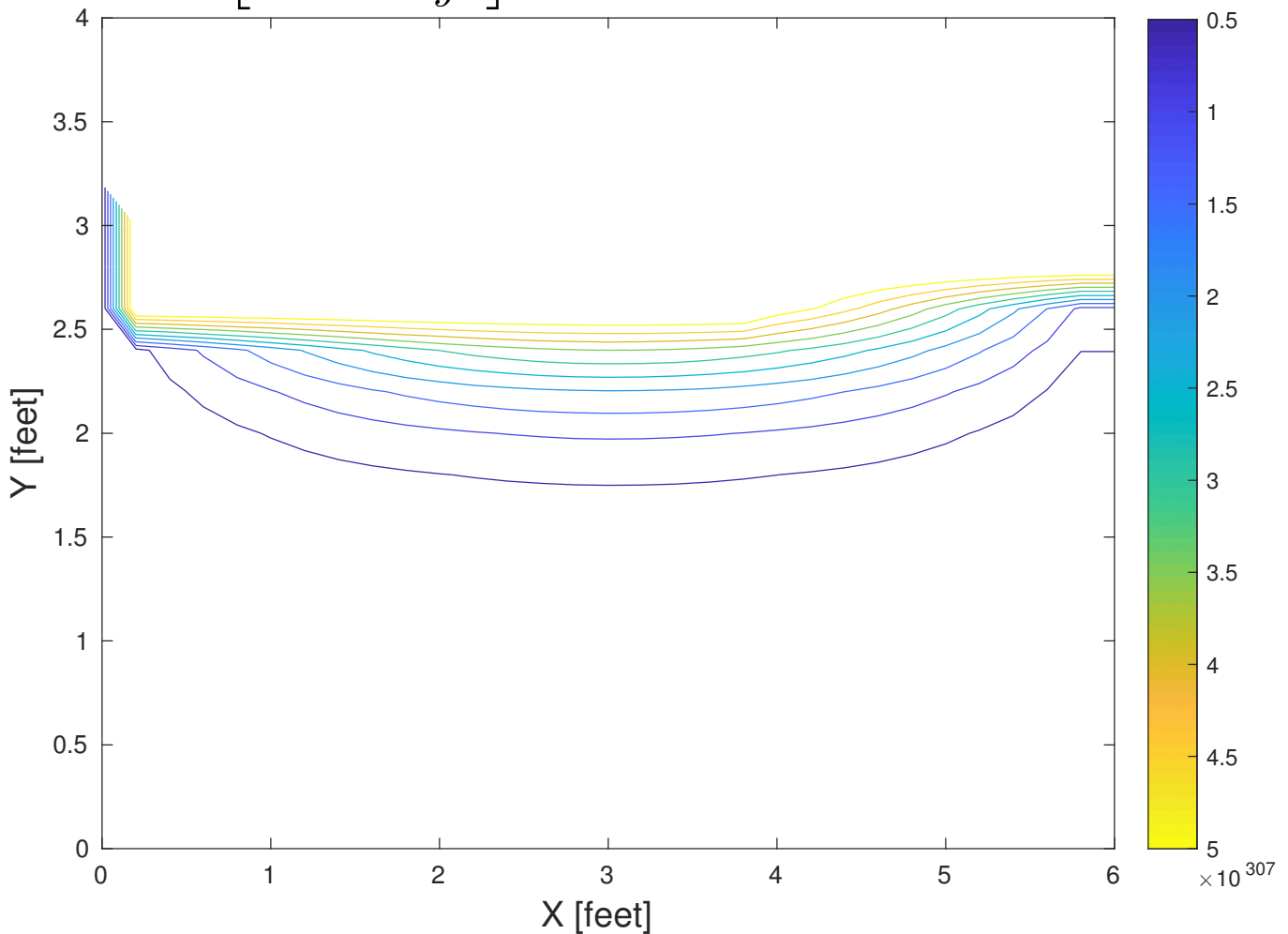


Solving  $\left[ \frac{\partial^2 \Psi}{\partial x^2} + \frac{\partial^2 \Psi}{\partial y^2} \right] = 0$  using Line SOR at  $w = 1.5$



For Line SOR, the solution reaches optimum convergence at a lower  $w$  than Point SOR. Still, passing this optimal value causes divergence. We can see that the code tries to keep the derivative boundary condition ( $d\Psi/dx = 0$ ) on the right hand side, but due to the divergence of earlier data points, this does not help it to converge.