<div align="center">

PRODUCTION LIMITATION FACTOR

CALCULATION SHEET

</div>

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

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

1. <u>NORTH-SOUTH FACTOR</u>, % = $\frac{330}{990}$ X 100 = <u>33.33</u>

2. <u>EAST-WEST FACTOR</u>, % = $\frac{330}{990}$ X 100 = <u>33.33</u>

3. <u>NET ACRE FACTOR</u>

   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:

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

   Percent of crescent to drainage area:

   88.03/320 X 100 = 27.51%

Net Area factor, % = 100 - 27.51 = <u>72.49</u>
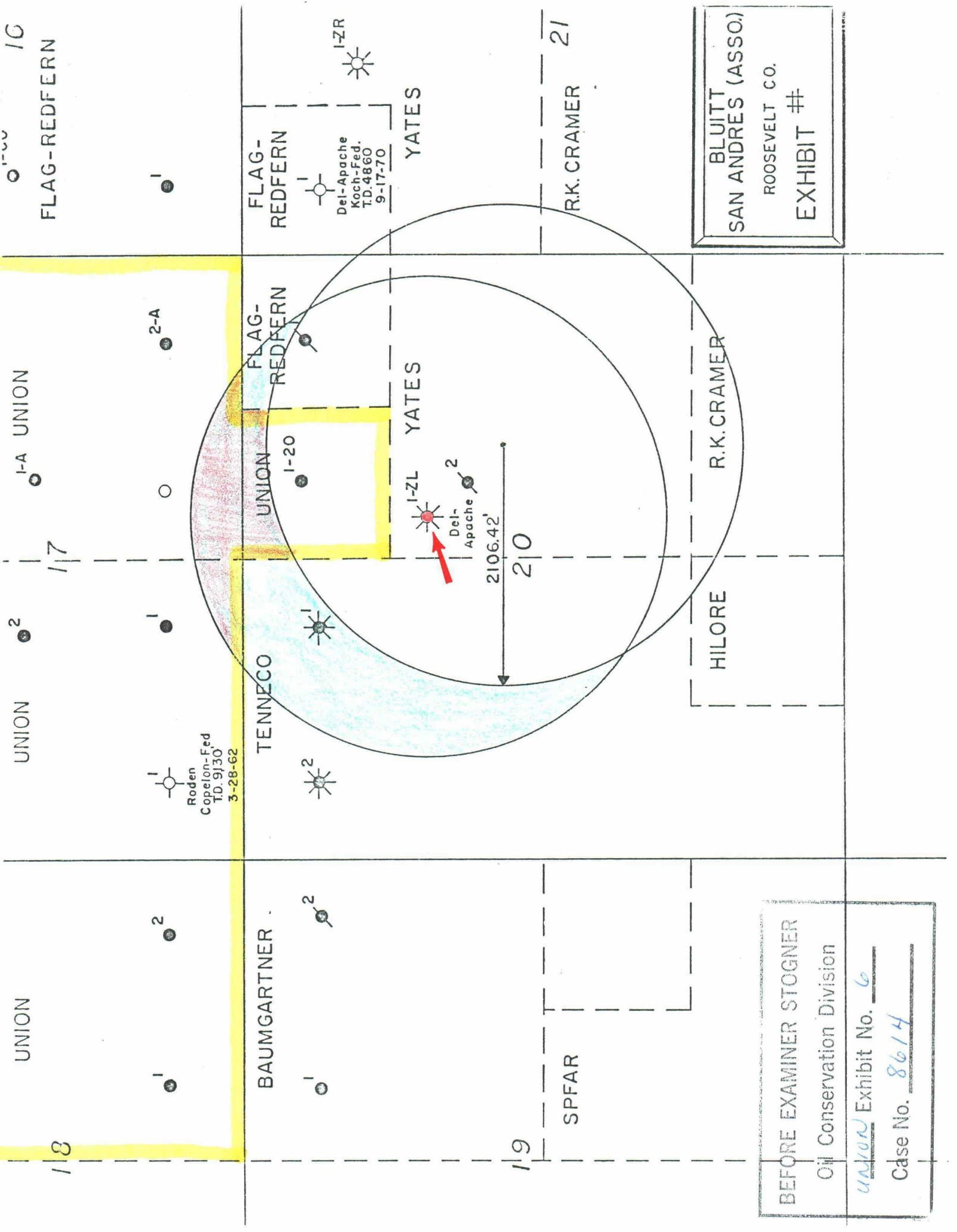
4. <u>TOTAL PRODUCTION LIMITATION FACTOR</u>

   For 320 acre proration Unit:
   (33.33 + 33.33 + 72.49) ÷ 3 = 46.38%

   For 160 acre proration Unit:
   46.38/2 = <u>23.19%</u>

FLAG-REDFERN
16
FLAG-REDFERN
17
UNION
18
UNION
UNION
1-A UNION
2-A
FLAG-REDFERN
FLAG-REDFERN
YATES
1-ZR
Del-Apache
Koch-Fed.
T.D. 4860
9-17-70
Del-Apache
Koch-Fed.

UNION
YATES
1-20
1-ZL
Del-Apache
2
2106.42'
20
R.K. CRAMER
R.K. CRAMER
HILORE
21

TENNECO
BAUMGARTNER
Roden
Copelon-Fed
T.D. 9J30'
3-28-62
2
SPFAR
19

BLUITT
SAN ANDRES (ASSO.)
ROOSEVELT CO.
EXHIBIT #

BEFORE EXAMINER STOGNER
Oil Conservation Division
Union Exhibit No. 6
Case No. 8614