O-PitBlast

File | Home | Topography | Free-Face | Boreholes | Charge | Non-Electric | Electronic | Blast Results | Attenuation Law | Map

Drone Mapping Service | Blast Information | O-PitCloud | New Messages

Import Terrain | Import Layer | Contour Lines | Outliers | Elevation | Cut Terrain | Expand Terrain | Bench Bottom | Edit Cloud | Eliminate Triangles

Topography Preparation

Views | Export

Data

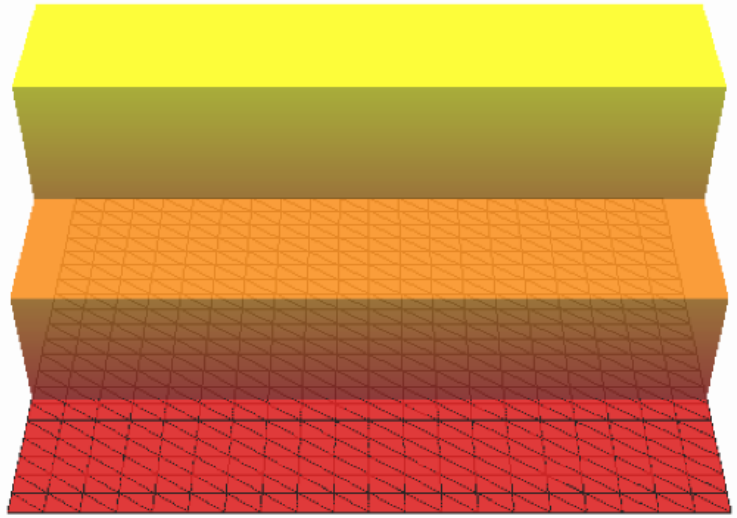
Select: Davey

Rock

Welcome to O-Pitblast!

Let's take a look at the principal functionalities of O-Pitblast.

Step 1 of 23



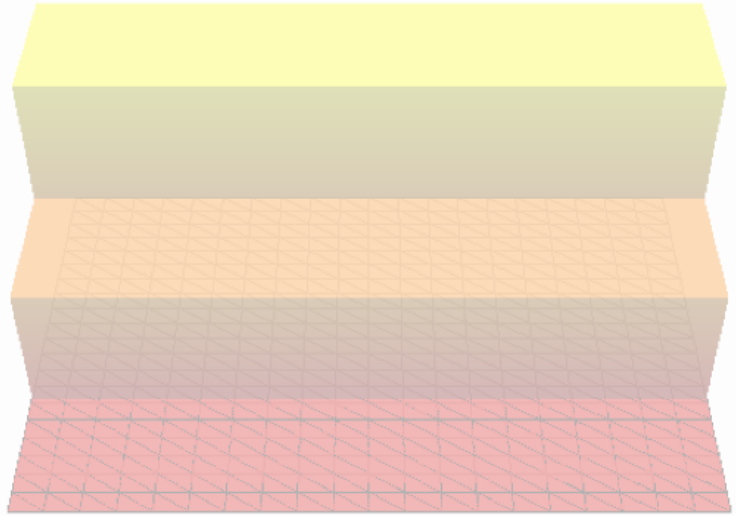
Looking for... | Volume: 0.0 m³ | Surface: 0.0 m² | Info: | Invisible Holes: 0 | 2D | 3D | FreeCam

Import Terrain Import Layer Contour Elevation Expand Terrain Edit Cloud Eliminate Triangles Views Export Select Davey Views Data Rock

O-Pitblast Modules

In this tab you can navigate through all modules included in O-Pitblast.

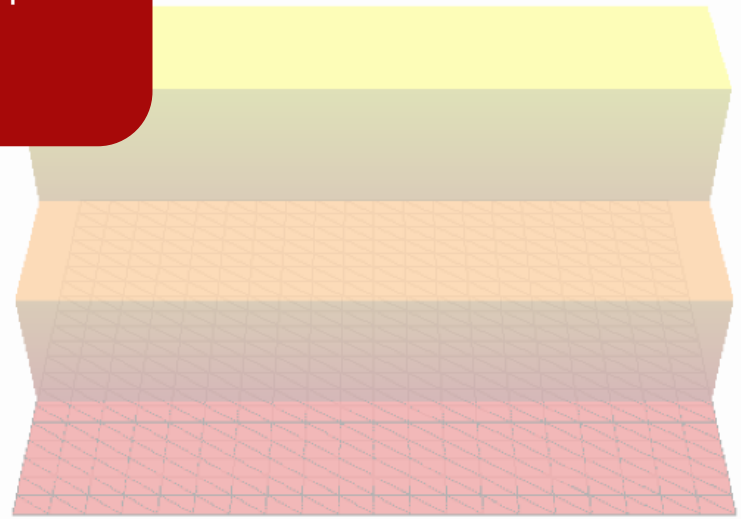
Step 2 of 23

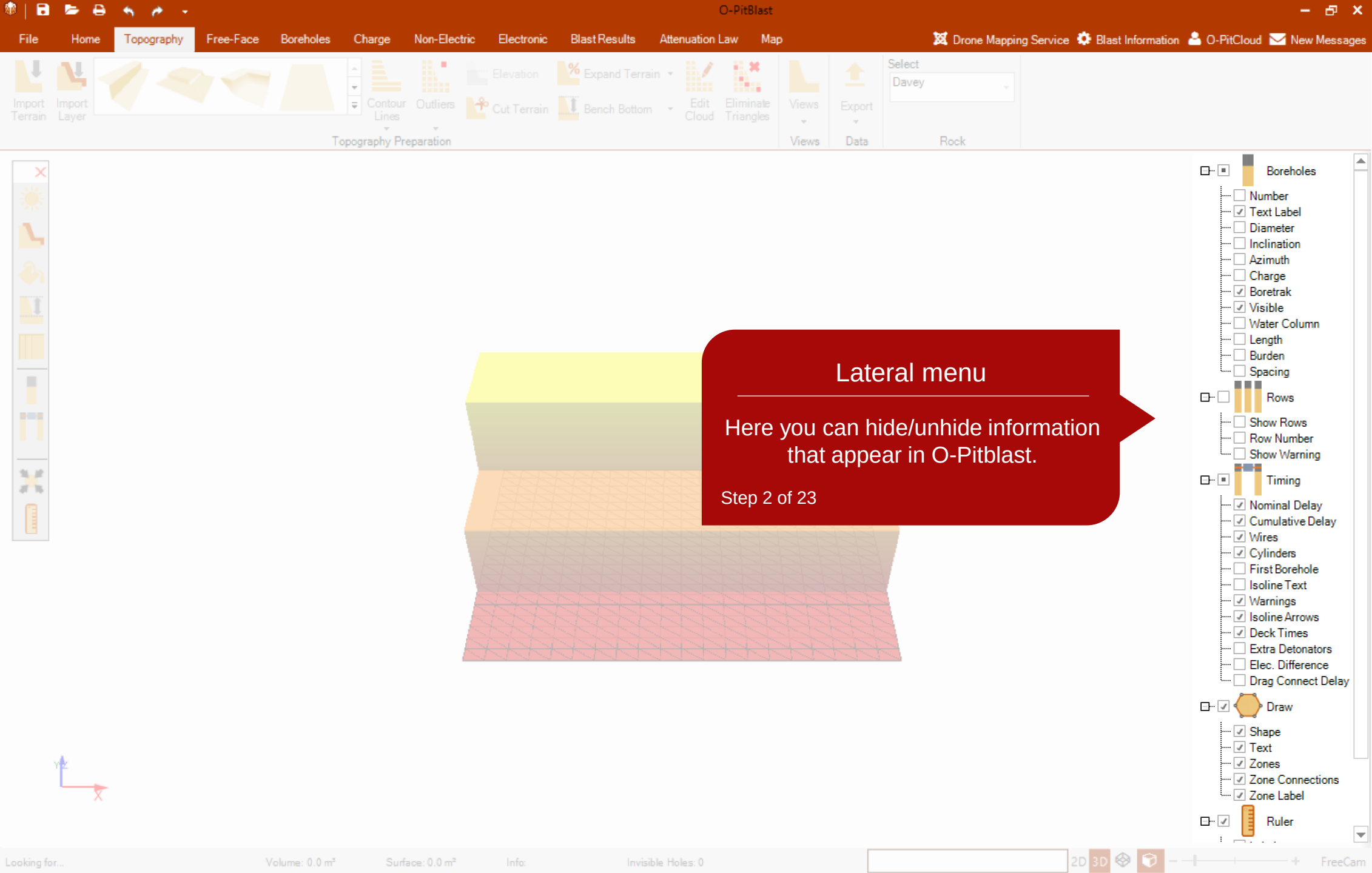


Tool Box

Here you can change visual aspect of O-Pitblast.

Step 2 of 23





Lateral menu

Here you can hide/unhide information that appear in O-Pitblast.

