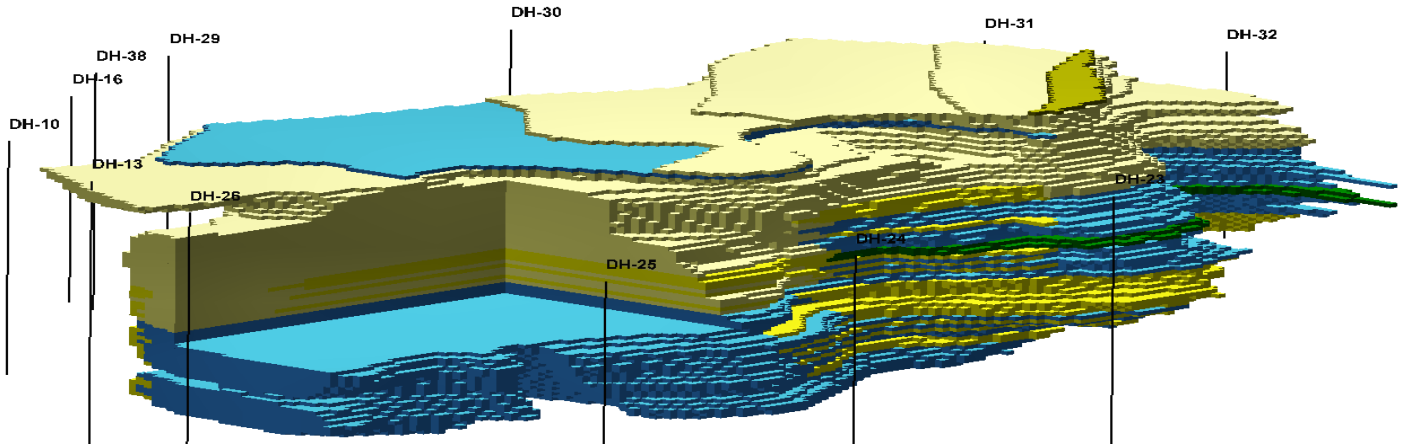


# Changes to the RockWorks Lateral Blending Algorithm

2/20/22



The following changes (Figure 1) have been made to the **Lateral Blending** algorithm.

