

First set of images:

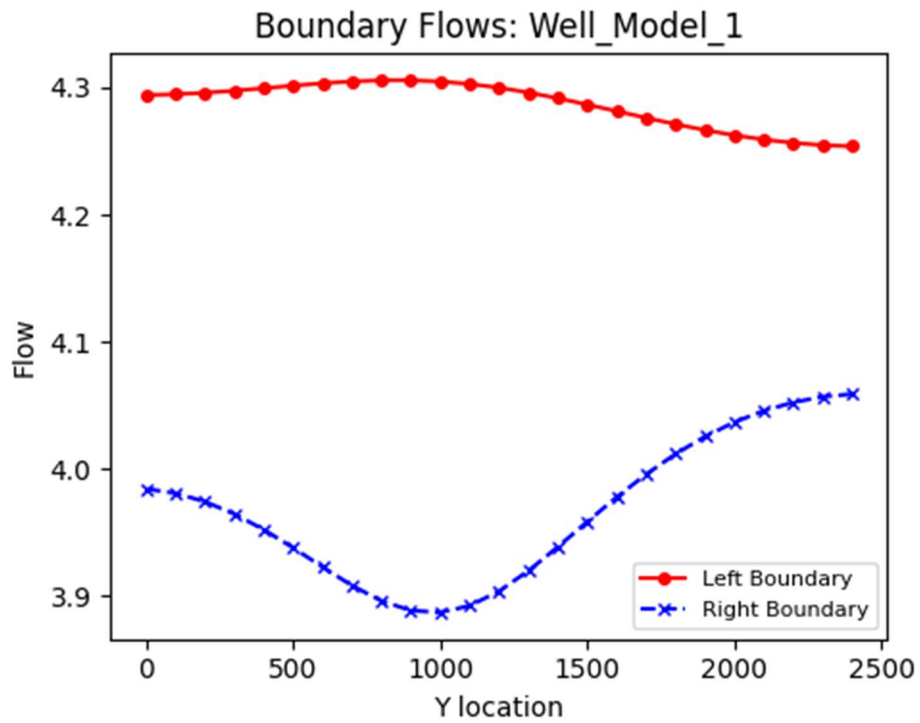


Figure 1: Initial conditions from base code, no center line flow plotted.

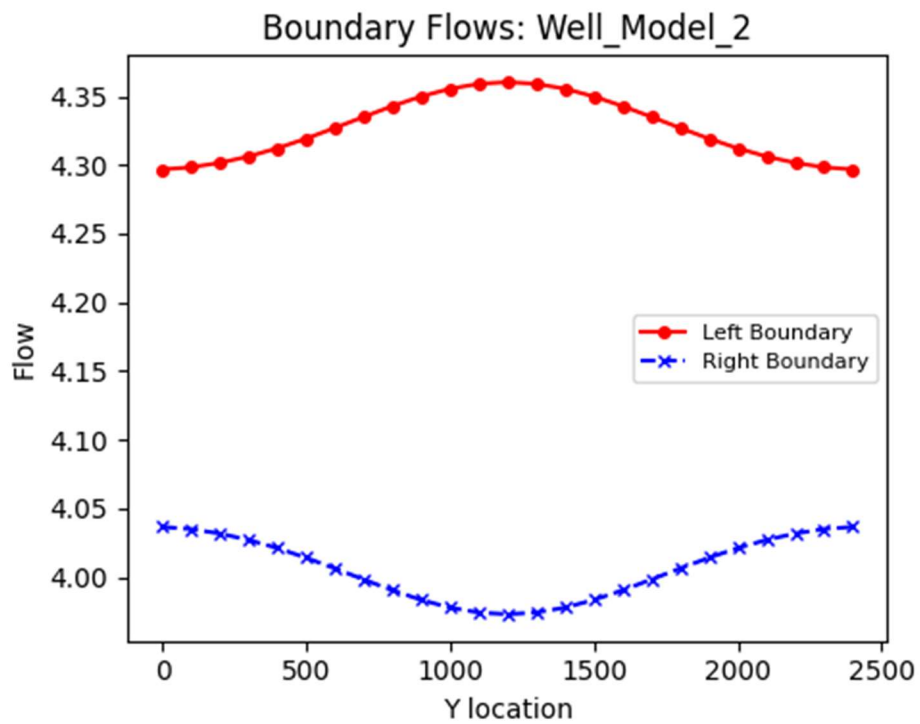


Figure 2: Flow rate on y-transect with well moved to center row/col.

