# Reference case: Working fluid: water

Horizontal well – 1000 m horizontal section

Casings (similar to Balmatt):

0 – 900 m: ID 17.755 inch

900 – 3690 m: vertical section in salt ID 12.347 inch

3690 – 4212 m: deviated section in salt ID 12.347 inch

4212 m: 1000 m horizontal section ID 8.535 inch

Injection temp.: 35 °C

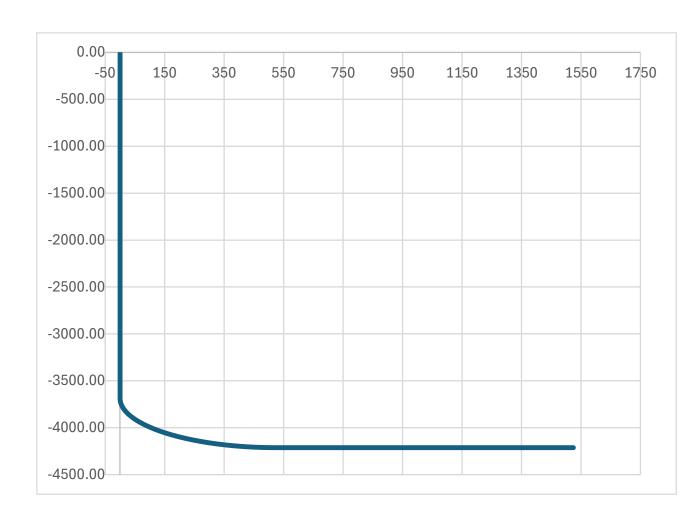
Injection press.: 0.1 MPa

#### Rate:

Case 1: 0.5 kg/s

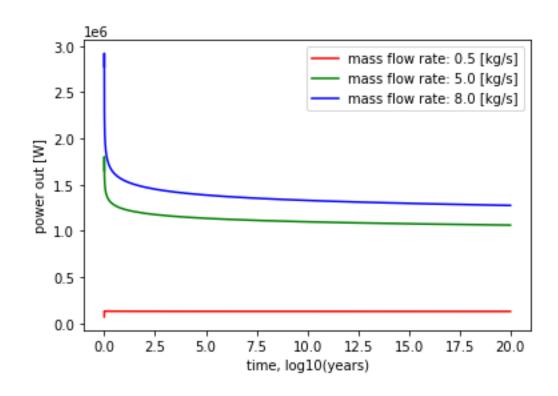
Case 2: 5.0 kg/s

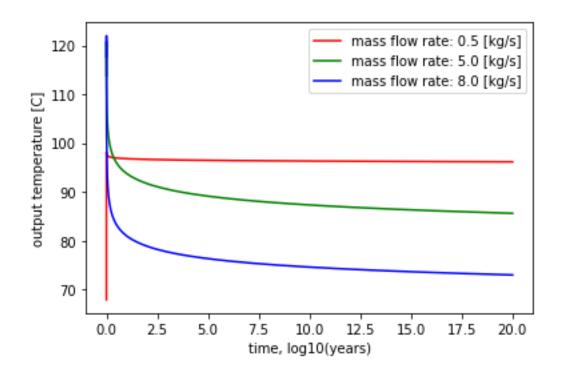
Case 1: 8.0 kg/s



Case: case-X2 Horizontal well: 1000 m - water -1000distance along well [m] Case: case-X1 -20000 -3000-1000distance along well [m] t=1 years -4000t=2 years -2000t=4 years t=8 years -5000-3000t=20 years t=1 years 60 70 80 100 50 90 -4000t=2 years temperature [C] Case: case-X3 t=4 years t=8 years 0 -5000t=20 years -1000120 40 60 80 100 distance along well [m] temperature [C] -2000 -3000t=1 years -4000t=2 years t=4 years t=8 years -5000 t=20 years 50 60 70 80 temperature [C]

#### Horizontal well: 1000 m - water





#### CO2 – casings with liners

Horizontal well – 1000 m horizontal section

Casings (similar to Balmatt):

0 – 900 m: ID 17.755 inch

900 – 3690 m: vertical section in salt ID 12.347 inch

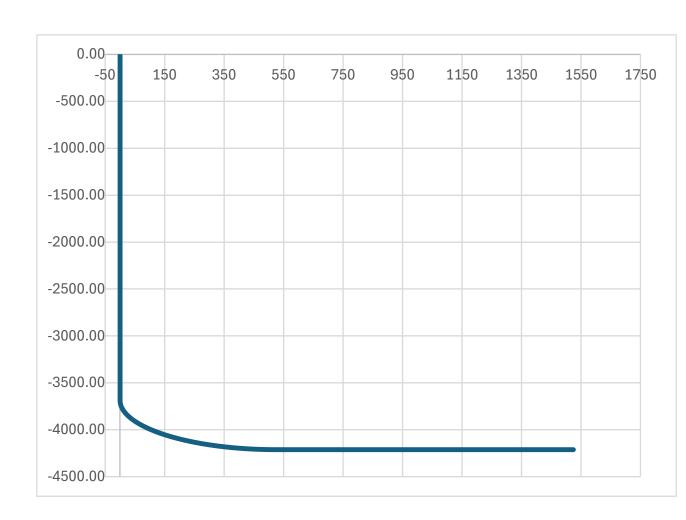
3690 – 4212 m: deviated section in salt ID 12.347 inch

