



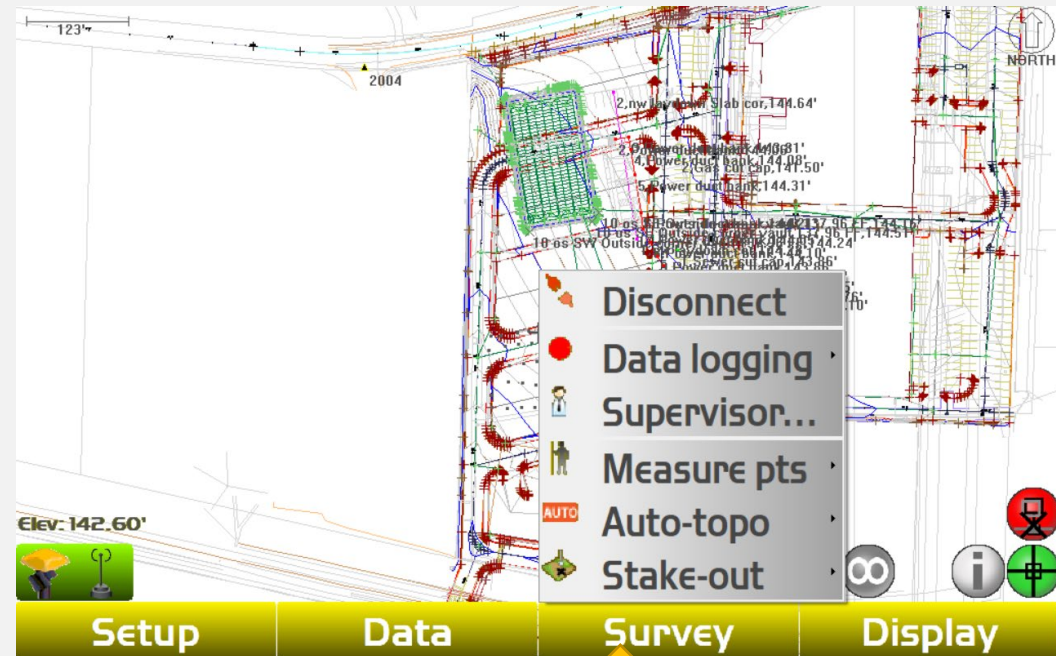
TOPO 101

How to Create Site and Stockpile Topo's
to Calculate Materials Quantities

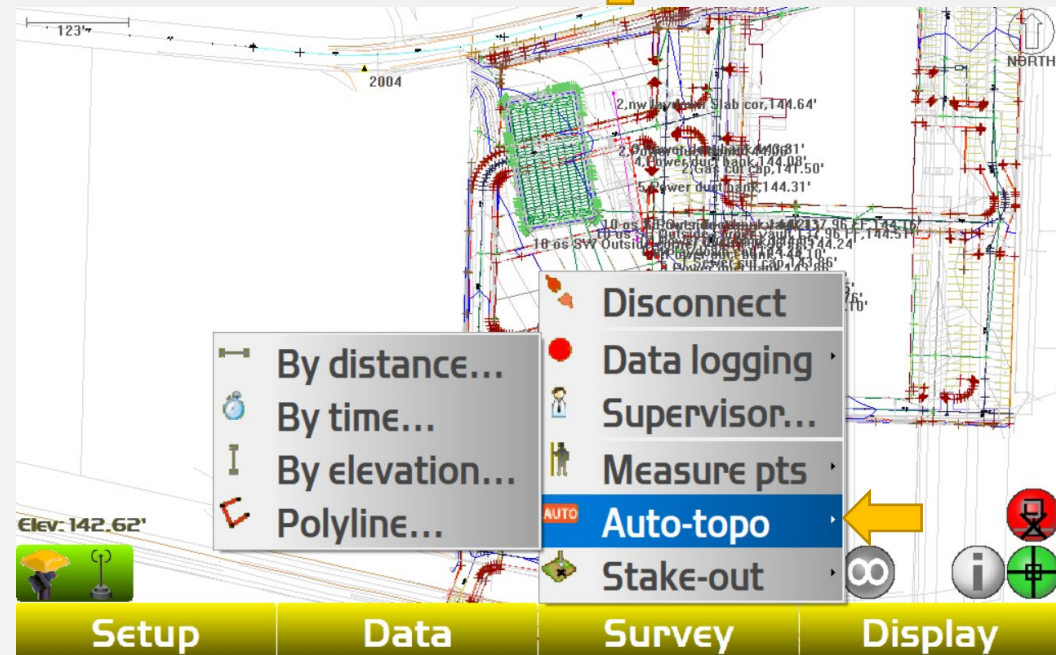


SITE TOPO

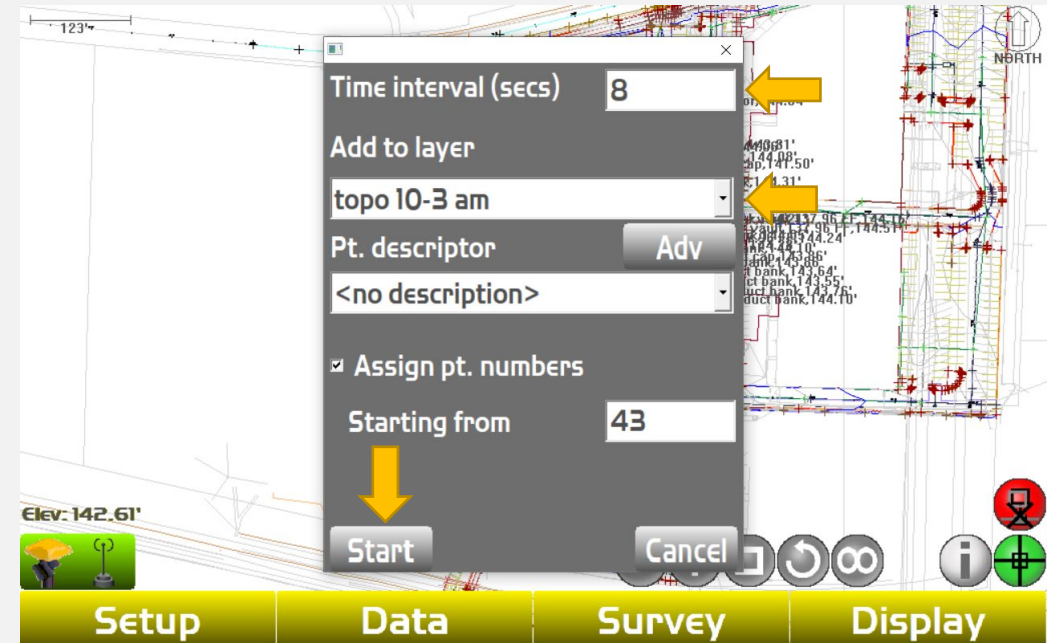
Select the Survey Tab



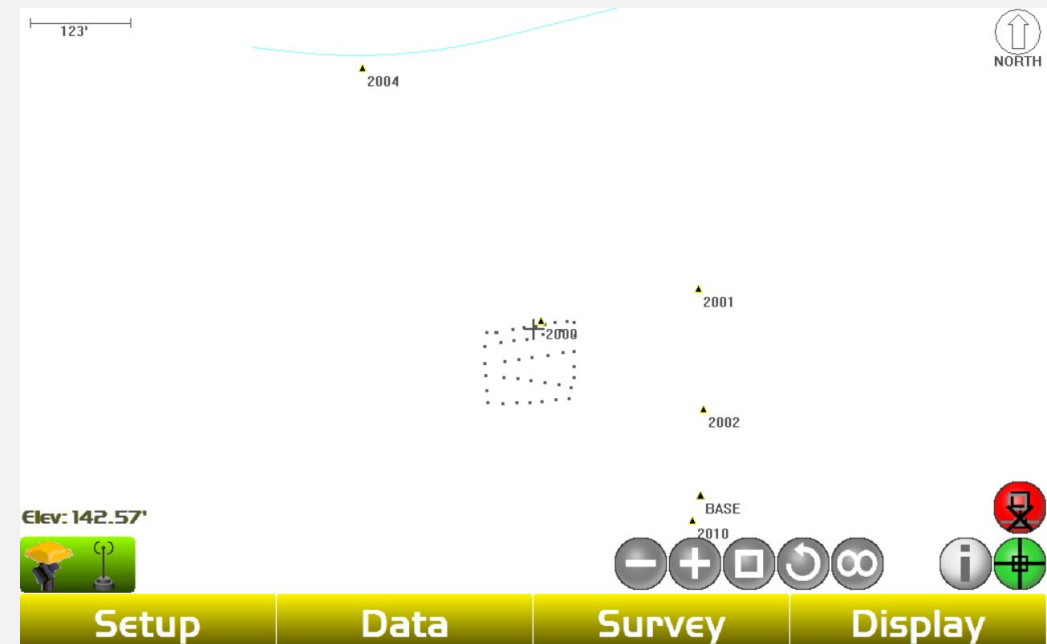
Click Auto-topo



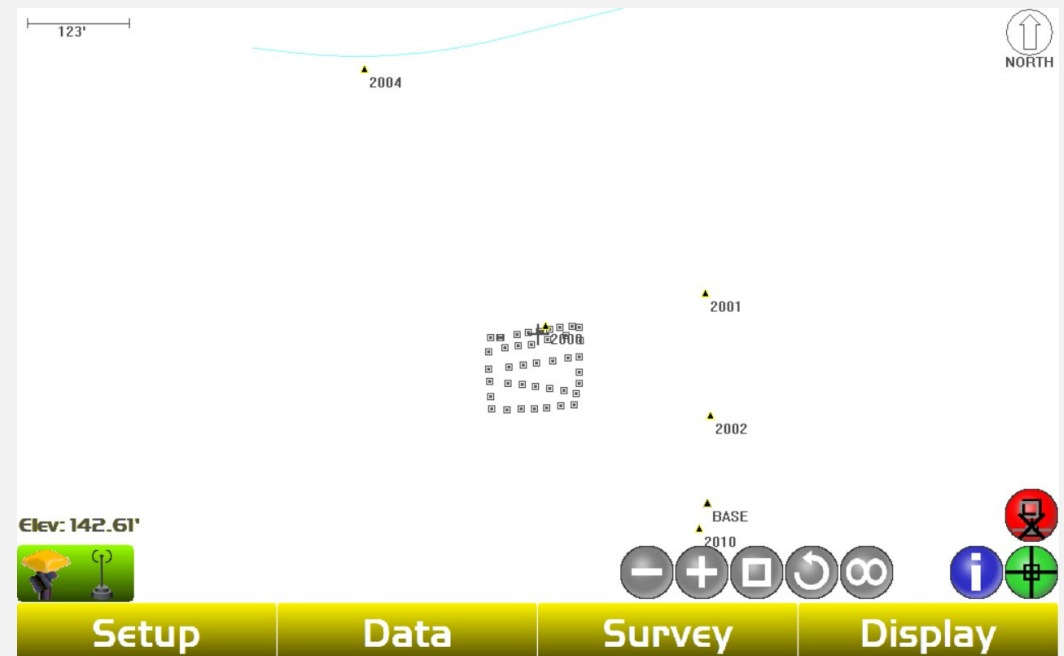
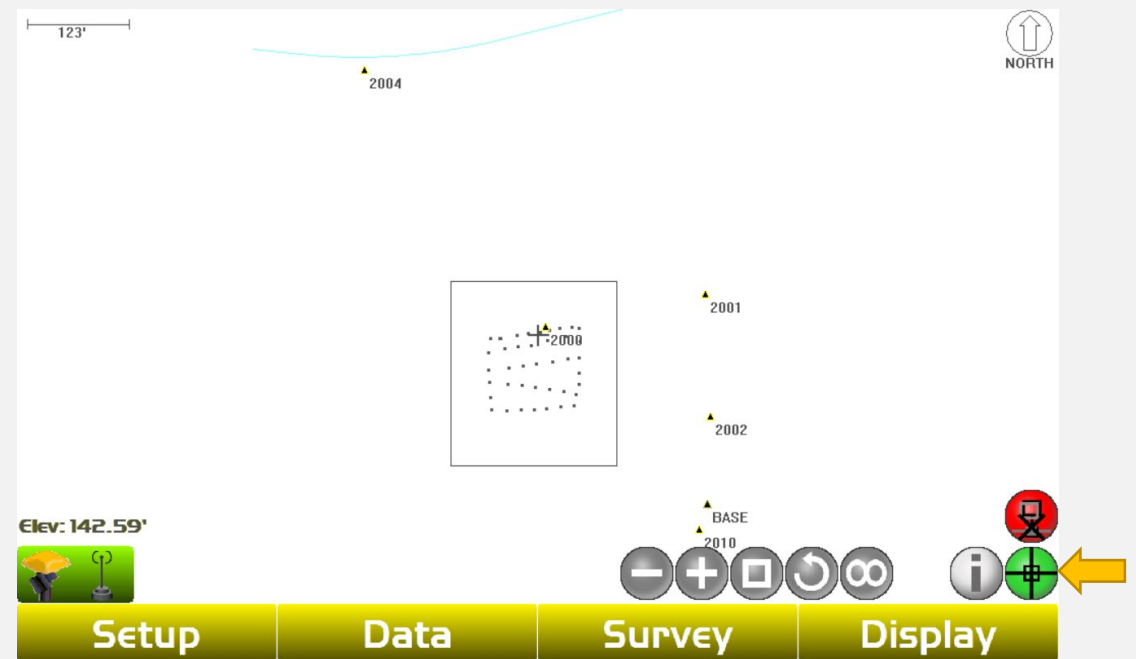
Create a layer for the baseline shots to be saved in to. Also decide the time interval between shots (usually between 5-8 seconds depending on the terrain and conditions). Click “Start”