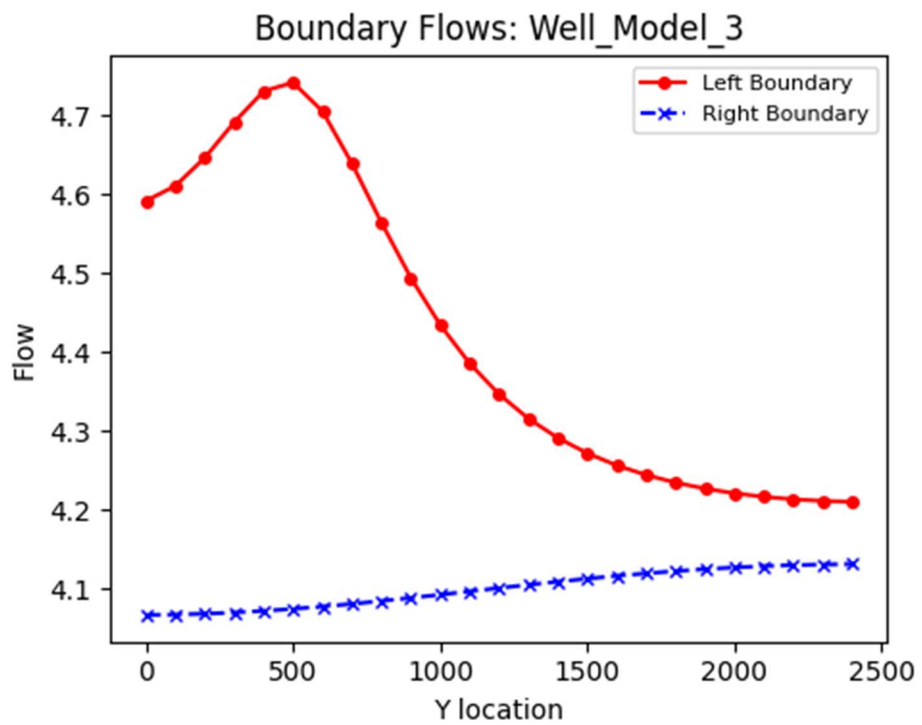


Figure 3: Flow rate on y-transect with well moved to  $[0,5,5]$  (MODFLOW Coord.)

Second set of images:

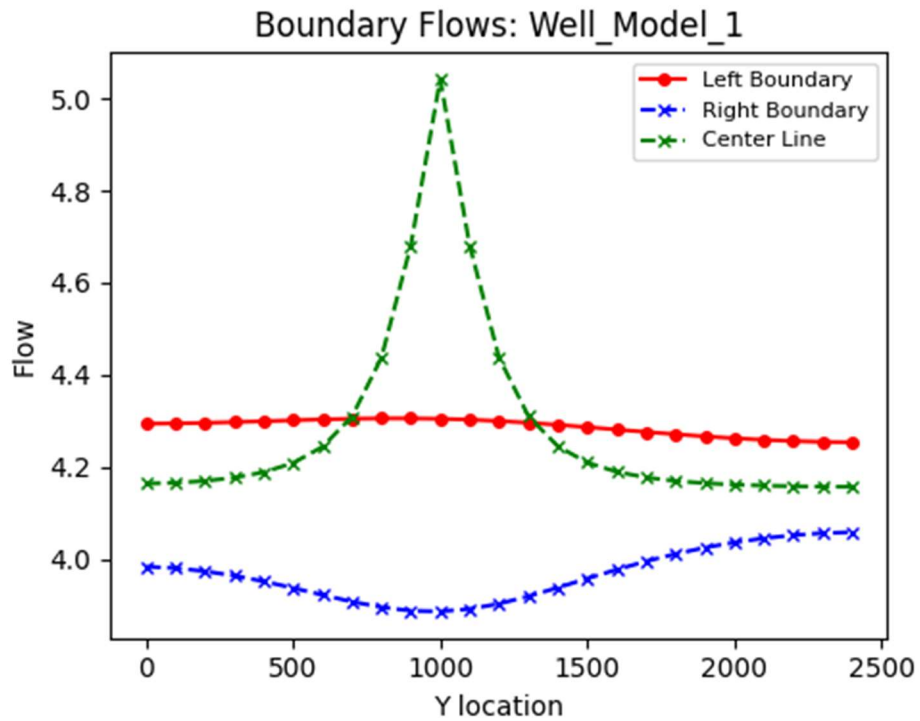


Figure 4: Flow on y-transect of initial model with center line flow shown.

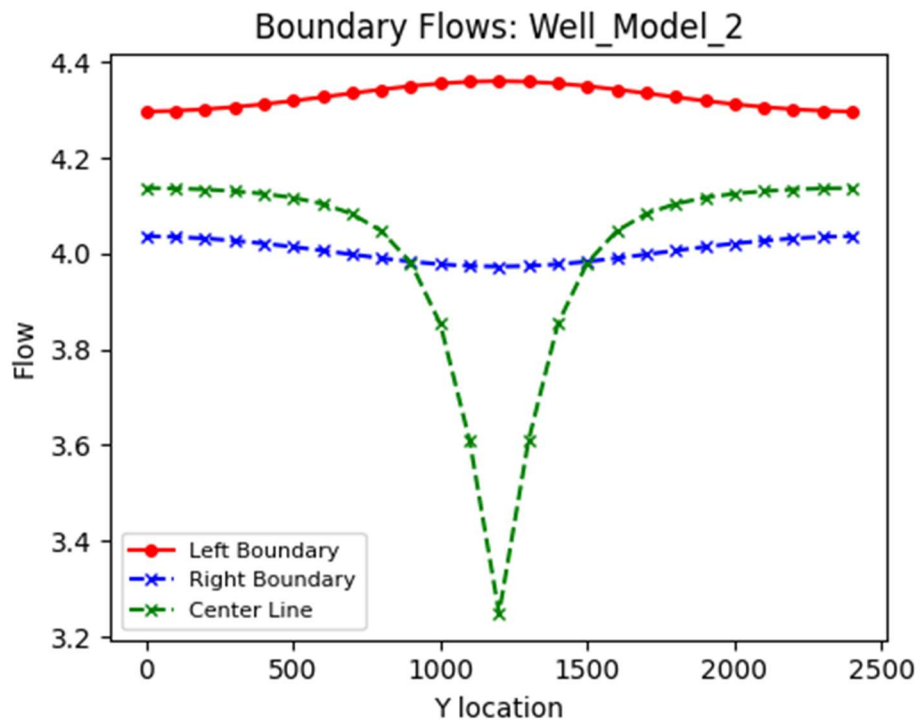


Figure 5: Flow on y-transect of model with well centered in domain; center line flow shown.