4212 m: 1000 m horizontal section ID 8.535 inch

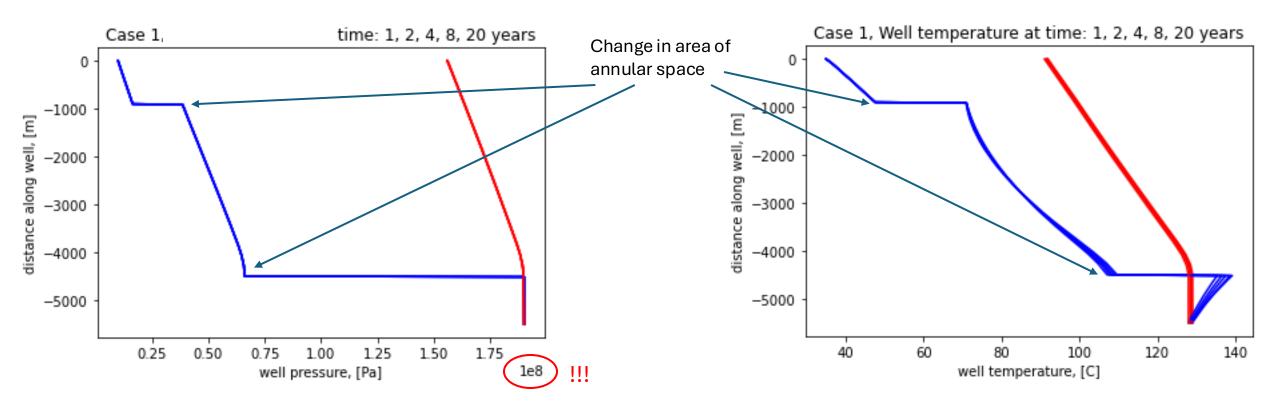
Injection temp.: 35 °C

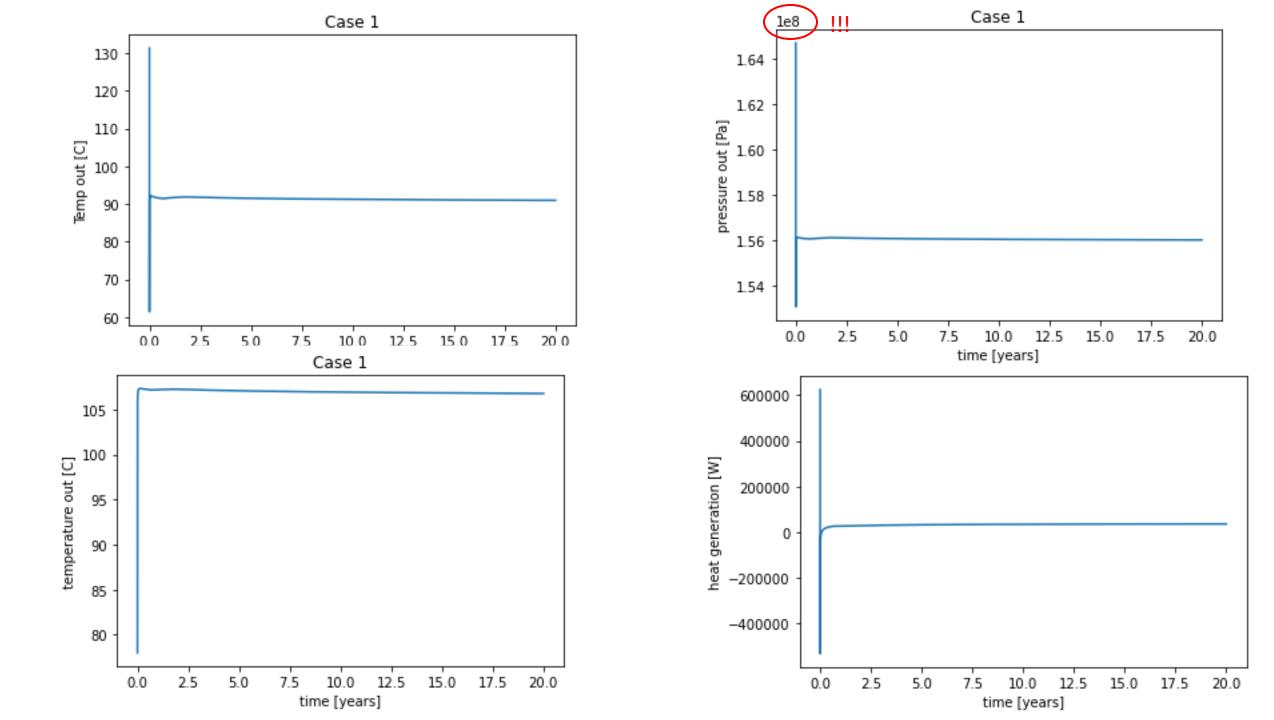
Injection press.: 10 MPa

Rate: 10 kg/s



## CO2 – casings with liners





#### CO2 – the same diameter throughout the well

Horizontal well – 1000 m horizontal section

Casings:

Constant delta annular (0.0868 m) as for casings ID12.347 inch

Injection temp.: 35 °C

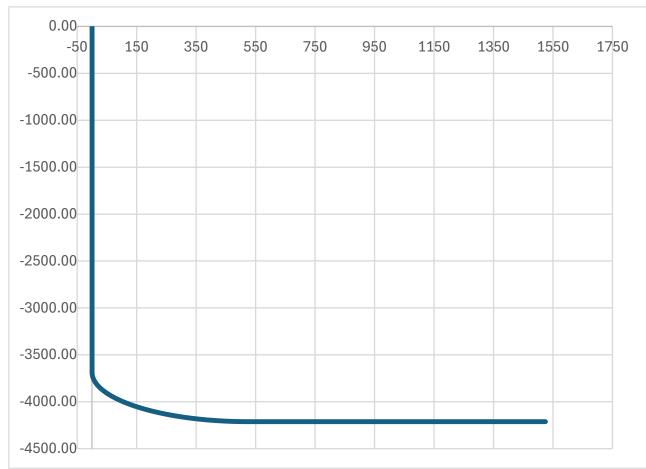
Rate: 10 kg/s

Injection press.:

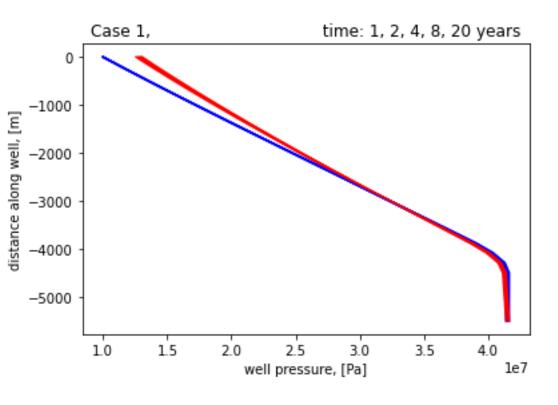
Case 1: 10 MPa

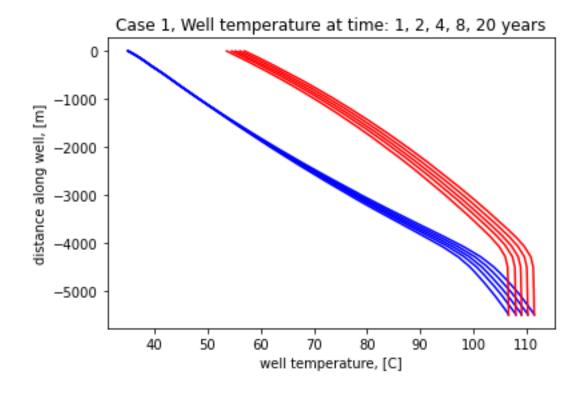
Case 2: 20 MPa

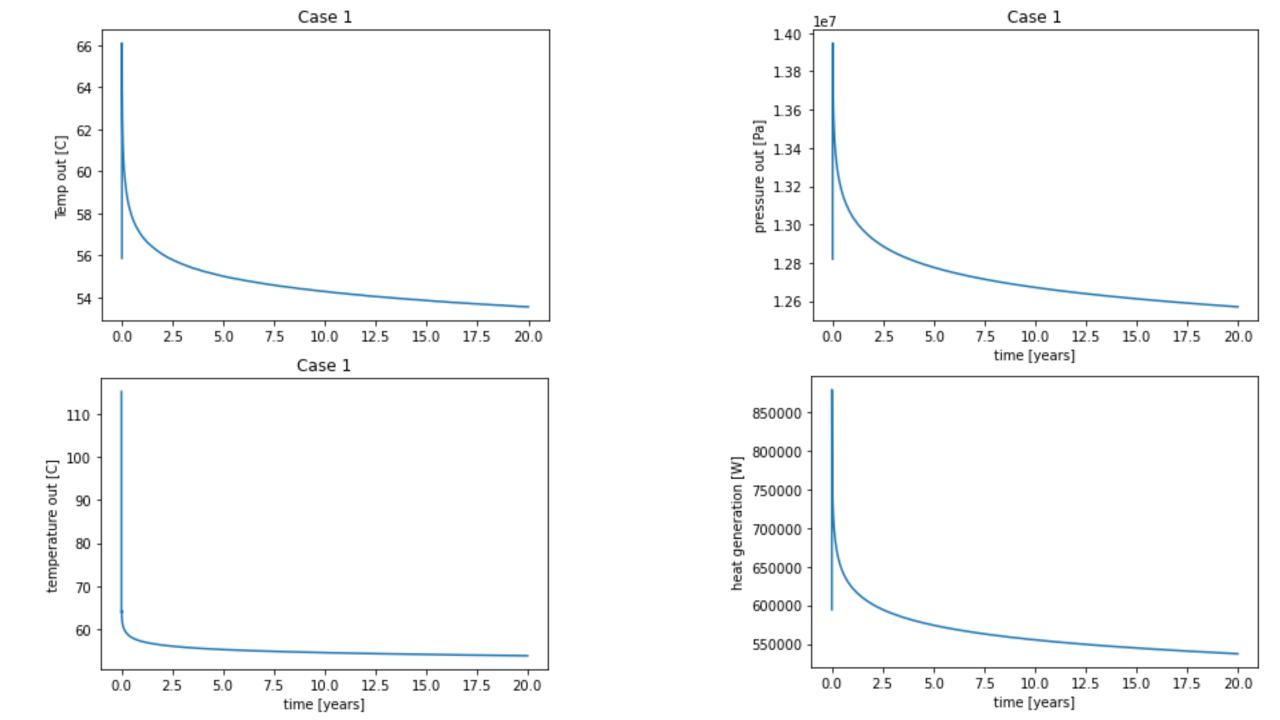
Case 3: 30 MPa



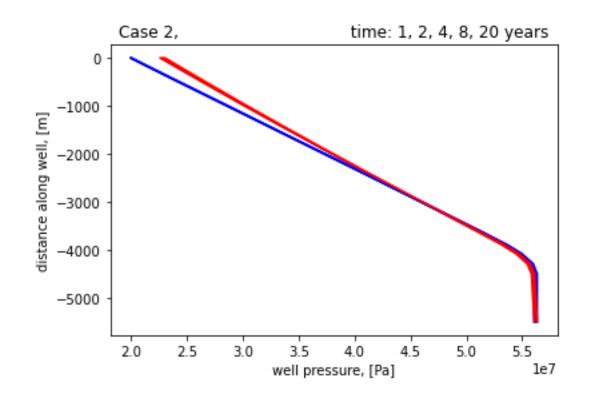
#### Case 1 – the same diameter throughout the well

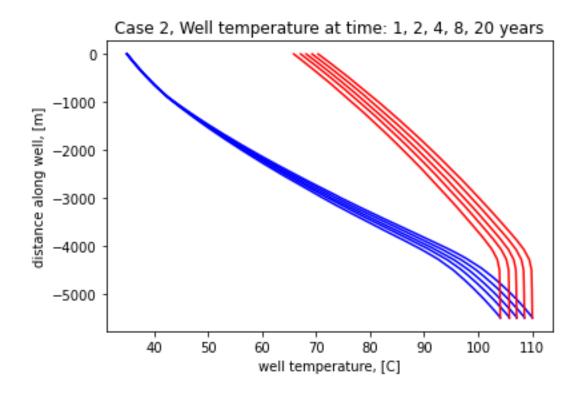


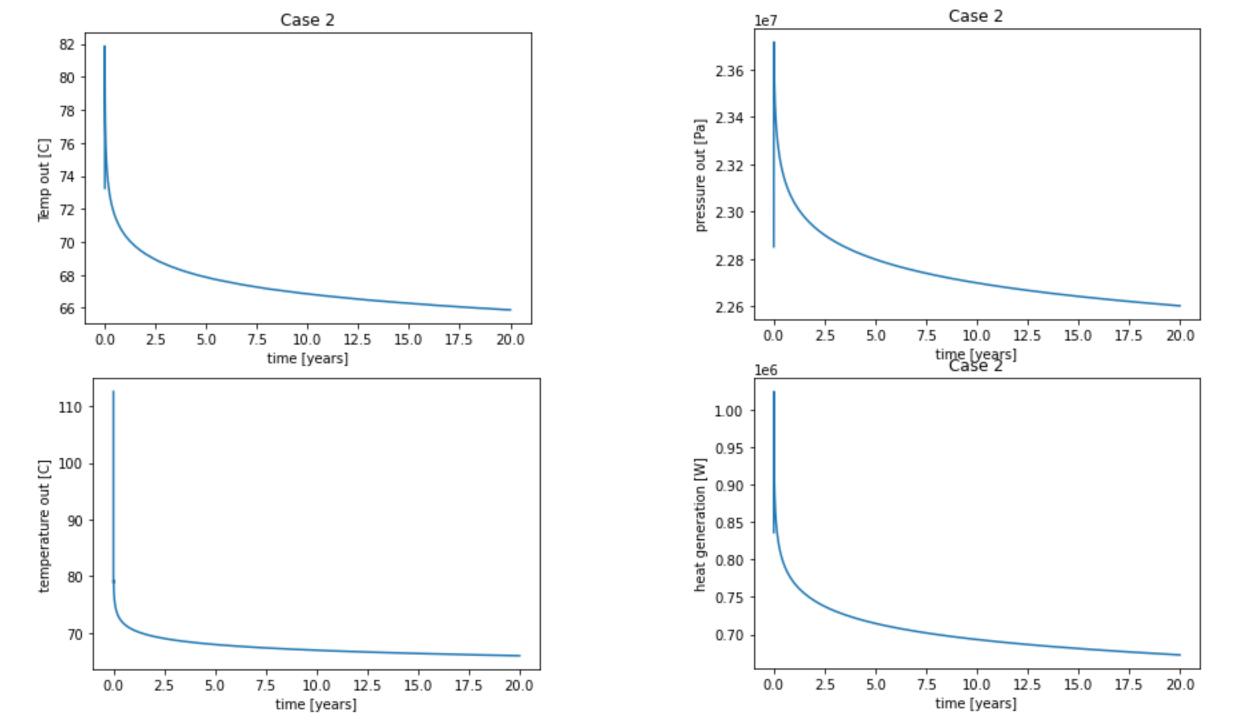




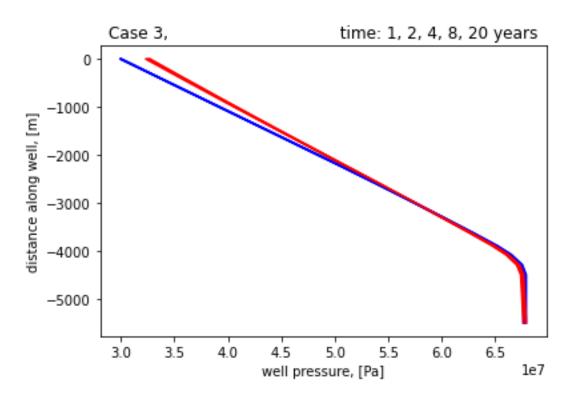
#### Case 2 – the same diameter throughout the well

