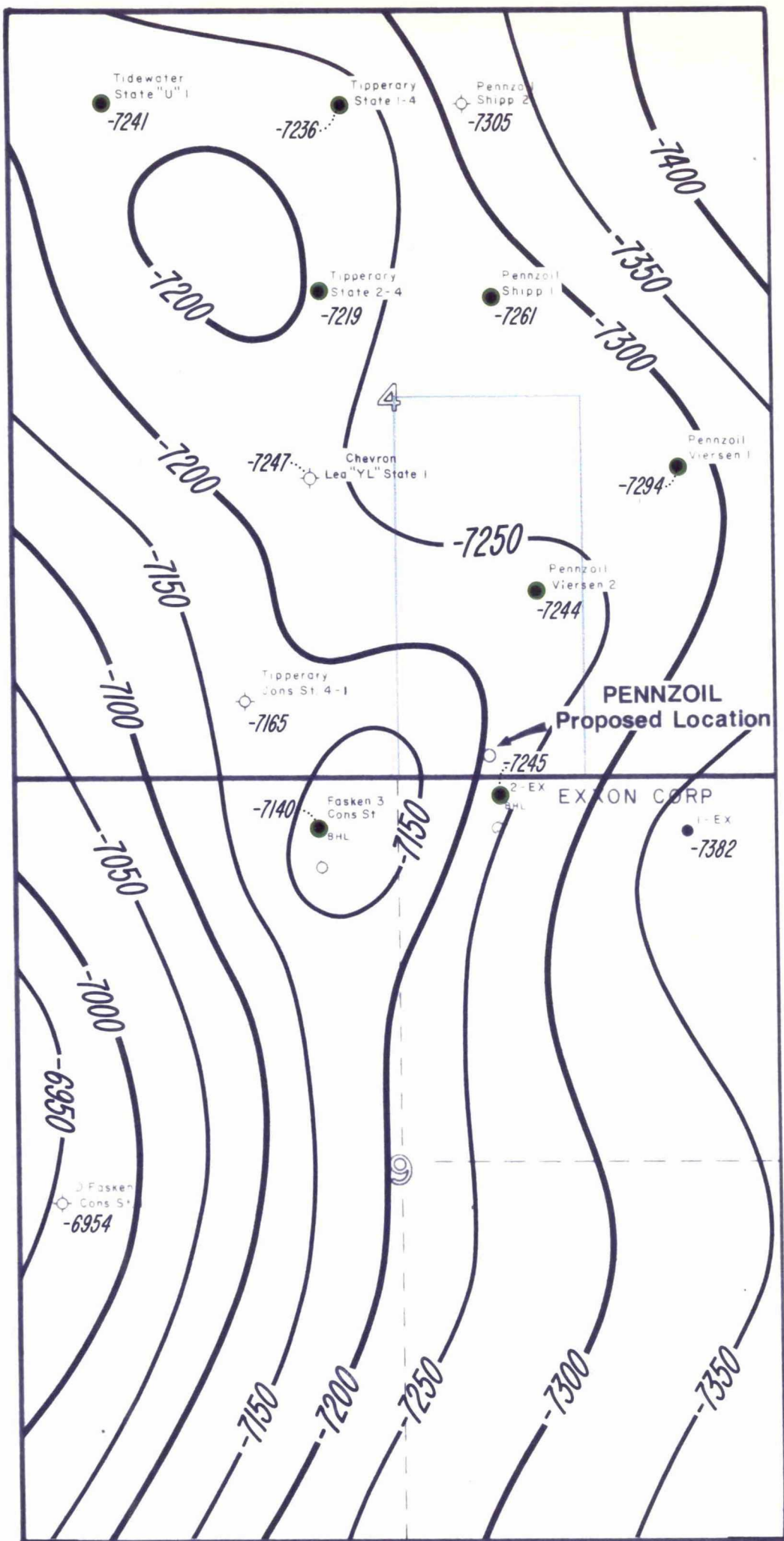
T-17-S, R-37-E
 LOCATION

Lea County, New Mexico
 COUNTY STATE

4% Porosity Cutoff

1" = 1000'

C.I. - 25'