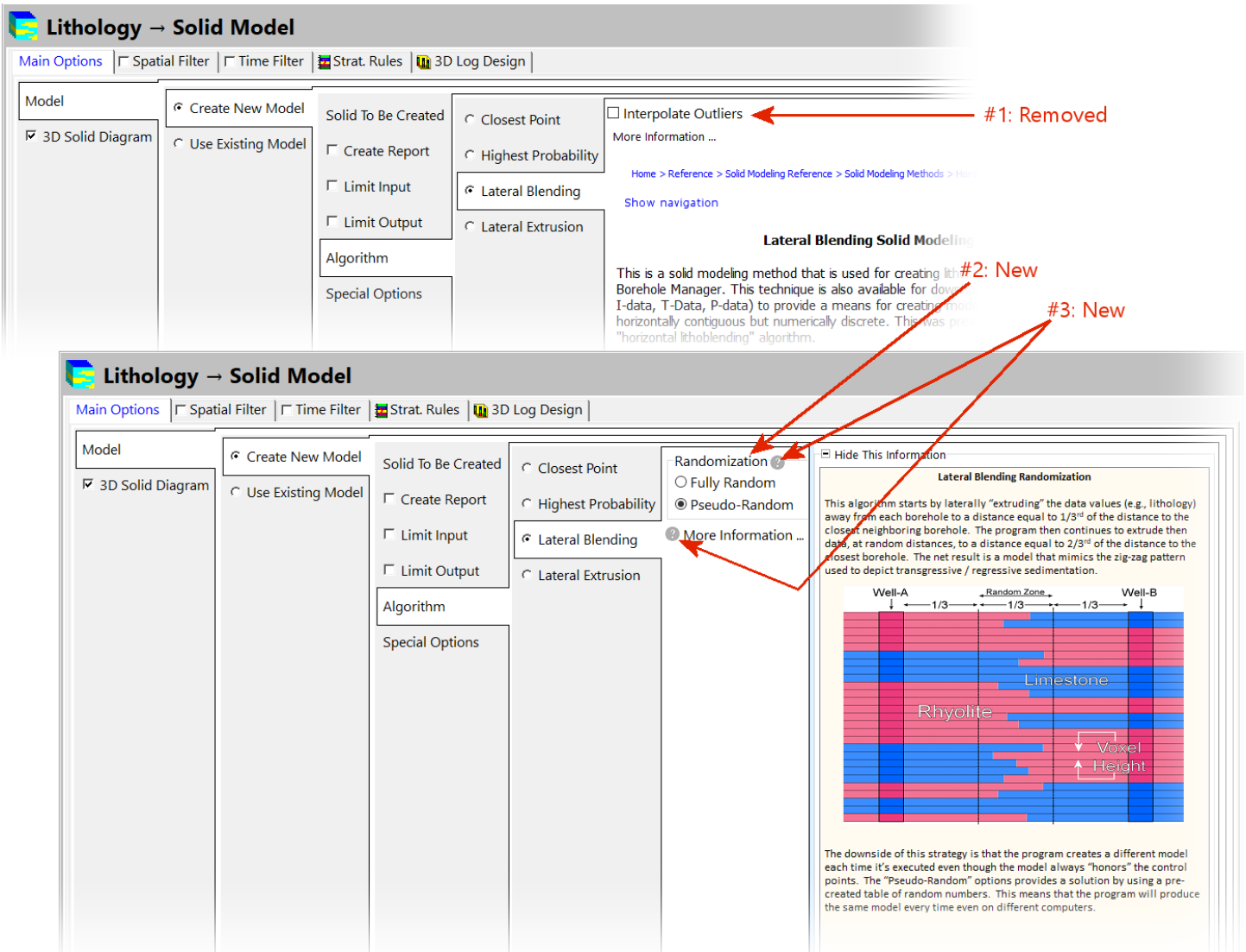


Figure 1

1. The **Interpolate Outliers** option has been removed from the menu. Instead, the model is best constrained by selecting the **Special Options / Polyclip / Exterior / Automatic** option for vertical clipping or the **Special Options / Superface & Subface** filters for sub-horizontal clipping (Figure 2).

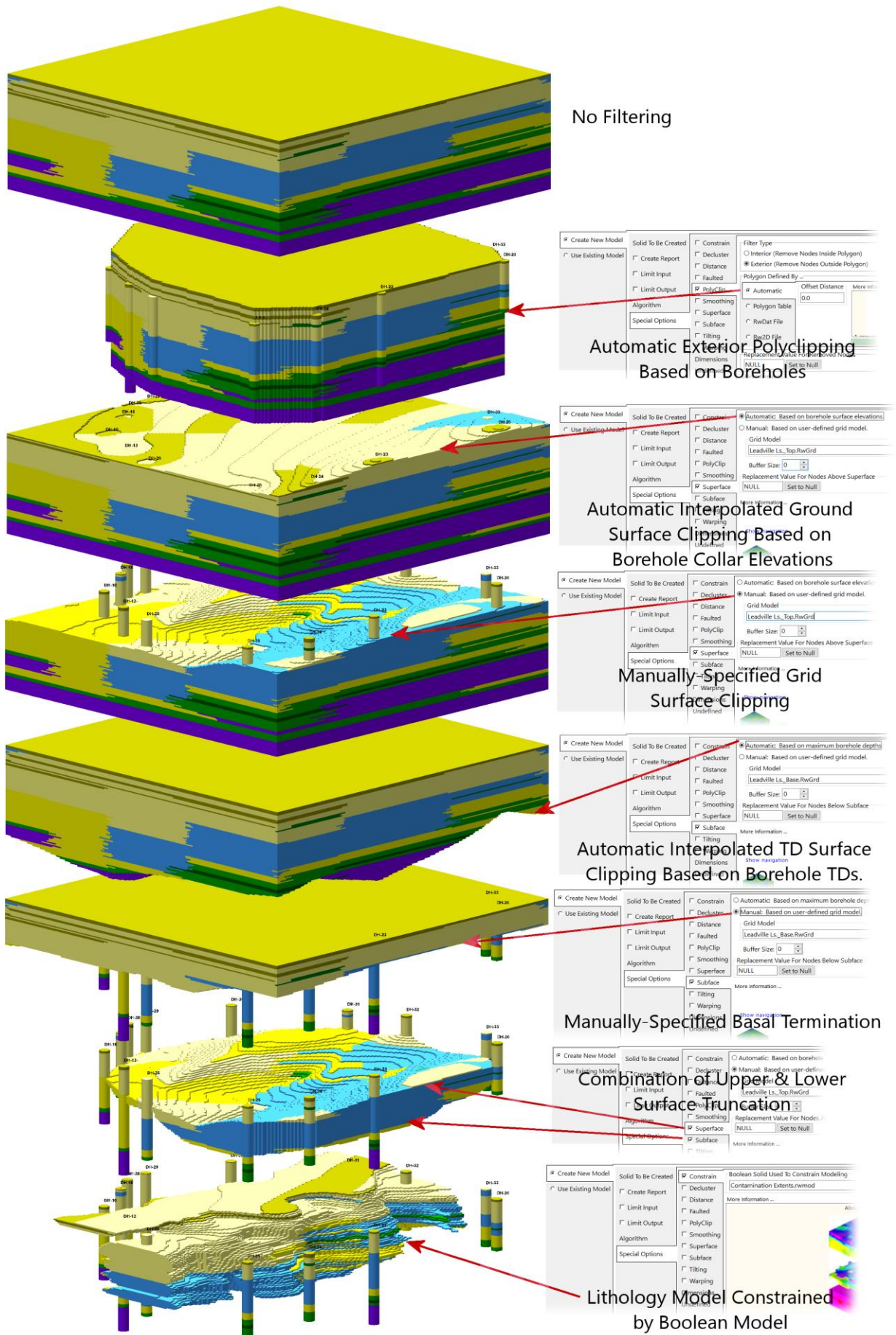


Figure 2

2. Two **Randomization** options have been added;

a. The **Fully-Random** option behaves in a fashion that is identical to previous versions by randomly and laterally extruding the data values between  $1/3^{\text{rd}}$  and  $2/3^{\text{rds}}$  of the distance to the closest neighboring point. These distances are randomly determined each time the program is executed. The diagrams on the left side of Figure 3 show three successive runs within the **Fully-Random** option turned on. Note how each model is slightly different yet all of them honor the borehole control points.