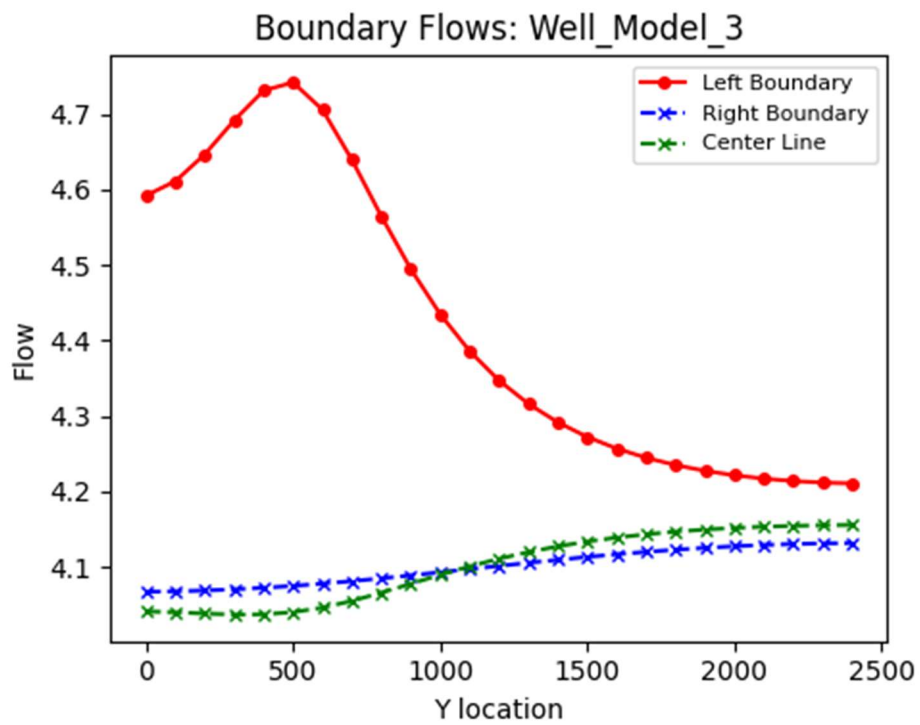


Figure 6: Flow on y-transect of model with well at  $[0,5,5]$  with center line flow shown.

Third set of images:

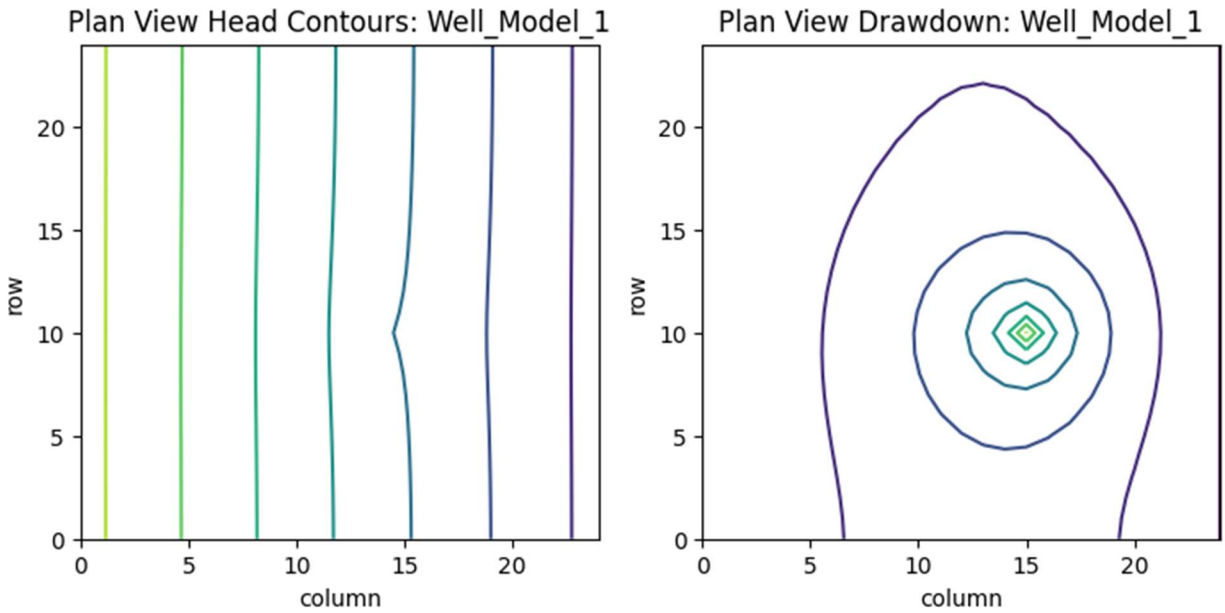


Figure 7: Head contours and well drawdown from the initial model.