● Strawn Producer

EXXON

EXHIBIT NO. 2A
DOCKET NO. 9003
HEARING DATE 11-20-86

EXXON CORPORATION

SHIPP FIELD

Structure Map - Top of Strawn

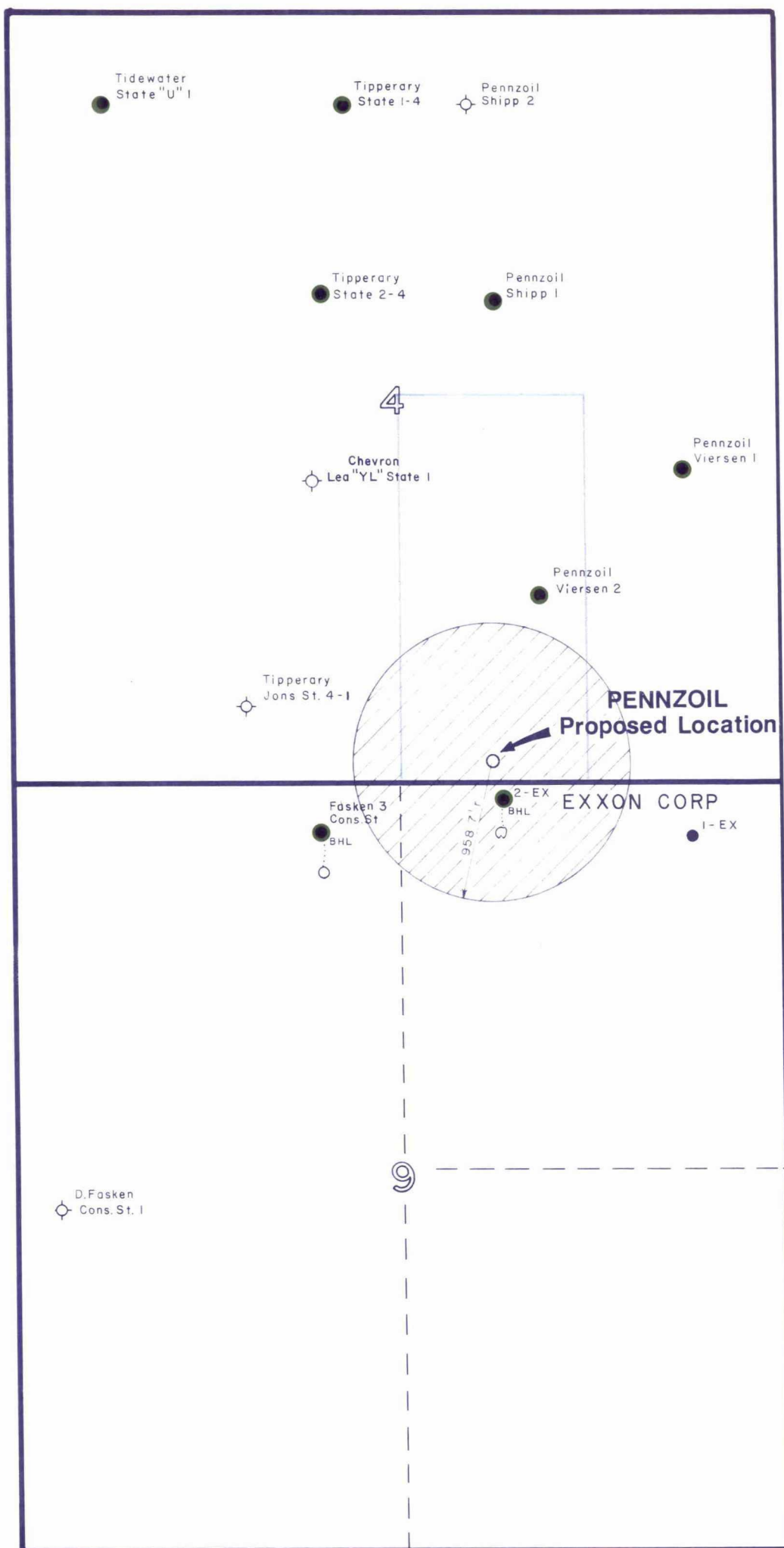
HORIZON

T-17-S, R-37-E
LOCATION

Lea County, New Mexico
COUNTY STATE

C.I. - 50'

1" = 1000'




● Strawn Producer

EXXON

EXHIBIT NO. 3
DOCKET NO. 9003
HEARING DATE 11-20-86

EXXON CORPORATION

SHIPP FIELD

 Possible BHL's (at 11,000-foot drill depth) without exceeding 5° deviation from vertical.

HORIZON

T-17-S, R-37-E
LOCATION

Lea County, New Mexico
COUNTY STATE

1" = 1000'

r = 958.7'

PENALTY CALCULATION¹

Acreage Distribution of Strawn Reservoir Productive in Fasken-Consolidated State #3 and Exxon "Ex" State #2

<u>Company</u>	<u>Number of Productive Acres Leased</u>
Exxon	39
Pennzoil	13
Phillips	8
Faskin	13

Total area of this productive reservoir = 73 acres

$$\text{Production Limitation Factor}^2 = \frac{\text{Productive Acreage}}{\text{Proration Unit Size}}$$

$$= \frac{13 \text{ Acres}}{80 \text{ Acres}}$$

$$\text{Production Limitation Factor}^2 = 0.16$$

$$\text{Penalty} = (1 - 0.16) = 0.84$$

$$\text{Production Limitation} = (0.16)(445 \text{ BOPD}) = 71 \text{ BOPD}$$

See R 8327
8229

¹ From Order No. R-8239

² To be applied to the Depth Bracket Allowable for an 80-acre Oil Proration Unit.

Exxon Corporation
Exhibit No. 4
Case No. 9003
November 20, 1986

PENALTY CALCULATION

Volume Distribution of Strawn Reservoir Productive in Fasken-Consolidated State #3 and Exxon "Ex" State #2

<u>Company</u>	<u>Volume of Reservoir under Leased Acreage</u> <u>(Acre/ft)</u>
Exxon	1662
Pennzoil	360
Phillips	254
Faskin	233

Total volume of this productive reservoir = 2509 acre-feet

$$\text{Production Limitation Factor}^1 = \frac{\text{Leased Volume}}{\text{Total Volume}}$$

$$= \frac{360 \text{ Acre-ft}}{2509 \text{ Acre-ft}}$$

$$\text{Production Limitation Factor}^1 = 0.14$$

$$\text{Penalty} = (1 - 0.14) = 0.86$$

$$\text{Production Limitation} = (0.14)(445 \text{ BOPD}) = 62 \text{ BOPD}$$

¹ To be applied to the Depth Bracket Allowable for an 80-acre Oil Proration Unit.

Exxon Corporation
Exhibit No. 5
Case No. 9003
November 20, 1986