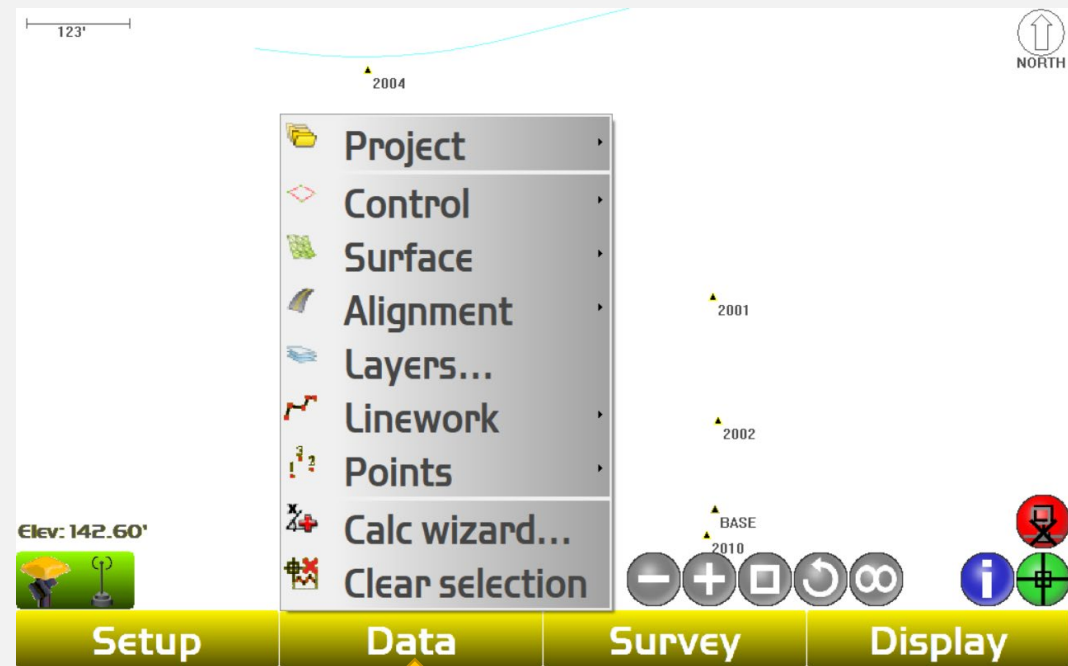
As soon as you click “Start” the rover will start taking shots. Walk the area you wish to calculate, stopping at the allotted time interval to allow the topo shot to be taken and repeat until you have covered the area with topo shots



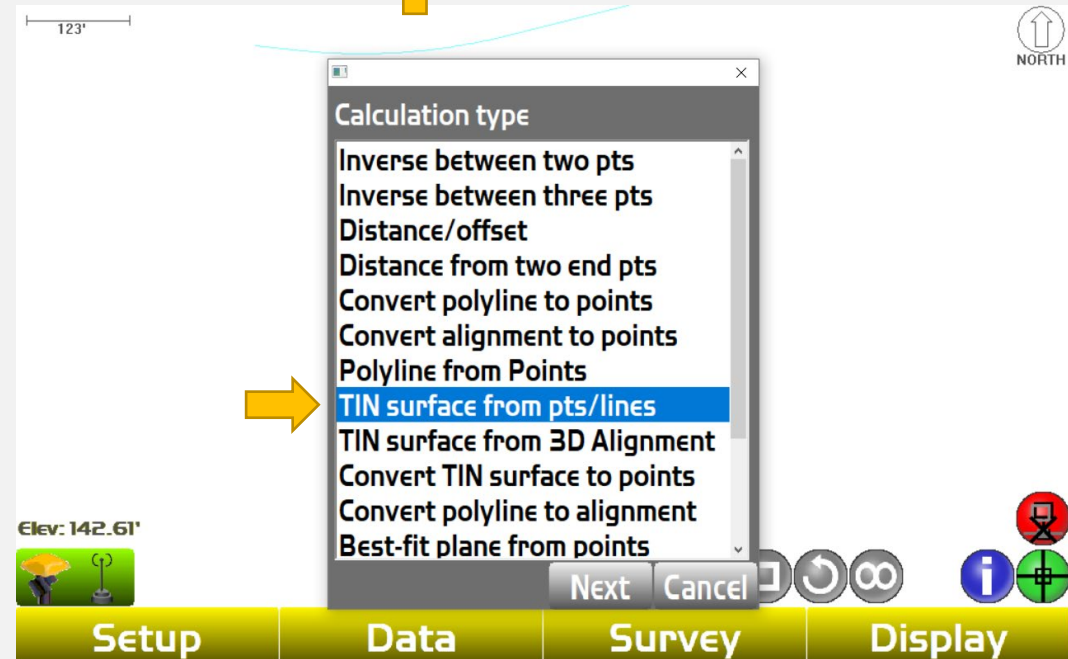
Change the walking man icon to the crosshair icon on the lower lefthand corner of the screen. Drag a box around topo shots to highlight points



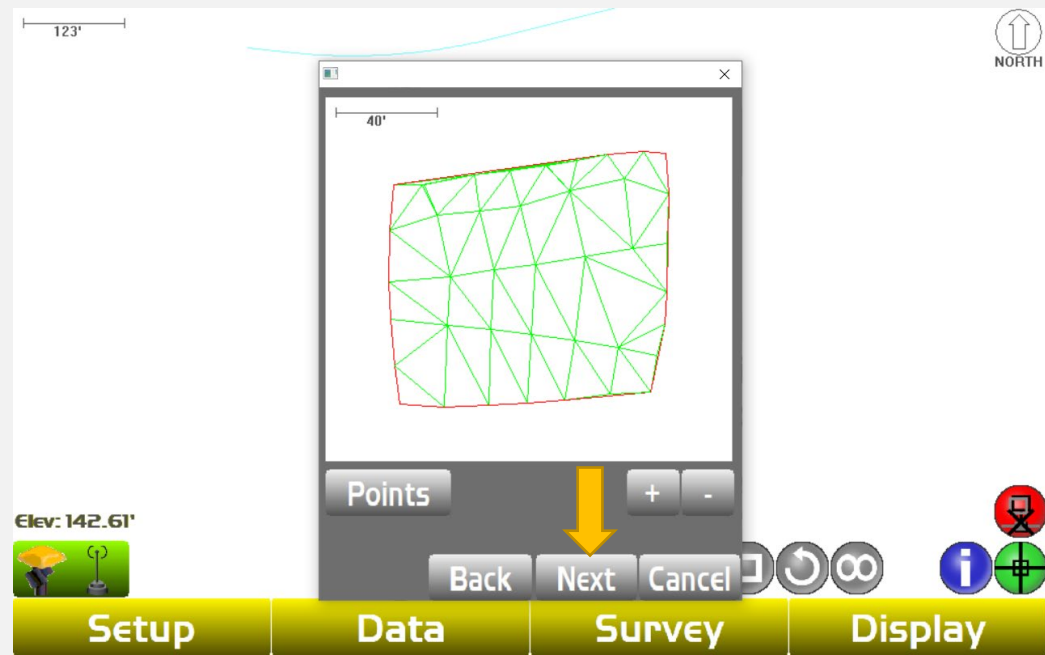
Select the Data tab



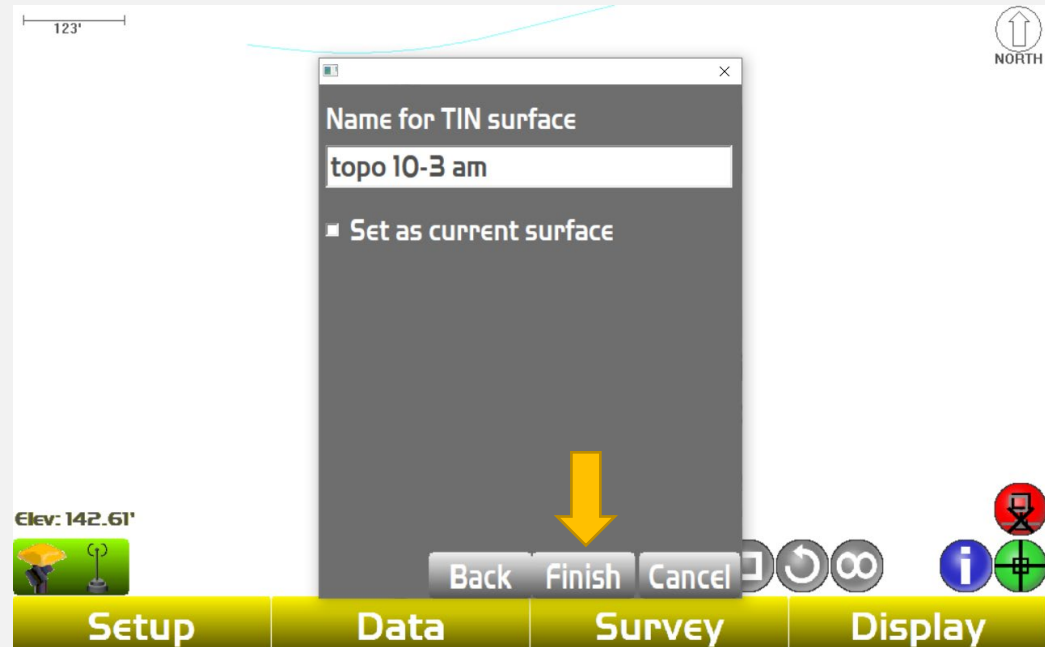
Click "TIN surface from pts/lines"



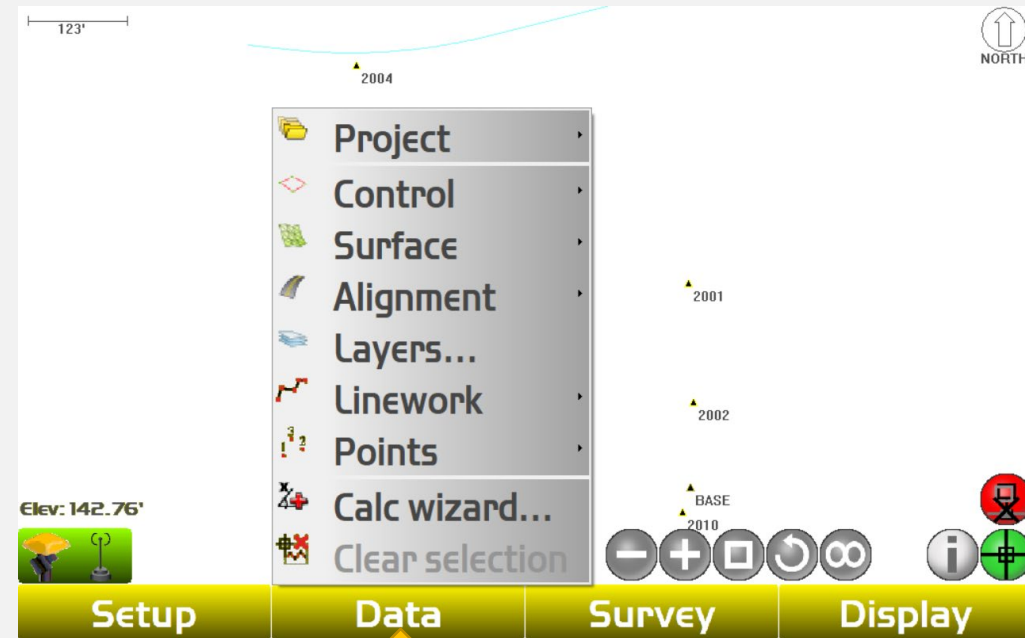
A screen will appear that will show the surface created from your points. Click "Next"



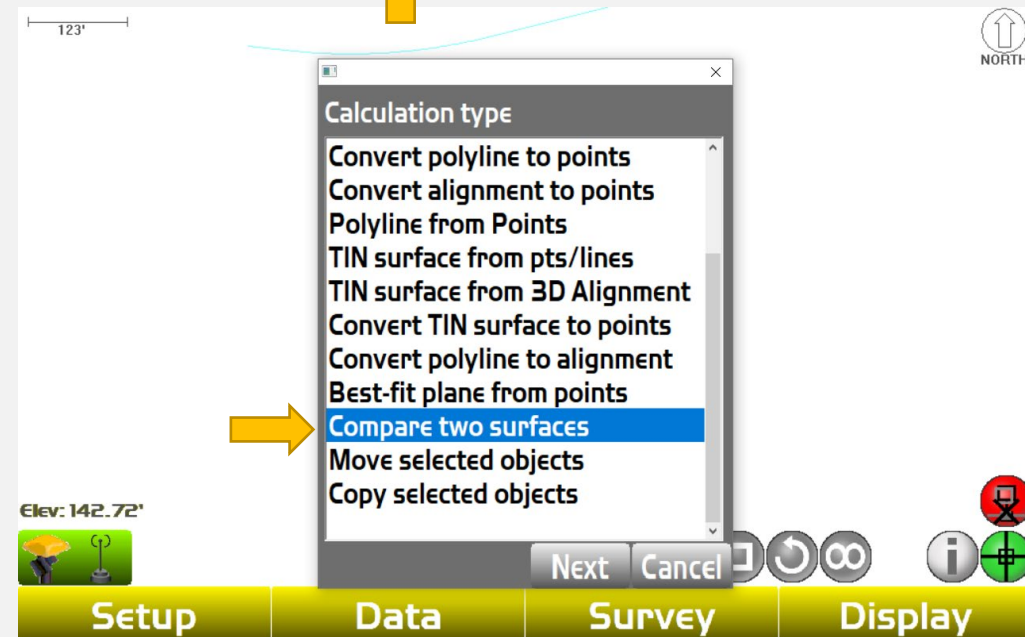
Give the surface a name and click "Finish"



