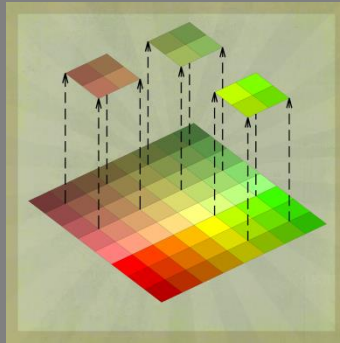




**VANTEC  
SOLUTIONS**

## QuickSurfaces – User Manual



Version 1.0

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## 1. Introduction

The *QuickSurfaces* plugin for AutoCAD® Civil 3D® provides an easy way to extract multiple “child” surfaces from an existing surface by selecting polylines that defines their outer boundary. The plugin assigns the child surfaces a user-specified style and extracts terrain information, including mean slope, mean elevation, minimum elevation, maximum elevation, 2D and 3D surface areas.

The plugin also allows the user to automatically create a TIN volume surface for each of the “child” surfaces and calculate cut and fill volumes.

## 2. Installation/Uninstallation

The *QuickSurfaces* app can be installed by running the QuickSurfaces.msi file and following the instructions in the wizard. This will install the program in the following location: C:\Program Files\Autodesk\ApplicationPlugins.

To uninstall the program, execute the same QuickSurfaces.msi file and follow the instructions.

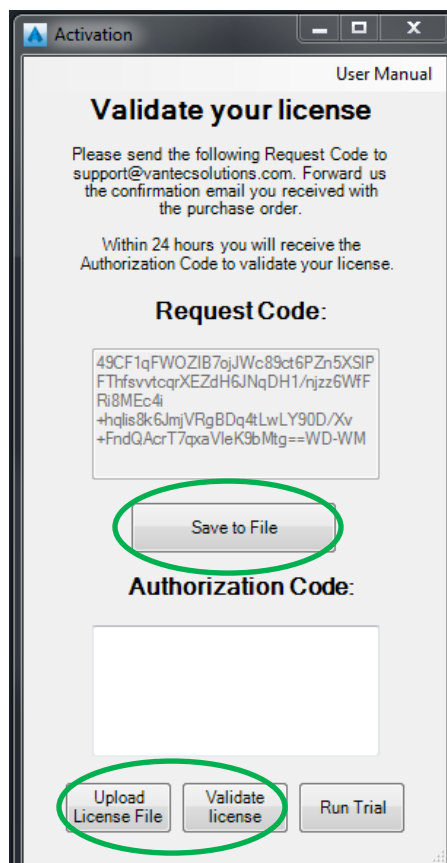
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<sup>1</sup> Autodesk, AutoCAD and AutoCAD Civil 3D are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and other countries.



### 3. Program Validation

The first time the application is launched, the user will be asked to validate the license. As shown in *Figure 1*, the program will create a text file with a Request Code that must be sent to Vantec Solutions ([support@vantecsolutions.com](mailto:support@vantecsolutions.com)). Please also forward the confirmation email that you received either from our website or the Autodesk App Store with the order number.



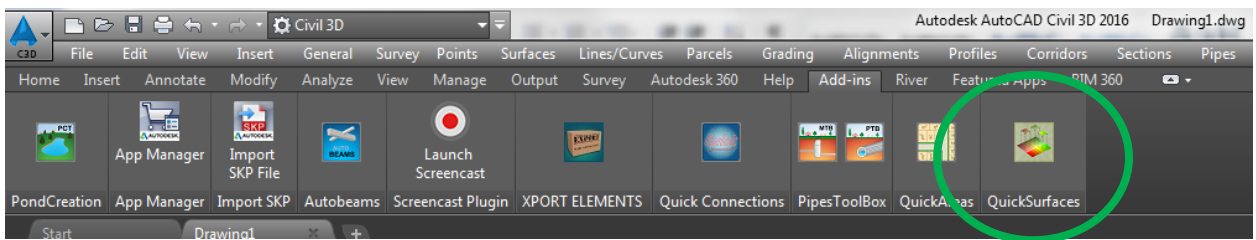
*Figure 1*



Within 24 hours we will send you back a text file with the Authorization Code. You must upload this file by clicking “Upload License File” and then “Validate License”. In the meantime, you can run the program in trial mode using the “Run Trial” button.