Step 2 of 23

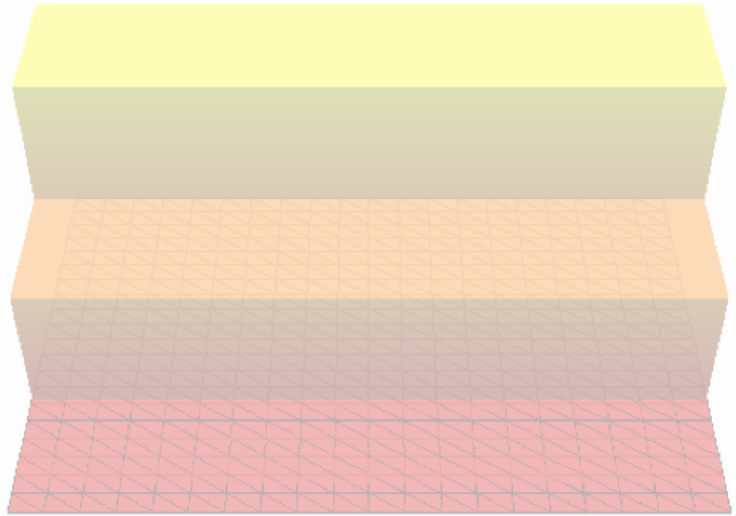
Import Terrain

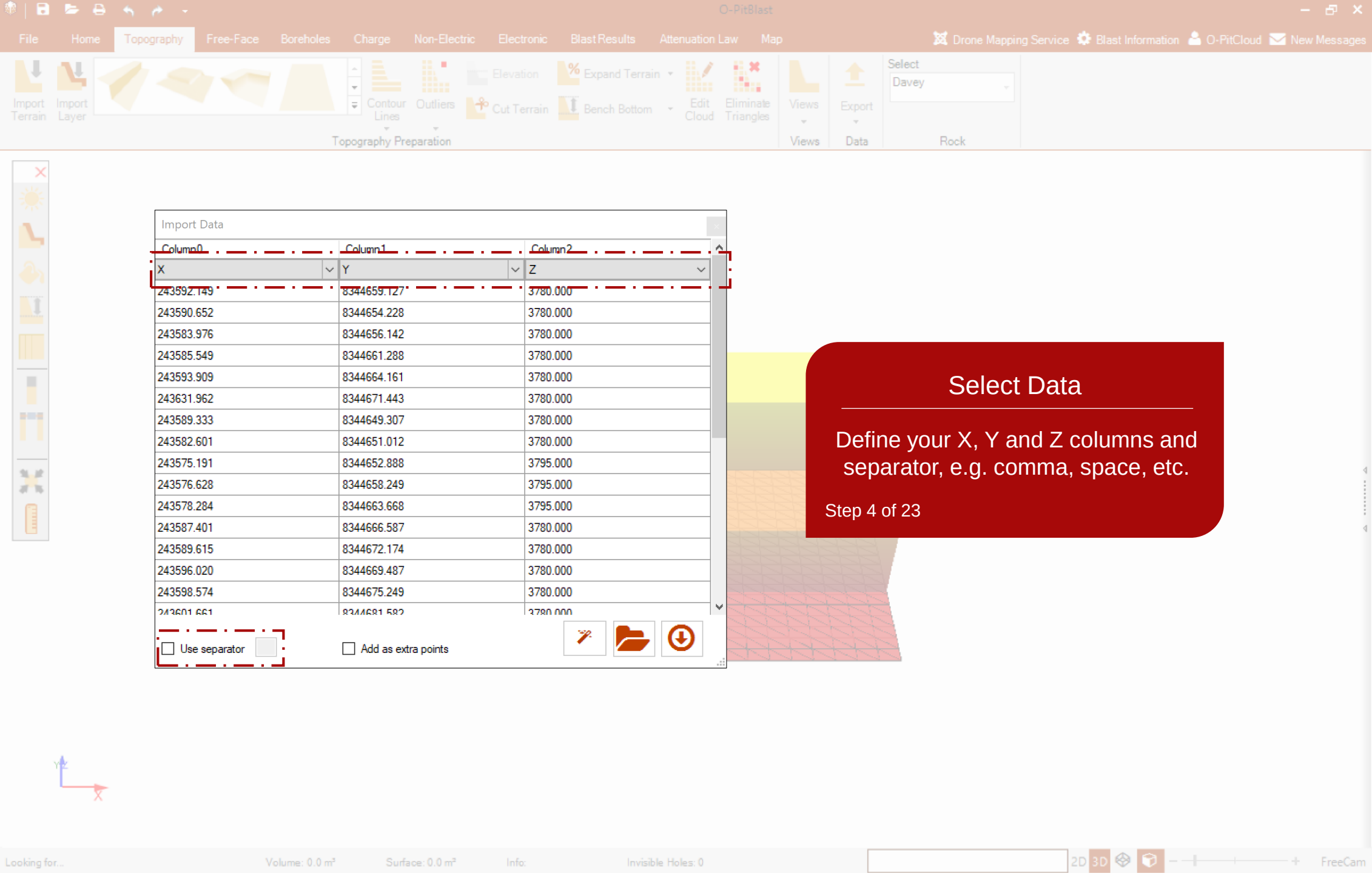
Expand Terrain
Bench Bottom
Edit Cloud
Eliminate Triangles
Views
Export
Select
Davey
Views
Data
Rock

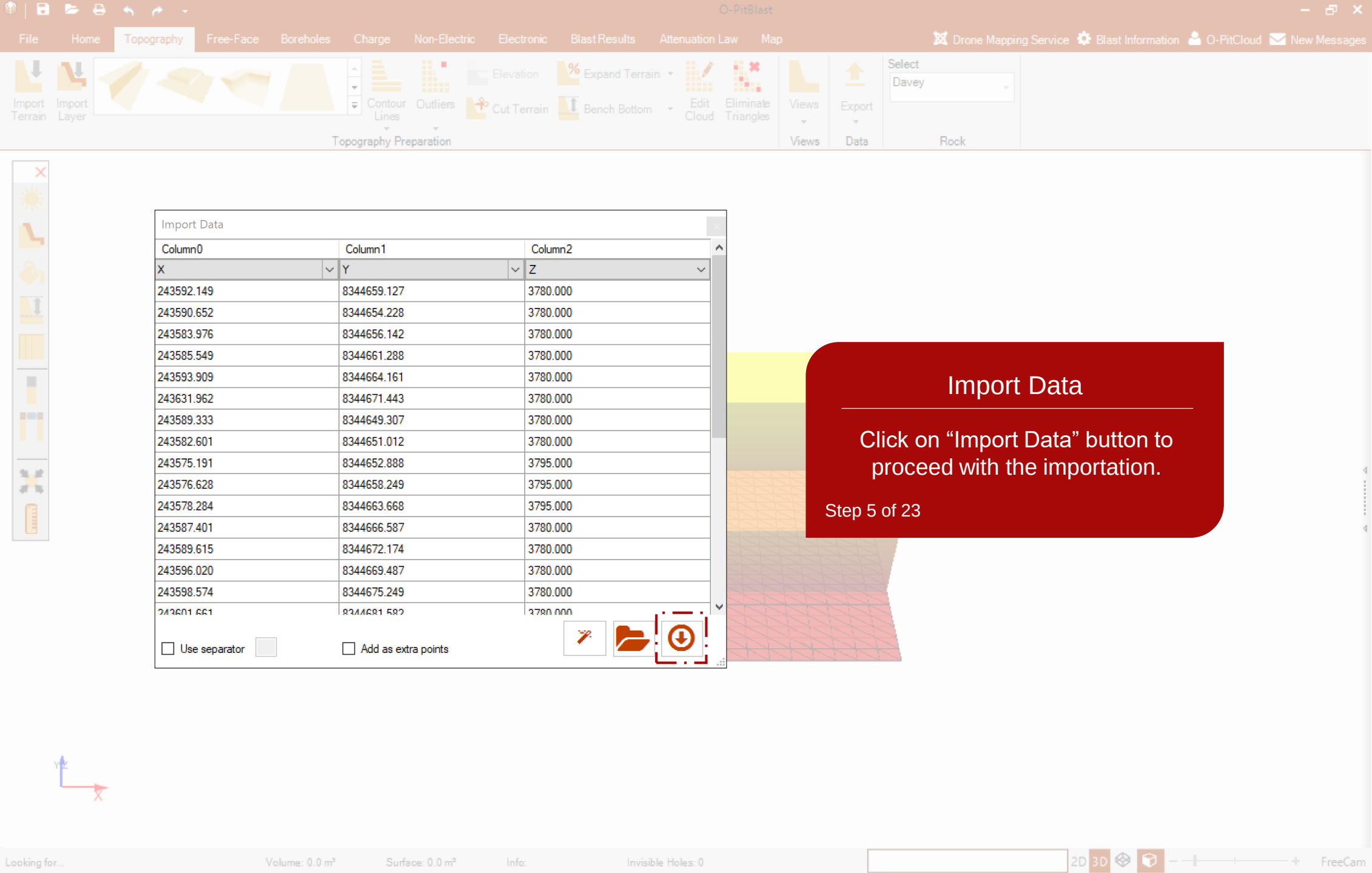
Import Terrain

You can import your terrain X, Y and Z coordinates. You can use .dxf, .csv and .txt files.

Step 3 of 23




O-PitBlast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Import Terrain
Import Layer
Contour Lines
Outliers
Elevation
Cut Terrain
Expand Terrain
Bench Bottom
Edit Cloud
Eliminate Triangles
Topography Preparation
Views
Export
Data
Select
Davey
Rock
Import Data
Column0
Column1
Column2
X
Y
Z
243592.149 8344659.127 3780.000
243590.652 8344654.228 3780.000
243583.976 8344656.142 3780.000
243585.549 8344661.288 3780.000
243593.909 8344664.161 3780.000
243631.962 8344671.443 3780.000
243589.333 8344649.307 3780.000
243582.601 8344651.012 3780.000
243575.191 8344652.888 3795.000
243576.628 8344658.249 3795.000
243578.284 8344663.668 3795.000
243587.401 8344666.587 3780.000
243589.615 8344672.174 3780.000
243596.020 8344669.487 3780.000
243598.574 8344675.249 3780.000
Use separator
Add as extra points
Select Data
Define your X, Y and Z columns and separator, e.g. comma, space, etc.
Step 4 of 23
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam


O-PitBlast
File
Home
Topography
Free-Face
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Charge
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Import Terrain
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Edit Cloud
Eliminate Triangles
Topography Preparation
Views
Export
Data
Select
Davey
Rock
Import Data
Column0
Column1
Column2
X
Y
Z
243592.149 8344659.127 3780.000
243590.652 8344654.228 3780.000
243583.976 8344656.142 3780.000
243585.549 8344661.288 3780.000
243593.909 8344664.161 3780.000
243631.962 8344671.443 3780.000
243589.333 8344649.307 3780.000
243582.601 8344651.012 3780.000
243575.191 8344652.888 3795.000
243576.628 8344658.249 3795.000
243578.284 8344663.668 3795.000
243587.401 8344666.587 3780.000
243589.615 8344672.174 3780.000
243596.020 8344669.487 3780.000
243598.574 8344675.249 3780.000
Use separator
Add as extra points
Import Data
Click on “Import Data” button to proceed with the importation.
Step 5 of 23
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam

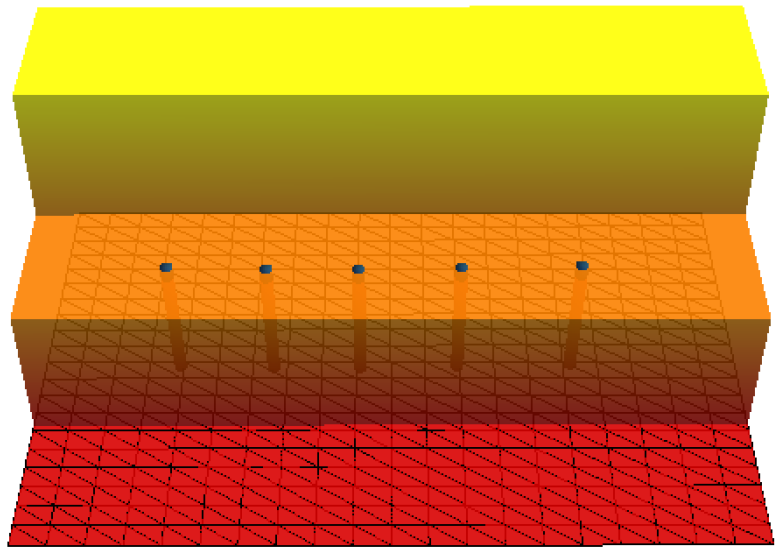
Edit Hole | Add Hole | Update Altitude | Renumber | Start 1 | Automatic Increment | Renumber All | Add Row | Line Editor | Pattern Creation | Import Pattern | Rotate Pattern | Import Zone | Type | Export

Renumber | Rows | Pattern | Data

Add boreholes

Create individual boreholes.

