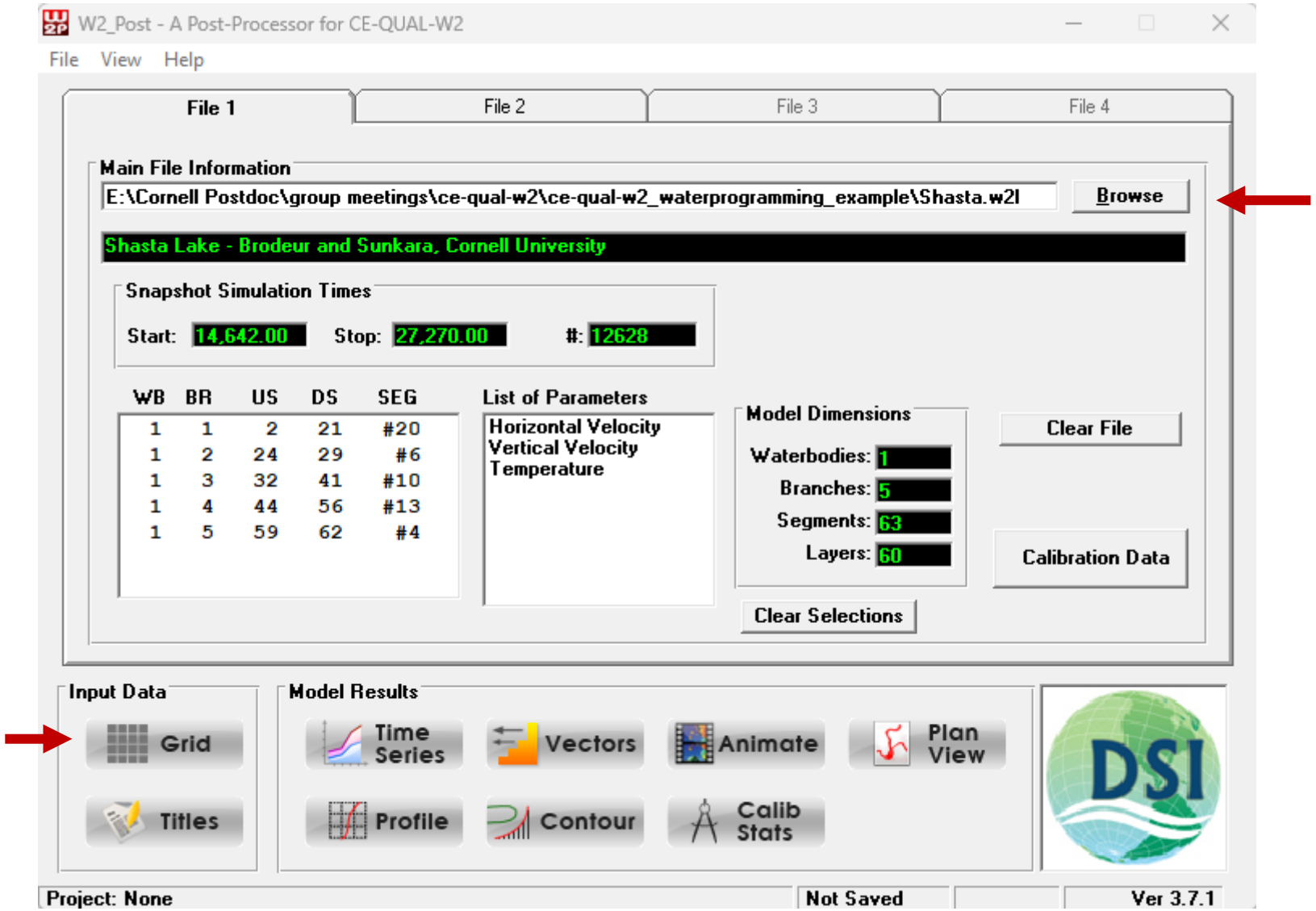
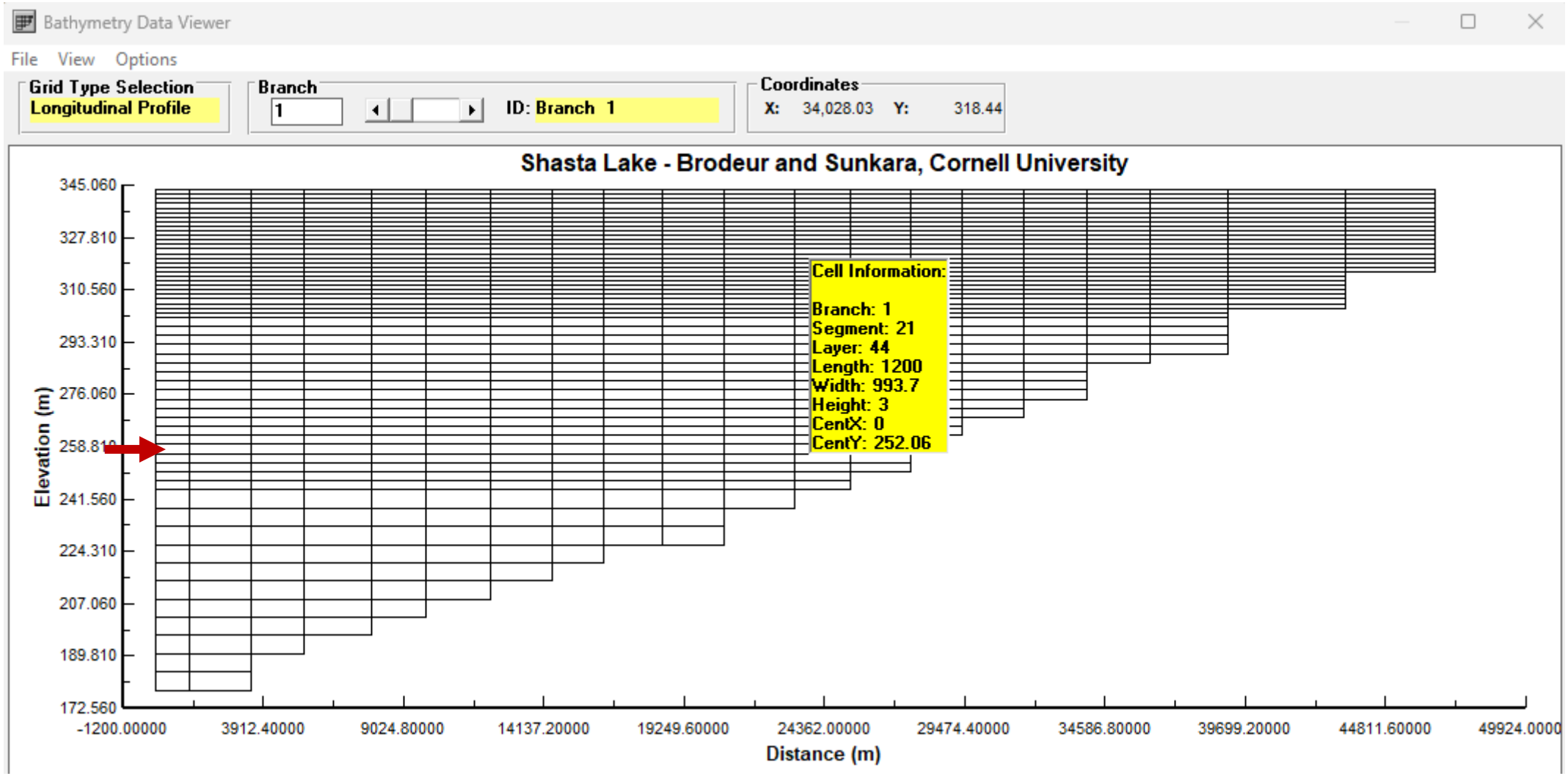
W2 post-processor tool example