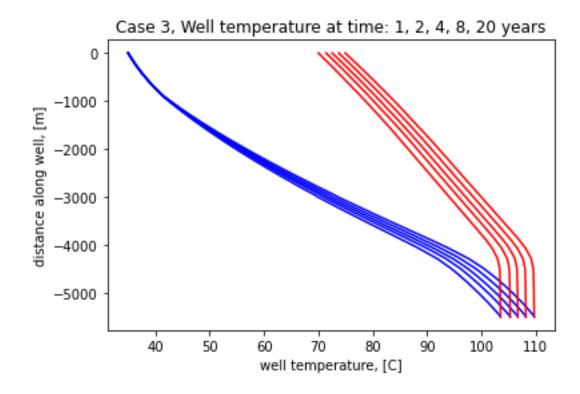


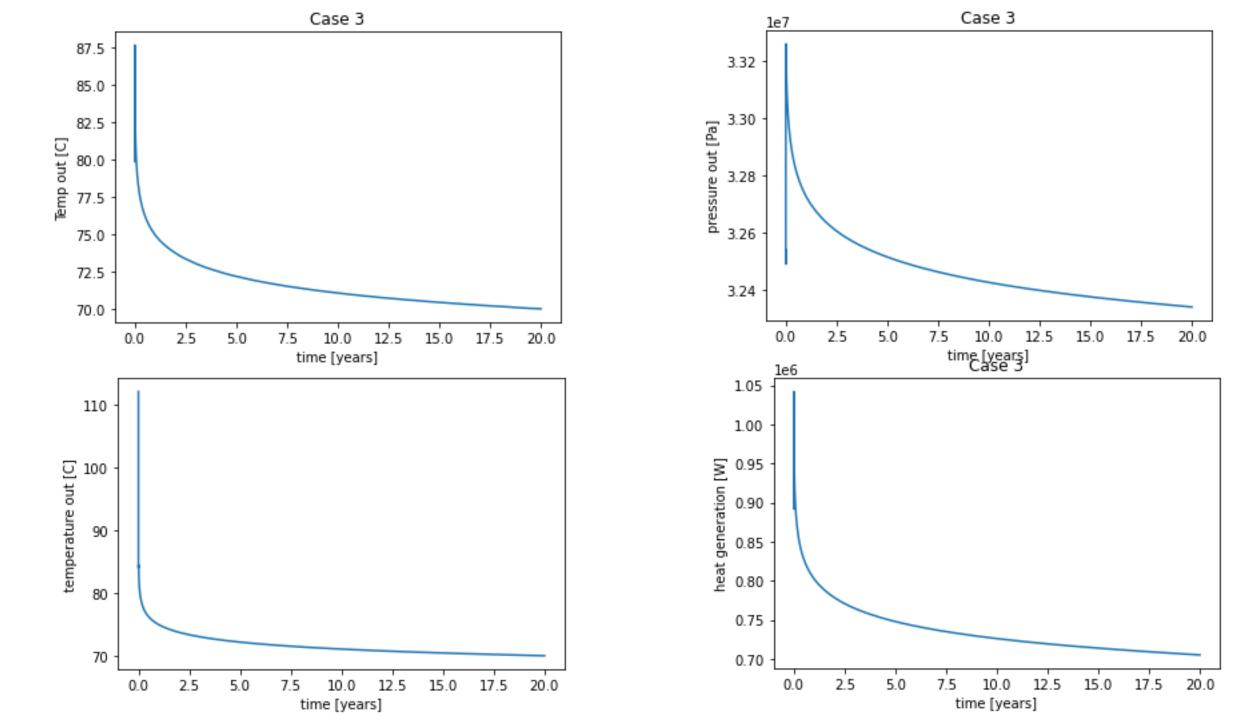


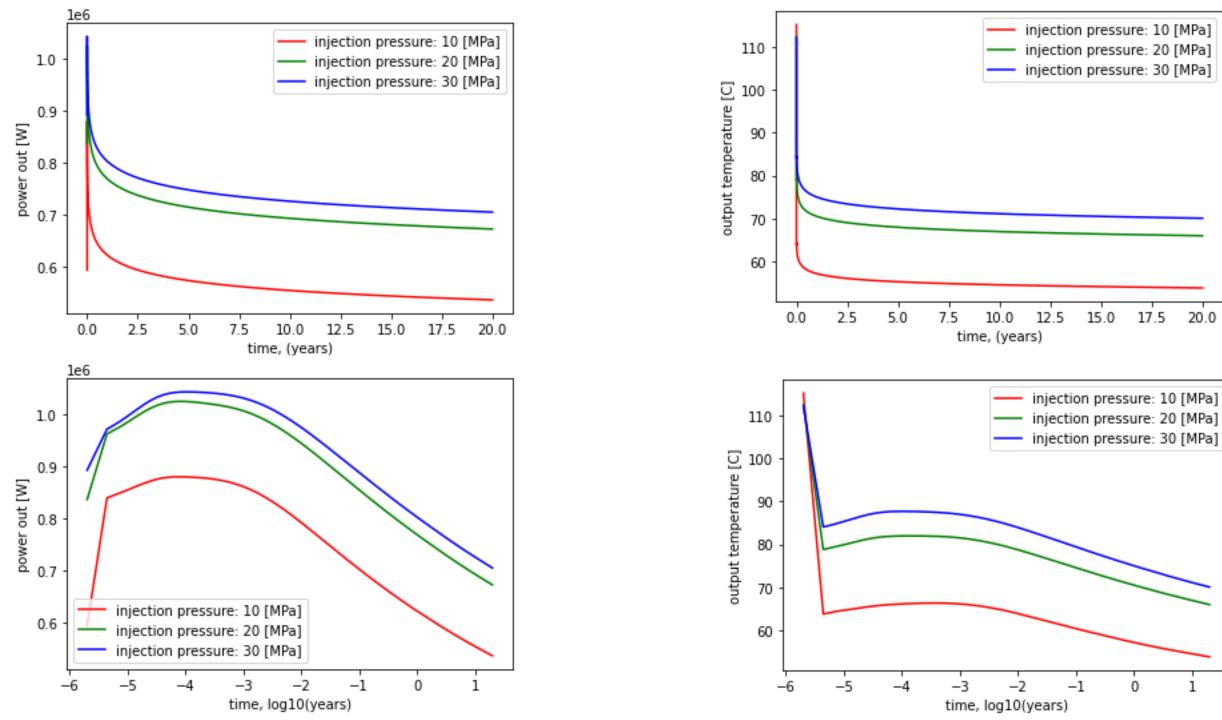


#### Case 3 – the same diameter throughout the well









20.0

#### CO2 – the same diameter throughout the well

Horizontal well – 1000 m horizontal section

Casings:

Constant delta annular (0.0868 m) as for casings ID12.347 inch

Injection temp.: 35 °C

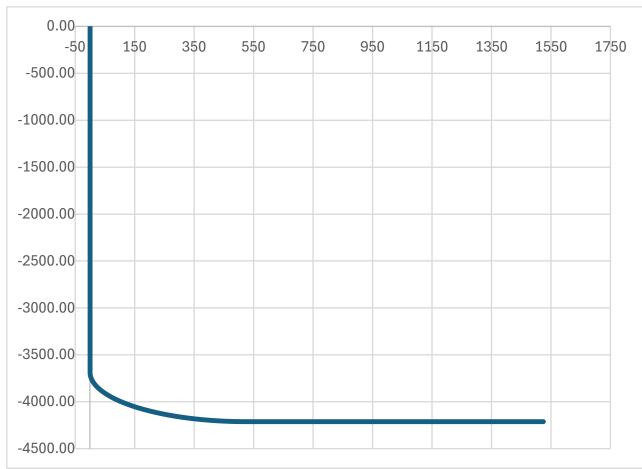
Injection press.: 10 MPa

Rate:

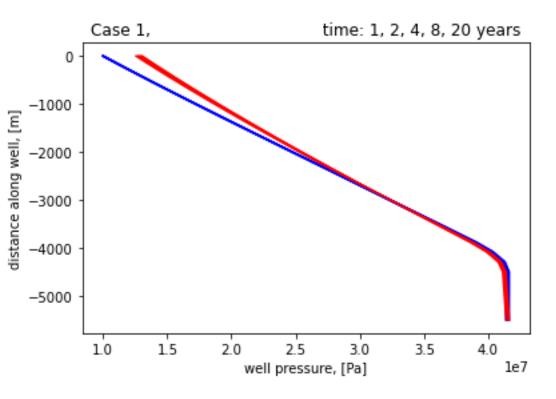
Case 1: 10 kg/s

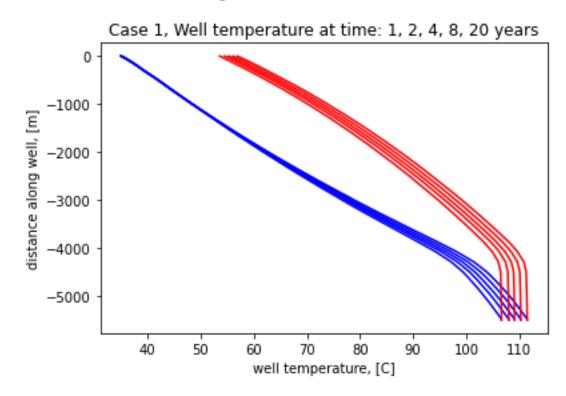
Case 2: 20 kg/s

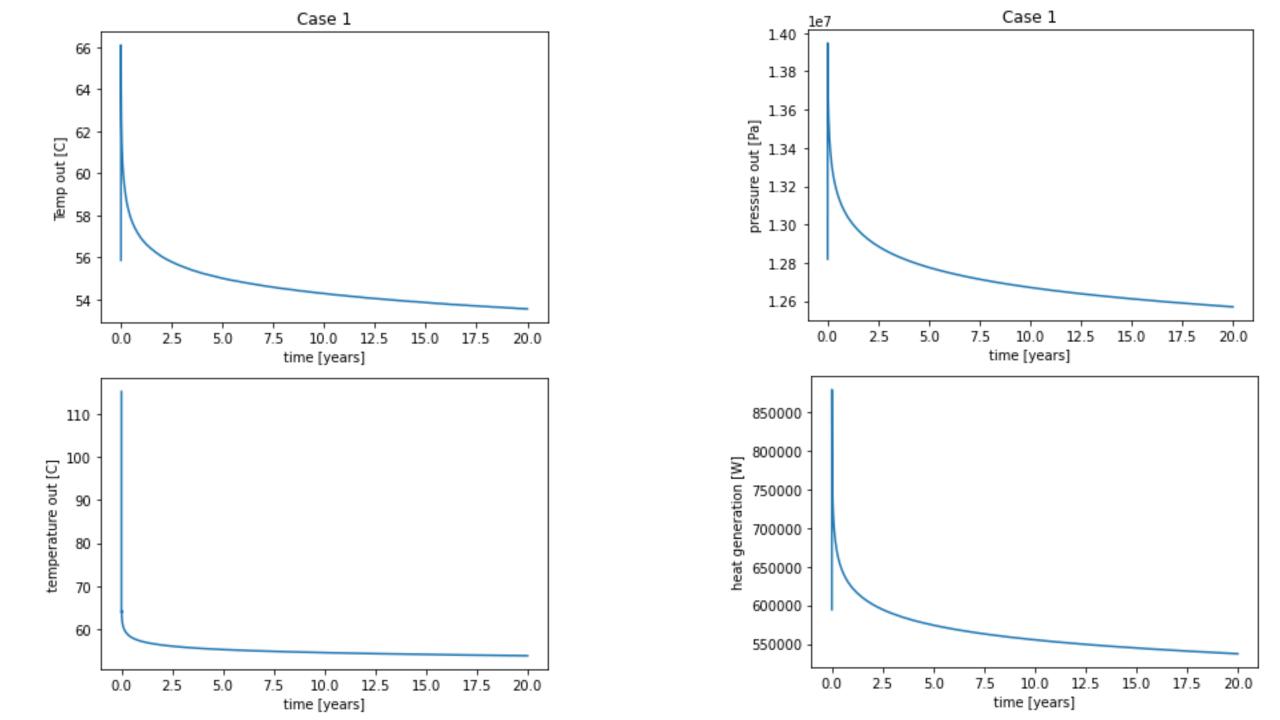
Case 3: 30 kg/s



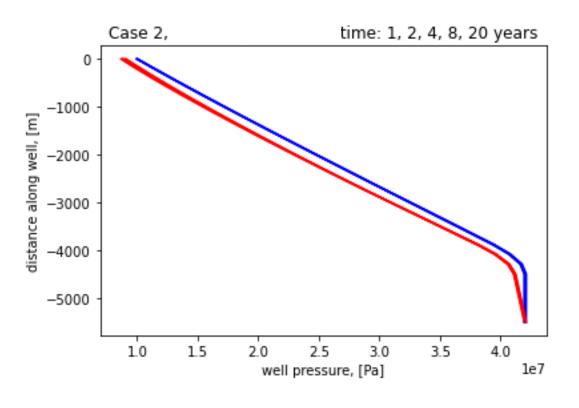
## Case 1 – the same diameter throughout the well