Step 6 of 23



Edit Hole | Add Hole | Delete | Move | Edit Toe | Edit Collar | Select | Table | Burden | Spacing | Off-set | Visible | Invisible | Update Altitude

Boreholes

Renumber | Start 1 | Automatic Increment | Renumber All

Renumber

Add Row | Line Editor

Rows

Pattern Creation | Import Pattern | Rotate Pattern | Import Zone | Type

Pattern

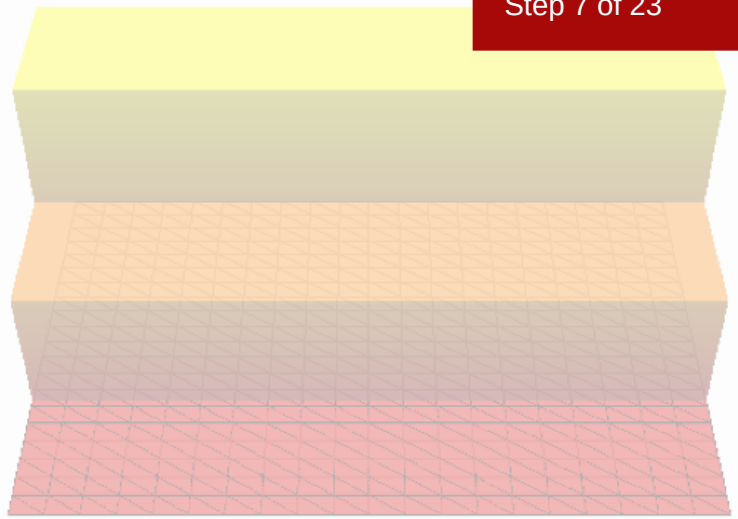
Export

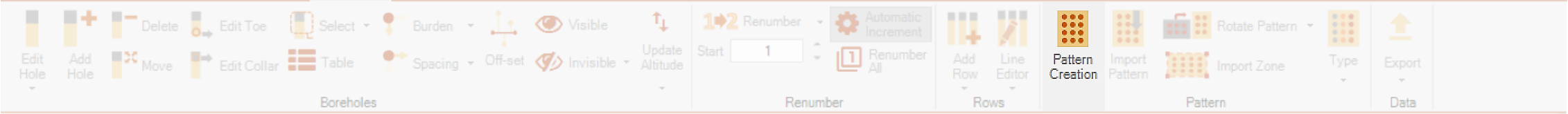
Data

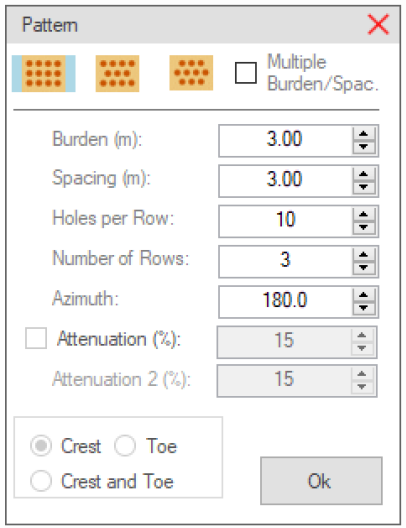
Pattern Creation

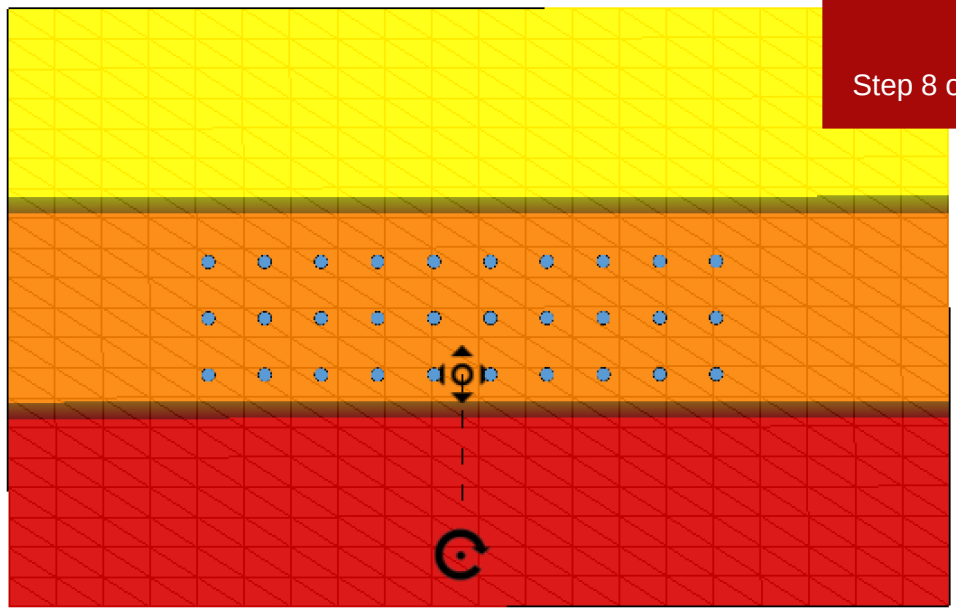
Create your pattern based on geometric inputs.

Step 7 of 23









Pattern Creation

Choose your burden, spacing, number of rows and azimuth and click on the “Ok” button.

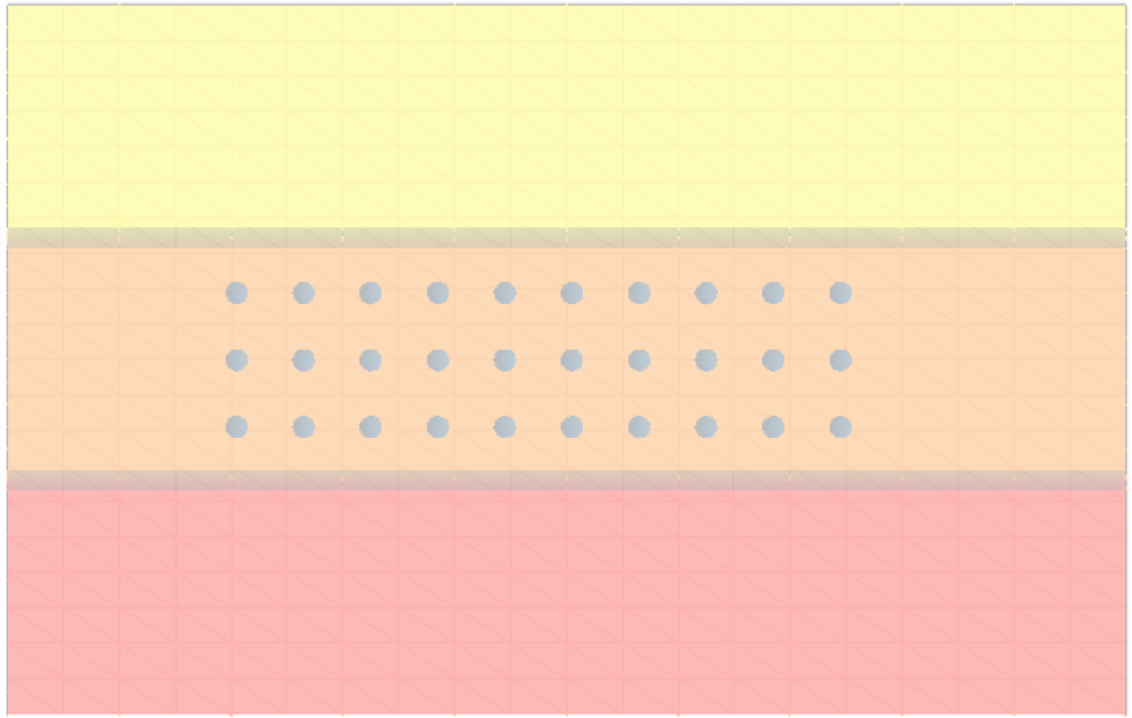
Step 8 of 23

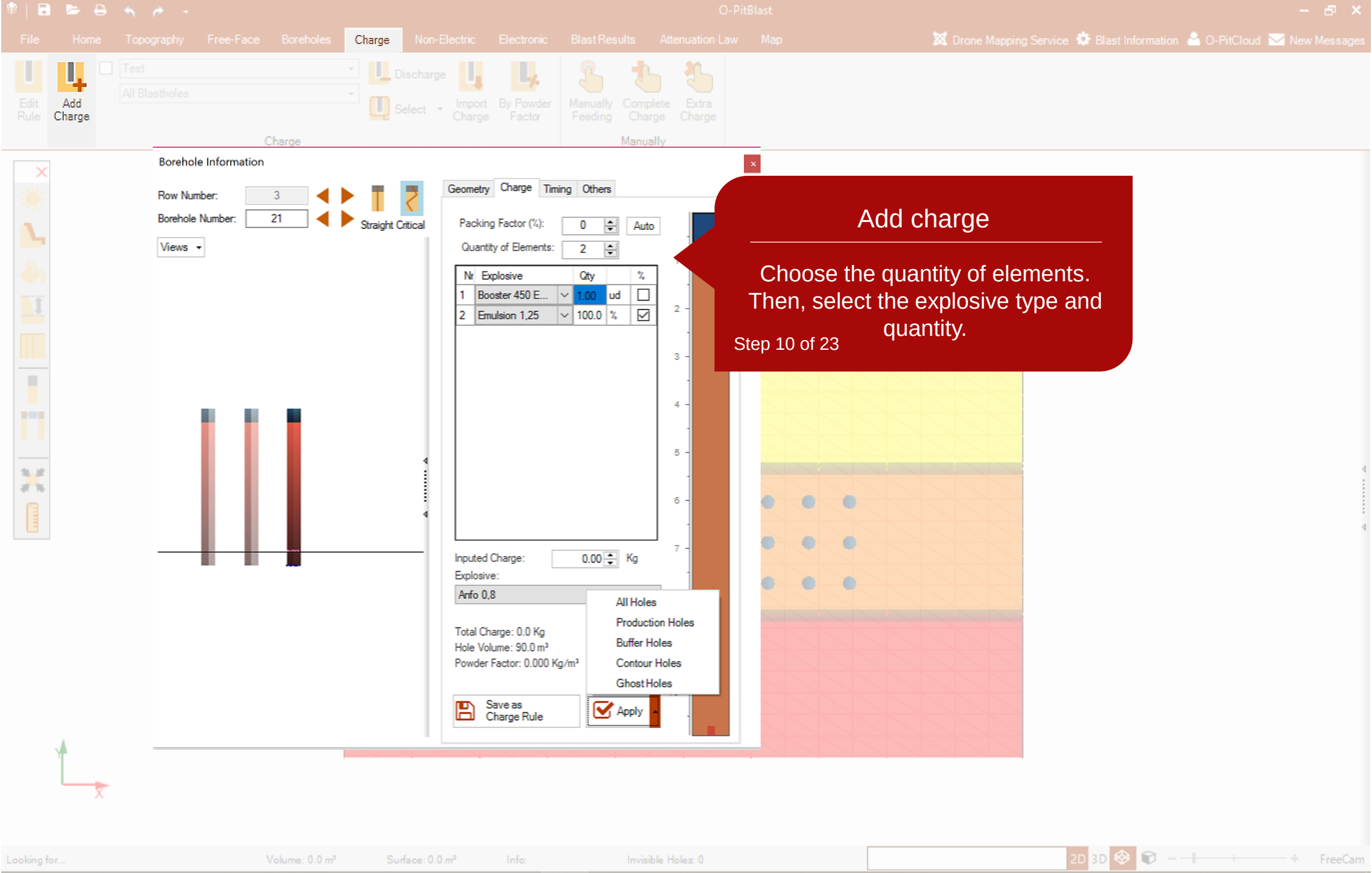
Edit Rule
Add Charge
Manually Feeding
Complete Charge
Extra Charge
Manually