After opening the W2_post tool, select the Shasta.w2l file in the ‘Browse’ window

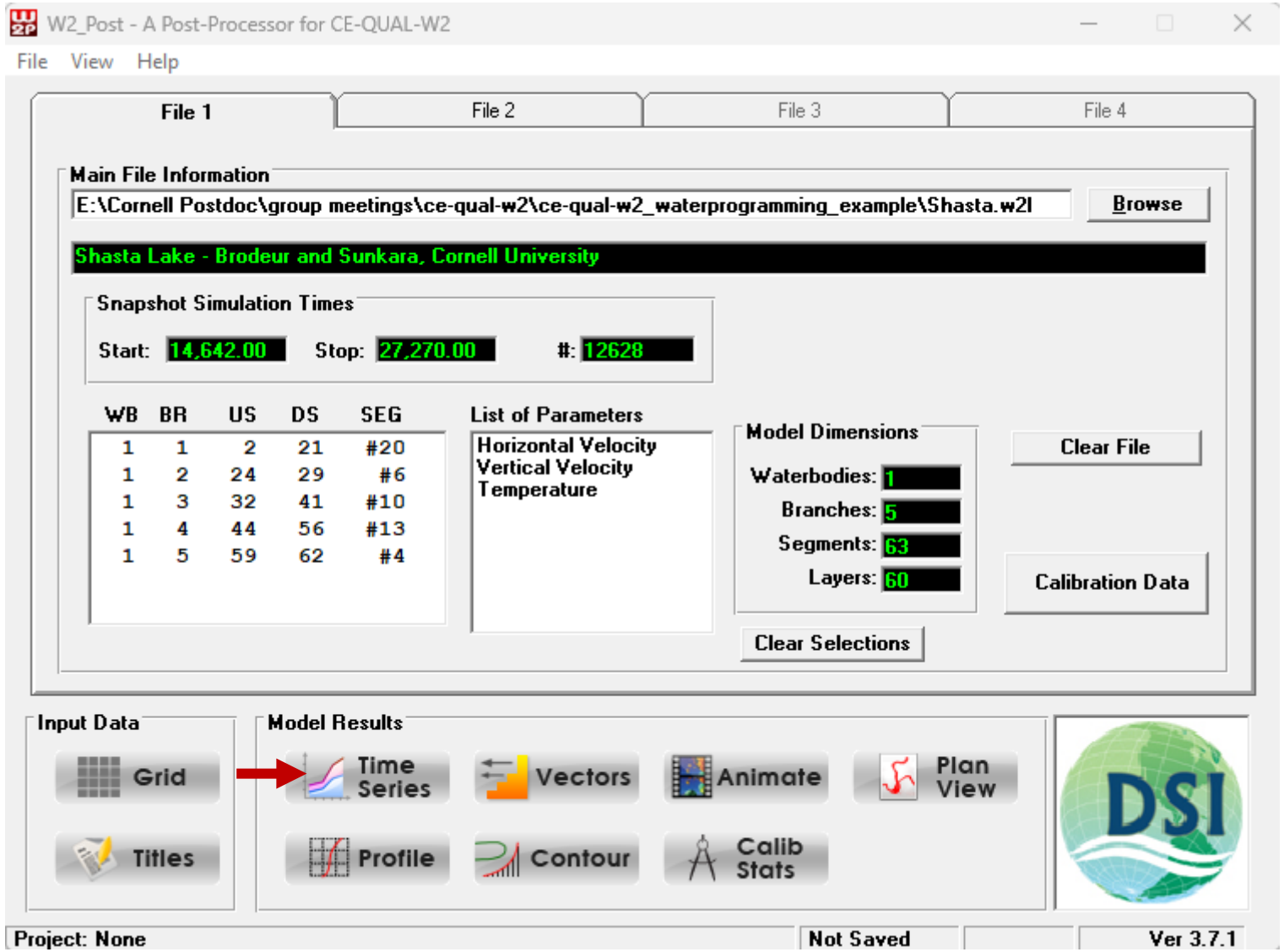


Select the Grid button to look at the underlying 2D mesh

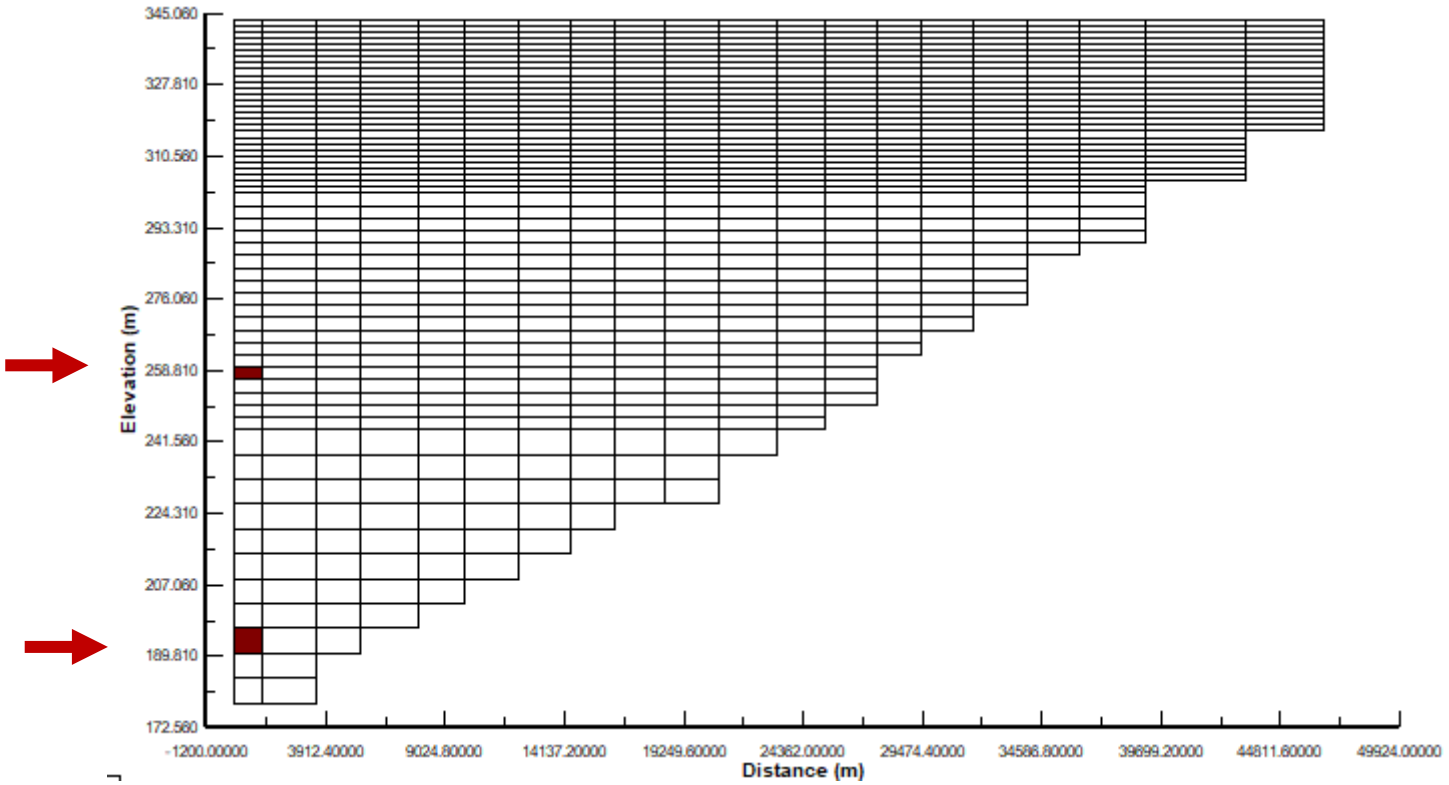
Ensure Branch 1 (main branch) is selected and toggle through View options to get to Longitudinal profile. Here you can select grid boxes with the cursor to see the segment and layer info associated with each grid box



