Austin, TX is slightly above sea level, and water in Austin boils at very close to its standard boiling point at 1 atm. What temperature does water boil at in Denver, CO, where atmospheric pressure is approximately 85% of its value at sea level? The molar enthalpy of vaporization of water is 40.65 kJ mol⁻¹ at its standard boiling point.

\[
\ln \left( \frac{p_2}{p_1} \right) = -\frac{\Delta H_{\text{vap}}}{R} \left( \frac{1}{T_2} - \frac{1}{T_1} \right)
\]

\[
\frac{1}{T_2} = -\frac{R}{\Delta H_{\text{vap}}} \ln \left( \frac{p_2}{p_1} \right) + \frac{1}{T_1}
\]

\[
\frac{1}{T_2} = -\frac{8.314 \text{ J K}^{-1} \text{ mol}^{-1}}{41065 \text{ J atm}^{-1} \text{ mol}^{-1}} \ln \left( \frac{0.85 \text{ atm}}{1 \text{ atm}} \right) + \frac{1}{373 \text{ K}}
\]

\[
\frac{1}{T_2} = 0.0027
\]

\[
T_2 = 368 \text{ K}
\]