Select the Data tab



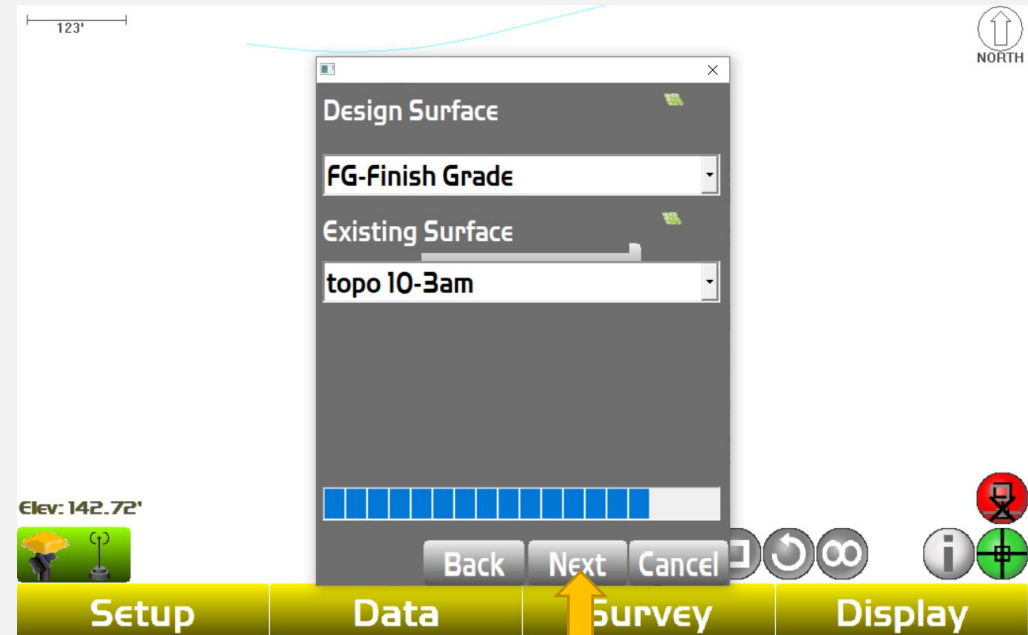
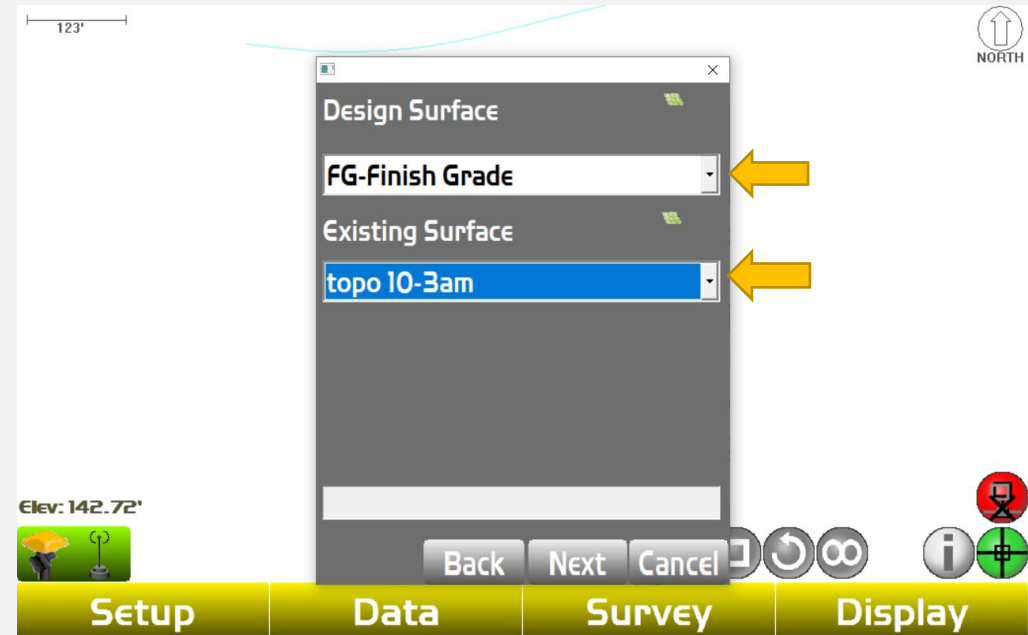
Click "Compare two surfaces"
then click "Next"



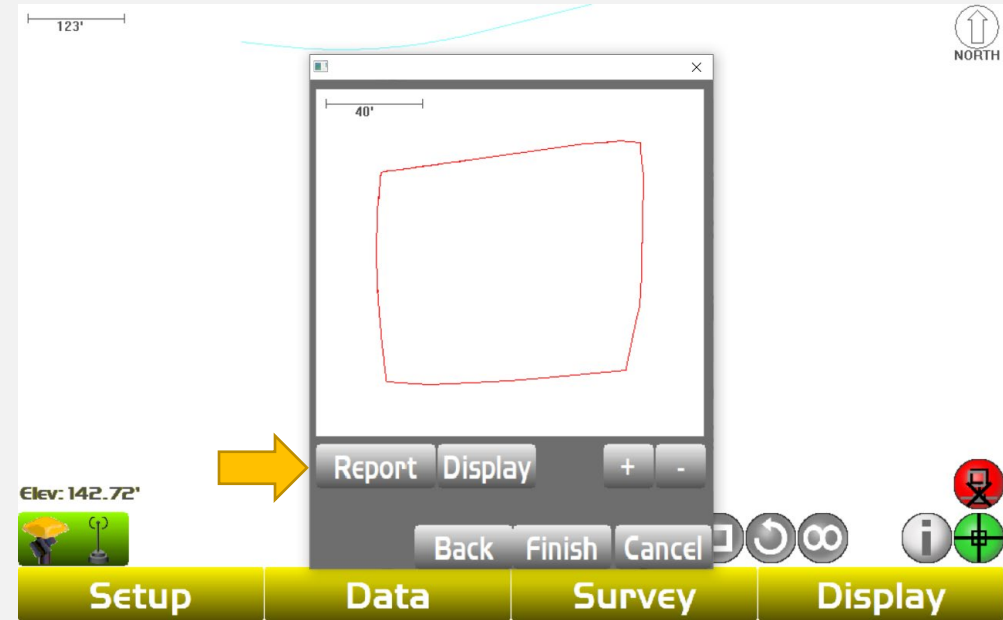
Under “Design Surface” click the dropdown arrow and select the “Finish Grade” surface.

Under “Existing Surface” select the surface that you just created with your topo shots.

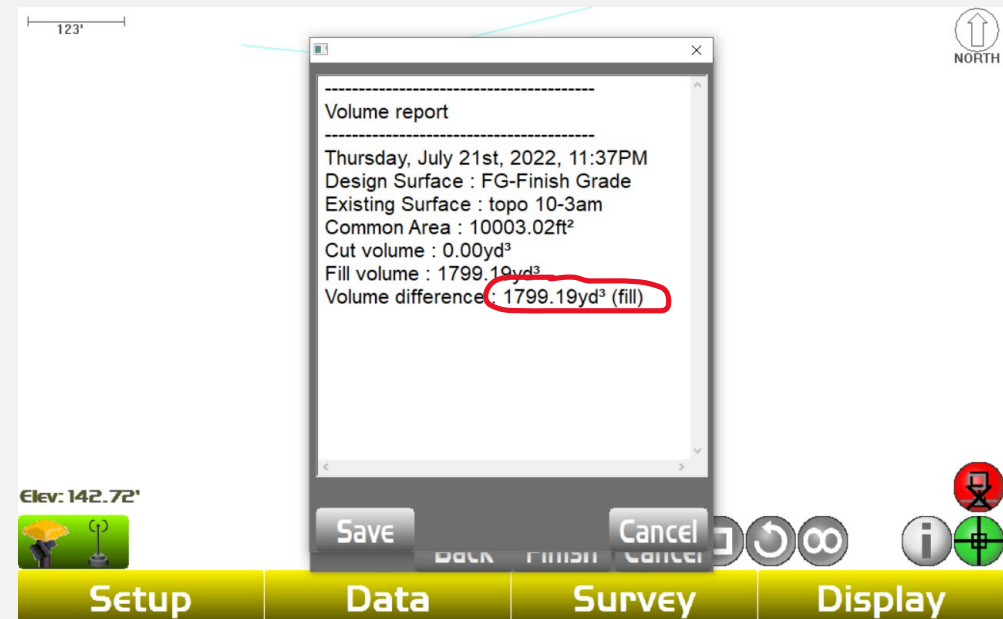
Click “Next”



A box with an outline of the area was measured will appear. Click "Report"

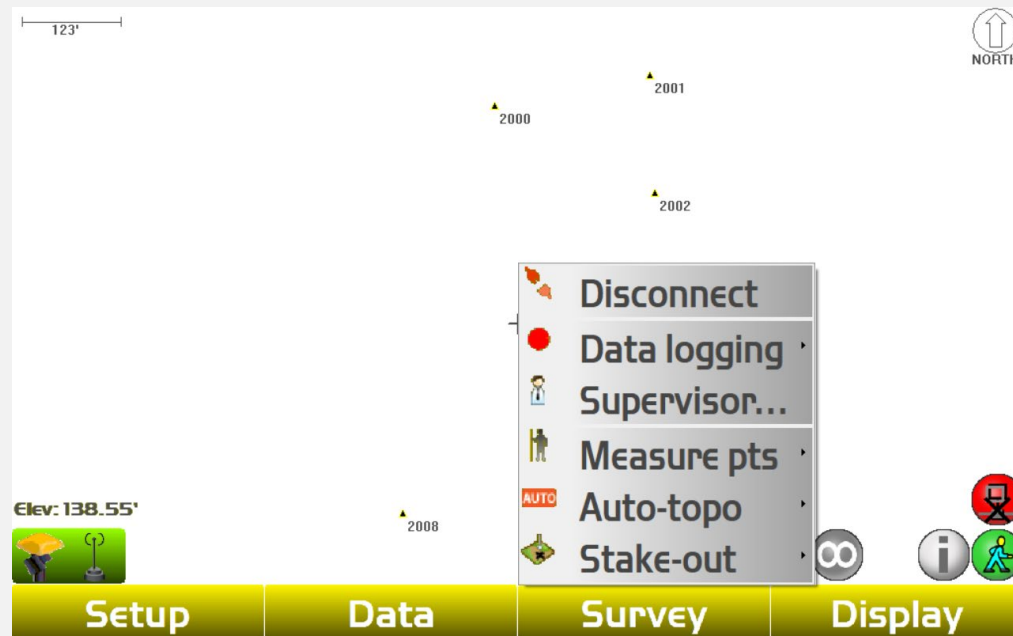


The "Volume difference" is your material quantity compared to Finish Grade in bank cubic yards. The "common area" is your square footage of the area measured. Use this to get quantities to subgrade