b. The **Pseudo-Random** option uses a pre-created table of random numbers to determine how far the data should be laterally extruded between  $1/3^{\text{rd}}$  and  $2/3^{\text{rds}}$  of the distance to the closest neighboring point. This means that the program will produce the same model every time it is executed, even on different computers. The diagrams on the right side of Figure 3 show three successive runs within the **Pseudo-Random** option turned on. Note how each model is identical (i.e., reproducible and consistent).

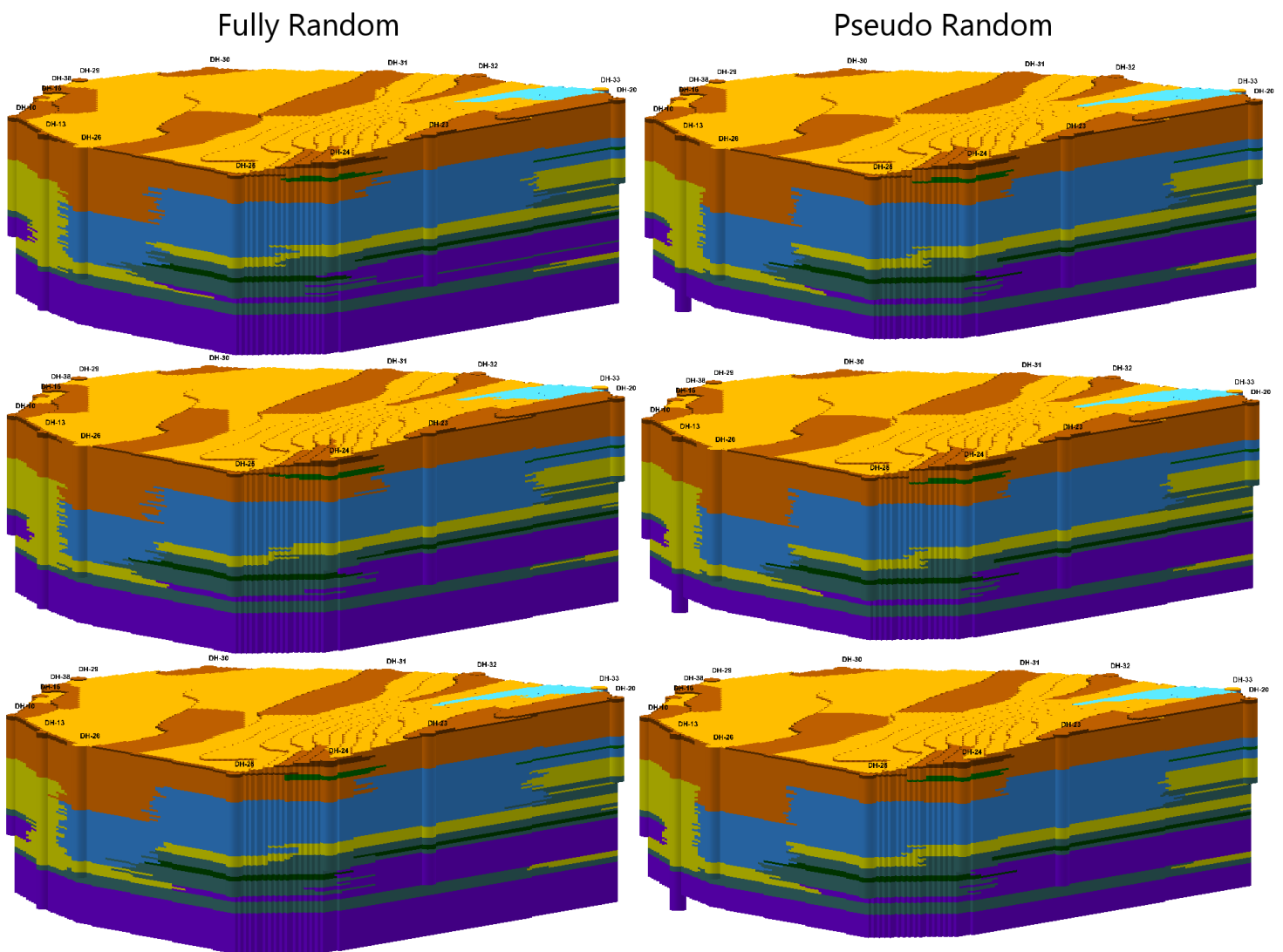


Figure 3

3. Two help buttons have been added to the **Lateral Blending** menu.

4. The program is significantly faster thanks to improvements with the parallel processing code.