Original Gas in Place
Lea (Wolfcamp) Field

$$Vs = 1544\left(\frac{Pr}{Zr\,Tr}\right)(\phi)(Sg)$$

Vs = Reservoir Volume at Std. Conditions, mcf/Ac - Ft.

Pr = Reservoir Original Pressure, 3600 psi

Tr = Reservoir Temperature, °R: 155° F + 460 = 615°R

Zr = Compressibility Factor at Reservoir Cond., Fraction

ϕ = Porosity, Fraction: 0.087

Sg = 1 - Sw, Gas Saturation, Fraction

Sw = Water Saturation, Fraction: 0.22

$$Vs = 1544\left(\frac{3600}{(.9437)(615)}\right)(.087)(1-.22)$$

$$Vs = 649.9 \text{ mcf/Ac.-Ft.}$$

From P/Z Vs. Cum Gas Prod. Curve

Original Gas In Place = 6,461,590 mcf

Therefore Reservoir Volume in Acre - Feet

$$\text{Ac - Ft} = \frac{6{,}461{,}590 \text{ mcf}}{649.9 \text{ mcf/Ac.-Ft.}}$$

Reservoir Vol. = 9942 Ac - Ft.

BEFORE THE
OIL CONSERVATION DIVISION
Santa Fe, New Mexico

Case No. 10796 Exhibit No. 10

Submitted by: Manzano Oil Corporation

Hearing Date: August 12, 1993