## 4. Main Interface

The app can be launched by clicking the corresponding button at the Add-ins tab, as shown in *Figure 2*, or by typing **qsurfaces** in the command line.



*Figure 2*



Figure 3 below shows the plugin interface.

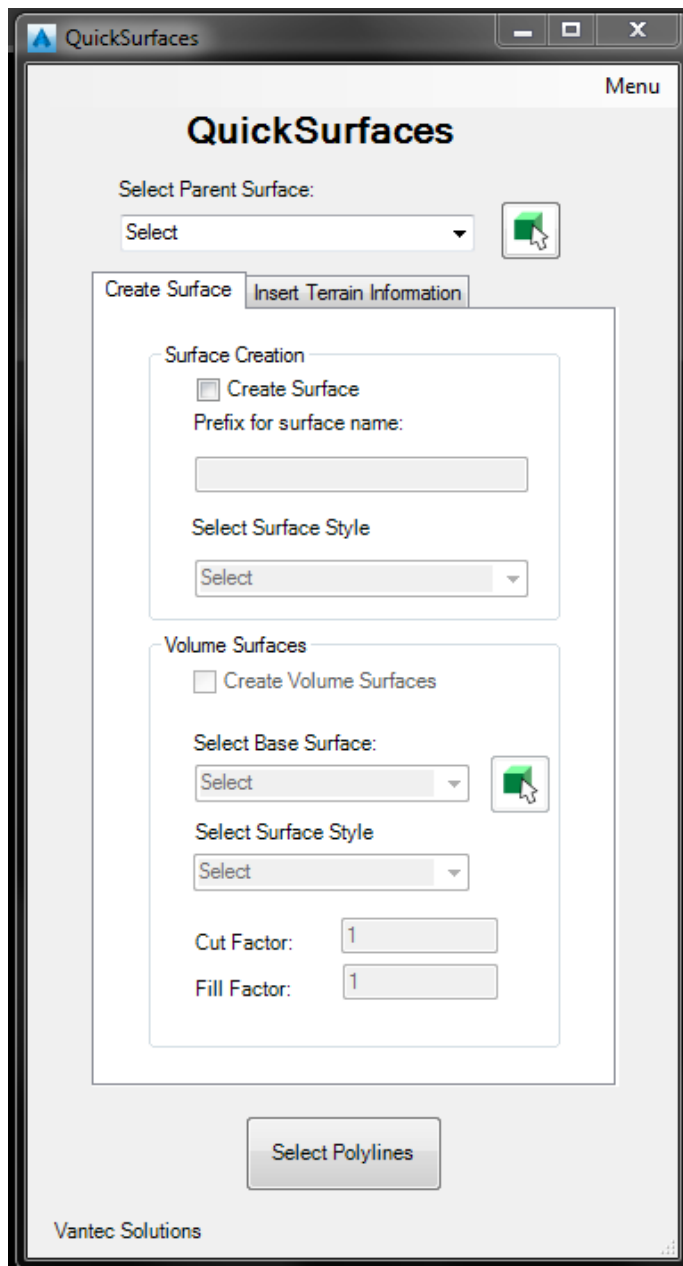
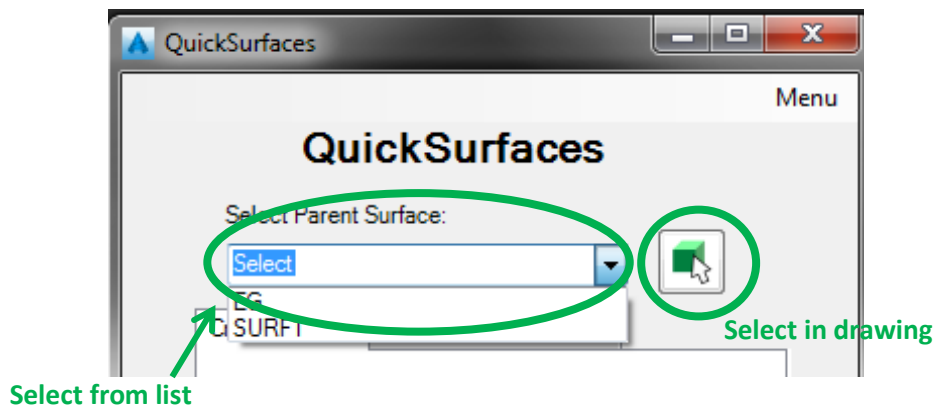