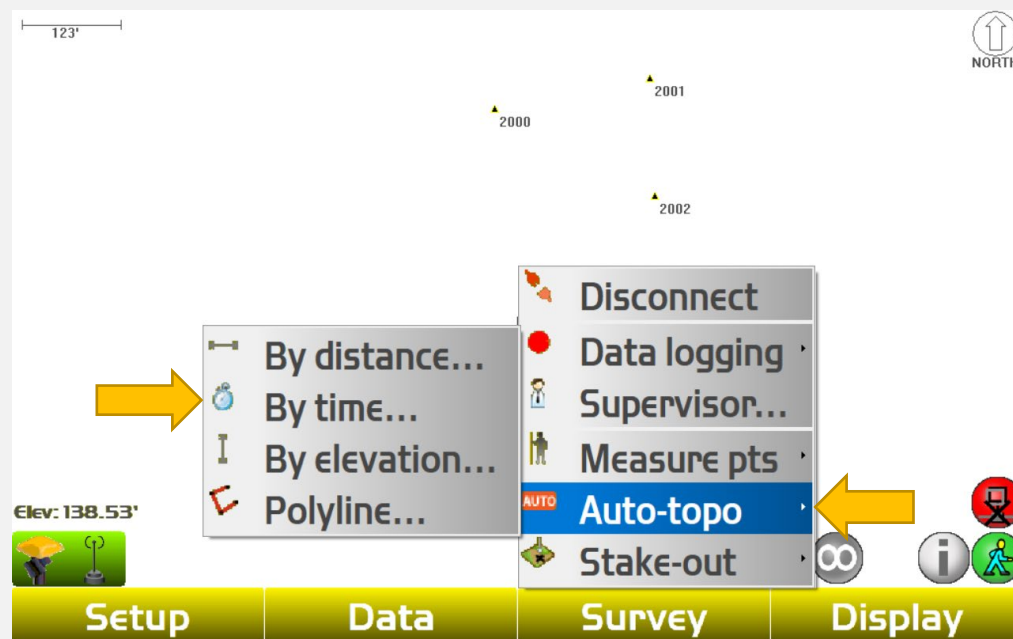


STOCKPILE TOPO

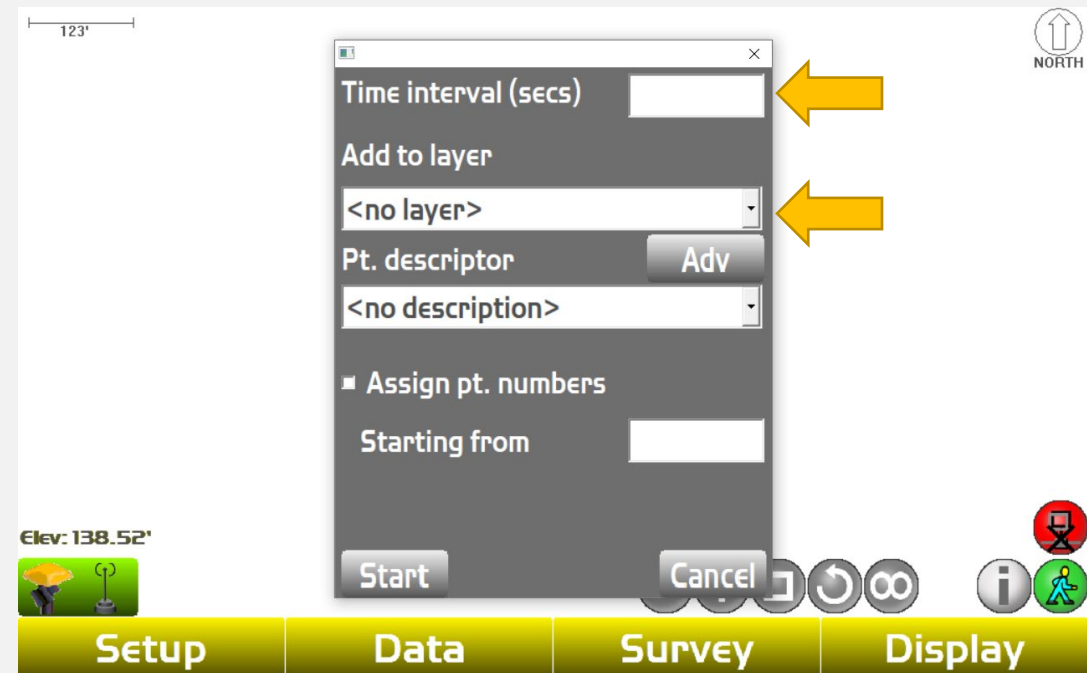
Select the Survey tab



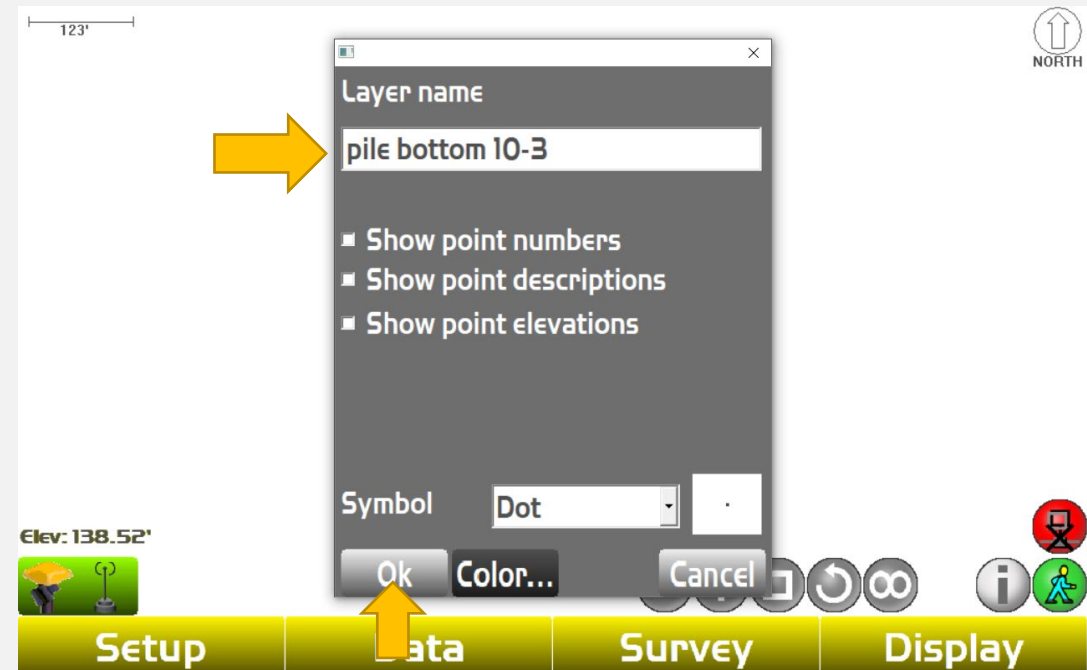
Click "Auto-topo" then click "By time"



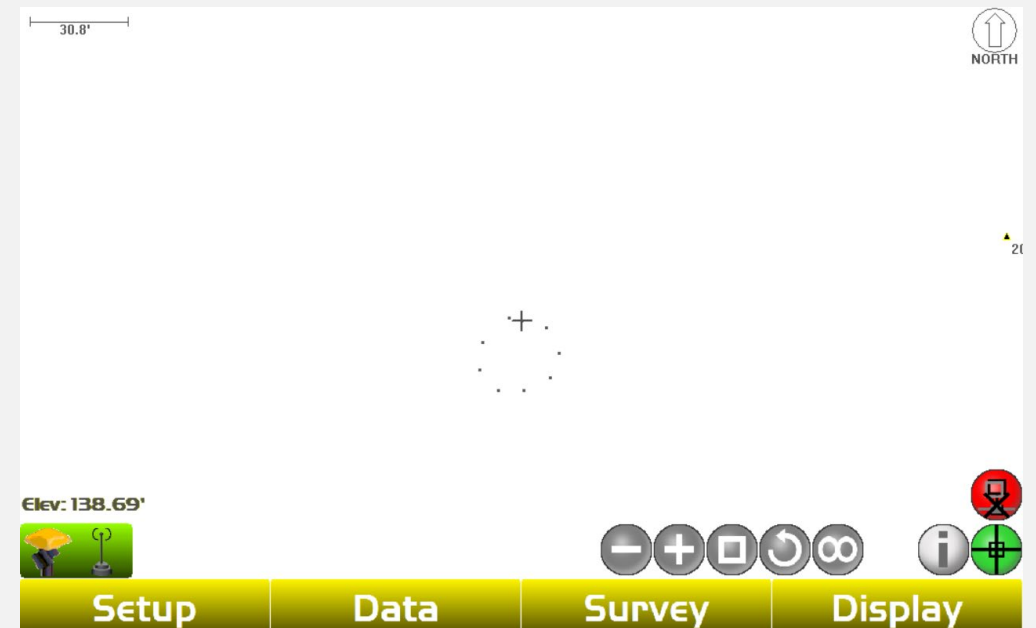
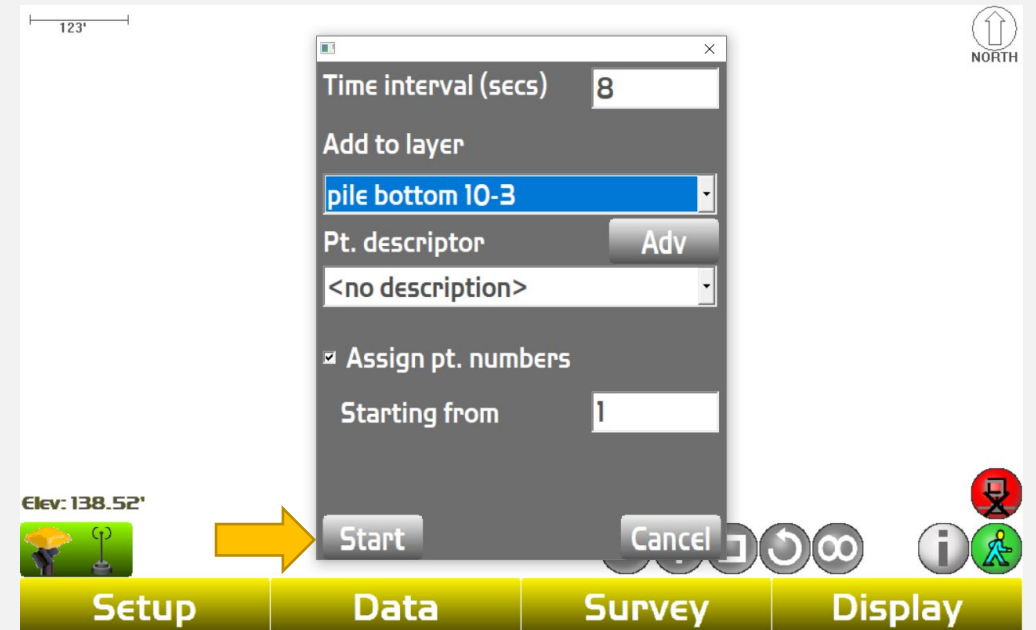
Select the "Add to layer" and create a new layer for the base of pile shots to be saved in to. Also decide the time interval between shots(usually between 5-8 seconds depending on the terrain and conditions



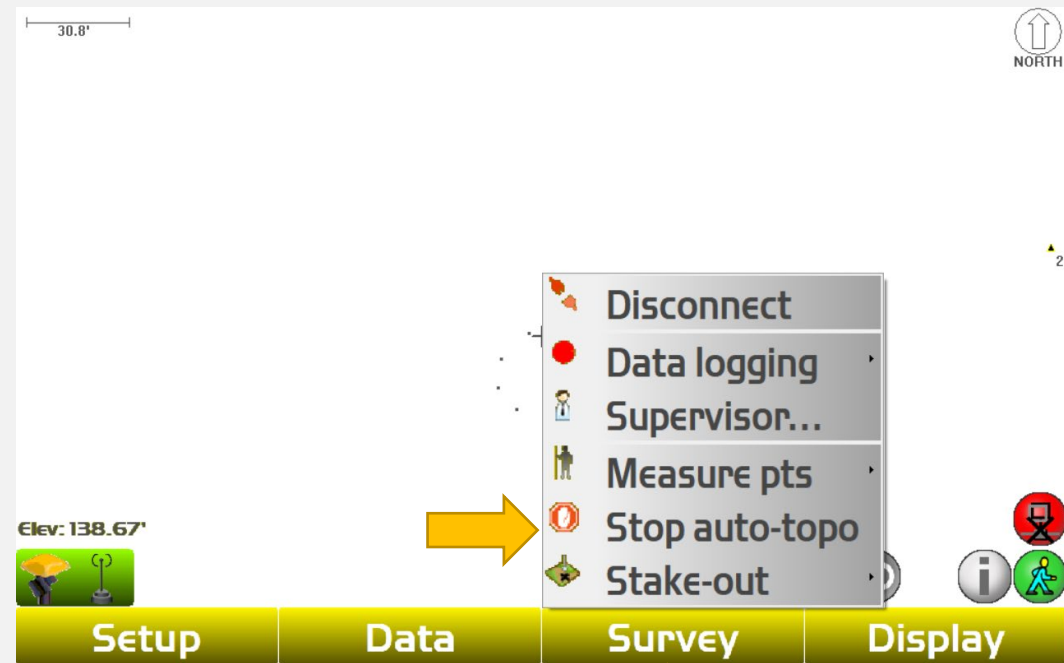
Name the layer for the base of pile topo shots and click "Ok"



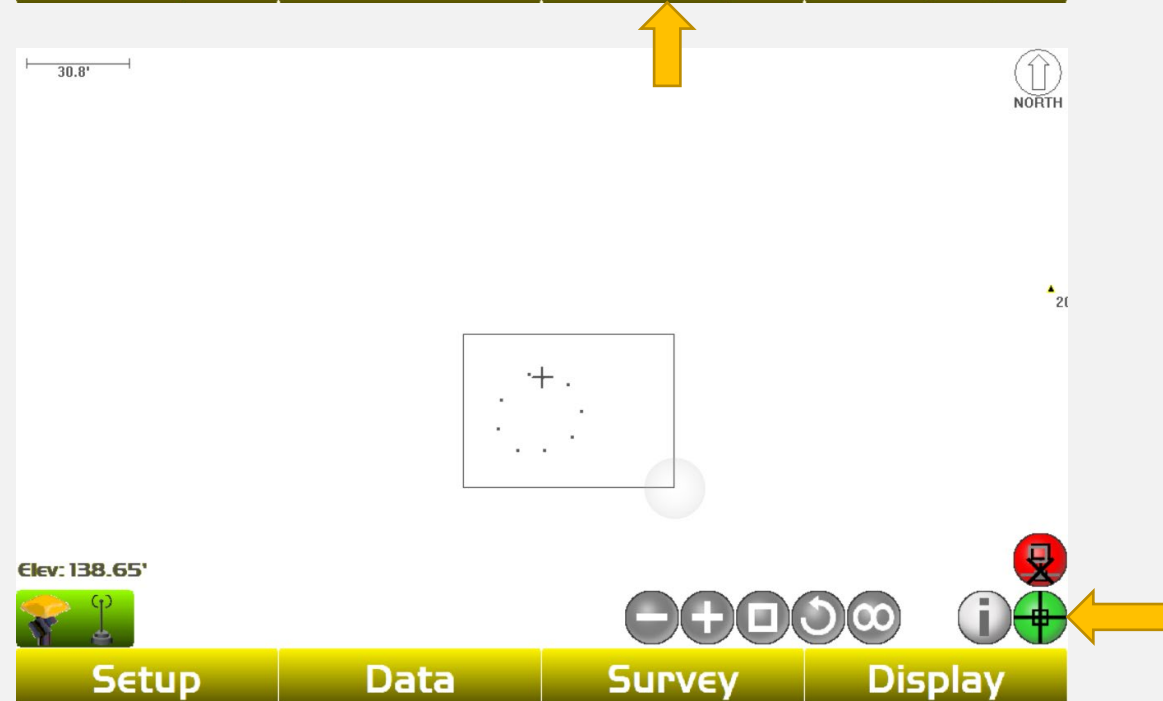
Once a layer has been created click "Start". The rover will now begin taking shots every 8 seconds. Walk the perimeter of the base of the stockpile stopping before each shot is taken. Repeat until there are shots are the entire base of stockpile



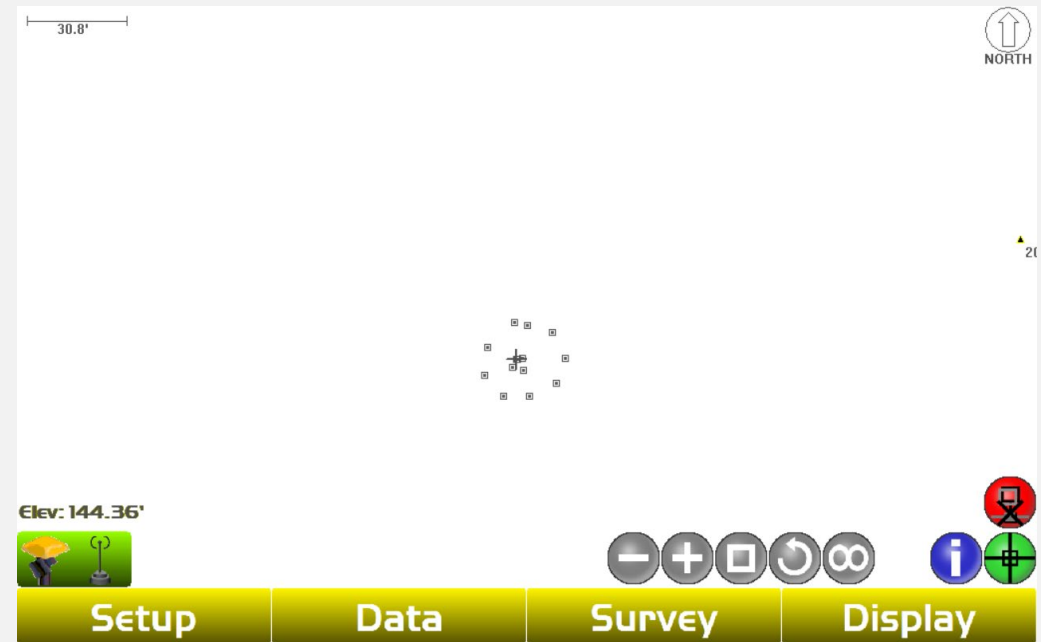
Once you are finished around the base of the pile select the Survey tab then click "Stop auto-topo"



