Which relation

Which relation can be derived from:

1. The first law of thermodynamics: $du = \delta q + \delta w$
2. The differential expression for volume work: $\delta w = -Pdv$
3. The inequality of Clausius: $ds = \left(\frac{\delta q}{T}\right)_{int.rev.}$ **And how is this known equation called?**

Substitute the differential expression for volume work: $\delta w = -Pdv$ and the inequality of Clausius: $ds = \left(\frac{\delta q}{T}\right)_{int.rev.}$ rearranged as: $\delta q = Tds$ in the first law of thermodynamics: $du = \delta q + \delta w$

This results in: $du = Tds - Pdv$ rearranging gives the first Gibbs equation: $Tds = du + Pdv$.