This is a description for using the code to generate the plots reported in the manuscript egusphere-2023-2119.

1. Run the script "master_4creating_reference_model.m" to generate the data for figure 3, which is created by running the script "plot_figure3_reference_model.m".
2. Run the scripts "master4testing_deltat.m", "master4testing_e0.m", "master4testing_G0.m", "master4testing_sigma0.m" to generate the data for figures 4-7, which are created by running the script "plot_figures4_7_testing_sigma0_e0andG0.m".
3. Run the script "master4synthetic_trasects.m" to generate the data for figure 9, which is created by running the script "plot_synthetic_models_figure9.m".
4. Run the script "master4synthetic_trasects_without_boreholesamples.m" to generate the data for figure 9, which is created by running the script "plot_synthetic_models_without_boreholesamples_figureS2.m".
5. Run the script "master4example_trasects" to generate the data for figure 10, which is created by running the script "plot_example_transects_figure10.m".

An matlab GUI application is also built, it is available in my GITHUB site.