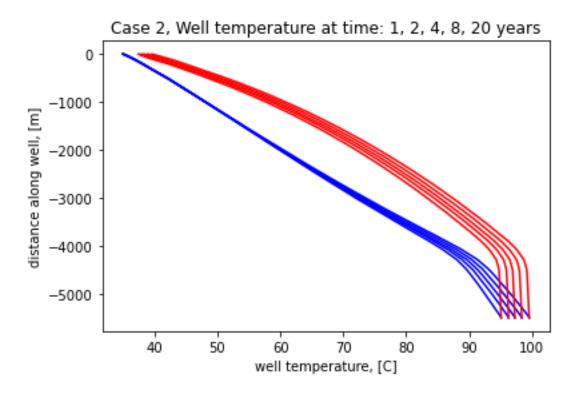


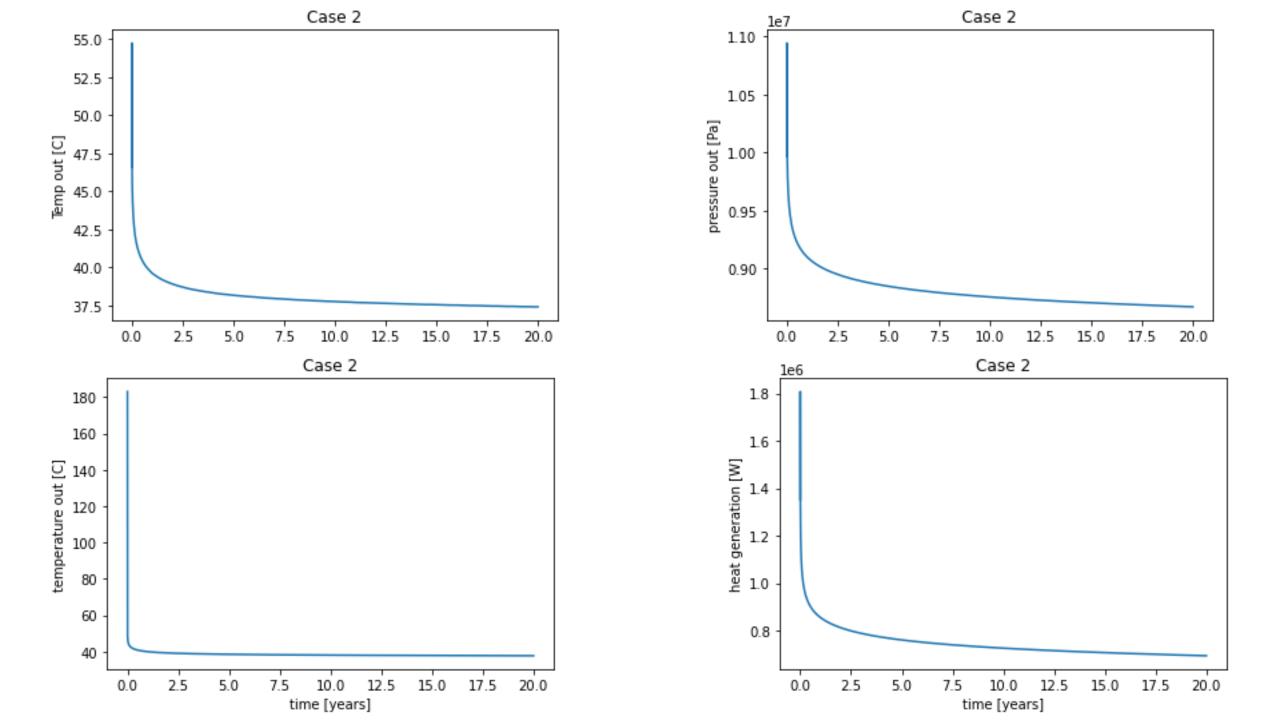




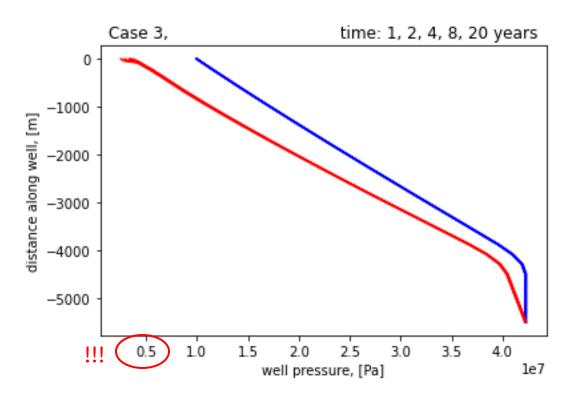
#### Case 2 – the same diameter throughout the well

