PT\_EOS\_STD\_1D\_1:

Problem Description

TH problem - This benchmark problem provides the solution describing the pressure changes that occur when fluid is produced from a symmetric, infinite, homogeneous, isotropic aquifer of uniform thickness. The problem is defined for a disk-shaped domain with Source/Sink kernel pumping in the center of the domain at a mass flux rate of 0.01667 kg/s, or a volume flow rate of ~1 L/min. The outer radial dimension is sufficiently distant to effect a semi-infinite domain.

Model Set-Up

Areawell = 1 m3

Fluxin = 0.01667 kg/s

Tinf = 50°C

Pinf = 0.1 MPa

100 m

Properties

|  |  |  |
| --- | --- | --- |
|  | Matrix | Unit |
| Porosity | 0.5 | [n/a] |
| Permeability | 1.00E-12 | [m^2] |
| Density (rock) | 2500 | [kg/m^3] |
| Density (water) | Variable | [kg/m^3] |
| Viscosity | Variable | [Pa.s] |