Figure 3



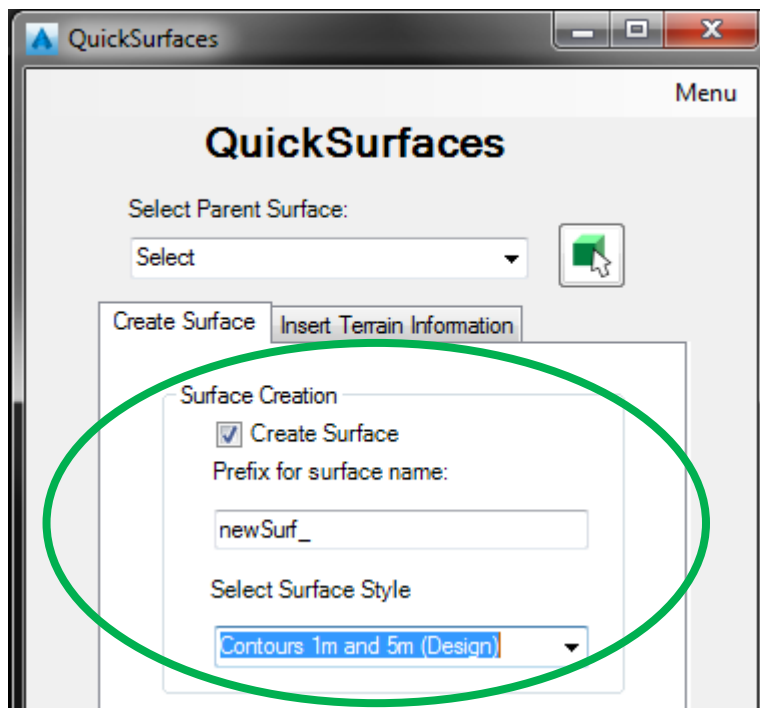
The first step is to select the surface from the list displayed in the plugin interface. The user can also select the surface in the drawing, as shown in *Figure 4*.



*Figure 4*



The user has the option of create child surfaces or just extract terrain information. If the creation of child surfaces is desired, check the “Create Surface” box shown in *Figure 5*, specify a prefix for the surface names, and select a surface style.

