

Trial and Error Solution

$$P_{pc} = 676 \text{ psia}$$

$$T_{pc} = 402 \text{ }^{\circ}\text{R}$$

(Based on volumetric averages)

$$T_r = 568/402 = 1.41$$

Assume: $P_{sfs} = 470 \text{ psia}$ - Due to gas

$$P = (470 + 412)/2 = 441 \text{ psia}$$

$$P_r = 441/617 = 0.715$$

$$\bar{z} = 0.915$$

$$P_{sfs} = (412)e^{.117/.915} = 468 \text{ psia}$$

Assume: $P_{sfs} = 468 \text{ psia}$ - Due to gas

$$P = (468 + 412)/2 = 440 \text{ psia}$$

$$P_r = 440/617 = 0.713$$

$$\bar{z} = 0.916$$

$$P_{sfs} = (412)e^{.117/.916} = 468 \text{ psia}$$

$$P_{ls} = .3 (5600 - 5033) = 170 \text{ psia}$$

Total static sandface pressure $P_{sfs} = 468 \text{ psia} + 170 \text{ psia} = 638 \text{ psia}$
 $P_{sfs} = \underline{638 \text{ psia for Blinebry}}$

Drinkard Zone:

$P_{sfs} = 760 \text{ psia}$ Measured at common datum -
midperfs of Blinebry (5600').
Pressure measurement attached.

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