



TENNECO

UNION

FLAG-REDFERN

YATES



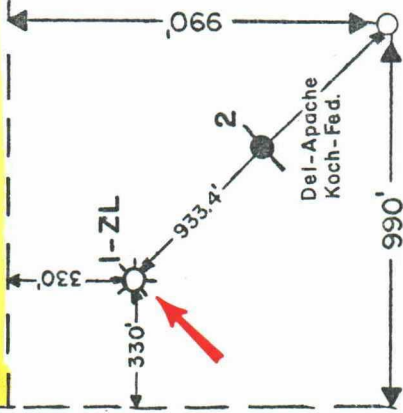
1-20

1

1-ZL

2

Del-Apache  
Koch-Fed.



BEFORE EXAMINER STOGNER

Oil Conservation Division

Union Exhibit No. 4

Case No. 8614

UNION

UNION

UNION

UNION I-A

FLAG-REDFERN I/C

1/8

1/7

1/6

1  
2

1  
Roden  
Copelon-Fed  
T.D. 9/30  
3-28-62

1  
2

0

2-A

1

BAUMGARTNER

TENNECO

UNION

FLAG-REDFERN

FLAG-REDFERN

1  
2

2  
Sun symbol

1  
Sun symbol

1-20

1  
Sun symbol

1  
Del-Apache  
Koch-Fed.  
T.D. 4860  
9-17-70

1-2R  
Sun symbol

1/9

SPFAR

210

2106.42'

1-2L  
Del-Apache  
2

YATES

YATES

R.K. CRAMER

21

HILORE

R.K. CRAMER

BLUITT  
SAN ANDRES (ASSO.)  
ROOSEVELT CO.

BEFORE EXAMINER STOGNER

Oil Conservation Division

Union Exhibit No. 6

Case No. 8614

EXHIBIT #

PRODUCTION LIMITATION FACTOR  
CALCULATION SHEET

Yates Bluestem ZL Fed. No. 1 - 330' FNL & 330' FWL of lease.

Standard location - 990' FNL & 990' FWL of lease.

1. NORTH-SOUTH FACTOR, % =  $\frac{330}{990} \times 100 = \underline{33.33}$
2. EAST-WEST FACTOR, % =  $\frac{330}{990} \times 100 = \underline{33.33}$
3. NET ACRE FACTOR

Drainage Area = 320 acres

Radius of circle with area of 320 acres:

$$\sqrt{\frac{320(43560)}{\pi}} = 2106.4'$$

Distance from standard location and Yates ZL #1:

$$\sqrt{990^2 + 990^2} - \sqrt{330^2 + 330^2} = \sqrt{2} (990-330) = 933.4$$

Area (A) of crescent between two circles with same radius (r)  
centered (a) distanced apart:

$$A = 2a \sqrt{r^2 - \left(\frac{a}{2}\right)^2} = 2(933.4) \sqrt{2106.4^2 - \left(\frac{933.4}{2}\right)^2} = 3,834,496' = 88.03 \text{ acres}$$

Percent of crescent to drainage area:

$$88.03/320 \times 100 = 27.51\%$$

Net Area factor, % =  $100 - 27.51 = \underline{72.49}$

4. TOTAL PRODUCTION LIMITATION FACTOR

For 320 acre proration Unit:

$$(33.33 + 33.33 + 72.49) \div 3 = 46.38\%$$

For 160 acre proration Unit:

$$46.38/2 = \underline{23.19\%}$$

EDWARD J. JAMNER STORNER
Oil Conservation Division
Exhibit No. _____
Case No. _____