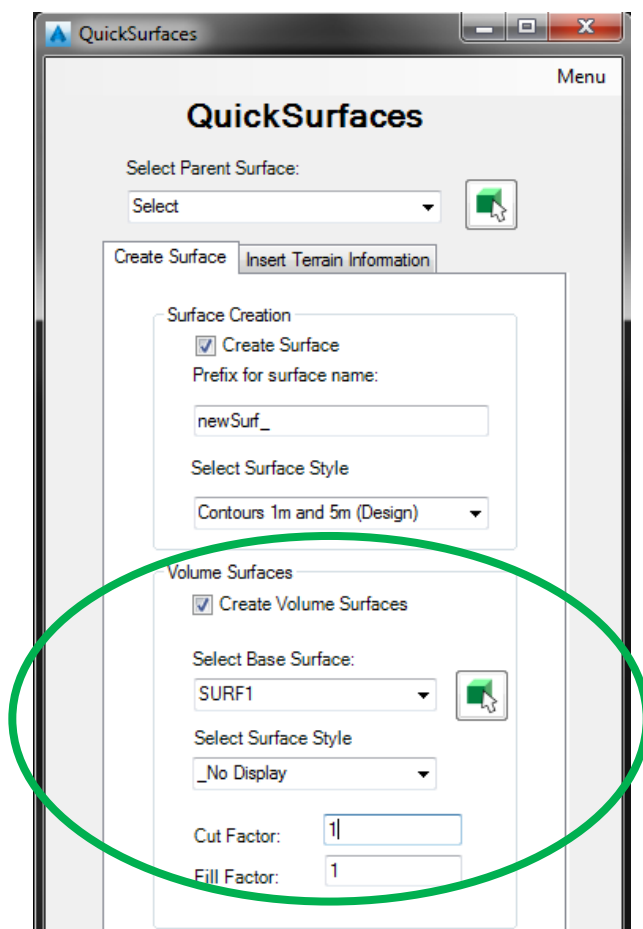


*Figure 5*





The app allows the user to automatically create TIN volume surfaces for each of the child surfaces. This option becomes available after checking the “Create Volume Surfaces” box shown in *Figure 6*. The user must indicate the Base Surface, Surface Style and Fill/Cut Factors.



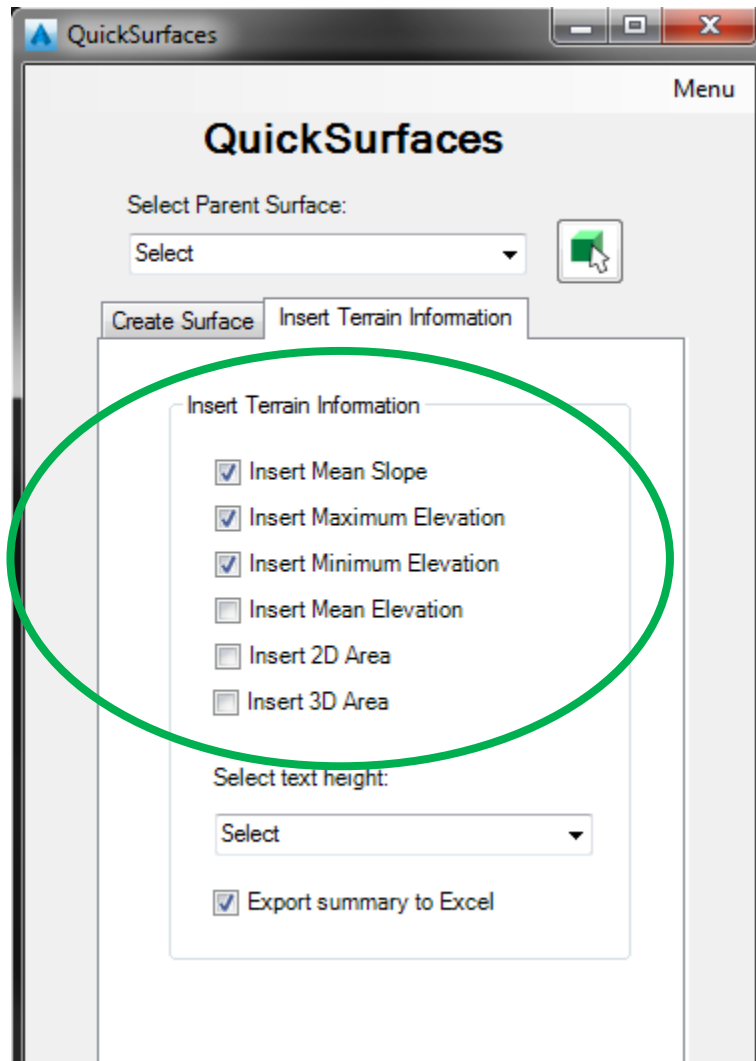
*Figure 6*



The user can decide to insert texts with terrain information, regardless of whether child surfaces are created or not. This information includes:

- Mean slope
- Maximum elevation
- Minimum elevation
- Mean elevation
- 2d Area surface
- 3d Area Surface

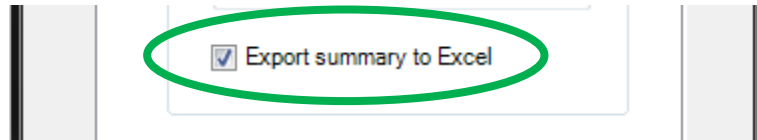
To extract this information, check the corresponding boxes in the “Insert Terrain Information” tab as shown in *Figure 7*. For each polyline selected, the plugin will extract the terrain information within the limits of that polyline and will insert a text at the centroid of the polyline with the corresponding data value. A layer is created for each data type (e.g. layer “Mean Elevations”).



**Figure 7**



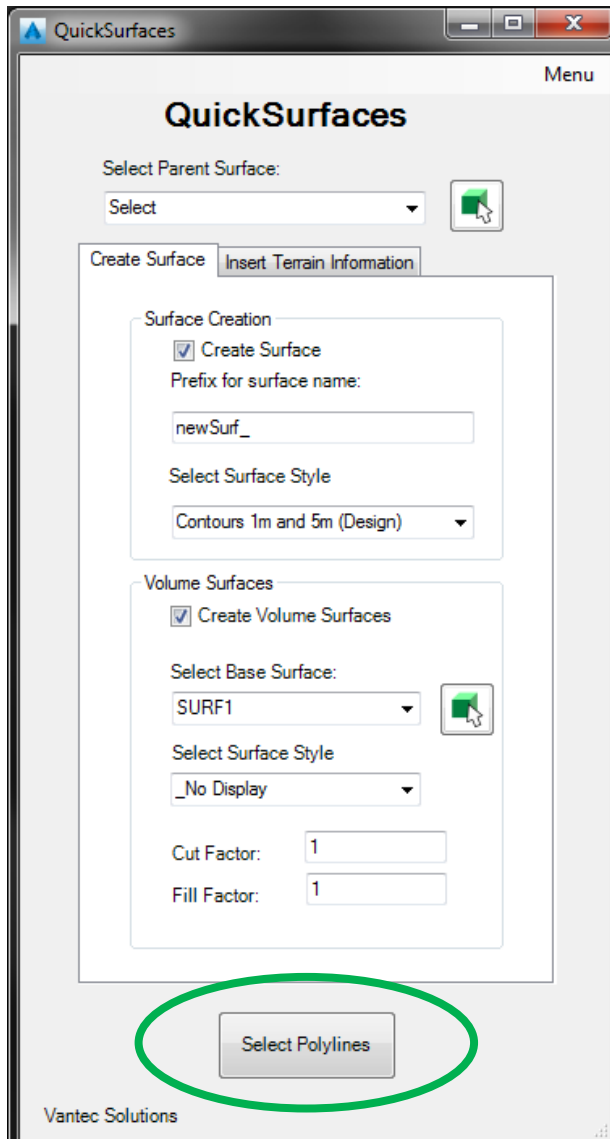
The user can export the information to Excel by selecting the “Export summary to Excel” box shown in *Figure 8*. This can be done only if the child surfaces are created.



