AVERAGE DRAINAGE AREA CALCULATION

Baldridge Canyon Morrow

$$Gp = 43560 \times \emptyset \times h \times A \times (1-Sw) \times (Bgi-Bga)$$

$$A = \frac{Gp}{43560 \times \emptyset \times h \times (1-Sw) \times (Bgi-Bga)}$$

Average values for Baldridge Canyon Wells:

$Gp = 1,450,000,000$ scf (through 12/88)

$\emptyset = 8.3\%$

$h = 9.5$ ft.

$Sw = 25\%$

$$Bgi = 35.35 \frac{Pi}{z\ T} = 35.35 \frac{4248 \text{ psi}}{0.96 \times 642^{\circ}R}$$

$Bgi = 244$ scf/ft.^{3}

$$Bga = 35.35 \frac{Pa}{z\ T} = 35.35 \frac{1000 \text{ psi}}{0.93 \times 642^{\circ}R}$$

$Bga = 59.2$ scf/ft.^{3}

$$A = \frac{1,450,000,000}{43560 \times .083 \times 9.5 \times (1-.25) \times (244-59.2)}$$

$A = 305$ acres

Exxon Corporation
Exhibit No. 11
Case No. 9832, 9797
November 29, 1989

AVERAGE DRAINAGE AREA CALCULATION

Average values for Rock Tank (Upper Morrow) wells:

Gp = 1,640,000,000 (through 12/88)

$\emptyset$ = 11%

h = 9 ft.

Sw = 25%

$$Bgi = 35.35 \frac{3932}{.94 \times 642^{\circ}R}$$

$$Bgi = 230 \text{ scf/ft}^3$$

$$Bgi = 59.2 \text{ scf/ft}^3$$

$$A = \frac{1,640,000.000}{43560 \times .11 \times 9 \times (1-.25) \times (230-59.2)}$$

A = 297 acres

Average values for Rock Tank (Lower Morrow) wells:

Gp = 5,900,000,000 scf (through 12/88)

$\emptyset$ = 9%

h = 22 ft.

Sw = 25%

$$Bgi = 35.35 \frac{Pi}{z\ T} = 35.35 \frac{4273}{0.96 \times 642^{\circ}R}$$

$$Bgi = 245 \text{ scf/ft.}^3$$

$$Bga = 59.2 \text{ scf/ft.}^3$$

$$A = \frac{5,900,000,000}{43560 \times .09 \times 22 \times (1-.25) \times (245-59.2)}$$

A = 491 acres

Exxon Corporation
Exhibit No. 11
Case No. 9832, 9797
November 29, 1989