Applied Petroleum Reservoir Engineering 3rd Edition Solution Manual

CHAPTER 2

2.1 using Equation 2.4: pV = nRT

(a)
$$V = \frac{1(10.73)(60 + 460)}{14.7} = 379.6 \text{ SCF}$$

(b)
$$V = \frac{1(10.73)(32+460)}{14.7} = 359.1SCF$$

(c)
$$V = \frac{1(10.73)(80 + 460)}{14.7 + 10/16} = 378.1 \text{ SCF}$$

(d)
$$V = \frac{1(10.73)(60+460)}{15.025} = 371.4 \text{ SCF}$$

- 2.2 (a) number of moles of methane =10 J6 = .625 moles number of moles of ethane = 20/30 = .667 moles total number of moles = .625+.667 = 1.292 moles
- (b) from Equation 2.4

$$p = \frac{1.292(10.73)(550)}{500} = 15.25 \text{ psia}$$

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L Cohen

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