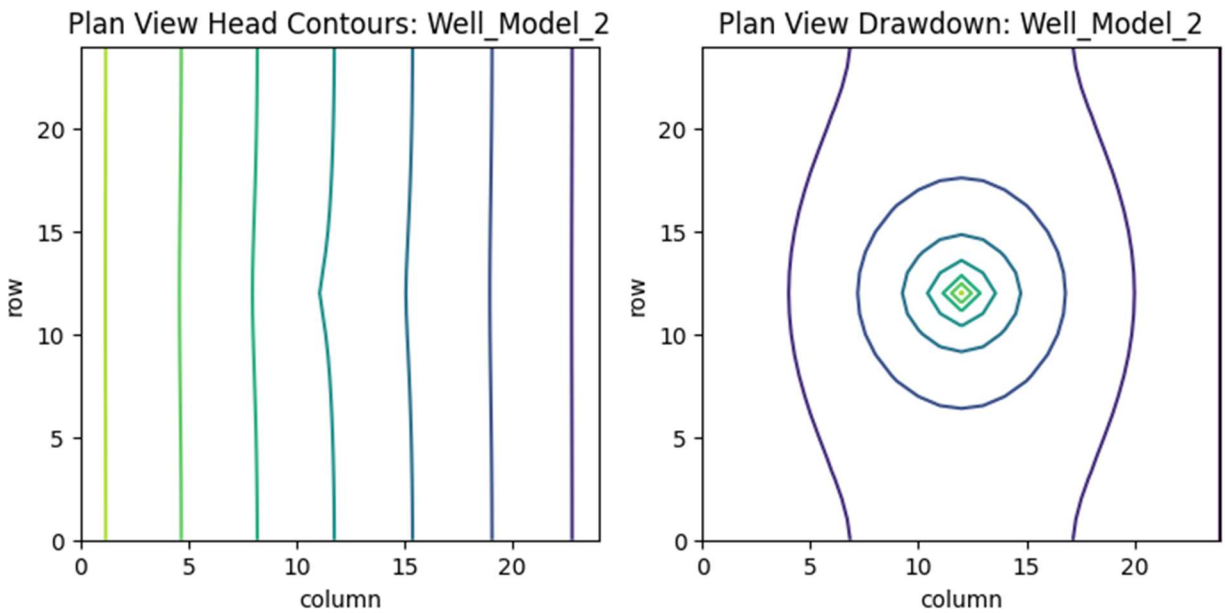


Figure 8: Head contours and well drawdown from the domain-centered well model.