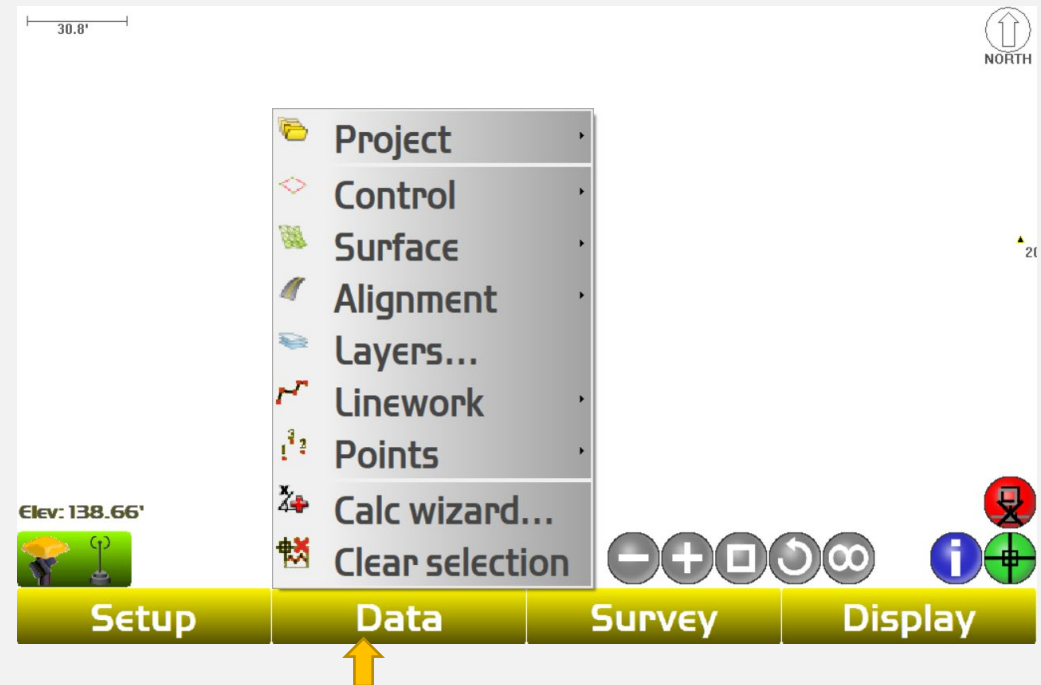
Change the walking man icon the crosshair icon then drag a box around topo shots



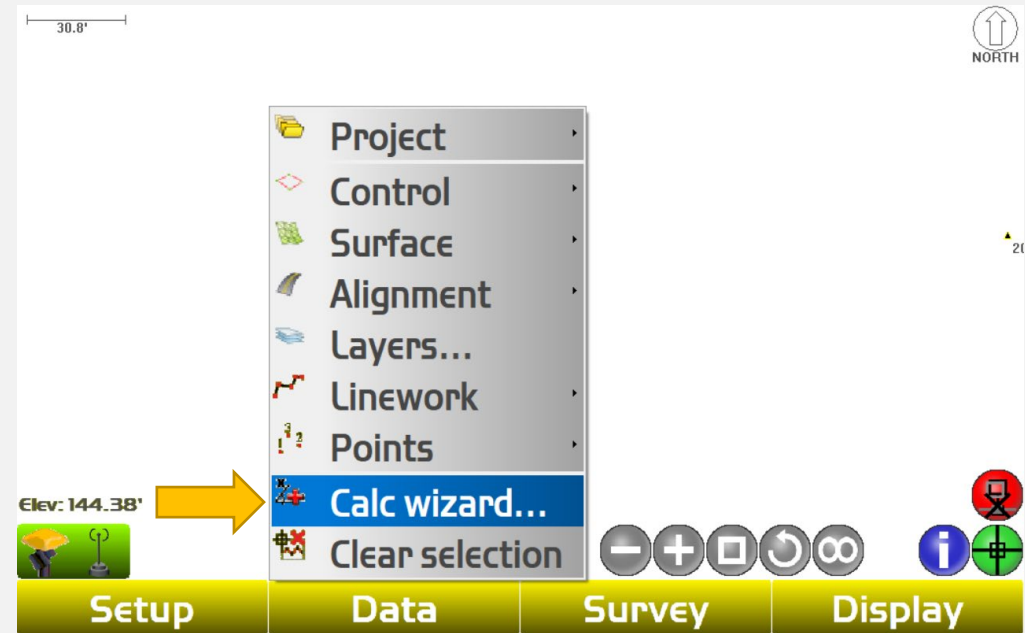
Points are now highlighted



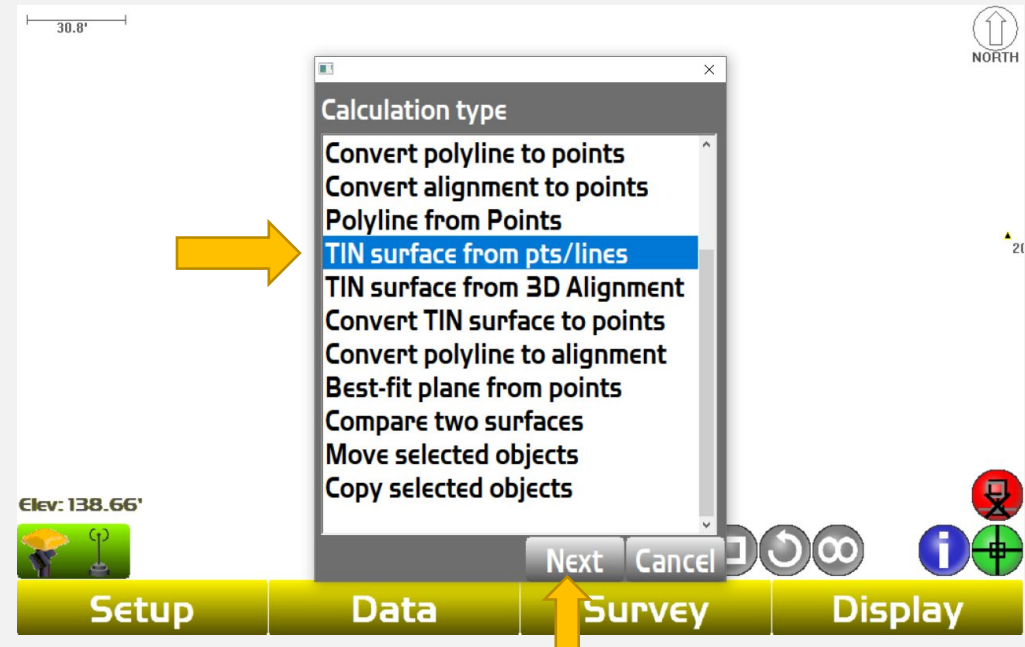
Select the Data tab



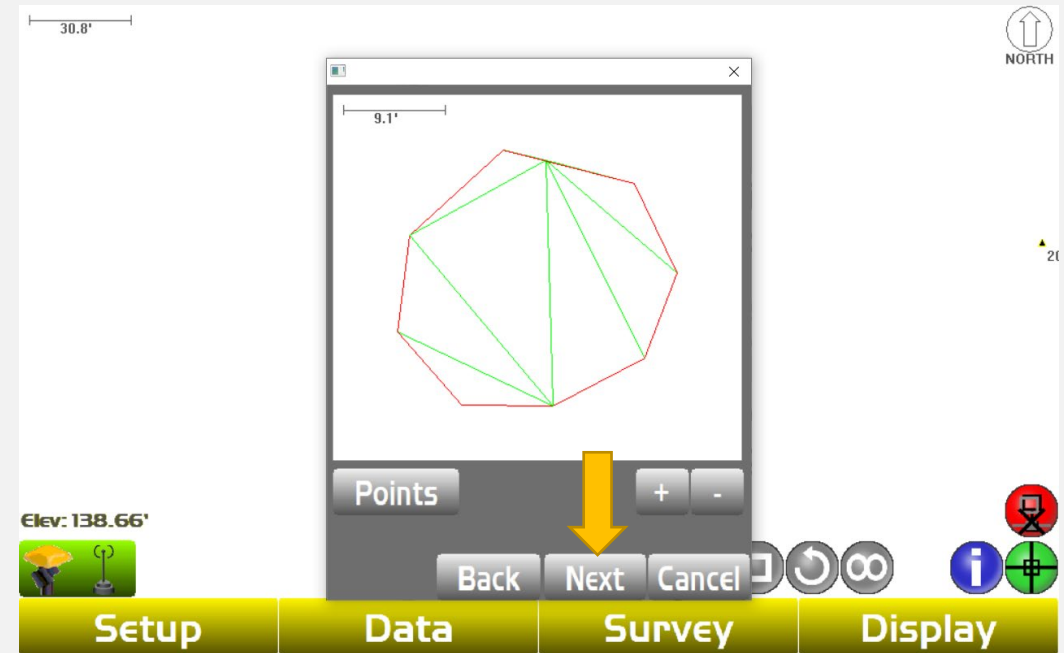
Click "Calc wizard"



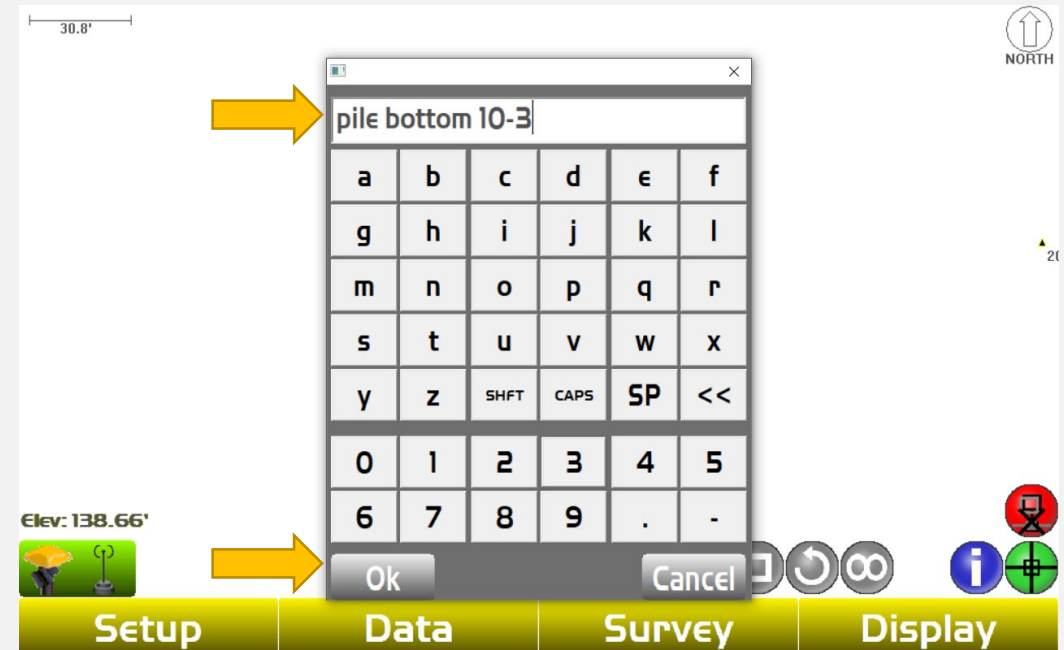
Click "TIN surface from pts/lines" the click "Next"



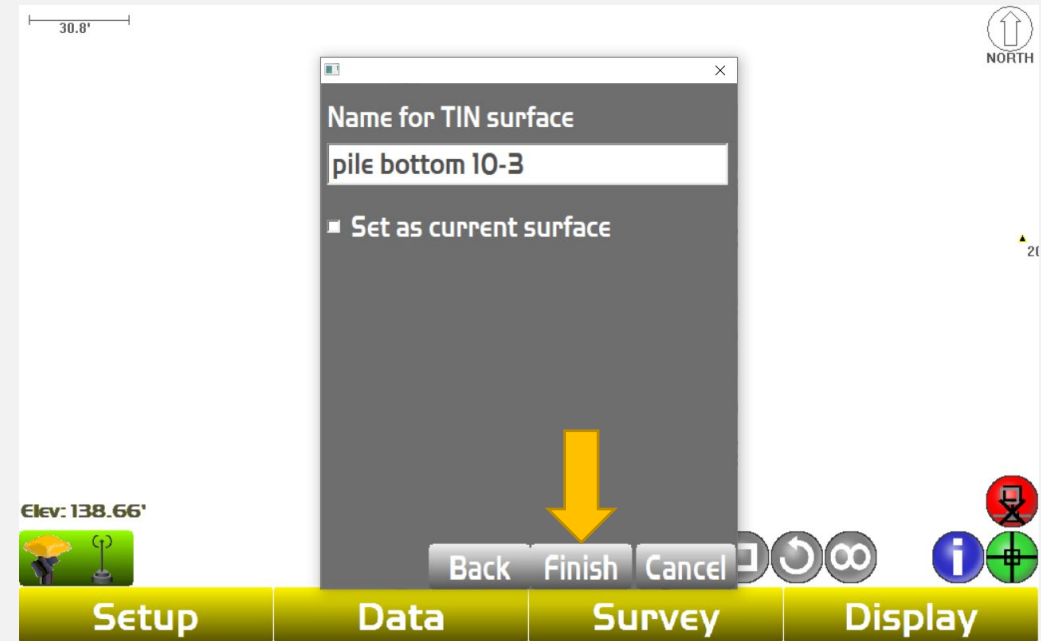
An image of the surface that was created from the shots will appear. Click "Next"