*Figure 8*



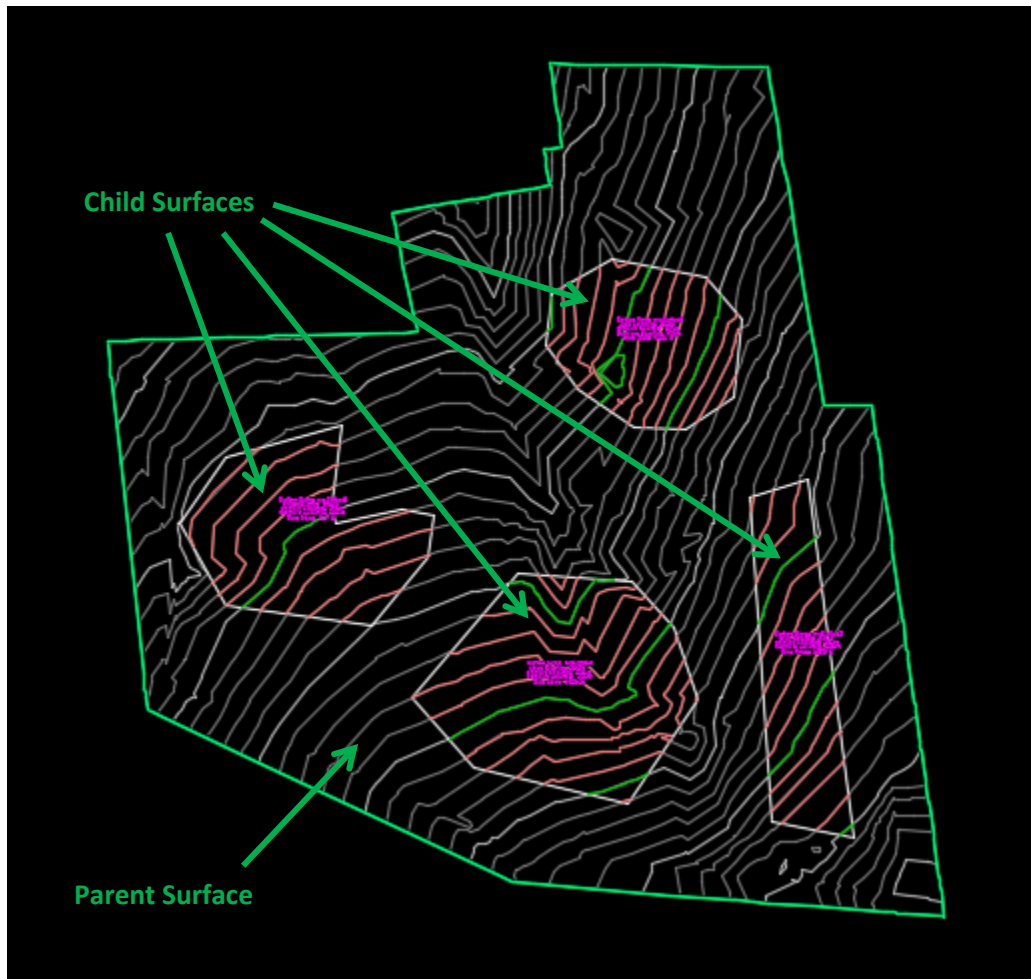
Finally, the user must click the “Select Polylines” button and select the polylines in the drawing that will define the outer boundary for the surfaces or/and the terrain data extraction.



