Pride Energy State #1-M -- Drainage Area

1. The volumetric equation for Original Gas in Place (in Scf) is

   G = 43560*A*h* phi*Sg*Bg

   where h*phi*Sg is the hydrocarbon pore volume.
   and A is the drainage area in acres

   The gas produced (Gp) is a fraction (the recovery factor) of the Original Gas in Place

   Gp = Rf*G = Rf*43560*A*h*phi*Sg*Bg

   where Rf = 0.8 is the recovery factor

2. From the log analysis , **h*phi*Sg = 2.100** feet is the hydrocarbon pore volume

3. The gas formation volume factor Bg = 35.35*P/(z*T) where the parameters are:

Pressure (P)	=	4860 psi
Temperature (T)	=	185 degrees F = 645 degrees R
Compressibility Factor (z)	=	0.97

   Gas Gravity = 0.7 → Pc = 667 psi → Pr = 4860/667 = 7.29
   Tc = 390 degree R → Tr = 645/390 = 1.65

   From the Standing & Katz table, z = 0.97 for Pr = 7.29 and Tr = 1.65

   Then, Bg = 35.35*4860/(0.97*645) = **275 Scf per cubic foot** (expands)

4. Rearrange Gp = Rf*43560*A*h*phi*Sg*Bg

   Gp = 0.8*43560*A*2.100*275 = 2.0125*10^7*A

   and **A = 4.9690^-8* Gp** where Gp is in Scf (standard cubic ft.)

5. For production to date of Gp = 464,127, 000 Scf

   A = 4.9690^-8*464127000 = **23 Acres**

   For ultimate production of Gp = 2,274,225,000 Scf

   A = 4.9690^-8*2274225000 = **113 Acres**

BEFORE THE OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case Nos. 13153 Exhibit No. 14
Submitted by:
Yates Petroleum Corporation
Hearing Date: August 12, 2004

Yates Petroleum Corporation
Case 13153 (De Novo)
Exhibit E-2