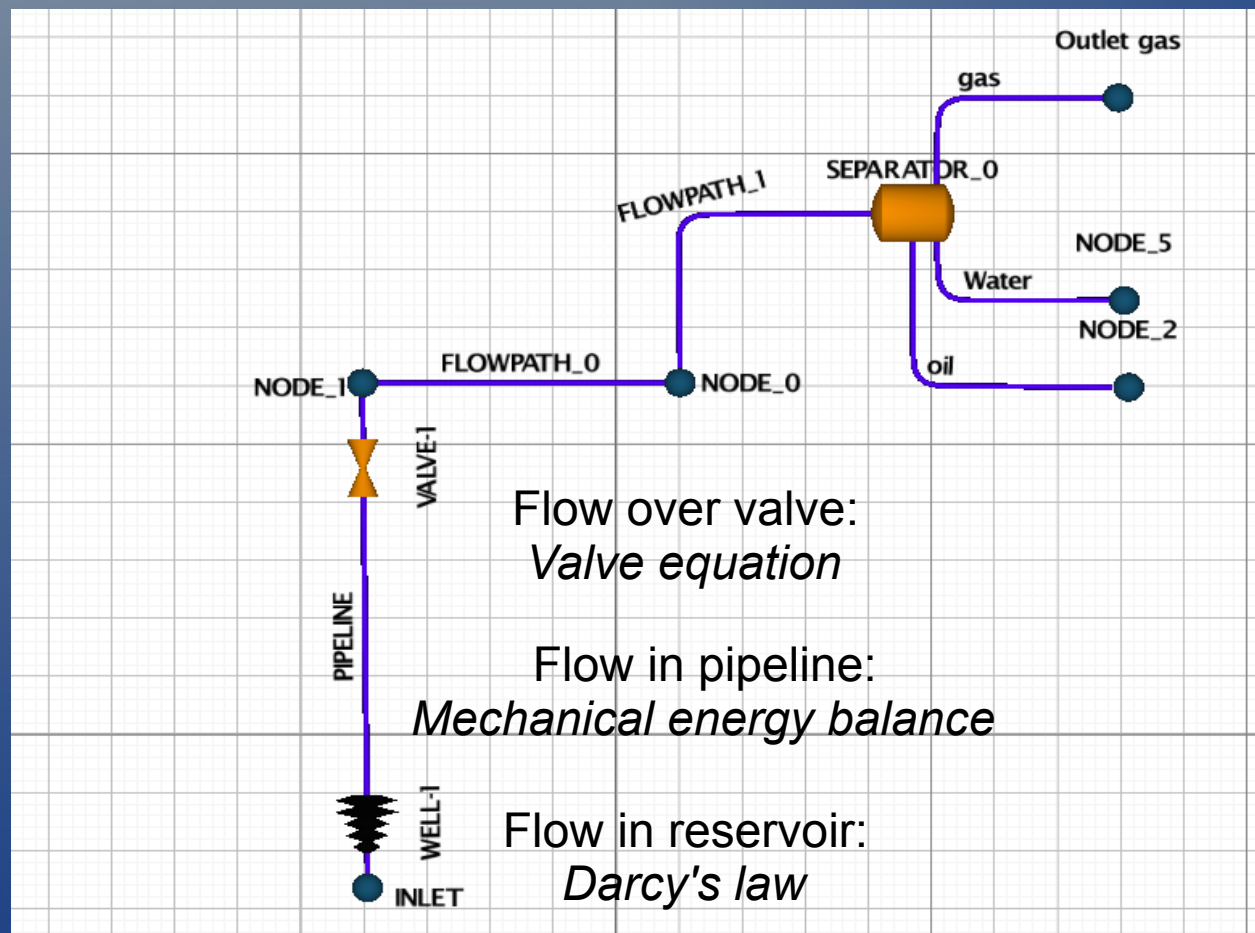# Simple well model based on simple physical equations

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- Develop a model.
- Simulate in OLGA.
- Compare

Flow over valve:
Valve equation

Flow in pipeline:
Mechanical energy balance

Flow in reservoir:
Darcy's law

Equations:

- Flow in reservoir: Darcy's law

- Flow in pipeline: Mechanical energy balance

- Flow over valve: Valve equation

Goal:
By being able to describe the system one can create a control scheme to ensure optimal production from the oil and gas wells.

Optimal operation:
Keeping the gas-oil-ratio for the well at minimum.