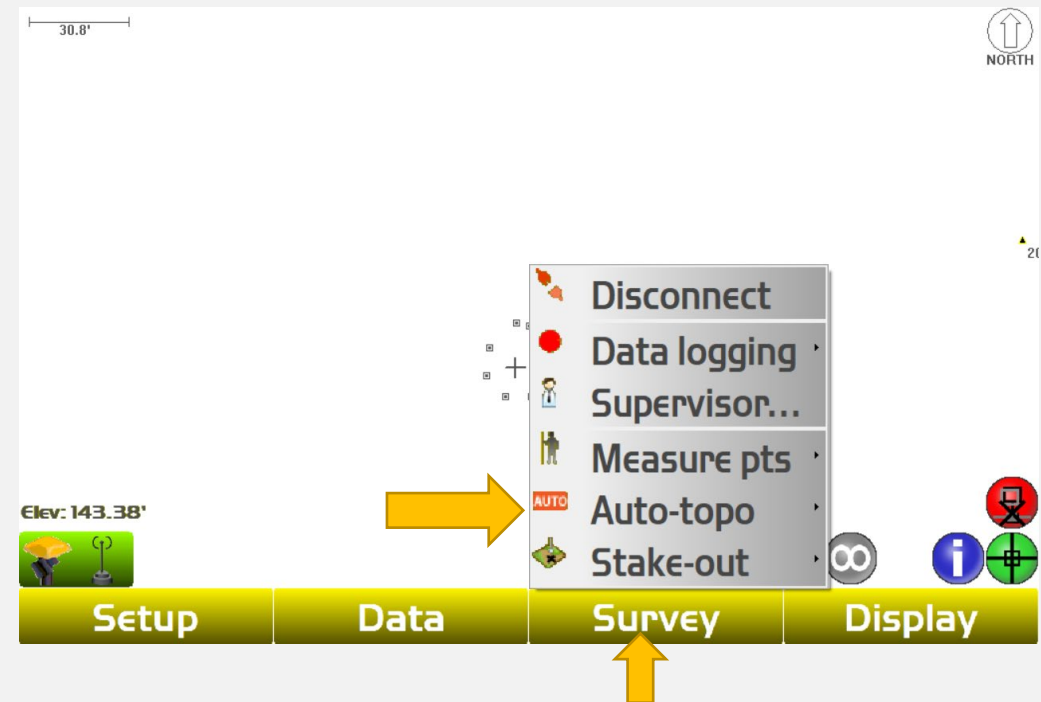
Name your bottom of pile surface and click "Ok"



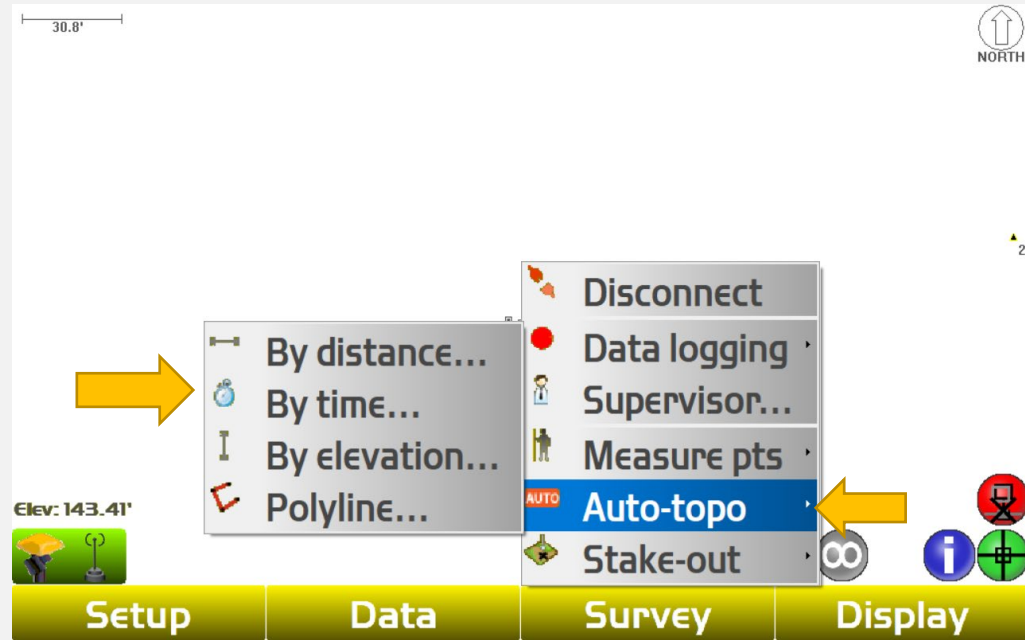
Click "Finish"



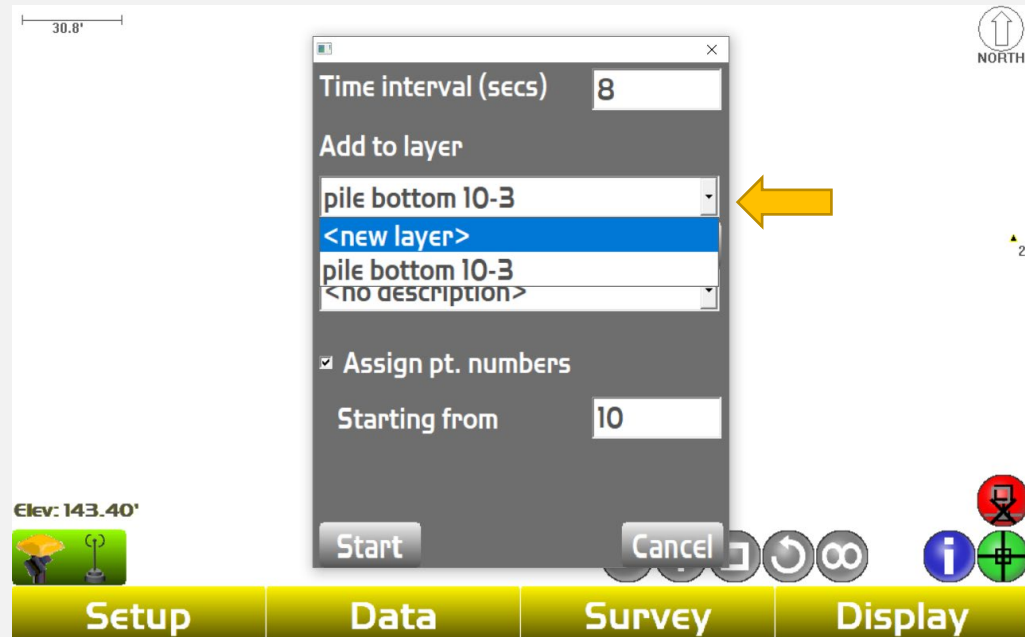
Now repeat the process for the top of the stockpile. Select the Survey tab



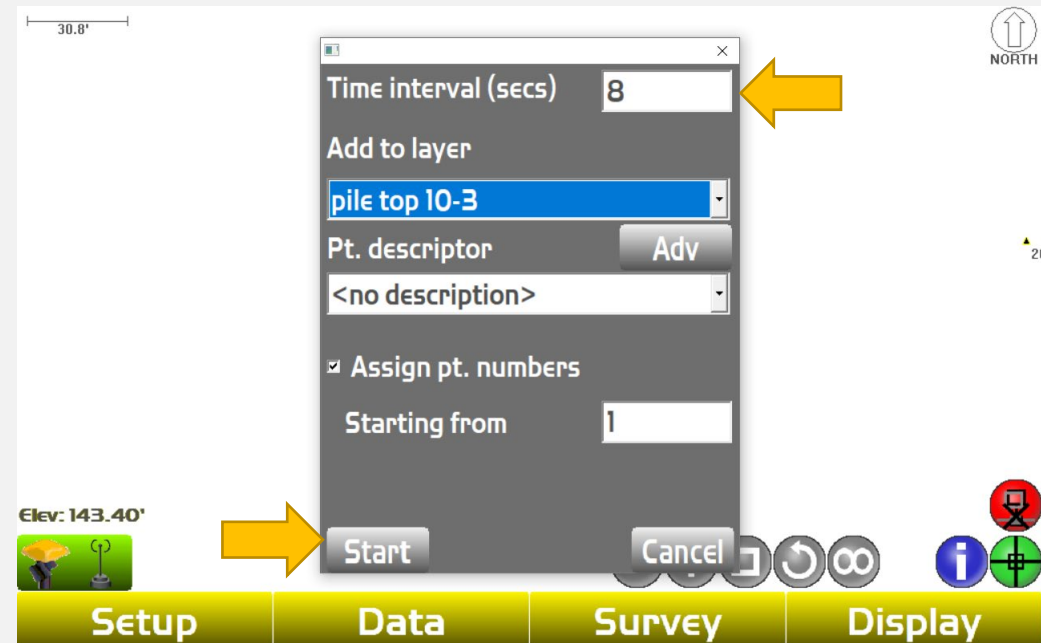
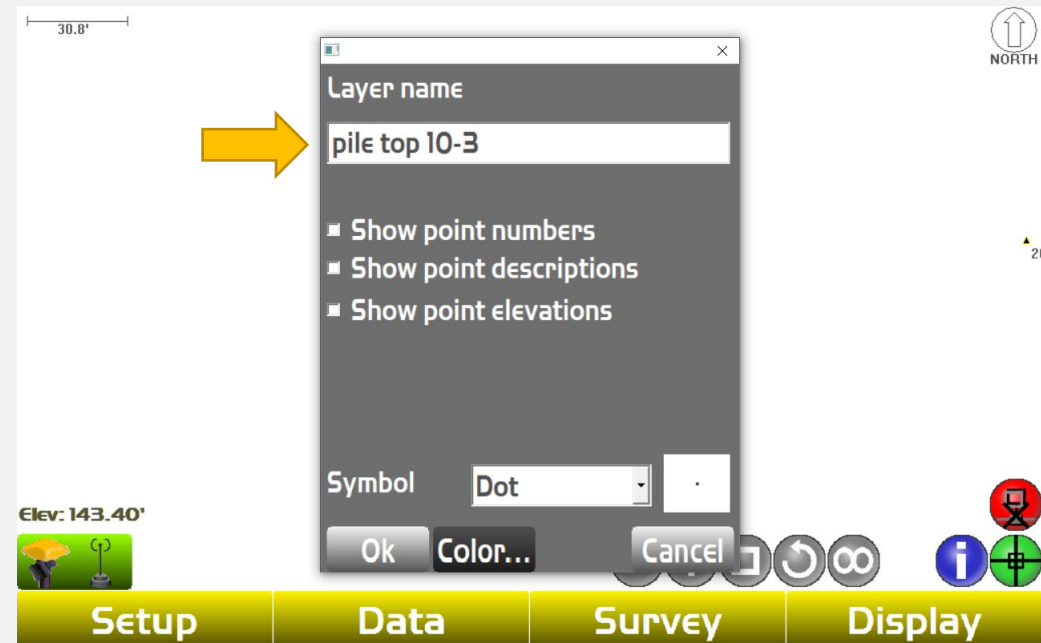
Click "Auto-topo", then click "By time"



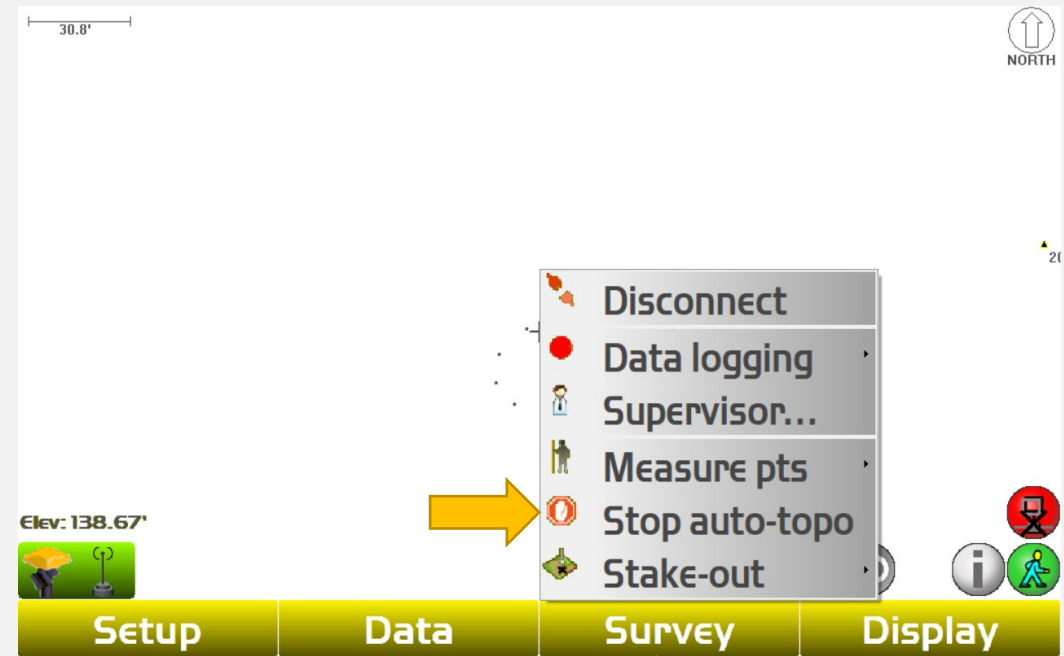
Select the "Add to layer" drop down and create a new layer for the top of pile topo shots



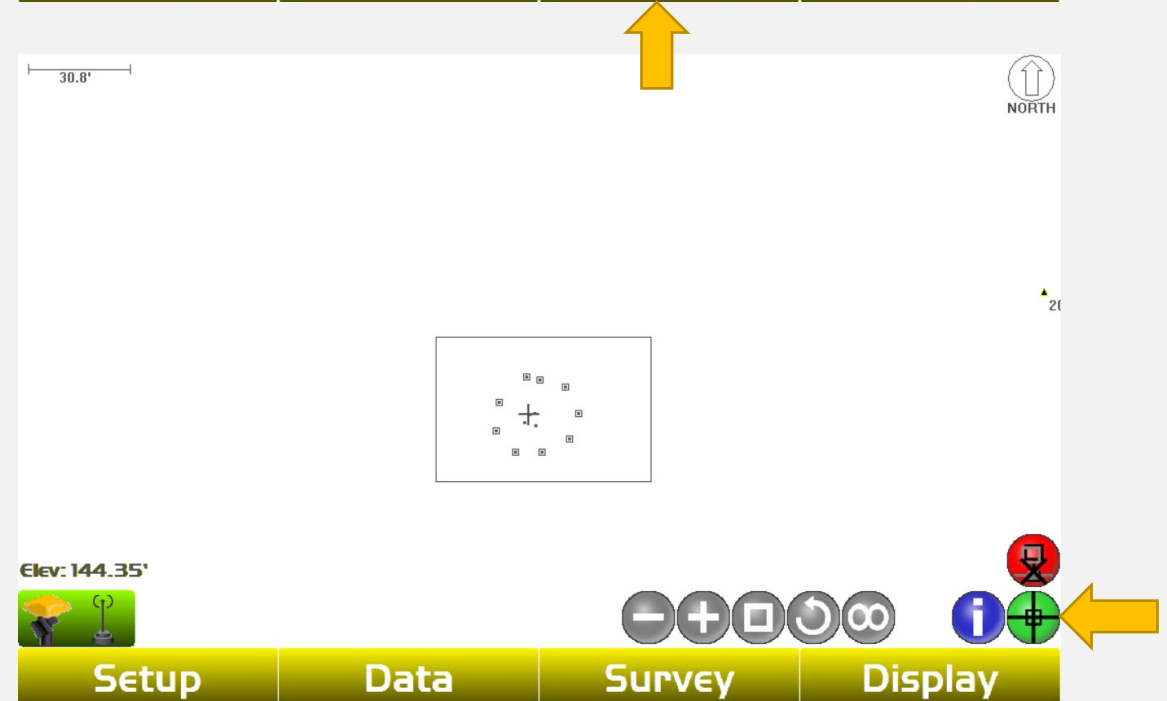
Name the new layer for your top of pile topo shots, choose your time interval between shots (usually between 5-8 seconds depending on terrain and conditions) and click "Start"