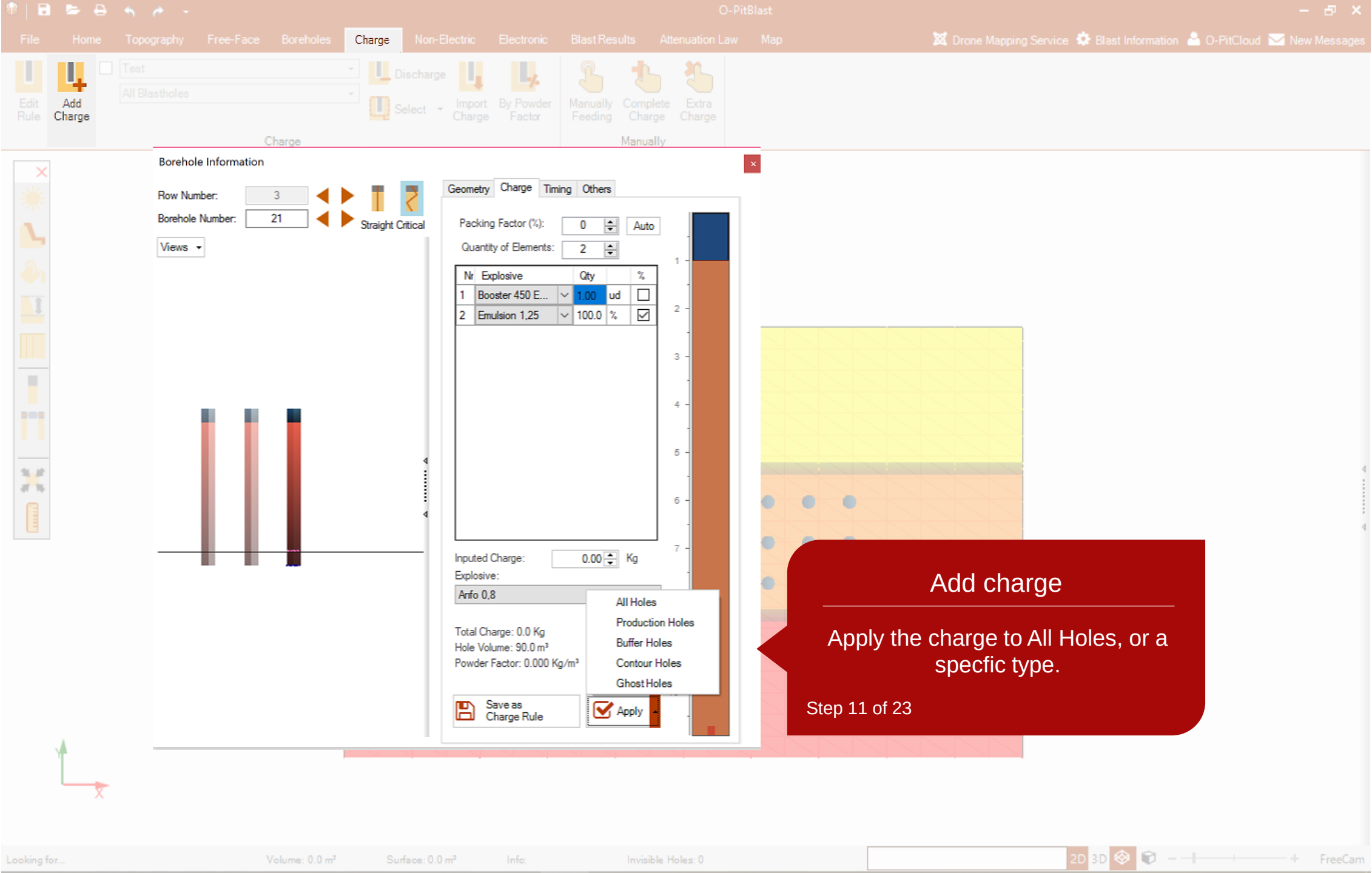
Add charge

Add charge to your holes by selecting this tool and then click in one hole.

Step 9 of 23




O-PitBlast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Edit Rule
Add Charge
Test
All Blastholes
Discharge
Select
Import Charge
By Powder Factor
Manually Feeding
Complete Charge
Extra Charge
Charge
Manually
Borehole Information
Row Number: 3
Borehole Number: 21
Straight Critical
Views
Geometry
Charge
Timing
Others
Packing Factor (%): 0
Auto
Quantity of Elements: 2
Nr Explosive Qty %
1 Booster 450 E... 1.00 ud
2 Emulsion 1,25 100.0 %
Inputed Charge: 0.00 Kg
Explosive:
Anfo 0,8
All Holes
Production Holes
Buffer Holes
Contour Holes
Ghost Holes
Total Charge: 0.0 Kg
Hole Volume: 90.0 m³
Powder Factor: 0.000 Kg/m³
Save as Charge Rule
Apply
Add charge
Choose the quantity of elements. Then, select the explosive type and quantity.
Step 10 of 23
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam


O-PitBlast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Edit Rule
Add Charge
Test
All Blastholes
Discharge
Select
Import Charge
By Powder Factor
Manually Feeding
Complete Charge
Extra Charge
Charge
Manually
Borehole Information
Row Number: 3
Borehole Number: 21
Straight Critical
Views
Geometry
Charge
Timing
Others
Packing Factor (%): 0
Auto
Quantity of Elements: 2
Nr Explosive Qty %
1 Booster 450 E... 1.00 ud
2 Emulsion 1,25 100.0 %
Inputed Charge: 0.00 Kg
Explosive:
Anfo 0,8
Total Charge: 0.0 Kg
Hole Volume: 90.0 m³
Powder Factor: 0.000 Kg/m³
All Holes
Production Holes
Buffer Holes
Contour Holes
Ghost Holes
Save as Charge Rule
Apply
Add charge
Apply the charge to All Holes, or a specfic type.
Step 11 of 23
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam

Edit Timing | Add Timing | Line | Initiation Hole | Time Tool | Delete | Select

Surface Det. | Surface Connector 25

In-hole Det. | In-hole Detonator 500

Non-Electric Detonator

Show Decks | Det.: | Con.: | Sort | Mode | Connect Decks

Decks

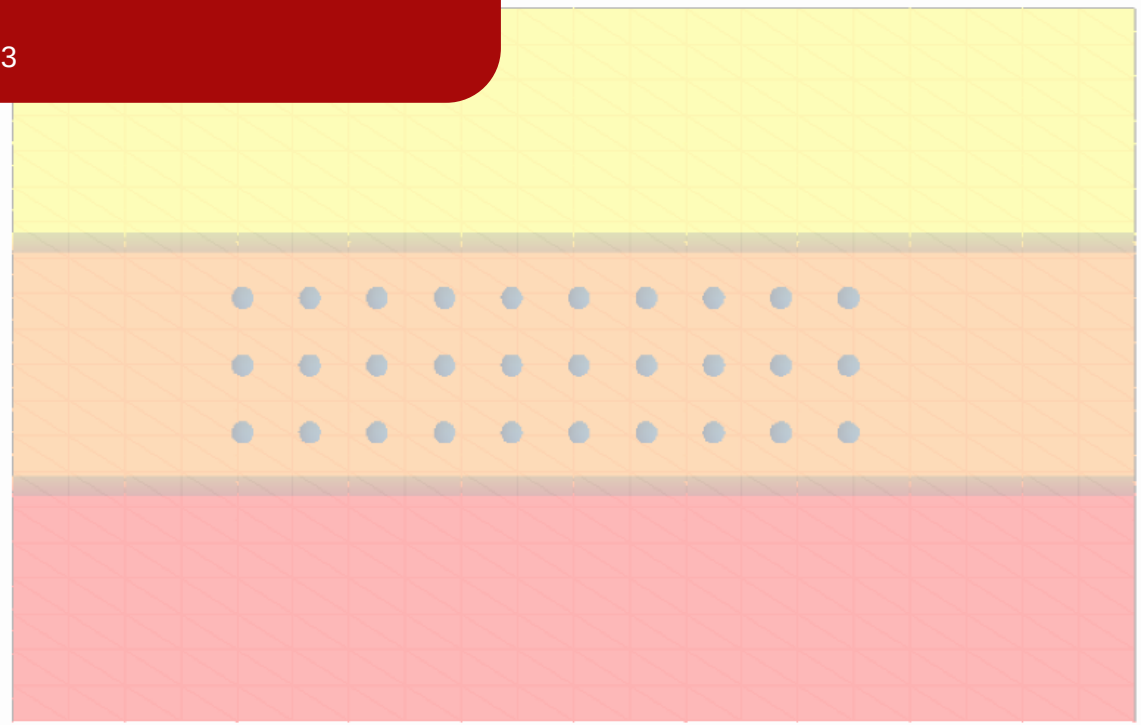
Isolines | Histogram | Play | Simulation Speed | Isolines: 100 ms | Relief Tool | Relief Isolines

Simulation

Timing: Non-Electronic

Select your surface and in-holes detonators.

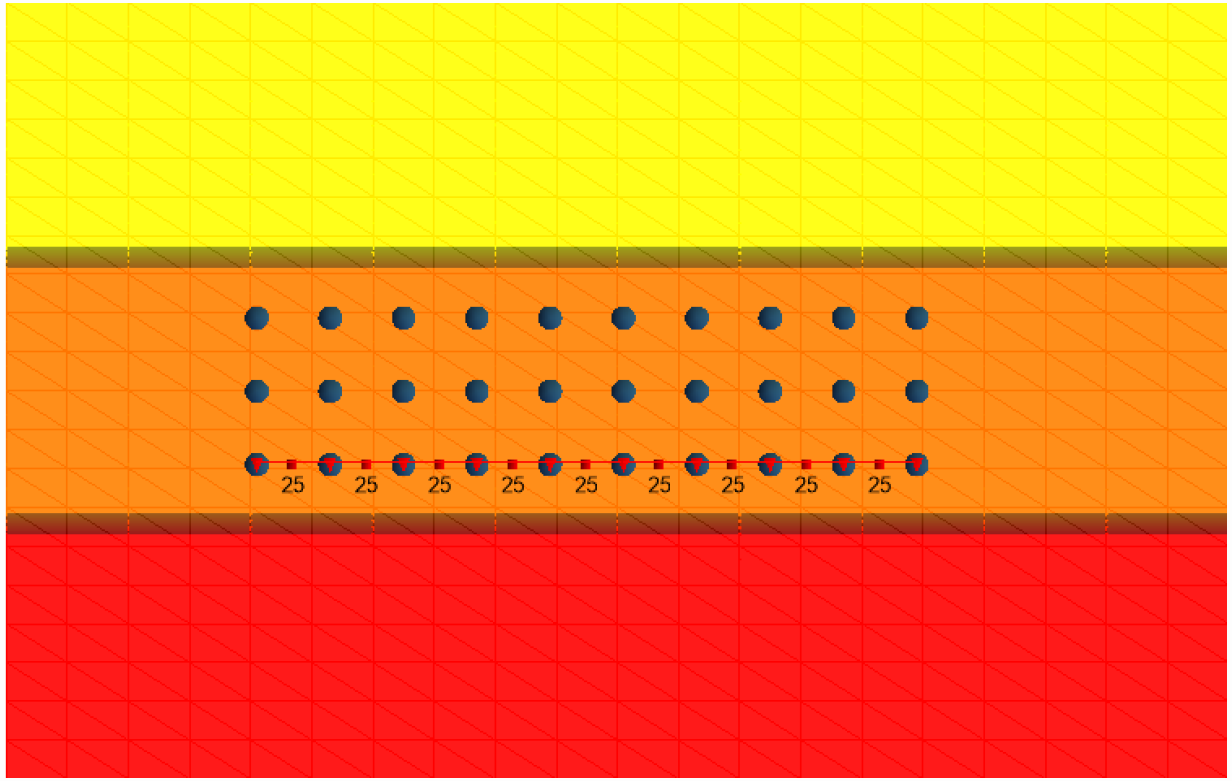
Step 12 of 23



Timing: Non-Electronic

Select “Add Timing”.
Drag the mouse between holes to connect.