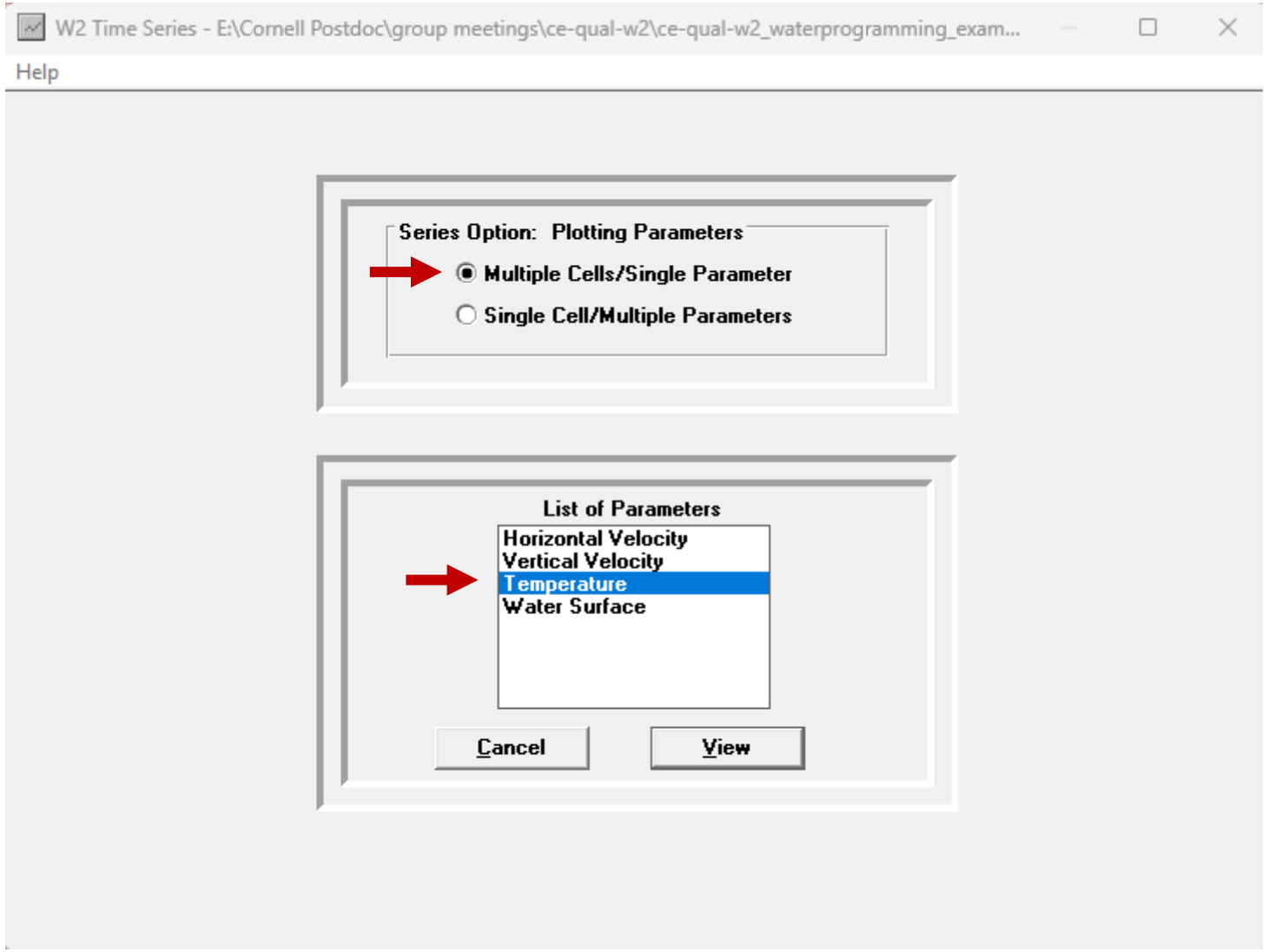
Go back to main screen by closing out Grid tool. Select the Time Series button to look at timeseries plots