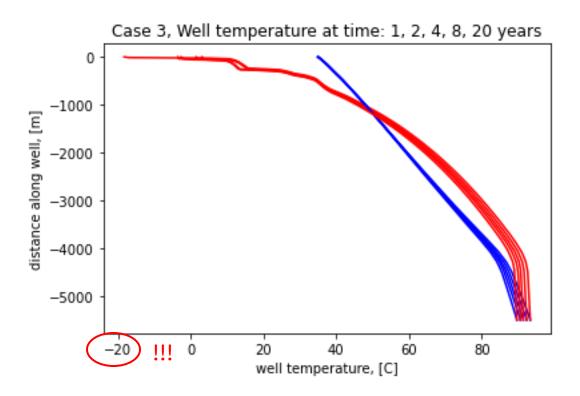


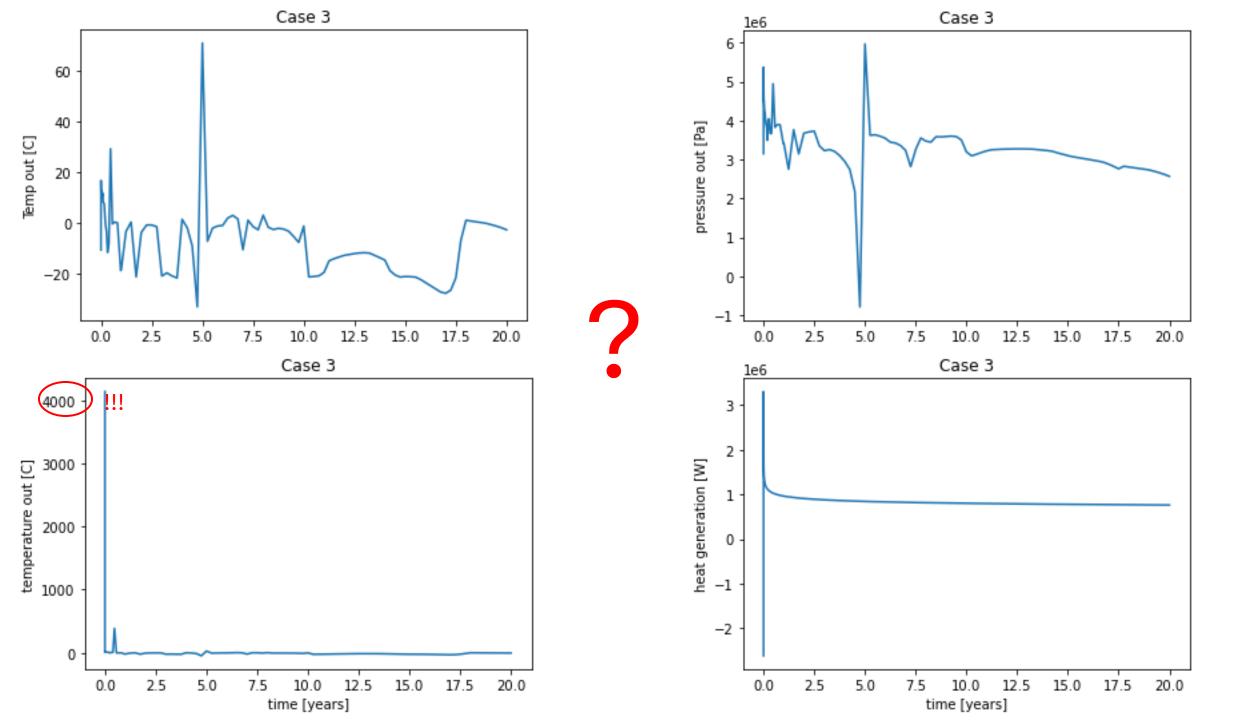


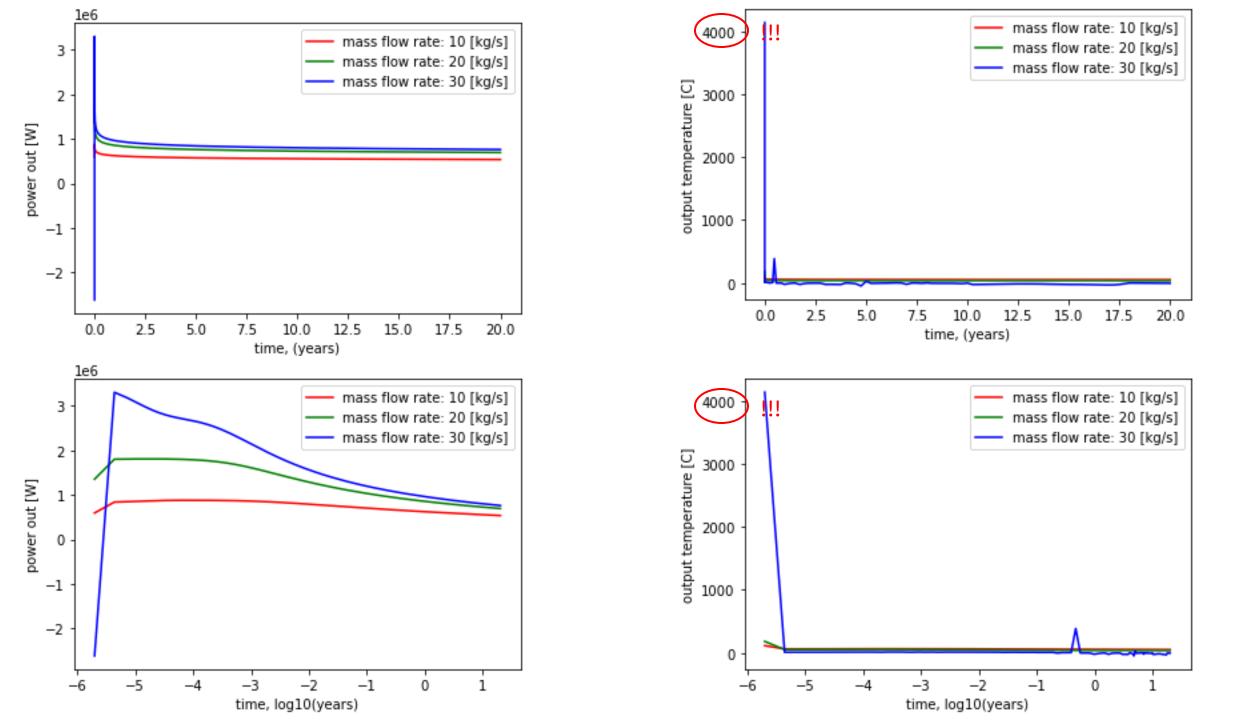


#### Case 3 – the same diameter throughout the well









## CO2 – the same diameter throughout the well

Horizontal well – 1000 m horizontal section

Casings:

Constant delta annular (0.0868 m) as for casings ID12.347 inch

Injection press.: 10 MPa

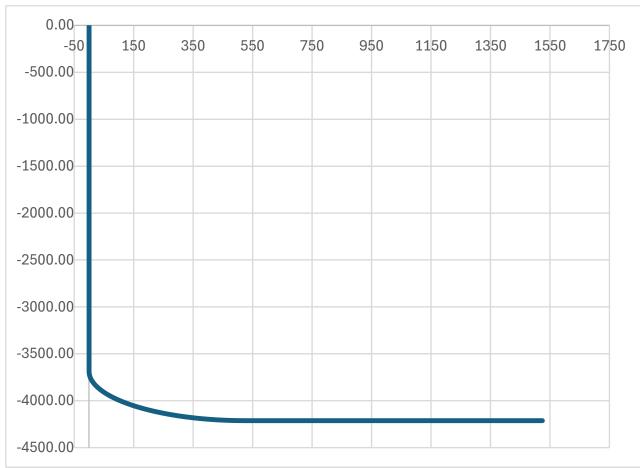
Rate: 10 kg/s

Injection temp.:

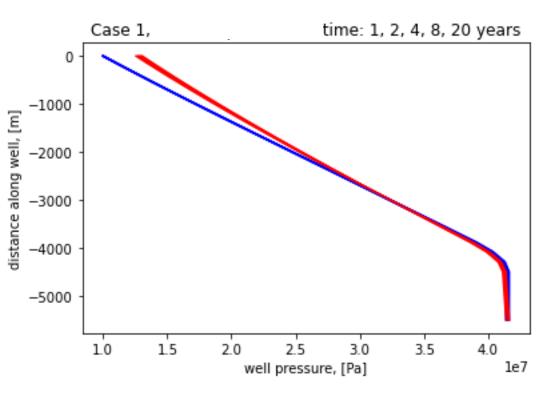
Case 1:35 °C

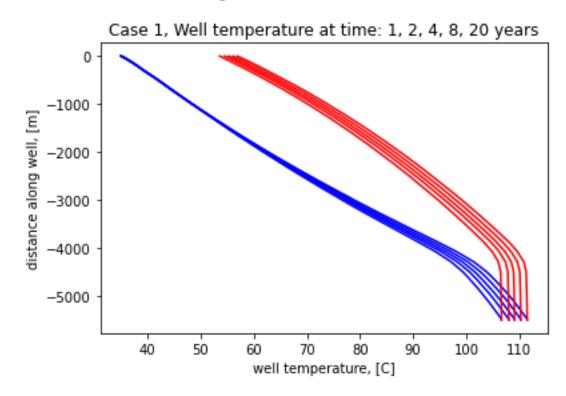
Case 2: 45 °C

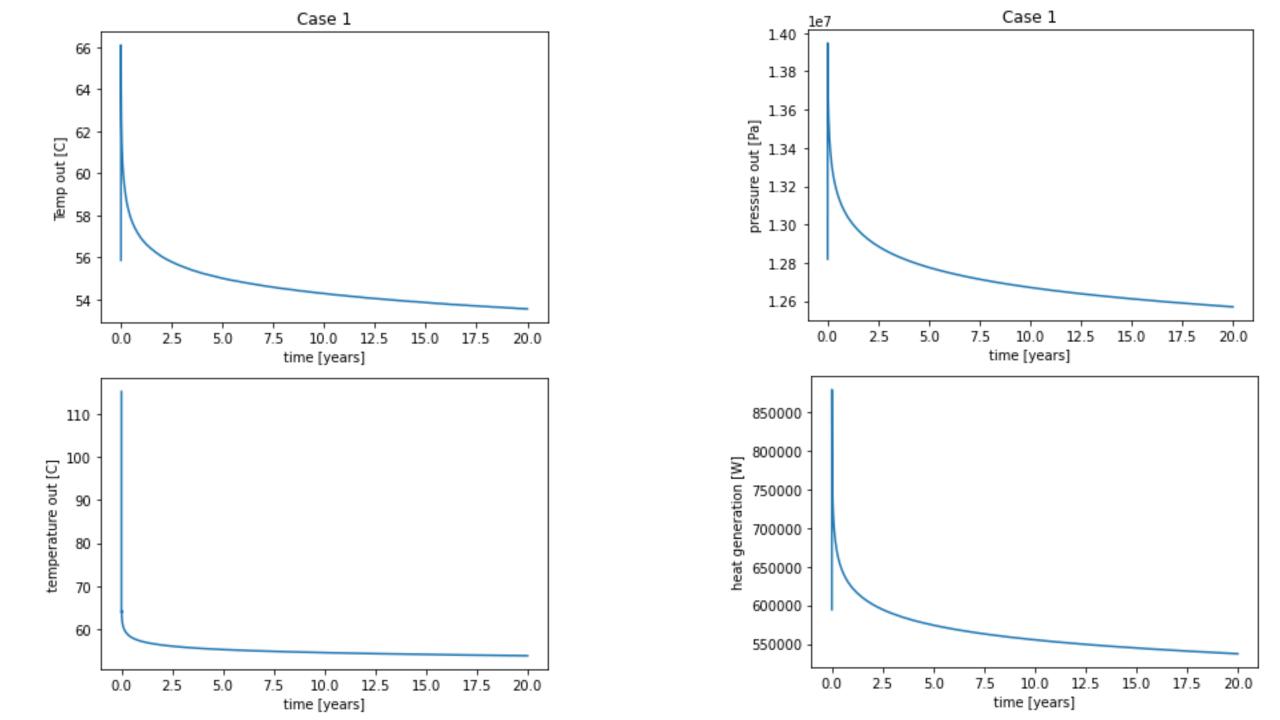
Case 3:55 °C



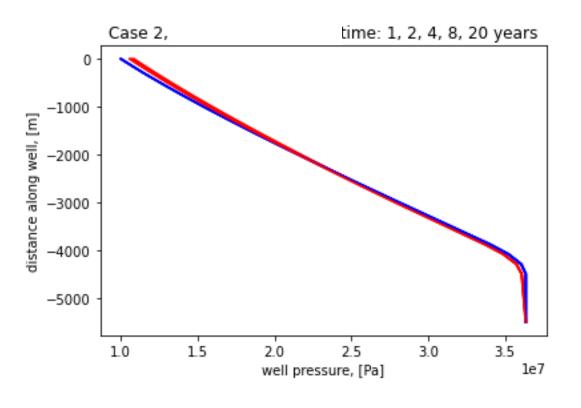
## Case 1 – the same diameter throughout the well

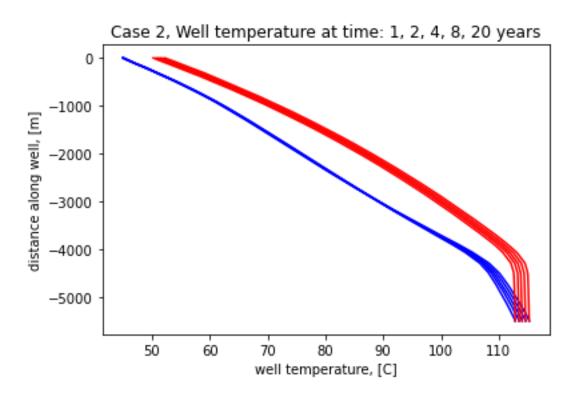


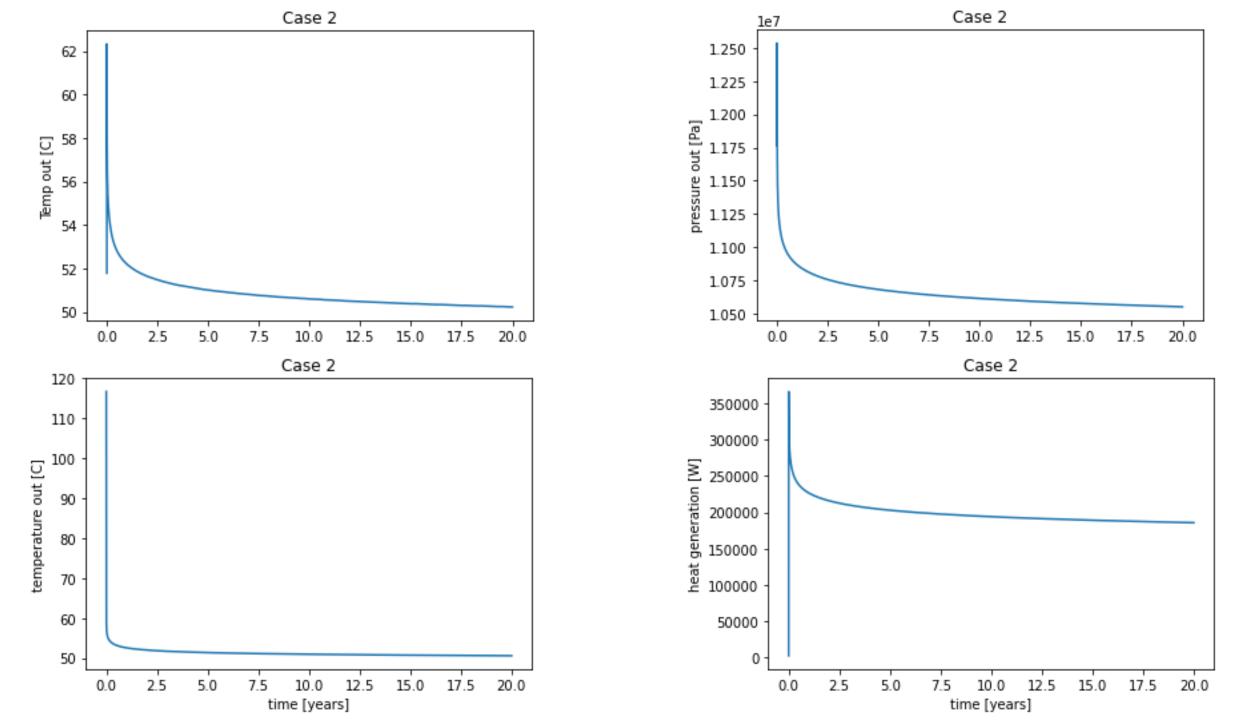




#### Case 2 – the same diameter throughout the well







#### Case 3 – the same diameter throughout the well