Step 13 of 23



Direction Vector | Center Lift | Time Tool

BRB 3.0 ms/m | BRS 0.0 ms/m | Angle 90.0 ° | Azi. 151.3 ° | e*star 12m

Edit Time | Select | Delete | Path | Export Blast Machine | Compare Data

Electronic Detonator

Delay inter decks 5 ms | Sort | Delay inter decks 0 ms

Deck

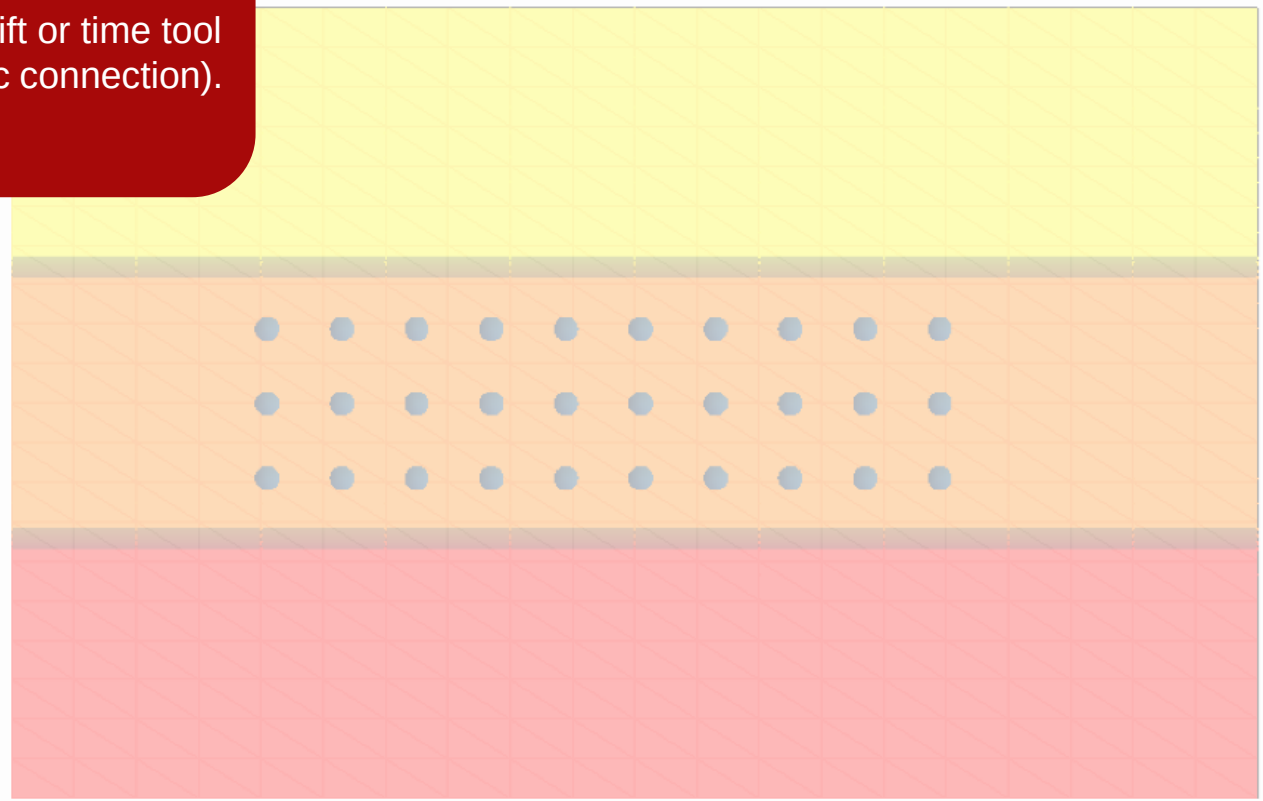
Isolines | Histogram | Play | Simulation Speed | Isolines: 100 ms | Relief Tool | Relief Isolines

Simulation

Timing: Electronic

Select your type of connection: direction vector, center lift or time tool (similar to non-electronic connection).

Step 14 of 23



O-PitBlast

File Home Topography Free-Face Boreholes Charge Non-Electric Electronic Blast Results Attenuation Law Map

Drone Mapping Service | Blast Information | O-PitCloud | New Messages

Direction Vector | Center Lift | Time Tool

BRB 3.0 ms/m | BRS 0.0 ms/m | Angle 90.0 º | Azi. 151.3 º | Electronic Detonator

Edit Time | Select | Delete | Path | Export Blast Machine | Compare Data

Electronic Detonator

Sort | Delay inter decks 5 ms | Delay inner decks 0 ms

Deck

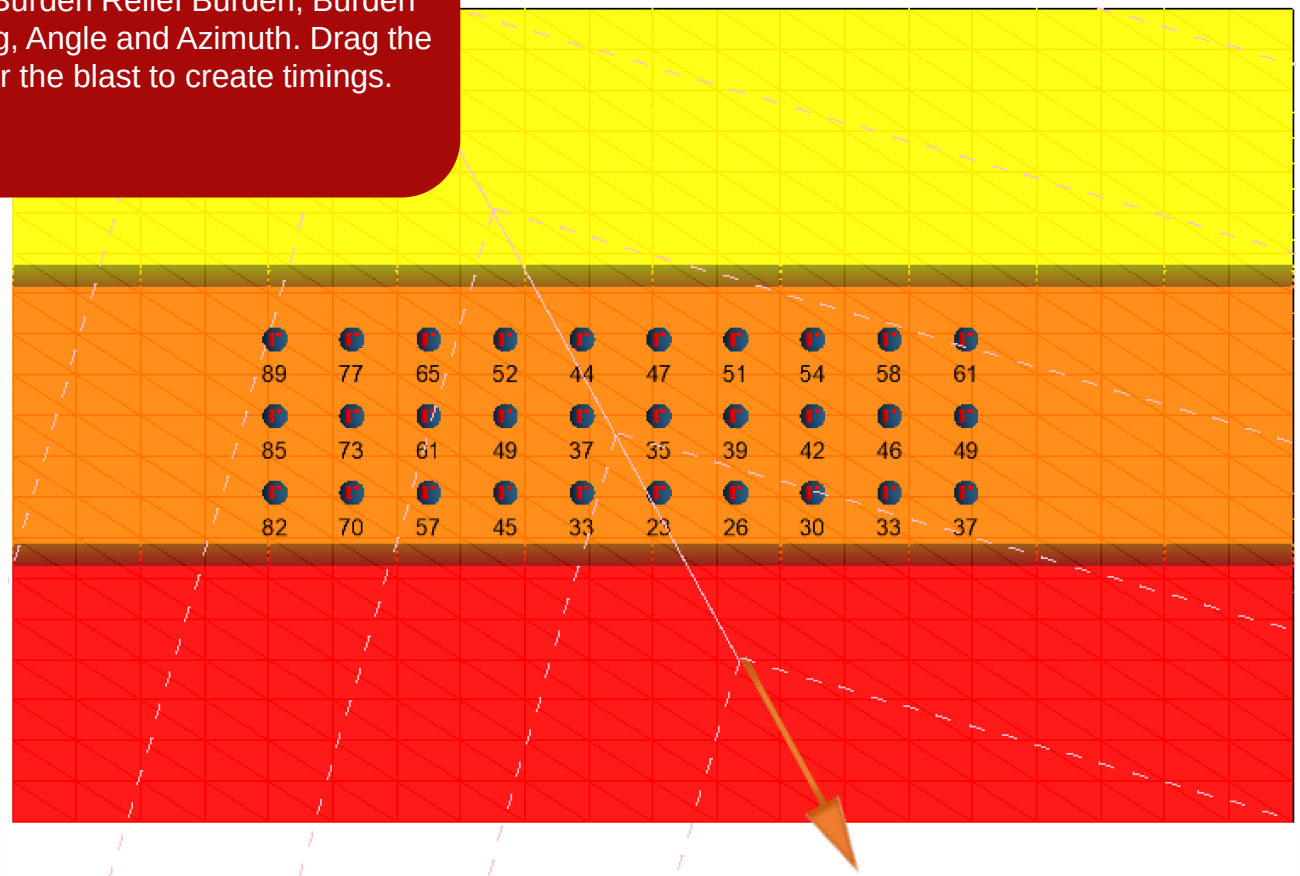
Isolines | Histogram | Play | Simulation Speed | Isolines: 100 ms | Relief Tool | Relief Isolines

Simulation

Timing: Electronic

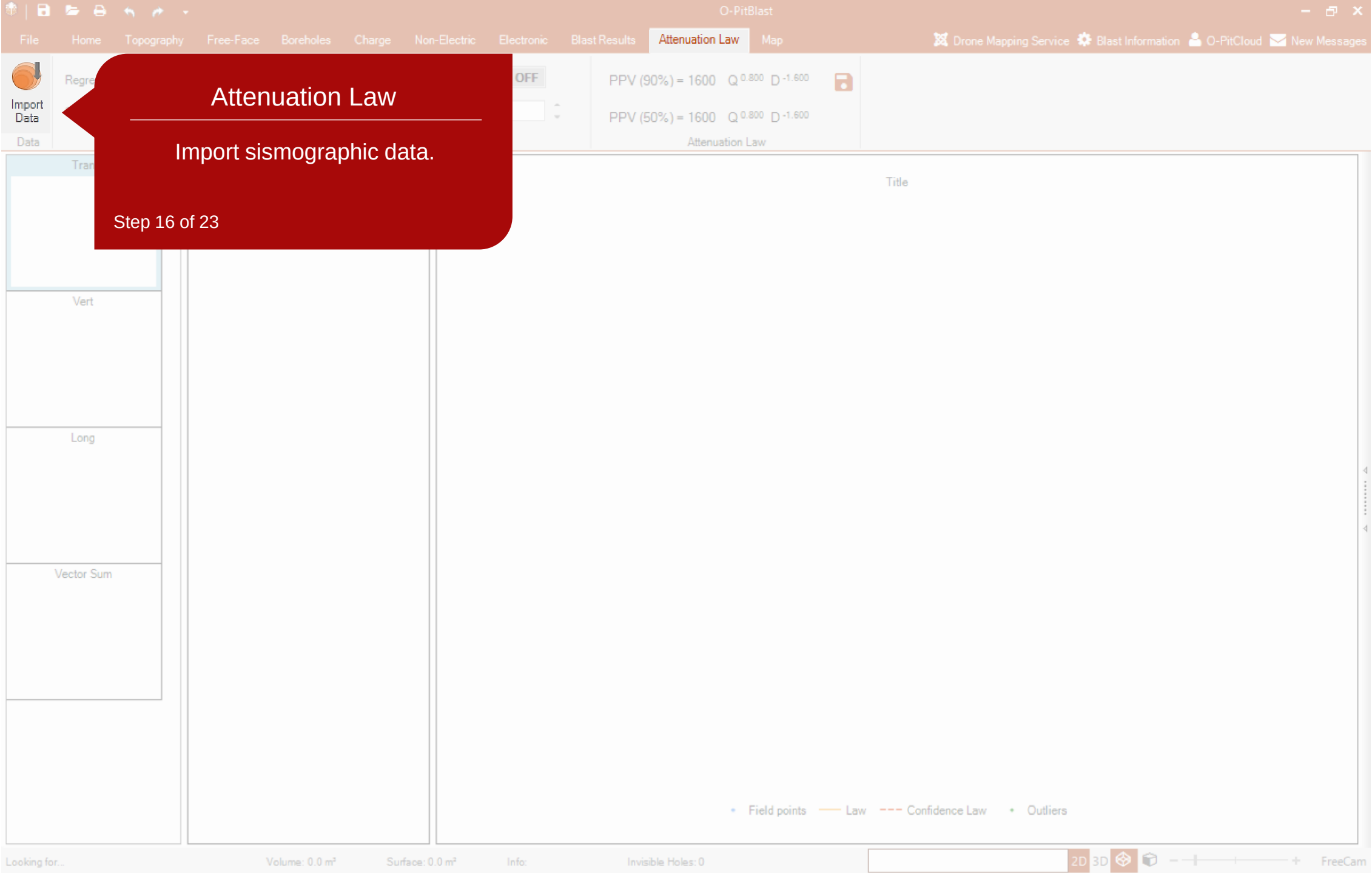
Select your Burden Relief Burden, Burden Relief Spacing, Angle and Azimuth. Drag the mouse over the blast to create timings.