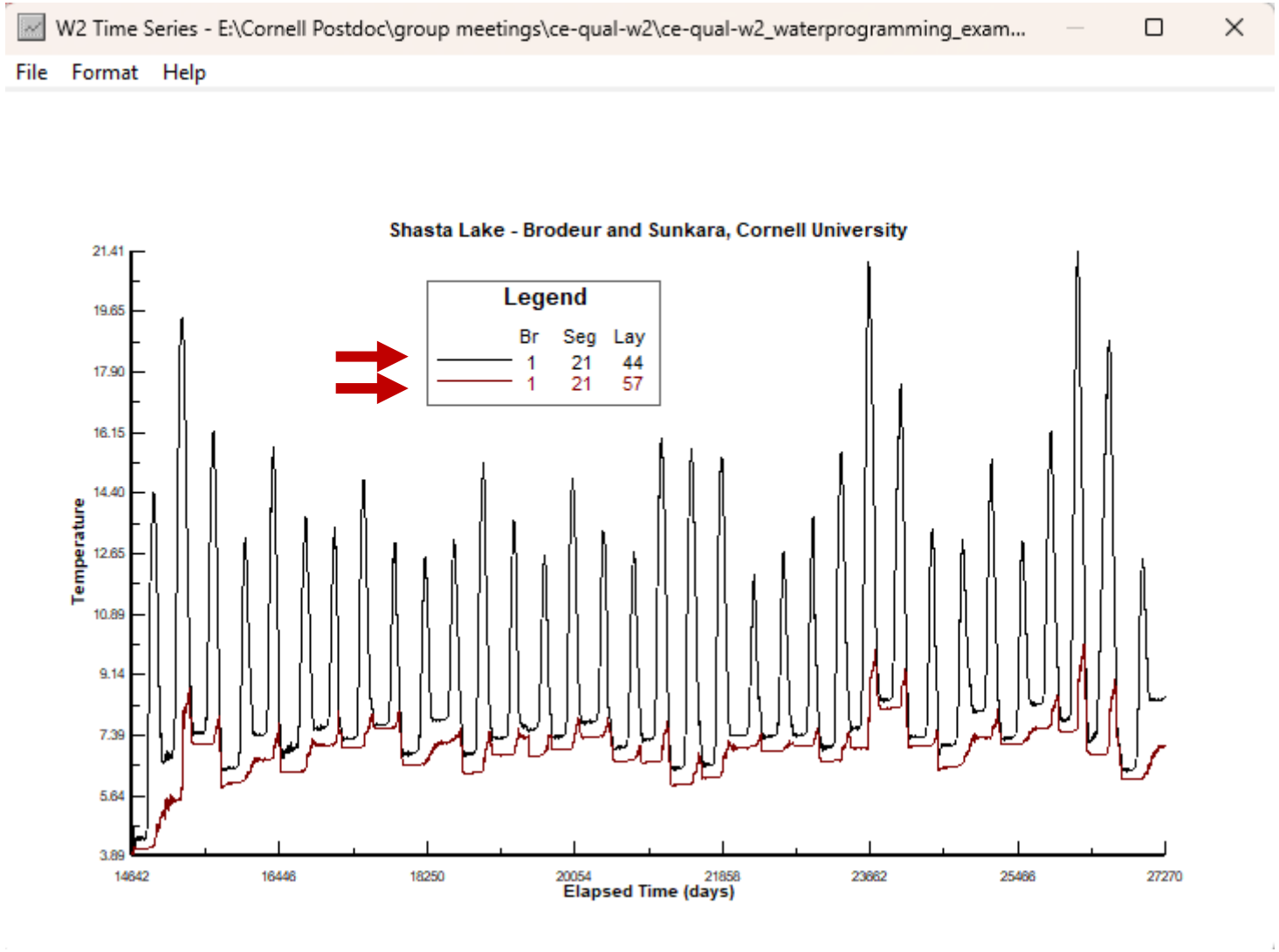
You'll first have the option to select which grid cells you want to look at timeseries for. You can select a mid-depth point and a very deep point right next to the dam to look at as shown below



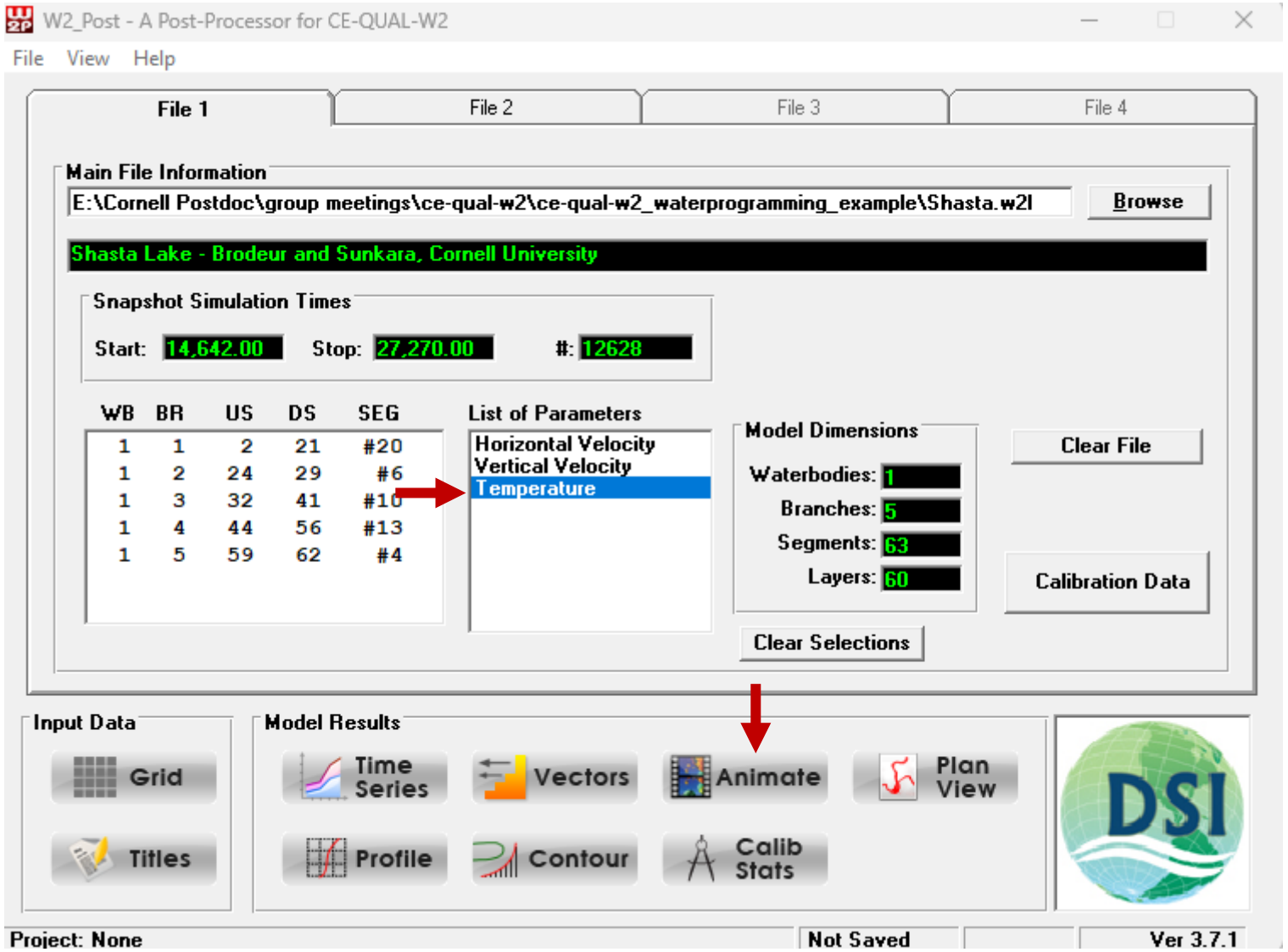
With multiple grids selected, let's look at temperature (Single Parameter) for Multiple Cells option



