Explanation of Reservoir Calculations

Drainage area was calculated using the following industry accepted volumetric equation:

$$G = 43{,}560\ V_b \phi (1-S_w) \left(\frac{P_{sc}}{T_{sc}}\right)\left(\frac{z_i T_i}{P_i} - \frac{z_a T_a}{P_a}\right)$$

Where G = Recoverable gas, SCF

V_b = Area x height, Acre-ft

ϕ = Porosity

Sw = Water saturation

P_{sc} = Pressure at standard conditions, 15.025 psia

T_{sc} = Temperature at standard conditions, 520°Rankin (60° F)

Z_i = Gas deviation factor at initial reservoir conditions

P_i = Pressure at initial reservoir conditions, psia

T_i = Temperature at initial reservoir conditions, °Rankin

Z_a = Gas deviation factor at abandonment reservoir conditions

P_a = Pressure at abandonment reservoir conditions, psia

T_a = Temperature at abandonment reservoir conditions, °Rankin

The estimated ultimate recoverable gas (G) was obtained by decline curve analysis. Log analysis provided the porosity, water saturation, and net pay thickness. Pressure and production data came from available industry and public sources: IHS Energy Group's PI/Dwights and NMOCD. Inputting the known reservoir data into the volumetric equation and solving for area (acres) results in the estimated drainage area for the subject wells. Power Tools software by IHS Energy Group was used for the decline curve analysis and volumetric calculations.

OIL CONSERVATION DIVISION

CASE NUMBER 12778

EXHIBIT 7