Step 15 of 23



Looking for... Volume: 0.0 m³ Surface: 0.0 m² Info: Invisible Holes: 0

2D 3D FreeCam


O-PitBlast
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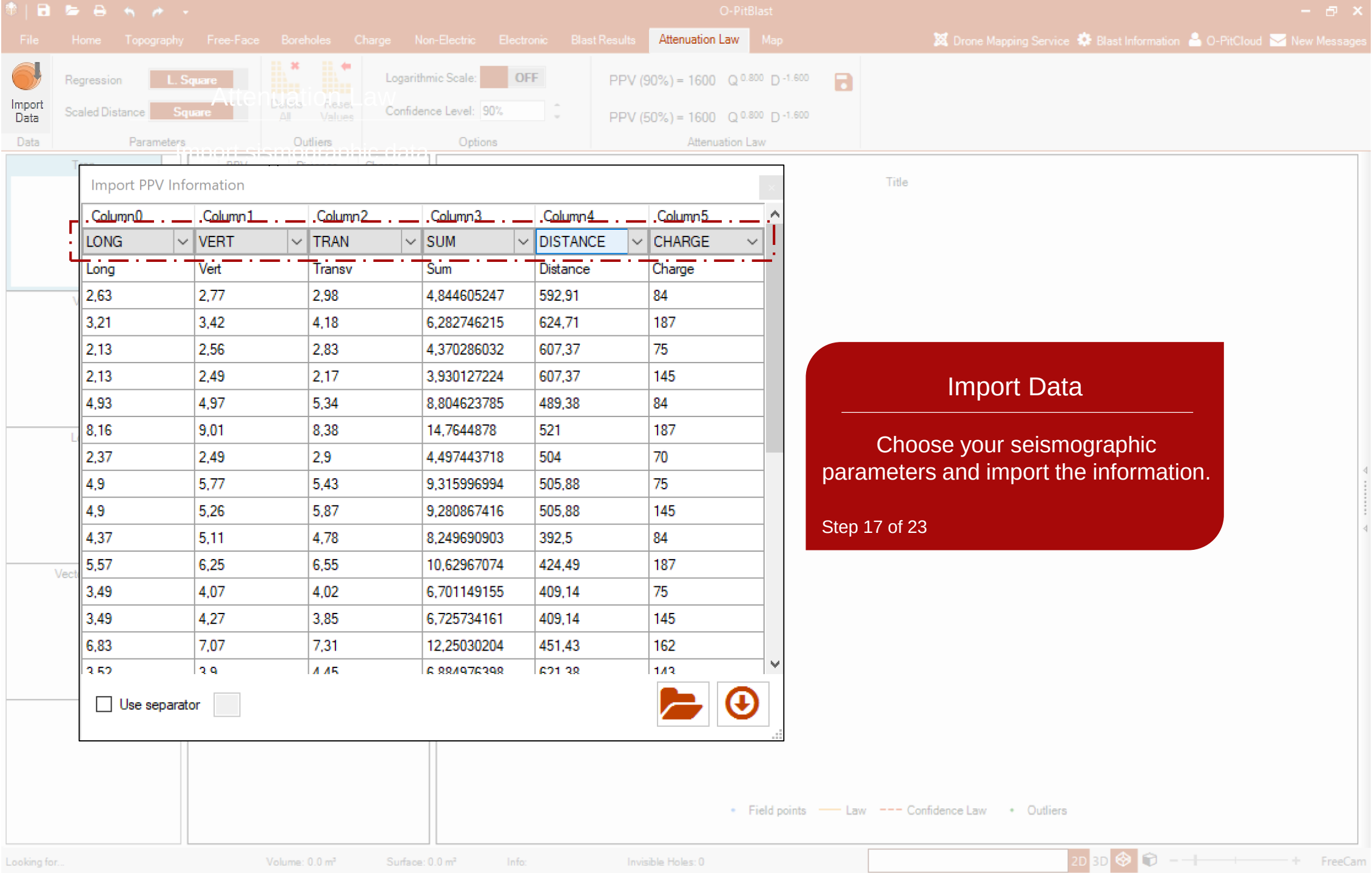
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Import Data
Data
OFF
PPV (90%) = 1600 Q 0.800 D -1.600
PPV (50%) = 1600 Q 0.800 D -1.600
Attenuation Law
Attenuation Law
Import sismographic data.
Step 16 of 23
Vert
Long
Vector Sum
Title
Field points
Law
Confidence Law
Outliers
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam


O-PitBlast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Import Data
Regression
L. Square
Scaled Distance
Square
Logarithmic Scale:
OFF
Confidence Level:
90%
PPV (90%) = 1600 Q 0.800 D -1.600
PPV (50%) = 1600 Q 0.800 D -1.600
Data
Parameters
Outliers
Options
Attenuation Law
Import seismographic data
Import PPV Information
Column0
Column1
Column2
Column3
Column4
Column5
LONG
VERT
TRAN
SUM
DISTANCE
CHARGE
Long
Vert
Transv
Sum
Distance
Charge
2,63 2,77 2,98 4,844605247 592,91 84
3,21 3,42 4,18 6,282746215 624,71 187
2,13 2,56 2,83 4,370286032 607,37 75
2,13 2,49 2,17 3,930127224 607,37 145
4,93 4,97 5,34 8,804623785 489,38 84
8,16 9,01 8,38 14,7644878 521 187
2,37 2,49 2,9 4,497443718 504 70
4,9 5,77 5,43 9,315996994 505,88 75
4,9 5,26 5,87 9,280867416 505,88 145
4,37 5,11 4,78 8,249690903 392,5 84
5,57 6,25 6,55 10,62967074 424,49 187
3,49 4,07 4,02 6,701149155 409,14 75
3,49 4,27 3,85 6,725734161 409,14 145
6,83 7,07 7,31 12,25030204 451,43 162
Use separator
Title
Import Data
Choose your seismographic parameters and import the information.
Step 17 of 23
Field points
Law
Confidence Law
Outliers
Looking for...
Volume: 0.0 m³
Surface: 0.0 m²
Info:
Invisible Holes: 0
2D
3D
FreeCam