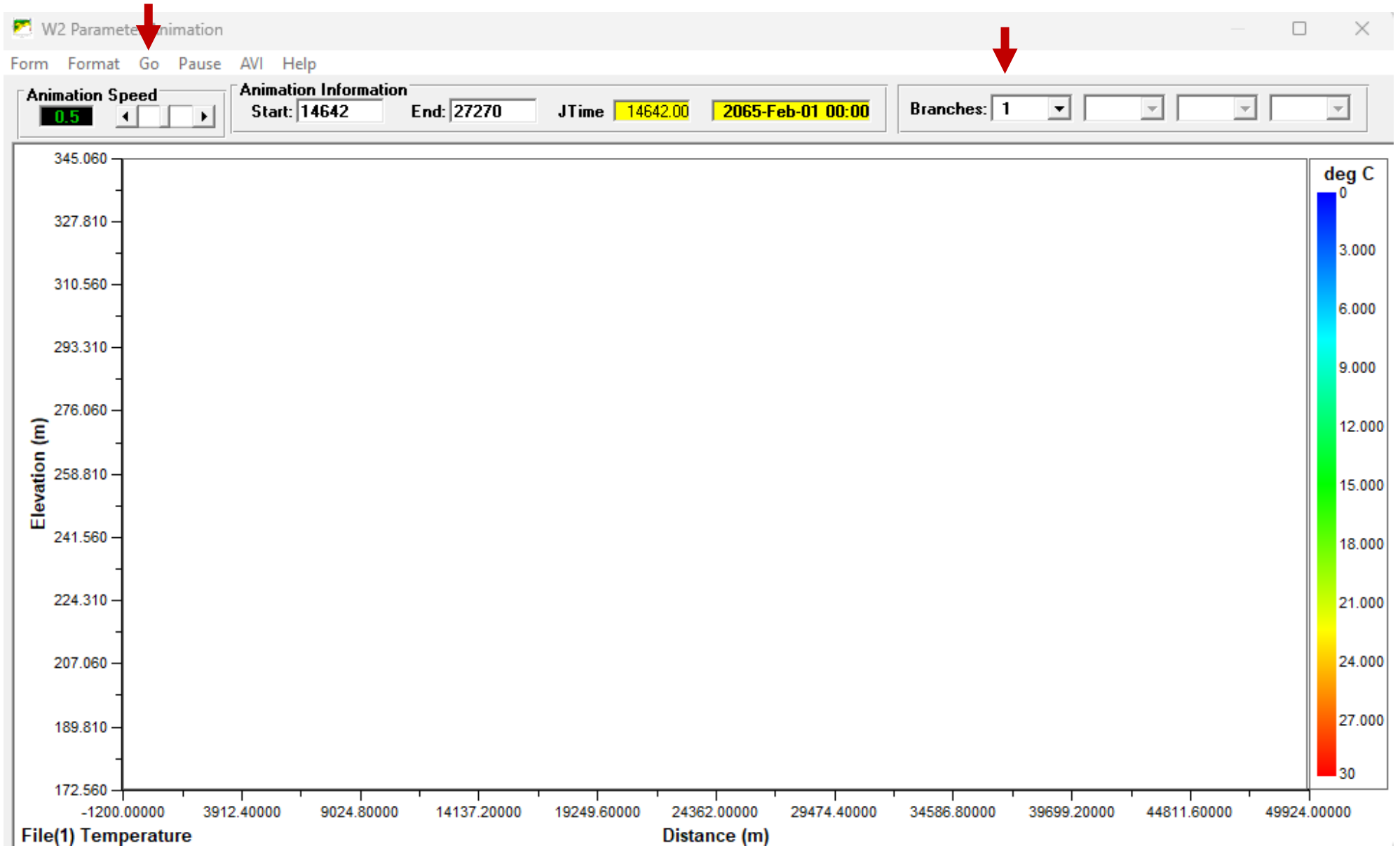
The output should look something like this. Note that the layers increase value with depth, so layer 57 is the deep one. You can see that the lower layer varies little in temperature and is cold throughout the simulation period; the middle layer is warmer and much more variable.



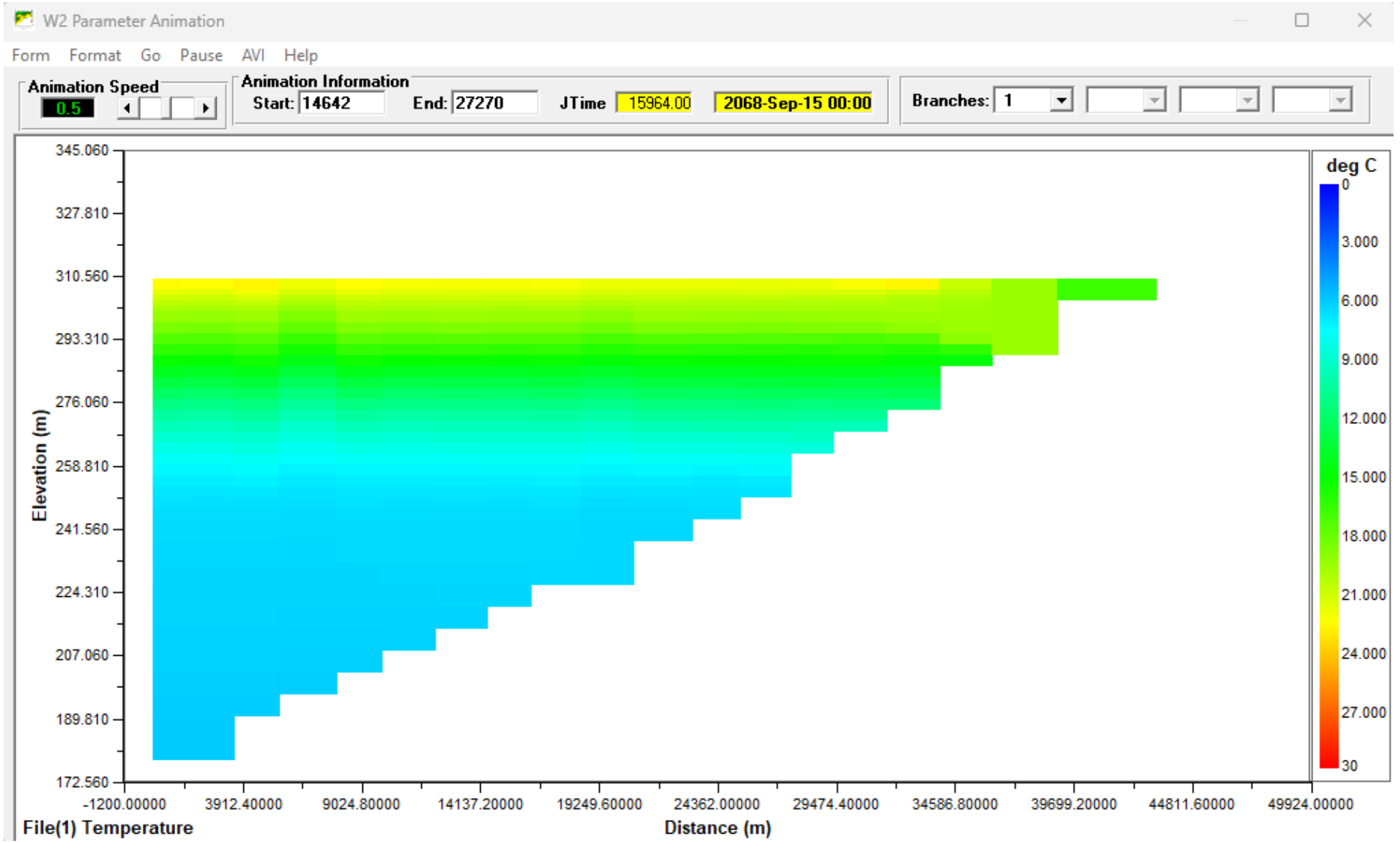
Close out the Time Series view. Now we'll take a look at the Animate feature by selecting Temperature in the List of Parameter box and the Animate button