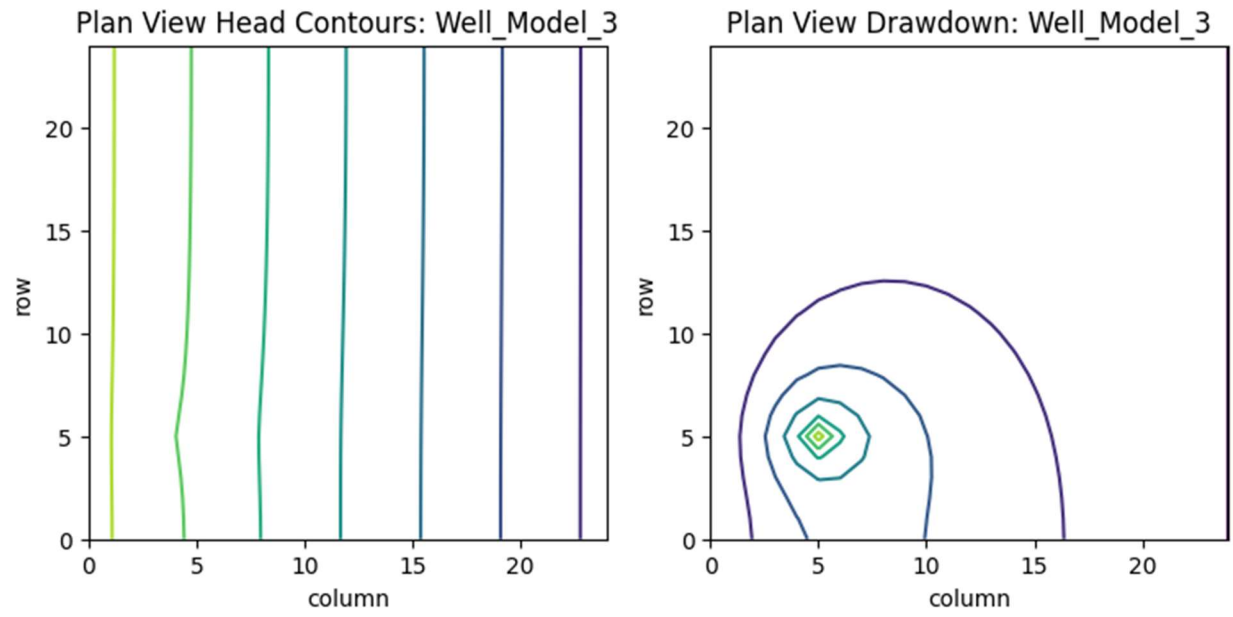


Figure 9: Head contours and well drawdown from the well at  $[0,5,5]$  model.

Fourth set of images:

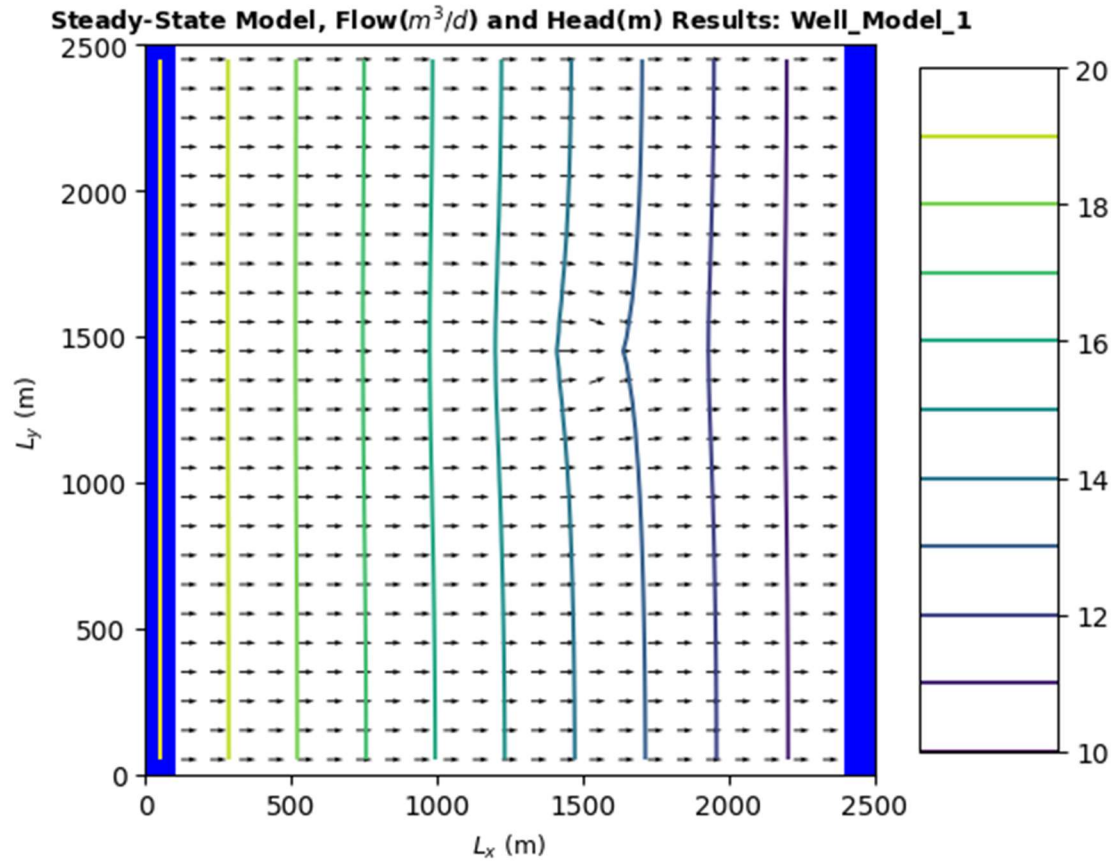


Figure 10: Head contours and flow lines overlaid on the model grid with constant head boundaries (blue vertical bars) for the initial model.

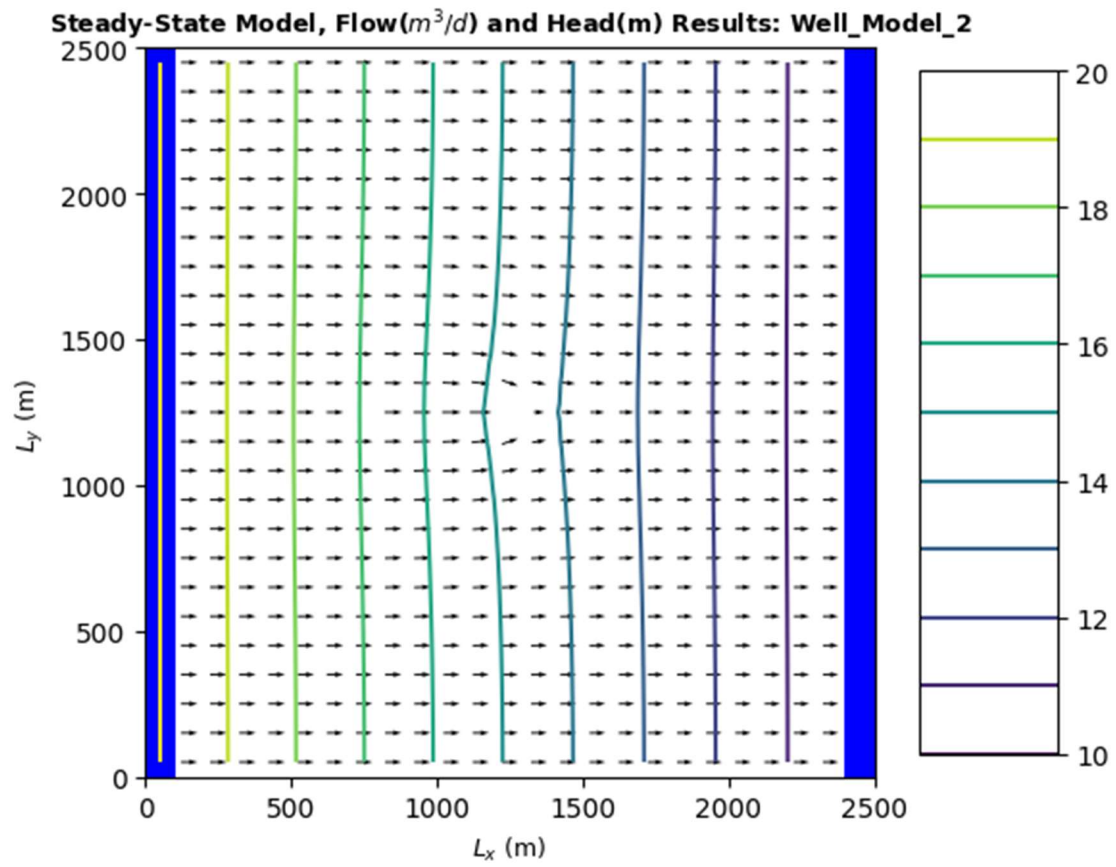


Figure 11: Head contours and flow lines overlaid on the model grid with constant head boundaries (blue vertical bars) for the domain-centered well model.