Import Data

Data

Regression: L. Square

Scaled Distance: Square

Parameters

Delete All | Reset Values

Outliers

Logarithmic Scale: OFF

Confidence Level: 90%

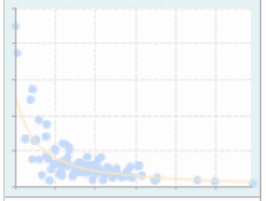
Options

PPV (90%) = 812 $Q^{0.58}$ $D^{-1.17}$

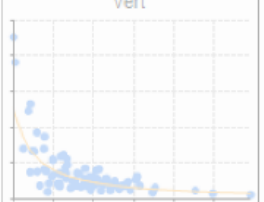
PPV (50%) = 470 $Q^{0.58}$ $D^{-1.17}$

Attenuation Law

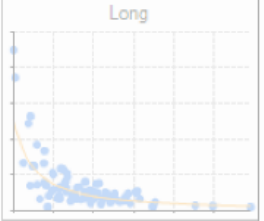
Tran



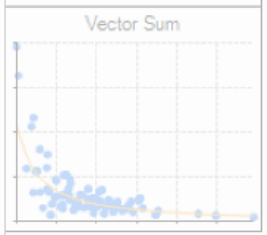
Vert



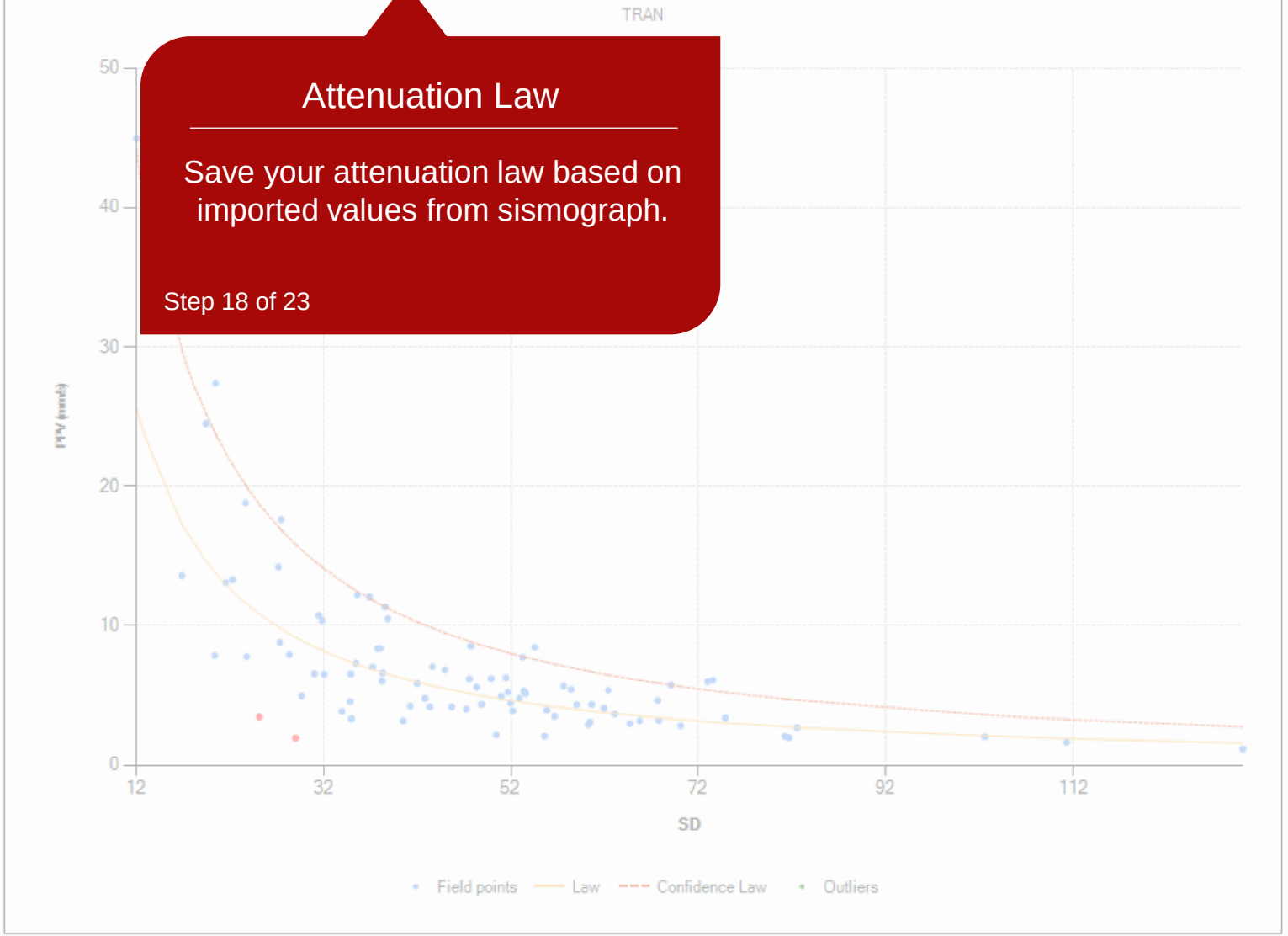
Long



Vector Sum



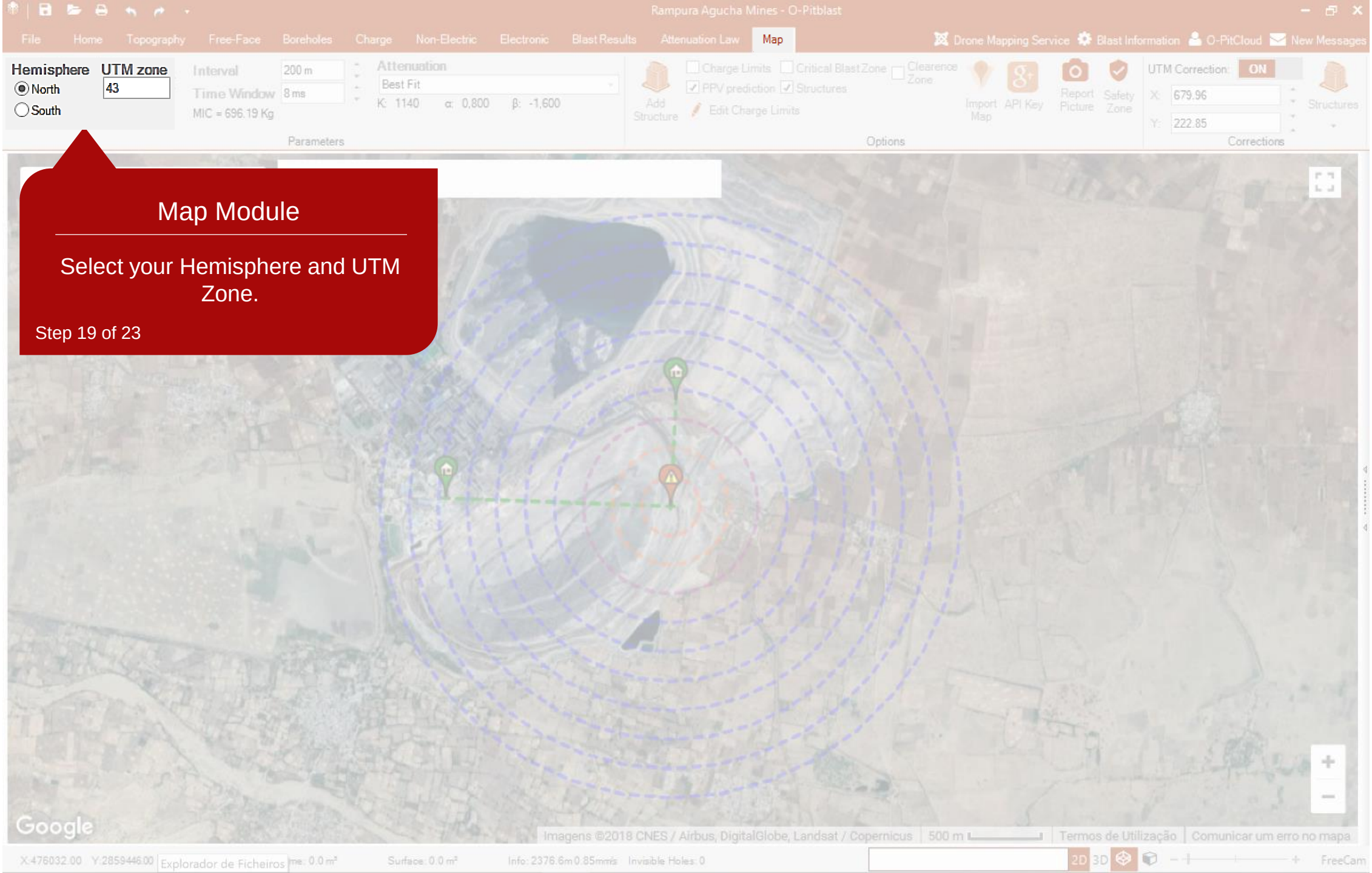
	PPV (mm/s)	Distance (m)	Charge (Kg)
☑	44.95	212	310
☑	37.44	182	198
☑	13.59	231	187
☑	24.50	274	198
☑	7.87	246	145
☑	27.39	361	310
☑	13.09	272	159
☑	13.30	204	84
☑	18.80	333	198
☑	7.78	325	187
☑	3.47	303	145
☑	14.21	325	143
☑	8.81	374	187
☑	17.62	348	160
☑	7.93	246	75
☑	1.94	243	70
☑	4.97	357	145
☑	6.55	424	187
☑	10.74	400	161
☑	10.38	292	84
☑	6.51	565	310
☑	3.85	409	145
☑	4.56	698	401
☑	6.54	699	401
☑	3.33	303	75
☑	7.31	451	162
☑	12.21	426	143
☑	12.07	739	401
☑	7.04	341	84
☑	8.36	665	310