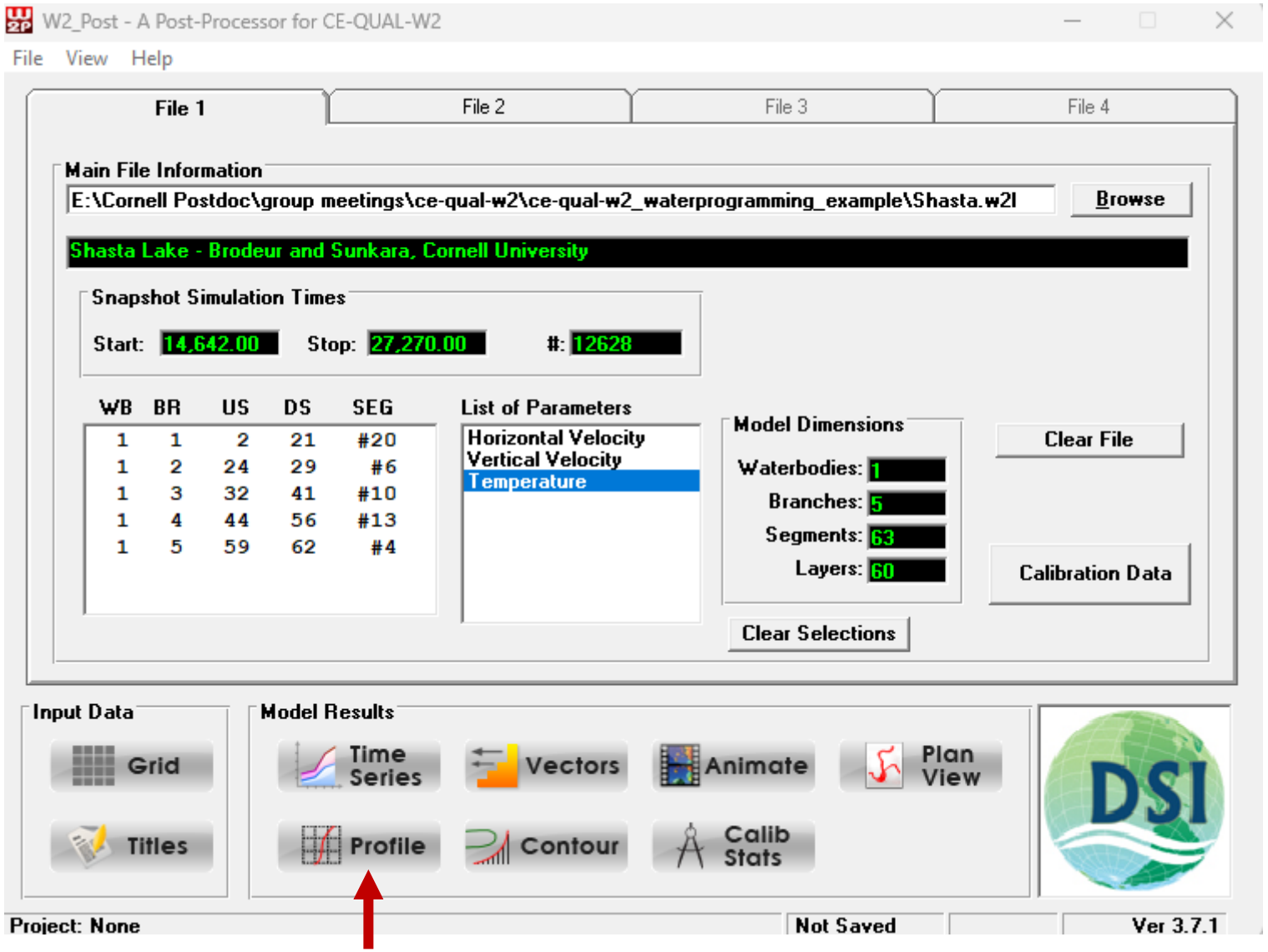
Select the Go menu then Resume to start the temperature animation for Branch 1



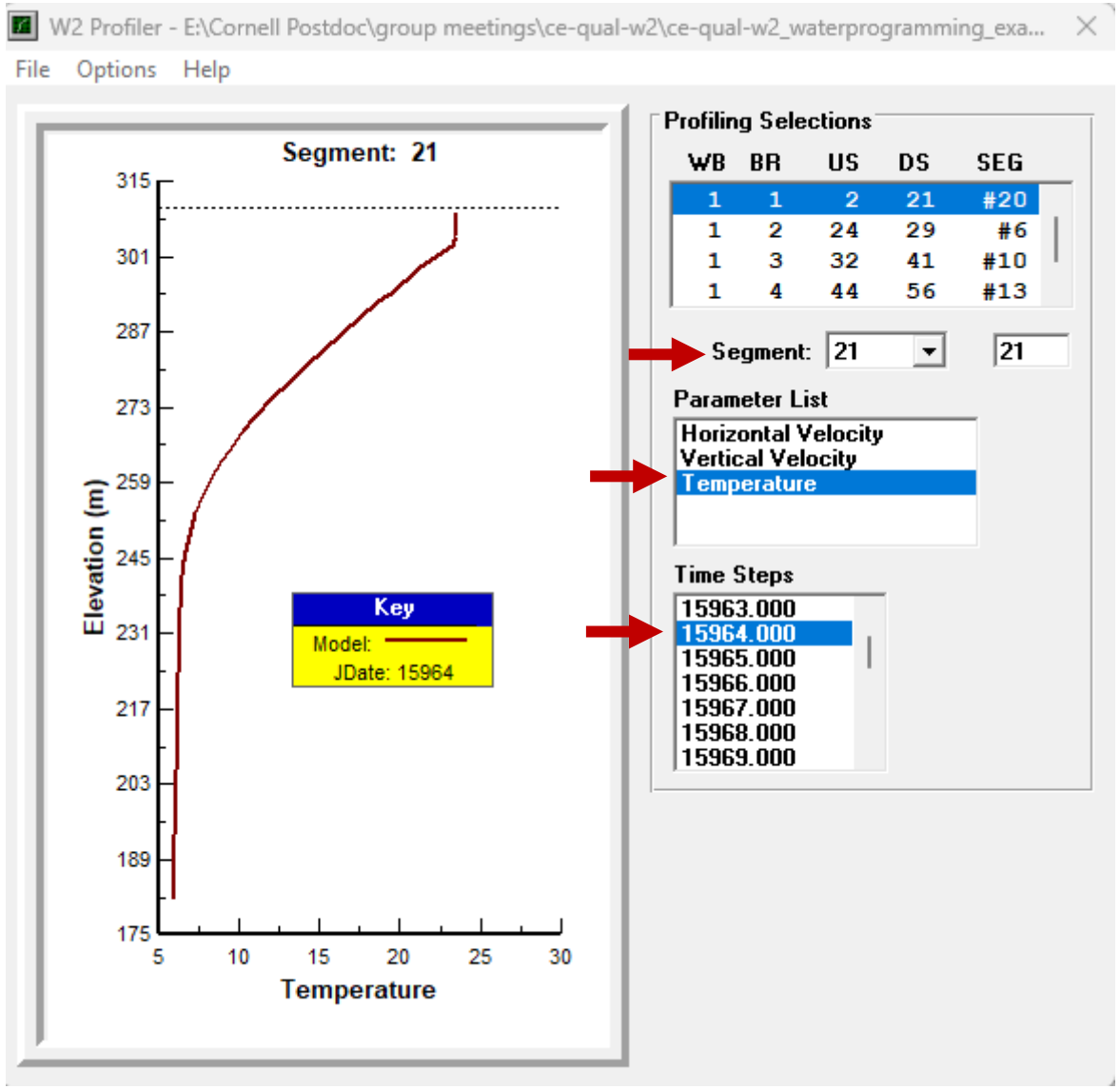
We can pause it at Jtime (Julian Day) 15964, equating to a mid-September day. Note the high degree of temperature stratification at the upper levels of the reservoir and the relatively large cold water pool