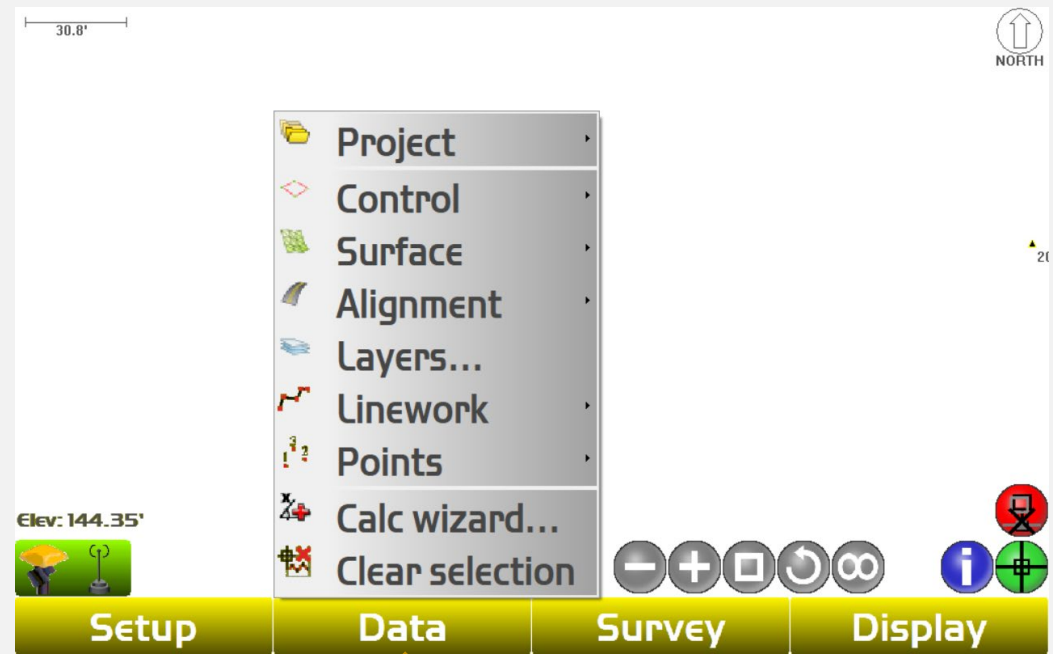
Once you click start, the rover will begin taking shots. Once you have completed shots around and on top of the pile (depending on the shape of the pile) select the Survey tab and click "Stop auto-topo"



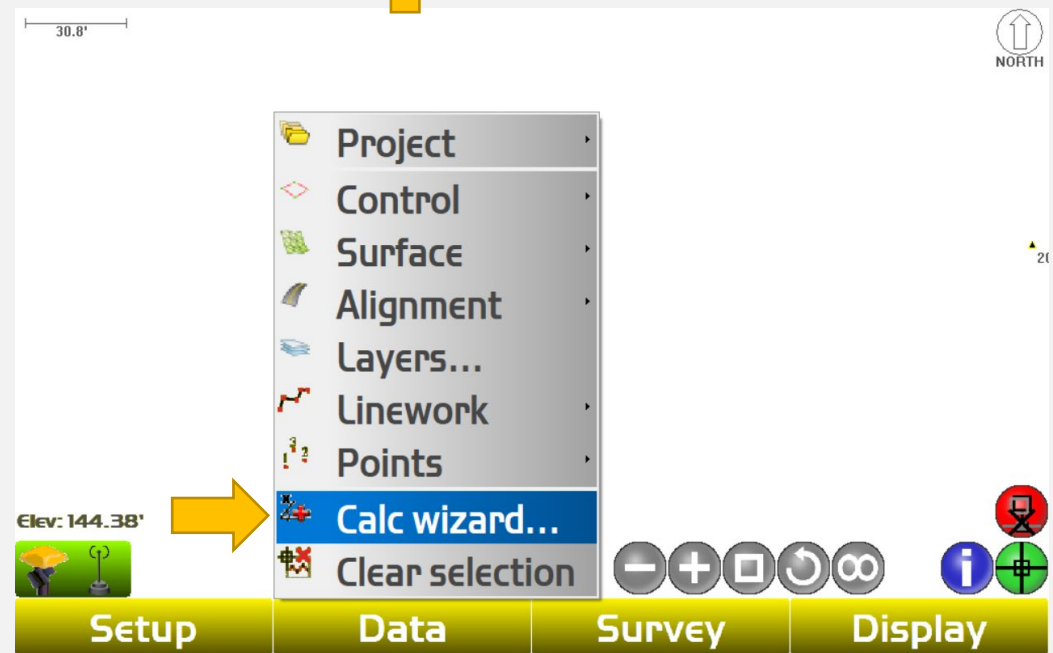
Switch the walking man icon on the lower lefthand side of you screen and drag a box around ALL points including the bottom of pile points. Now ALL points are highlighted.



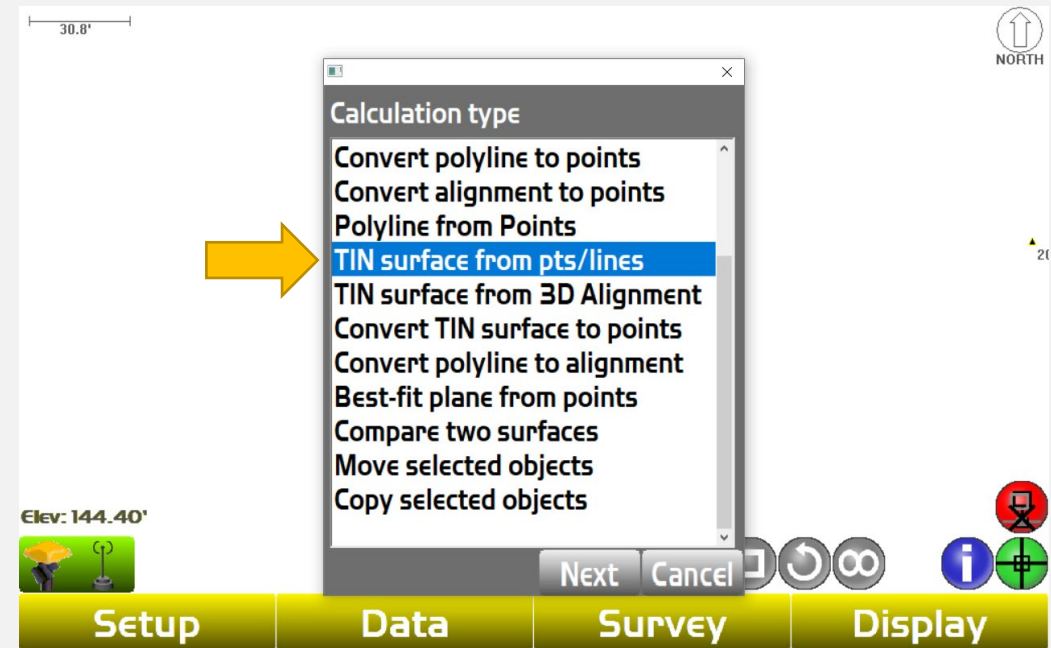
Select the Data tab



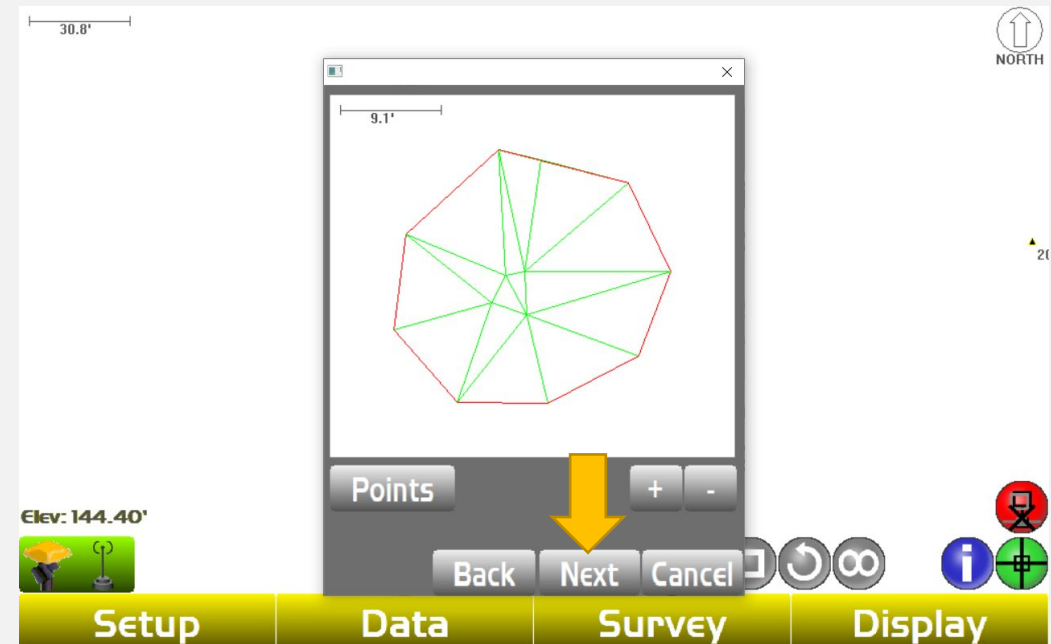
Click "Calc wizard"



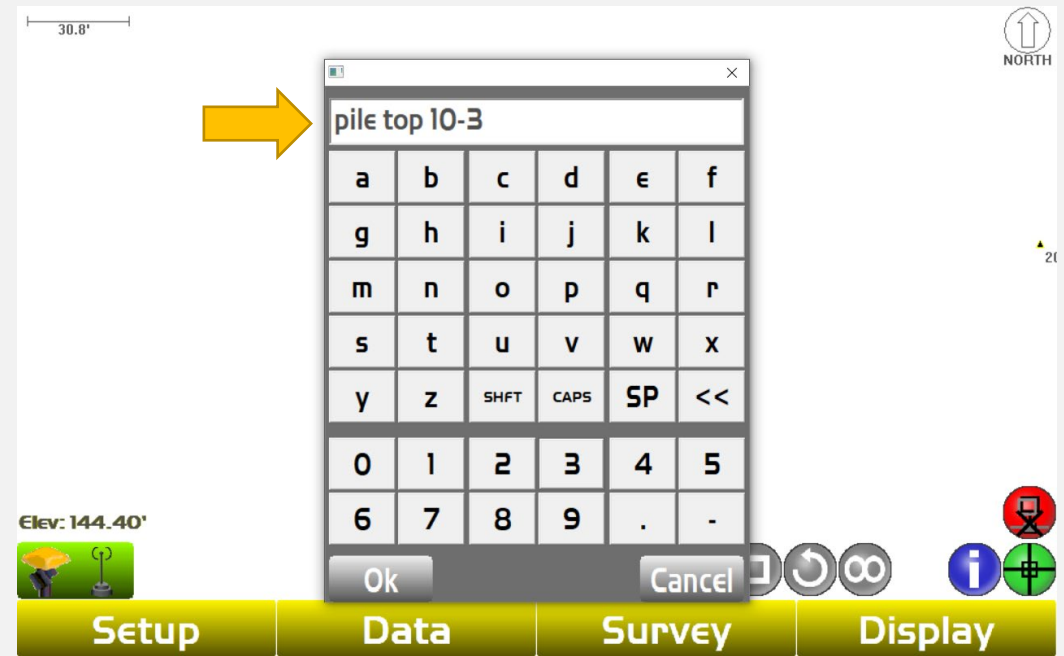
Click "TIN surface from pts/lines" and then click "Next"



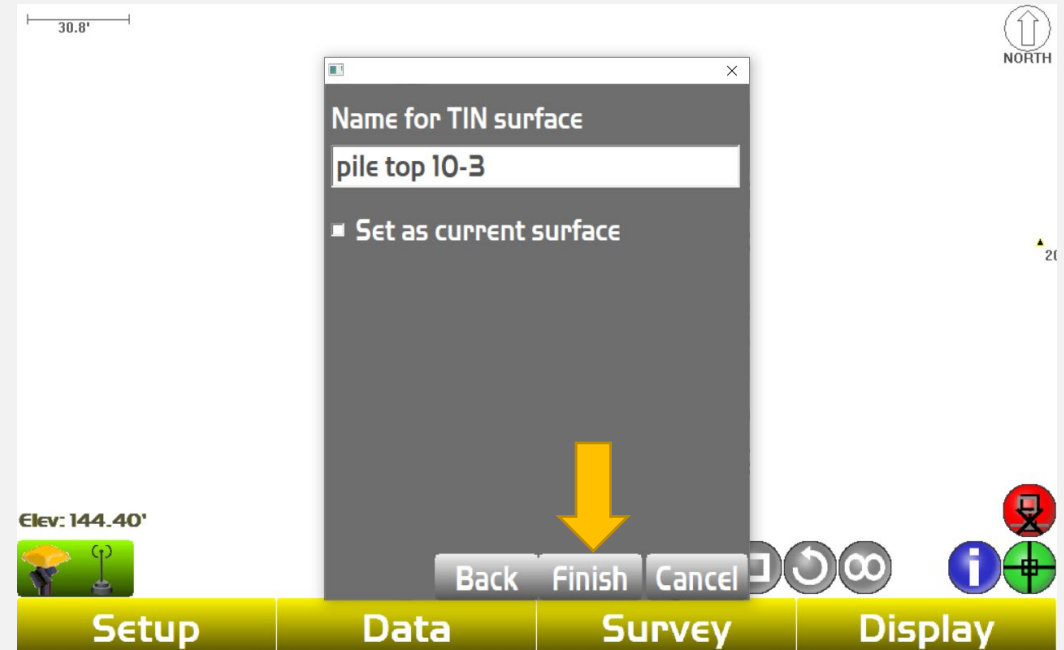
An image of the surface created from your topo points will appear. Click "Next"