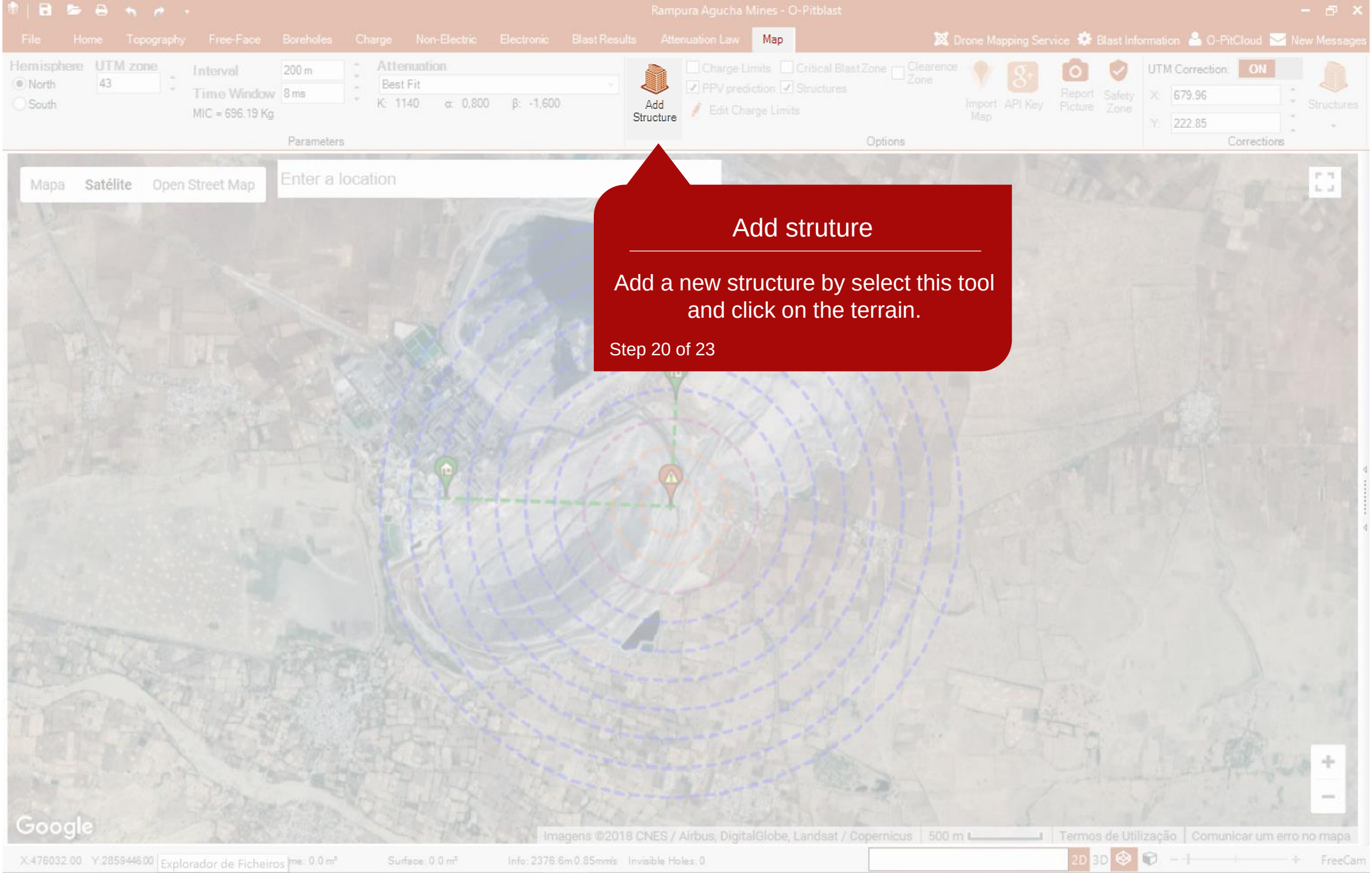


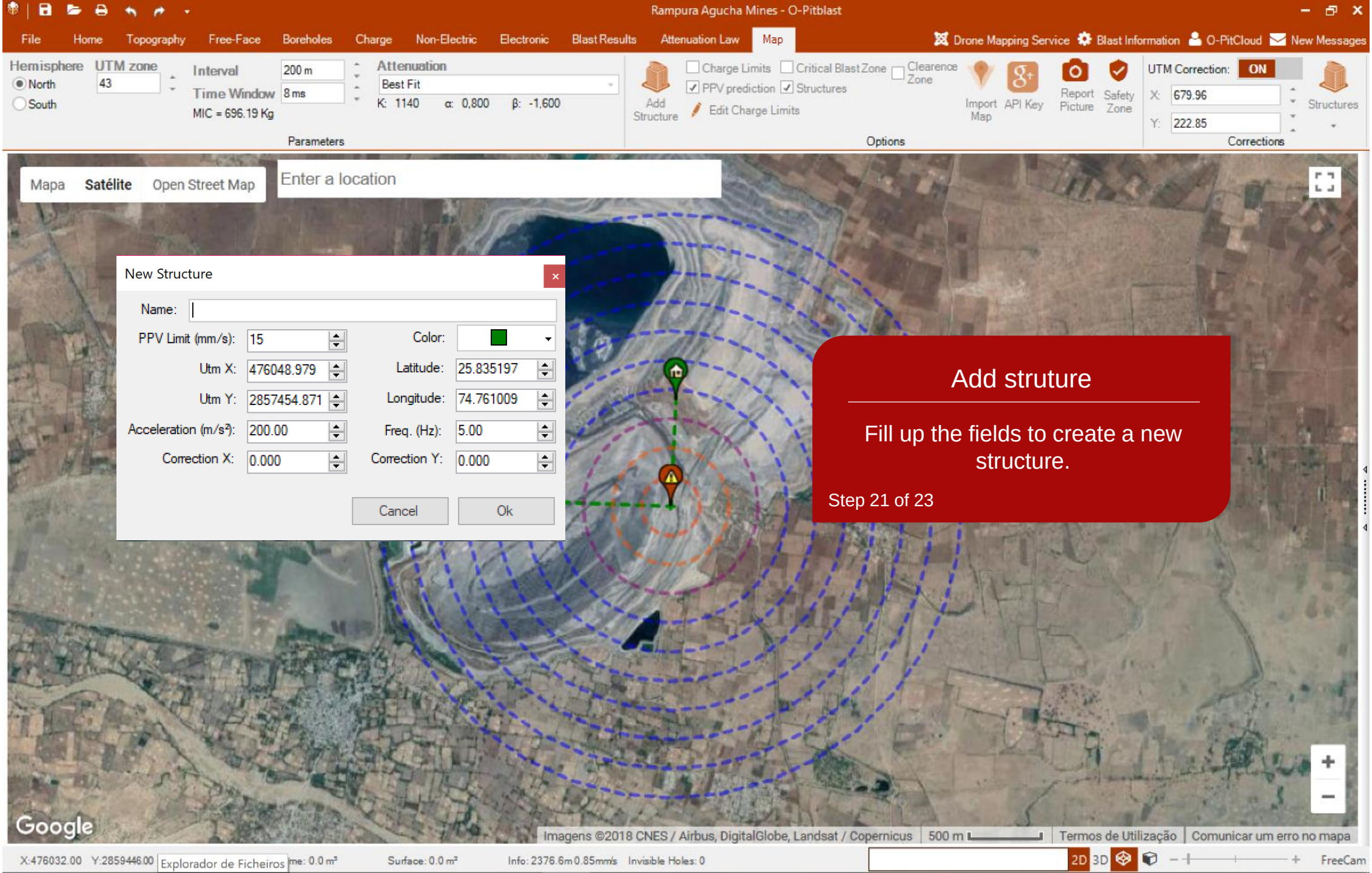
Attenuation Law

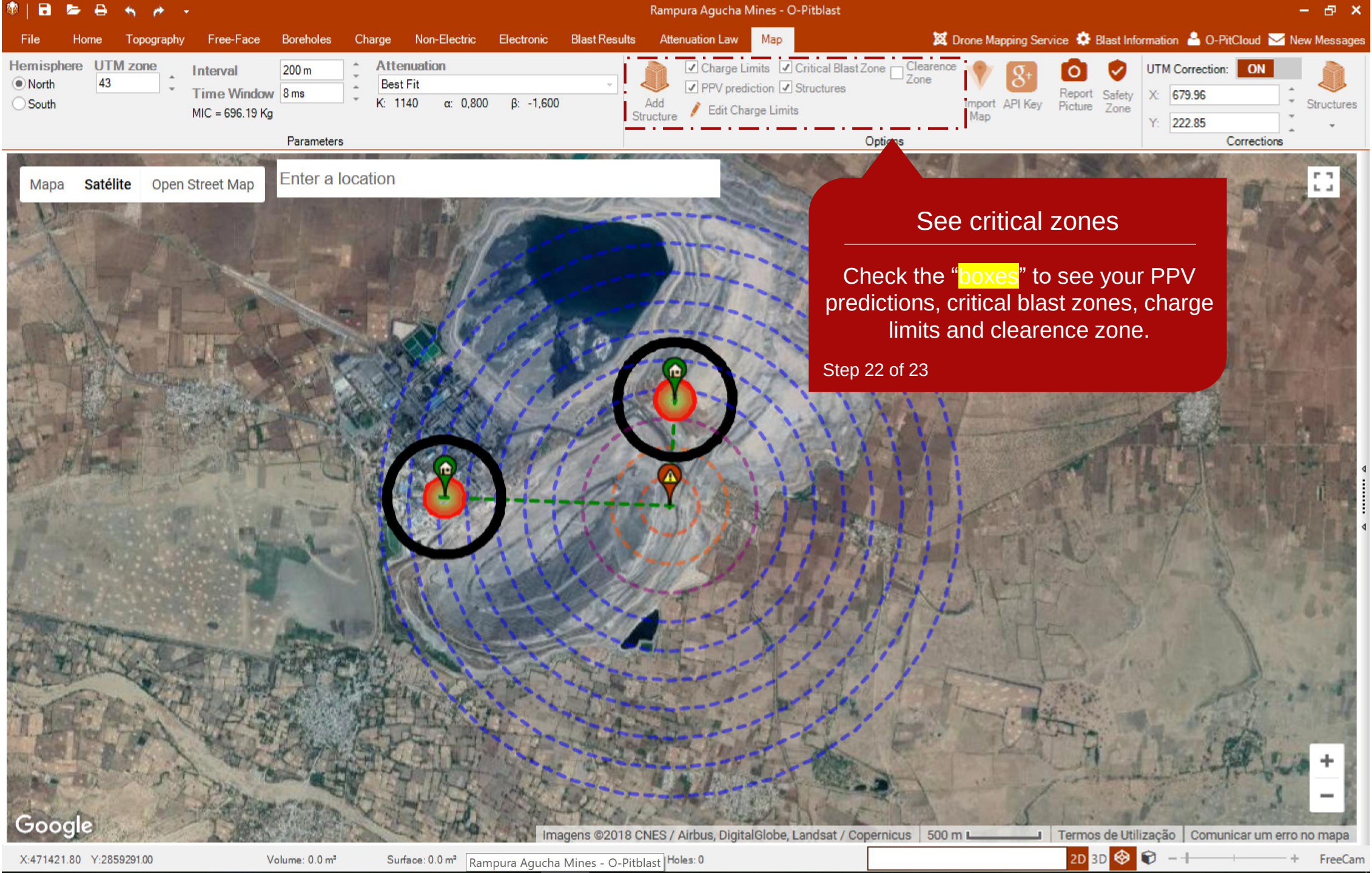
Save your attenuation law based on imported values from sismograph.

Step 18 of 23


Rampura Agucha Mines - O-Pitblast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Hemisphere
UTM zone
North
South
43
Interval
200 m
Time Window
8 ms
MIC = 696.19 Kg
Parameters
Attenuation
Best Fit
K: 1140
α: 0,800
β: -1,600
Add Structure
Charge Limits
Critical Blast Zone
Clearence Zone
PPV prediction
Structures
Edit Charge Limits
Import Map
API Key
Report Picture
Safety Zone
Options
UTM Correction:
ON
X: 679.96
Y: 222.85
Structures
Corrections
Map Module
Select your Hemisphere and UTM Zone.
Step 19 of 23
Google
Imagens ©2018 CNES / Airbus, DigitalGlobe, Landsat / Copernicus
500 m
Termos de Utilização
Comunicar um erro no mapa
X:476032.00
Y:2859446.00
Explorador de Ficheiros
Surface: 0.0 m²
Info: 2376.6m 0.85mm/s
Invisible Holes: 0
2D
3D
FreeCam


Rampura Agucha Mines - O-Pitblast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Hemisphere
North
South
UTM zone
43
Interval
200 m
Time Window
8 ms
MIC = 696.19 Kg
Parameters
Attenuation
Best Fit
K: 1140
α: 0,800
β: -1,600
Add Structure
Charge Limits
Critical Blast Zone
Clearence Zone
PPV prediction
Structures
Edit Charge Limits
Import Map
API Key
Report Picture
Safety Zone
Options
UTM Correction:
ON
X: 679.96
Y: 222.85
Corrections
Structures
Mapa
Satélite
Open Street Map
Enter a location
Add struture
Add a new structure by select this tool and click on the terrain.
Step 20 of 23
Google
Imagens ©2018 CNES / Airbus, DigitalGlobe, Landsat / Copernicus
500 m
Termos de Utilização
Comunicar um erro no mapa
X:476032.00
Y:2859446.00
Explorador de Ficheiros
Surface: 0.0 m²
Info: 2376.6m 0.85mm/s
Invisible Holes: 0
2D
3D
FreeCam


Rampura Agucha Mines - O-Pitblast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Hemisphere
North
South
UTM zone
43
Interval
200 m
Time Window
8 ms
MIC = 696.19 Kg
Parameters
Attenuation
Best Fit
K: 1140 α: 0,800 β: -1,600
Add Structure
Charge Limits
Critical Blast Zone
Clearence Zone
PPV prediction
Structures
Edit Charge Limits
Import Map
API Key
Report Picture
Safety Zone
Options
UTM Correction:
ON
X: 679.96
Y: 222.85
Corrections
Structures
Mapa
Satélite
Open Street Map
Enter a location
New Structure
Name:
PPV Limit (mm/s): 15
Color:
Utm X: 476048.979
Latitude: 25.835197
Utm Y: 2857454.871
Longitude: 74.761009
Acceleration (m/s²): 200.00
Freq. (Hz): 5.00
Correction X: 0.000
Correction Y: 0.000
Cancel
Ok
Add struture
Fill up the fields to create a new structure.
Step 21 of 23
Google
Imagens ©2018 CNES / Airbus, DigitalGlobe, Landsat / Copernicus
500 m
Termos de Utilização
Comunicar um erro no mapa
X:476032.00 Y:2859446.00
Explorador de Ficheiros
Surface: 0.0 m²
Info: 2376.6m 0.85mm/s
Invisible Holes: 0
2D
3D
FreeCam


Rampura Agucha Mines - O-Pitblast
File
Home
Topography
Free-Face
Boreholes
Charge
Non-Electric
Electronic
Blast Results
Attenuation Law
Map
Drone Mapping Service
Blast Information
O-PitCloud
New Messages
Hemisphere
North
South
UTM zone
43
Interval
200 m
Time Window
8 ms
MIC = 696.19 Kg
Parameters
Attenuation
Best Fit
K: 1140 α: 0,800 β: -1,600
Add Structure
Charge Limits
Critical Blast Zone
Clearence Zone
PPV prediction
Structures
Edit Charge Limits
Options
Import Map
API Key
Report Picture
Safety Zone
UTM Correction:
ON
X: 679.96
Y: 222.85
Corrections
Structures
Mapa
Satélite
Open Street Map
Enter a location
See critical zones
Check the "boxes" to see your PPV predictions, critical blast zones, charge limits and clearence zone.
Step 22 of 23
Google
Imagens ©2018 CNES / Airbus, DigitalGlobe, Landsat / Copernicus
500 m
Termos de Utilização
Comunicar um erro no mapa
X:471421.80 Y:2859291.00
Volume: 0.0 m³
Surface: 0.0 m²
Rampura Agucha Mines - O-Pitblast
Holes: 0
2D
3D
FreeCam

Import Terrain | Import Layer | Contour Lines | Outliers | Elevation | Cut Terrain | Expand Terrain | Bench Bottom | Edit Cloud | Eliminate Triangles

Topography Preparation

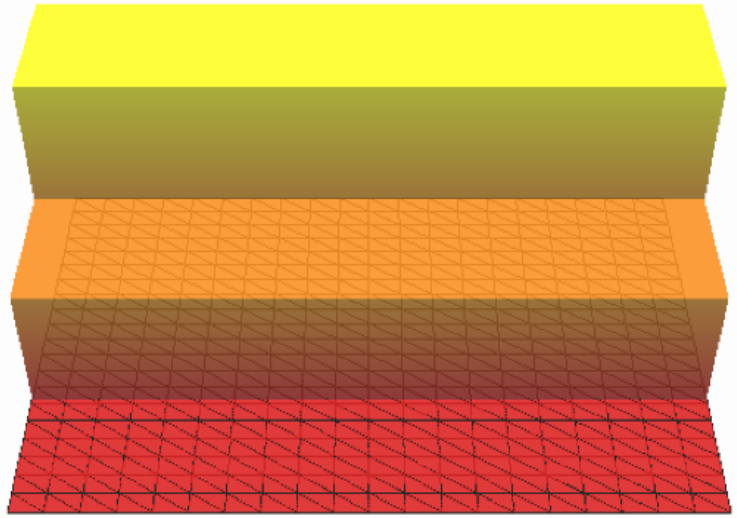
Views | Export

Views | Data

Select: Davey

Rock

Doubts and questions?

Just e-mail us: info@o-pitblast.com!

Step 23 of 23