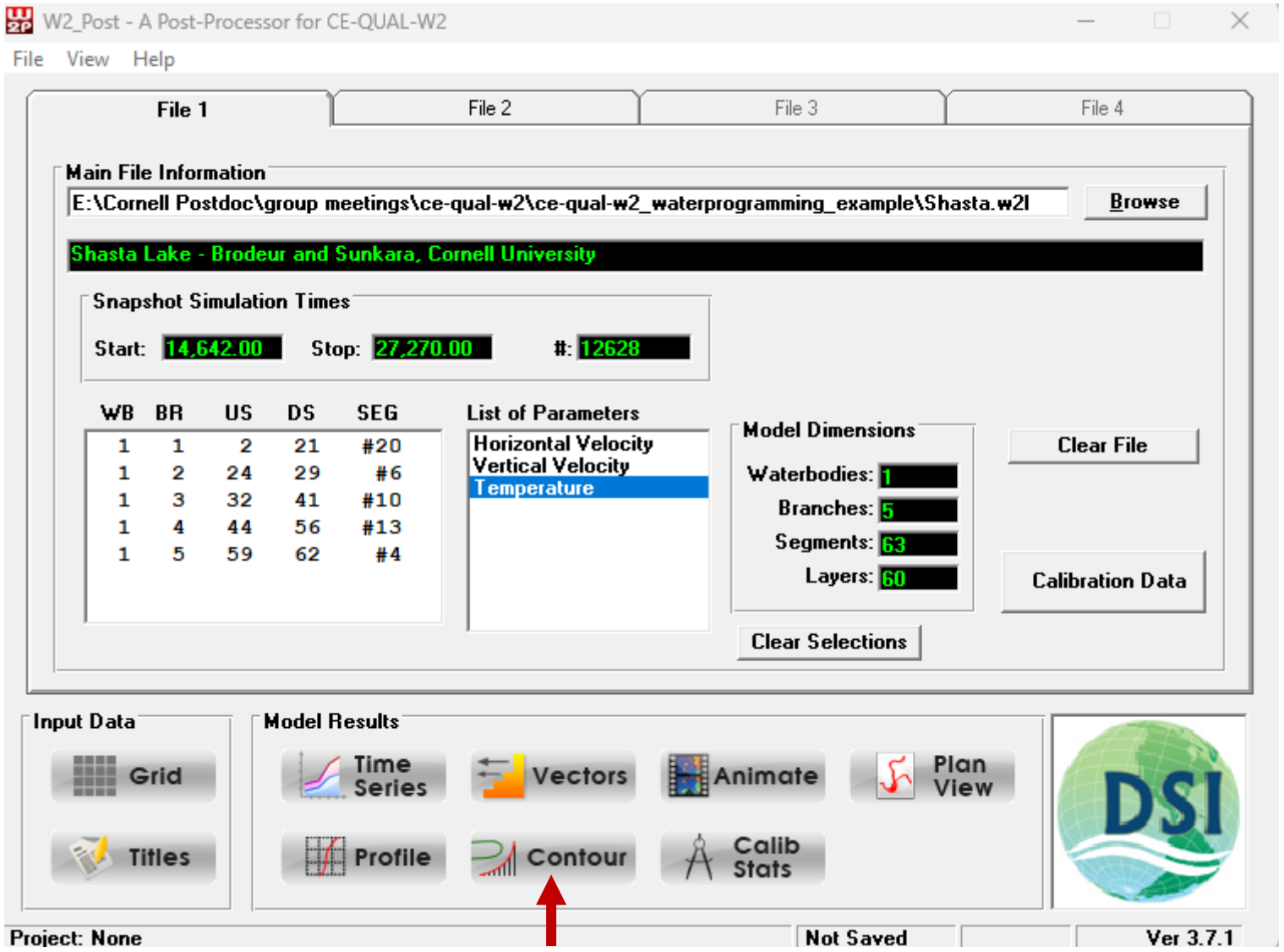
Close out the Animate window and go back to the main screen. Now select the Profile button



