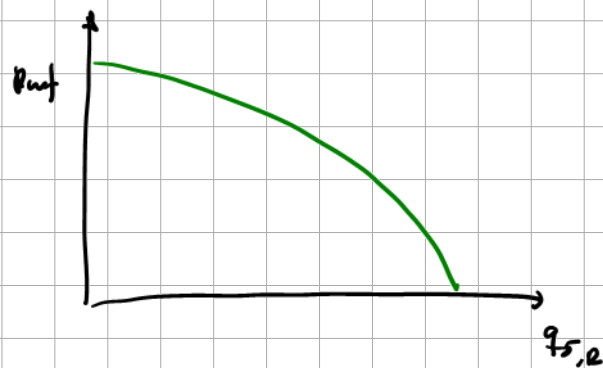
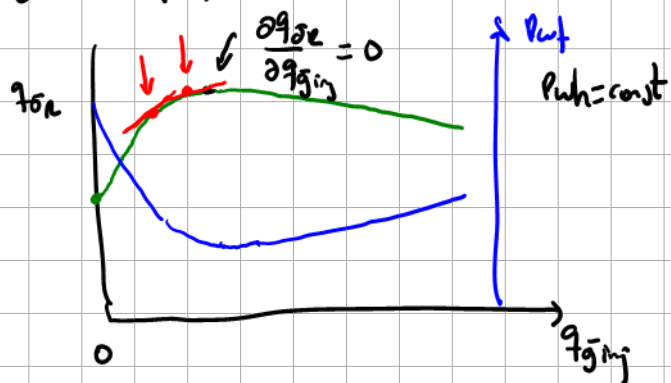


gas lift performance curve



$$\text{Profit} = \text{revenue} - \text{cost}$$

$$= q_{gr} \cdot p_o - \text{cost}(q_{ginj})$$

$$= q_{gr} \cdot p_o - p_g \cdot q_{ginj}$$

max Profit

$$\frac{\partial \text{Profit}}{\partial q_{ginj}} = \frac{\partial q_{gr}}{\partial q_{ginj}} \cdot p_o - p_g = 0 \Rightarrow \frac{\partial q_{gr}}{\partial q_{ginj}} = \frac{p_g}{p_o} > 0 \text{ close to zero}$$