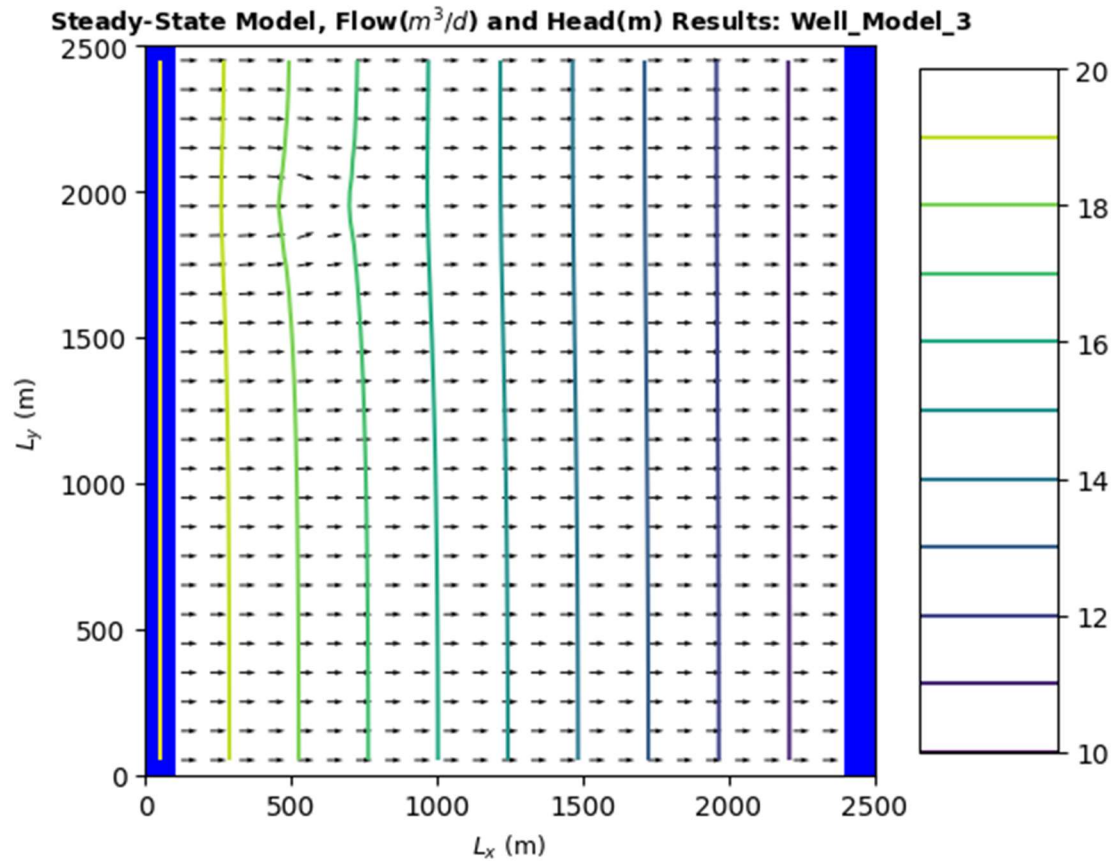


Figure 12: Head contours and flow lines overlayed on the model grid with constant head boundaries (blue vertical bars) for the well at  $[0,5,5]$  model. **Note** Python and MODFLOW count their rows differently, so the well appears at the top of the model plot using the flopy commands to plot, whereas using matplotlib and numpy flips the model vertically (I'm not entirely sure which one should be used, I'm assuming the flopy commands as they were intended for use with MODFLOW).