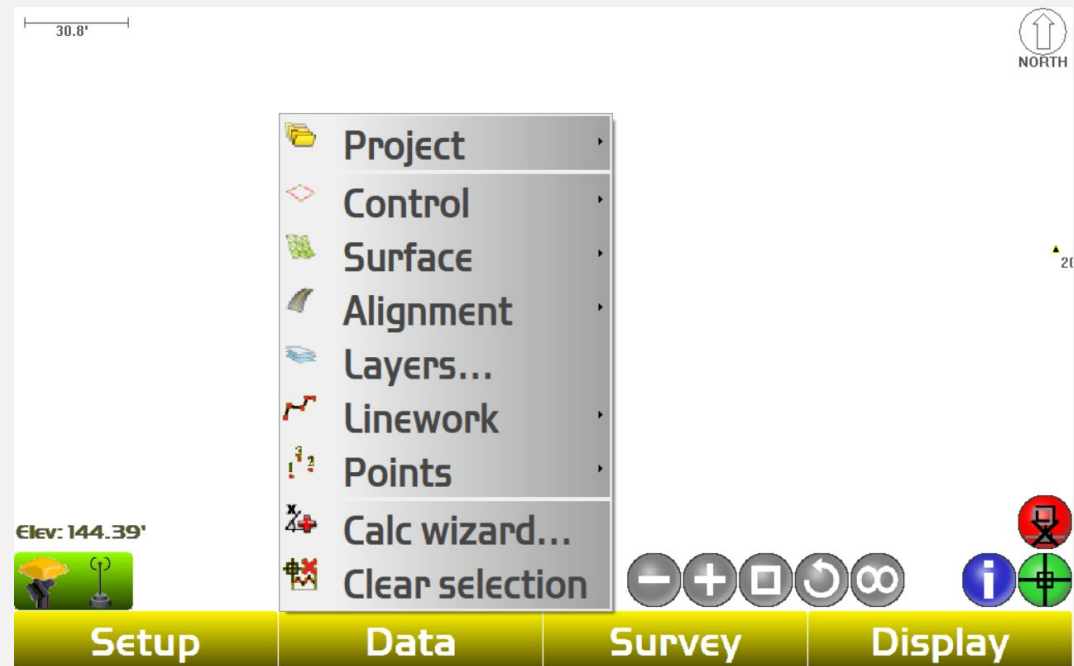
Name the surface and click "OK"



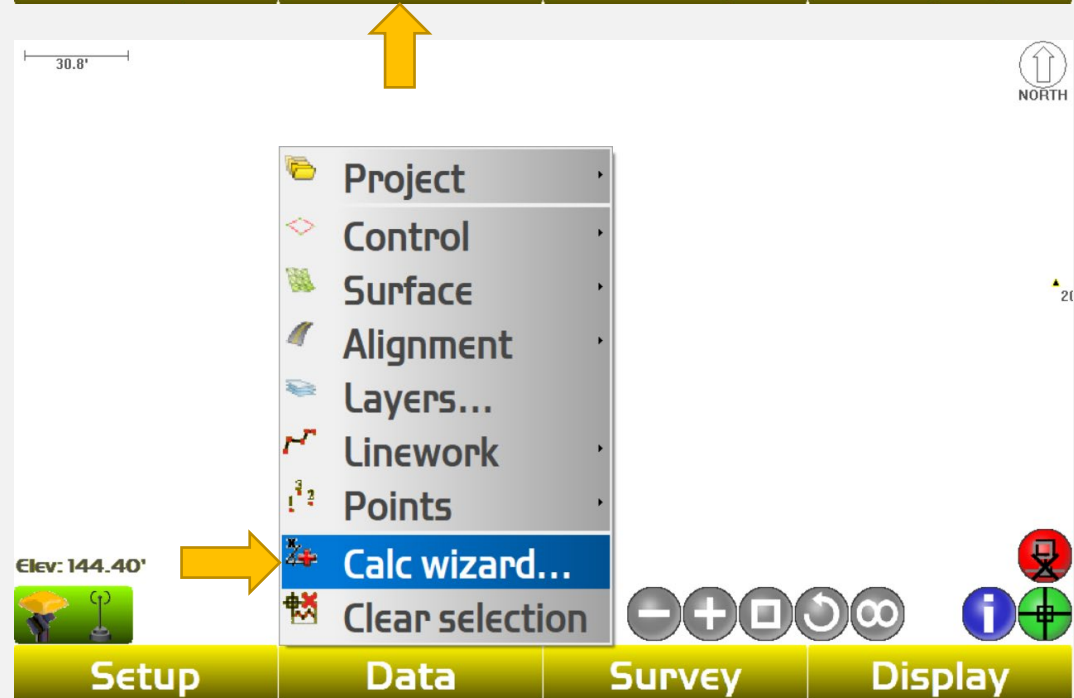
Now the surface has been titled,
click "Finish"



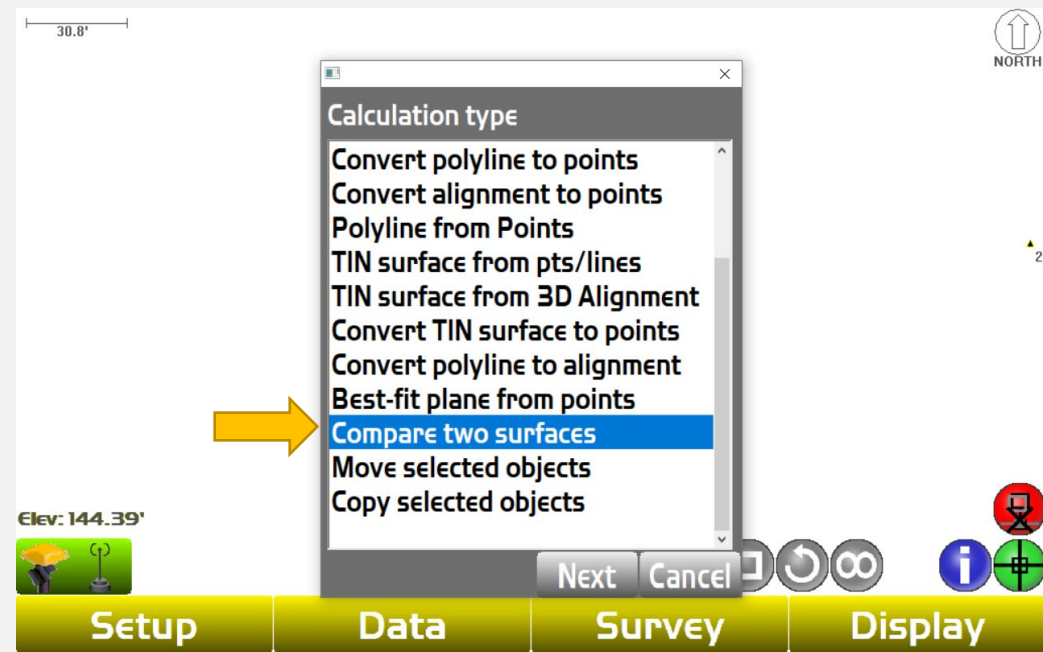
Select the Data tab



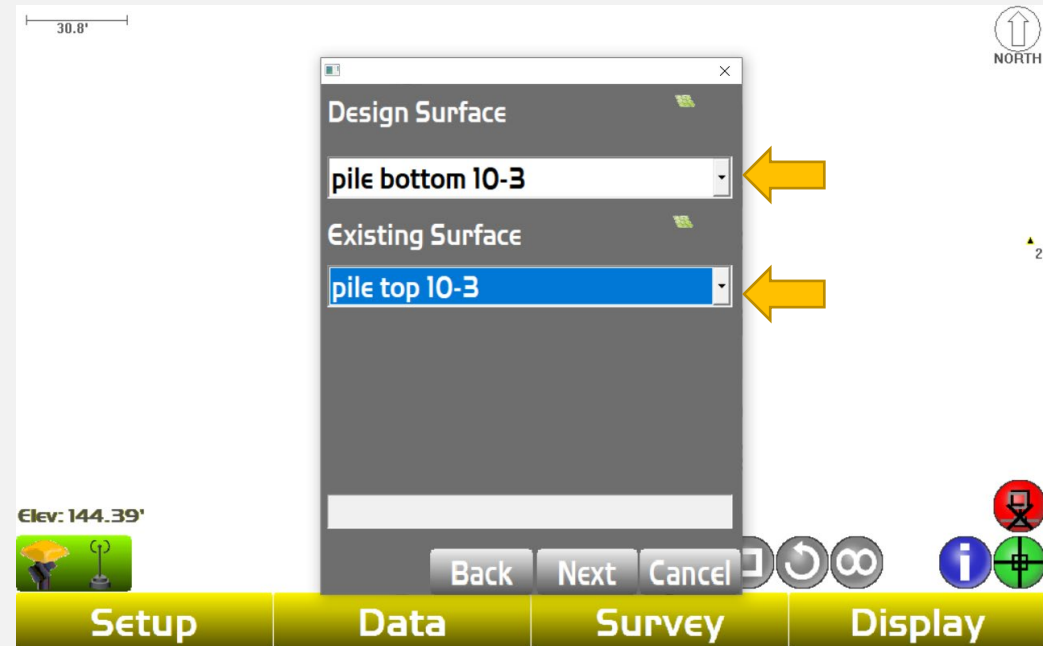
Click "Calc wizard"



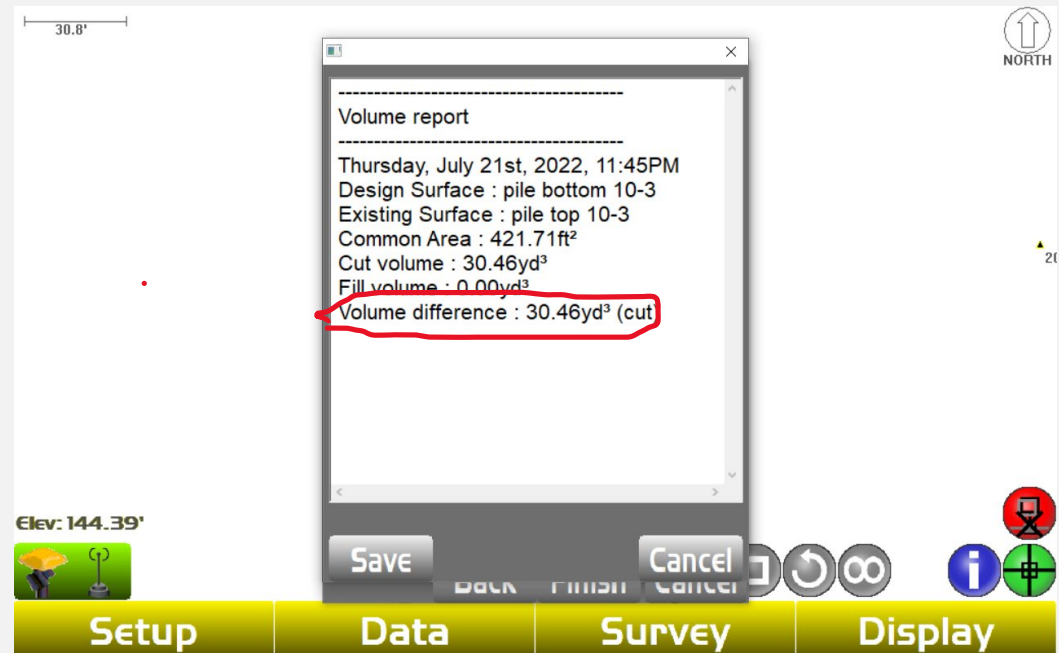
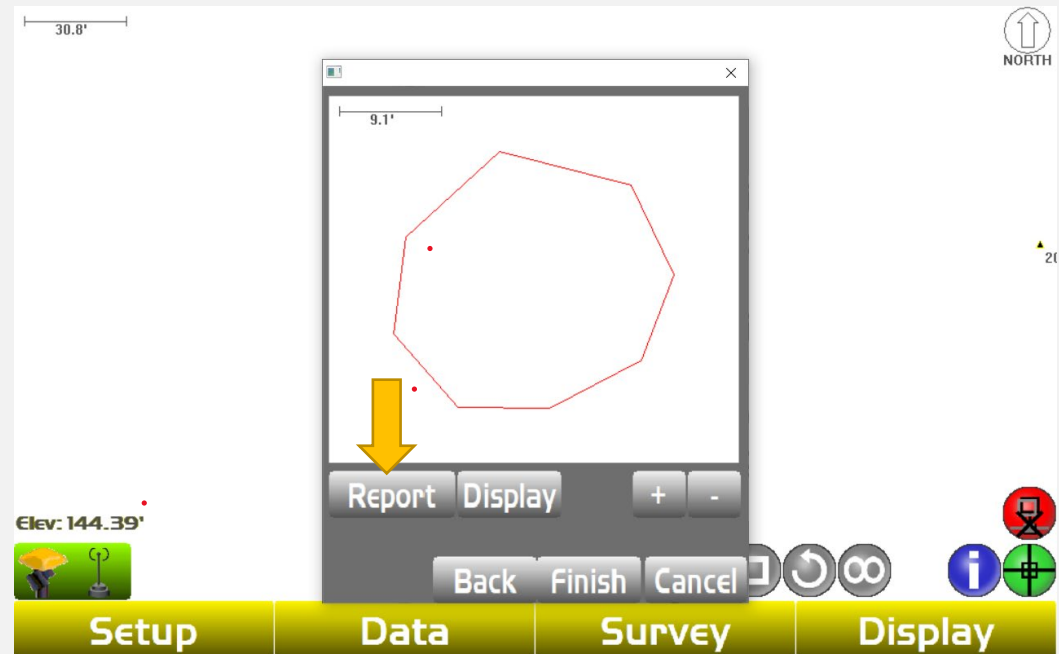
Click “Compare two surfaces”



Under Design Surface, select the bottom of pile surface, under Existing surface select the top of pile surface, click “Next”



An outline of the pile will appear. Click "Report" to get stockpile quantity. The "Volume difference" will be your pile quantity in bank cubic yards.





Link to Training Videos:

<https://www.youtube.com/@northwestconstruction>