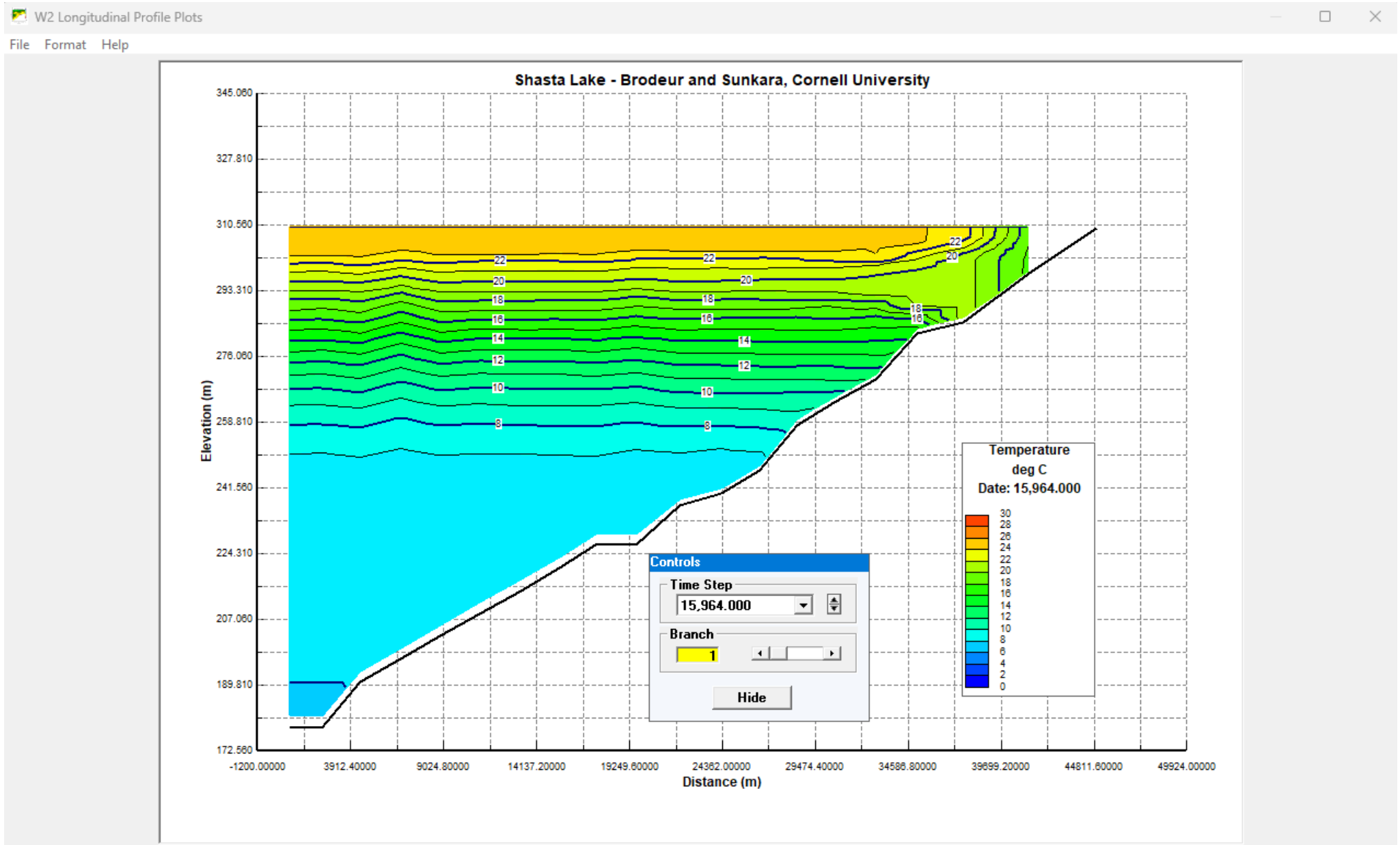
If we select Segment 21 (segment closest to dam) and Temperature from the Parameter List, then scroll down Time Steps to 15964, you can see a profile representation of the Reservoir temperature



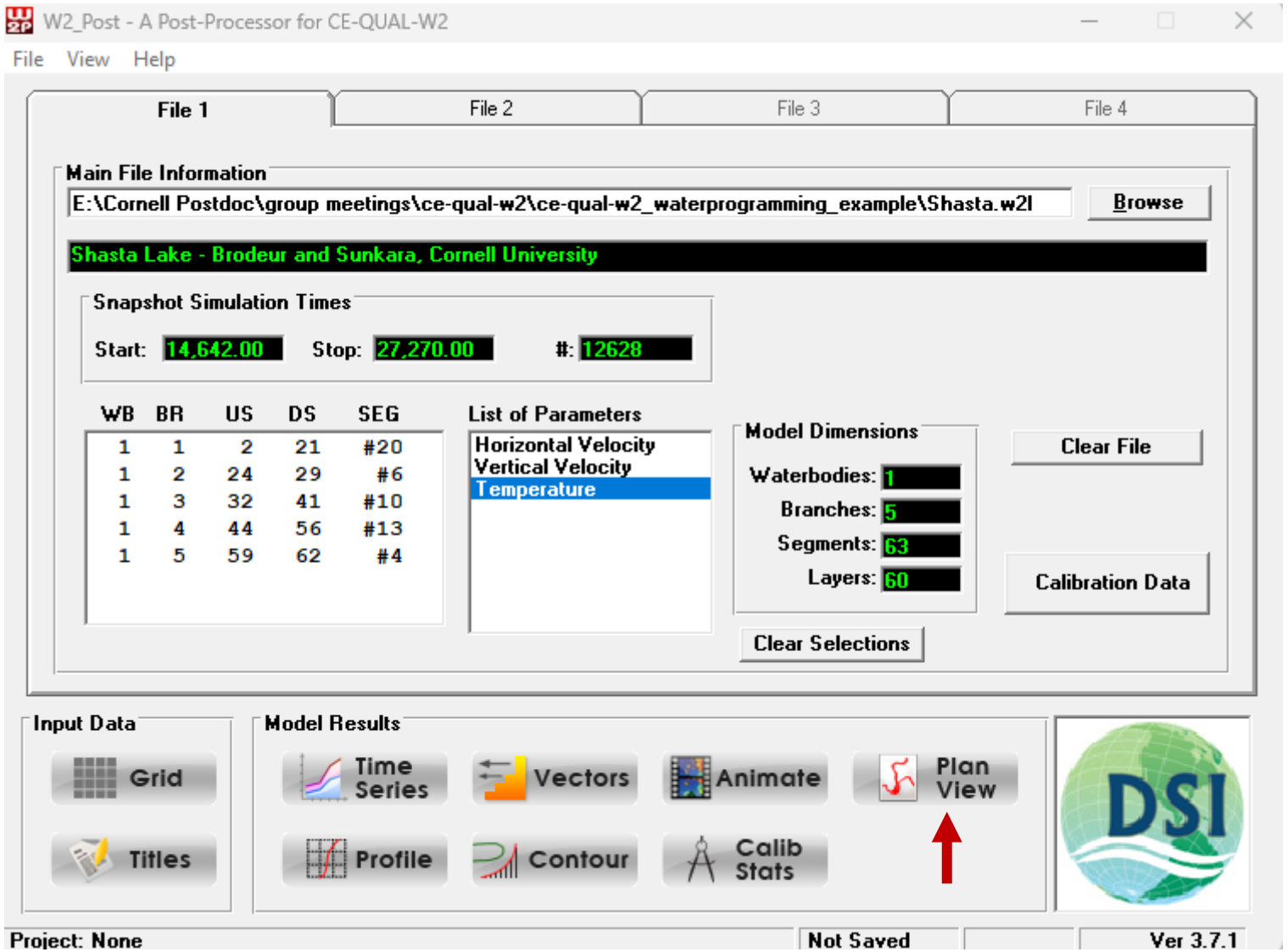
Go back to the main screen and select the Contour button



Ensure you are again in Branch 1 and at Time Step 15964. You can see a contour representation of the Temperature profile for this timestep that really highlights the stratification



Lastly, go back to the main screen and select the Plan View button



Ensure the Plan View is in ‘Normal’ view mode. Ensure Temperature is still selected and the 15964 Time Step. Here you can see the longitudinal structure of the branches and segments. Note that segments closest to the inflow points tend to be colder due to cooler water flowing into the system