All volumetric properties of gases can be derived from the real-gas law. Gas density is given by

$$\rho_g = pM_g/ZRT \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3.34)$$

or, in terms of gas specific gravity, by

$$\rho_g = 28.97\frac{p\gamma_g}{ZRT}. \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3.35)$$

For wet-gas and gas-condensate mixtures, wellstream gravity, γ_w, must be used instead of γ_g in Eq. 3.35.[3] Gas density may range from 0.05 lbm/ft^3 at standard conditions to 30 lbm/ft^3 for high-pressure gases.