16.17. **Solve:** The pressure due to seawater at a depth d is

$$p = p_0 + \rho_{\text{sea water}} g d$$
$$= 1.013 \times 10^5 \text{ Pa} + \left(1030 \text{ kg/m}^3\right)\left(9.8 \text{ m/s}^2\right)(100 \text{ m}) = 1.1107 \times 10^6 \text{ Pa} \simeq 11 \text{ atm}$$

From Figure 16.04, we see that the freezing temperature of water at $p = 11$ atm is below 0°C and the boiling temperature is above 100°C. This is because the solid-liquid transition line has a negative slope, but the liquid-gas transition line has a positive slope.