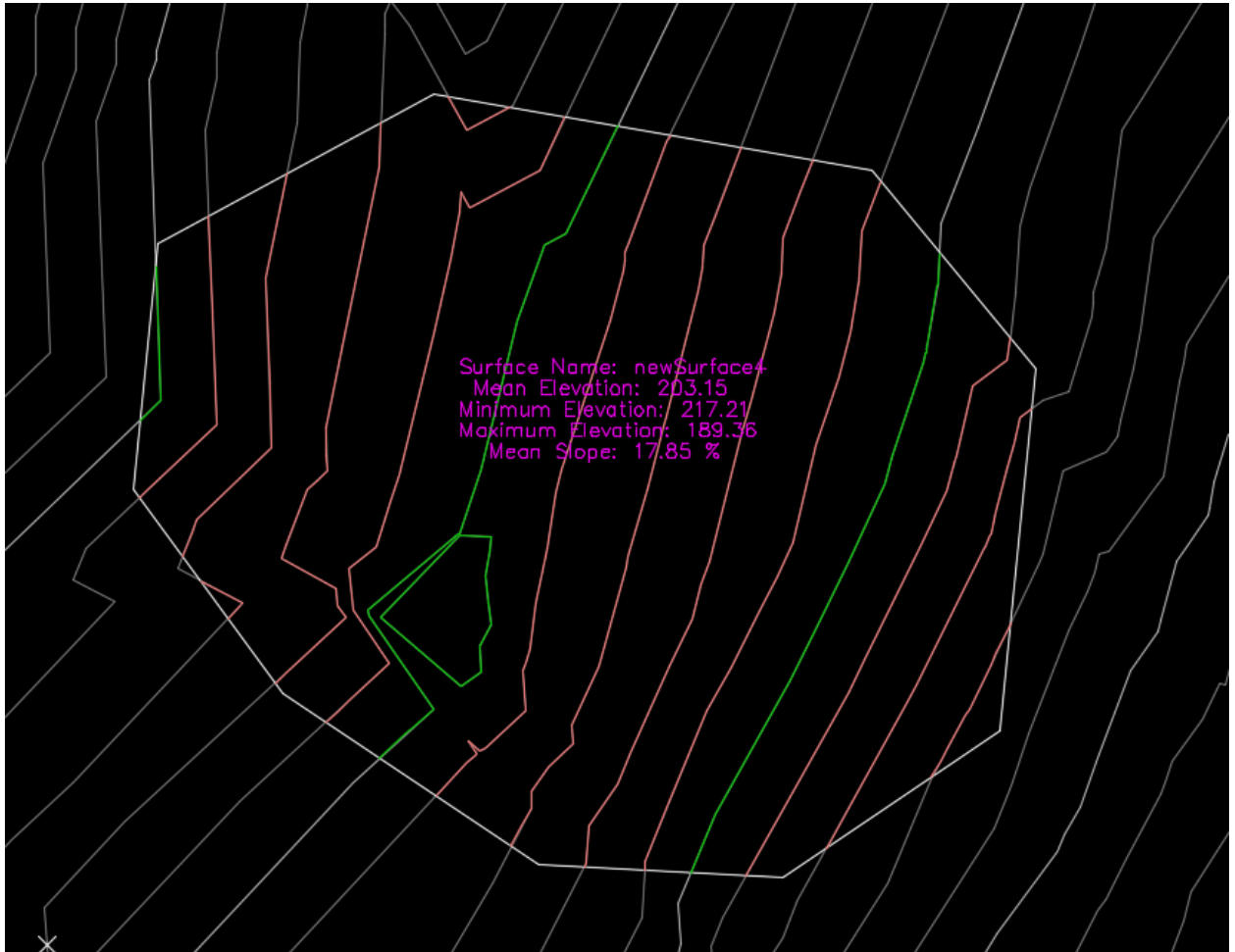
**Figure 9**



*Figures 10 and 11* show an example of the child surfaces creation and the terrain data extraction.



*Figure 10*



**Figure 11**

If the “Export summary to Excel” box is checked, the plugin will prompt the user to indicate the location and name of the Excel file.



	A	B	C	D	E
1	<b>Surface Name</b>	<b>Mean Slope</b>	<b>Maximum Elevation</b>	<b>Minimum Elevation</b>	<b>Mean Elevation</b>
2		<b>%</b>	<b>Meters</b>	<b>Meters</b>	<b>Meters</b>
3	newSurface1	14.35	204.87	232.41	219.06
4	newSurface2	13.32	223.77	251.67	236.71
5	newSurface3	11.7	190.25	209.9	199.46
6	newSurface4	17.85	189.36	217.21	203.15
7					

**Figure 12**

## 5. Support

Please let us know if you have further questions. Our contact email is [support@vantecsolutions.com](mailto:support@vantecsolutions.com).