



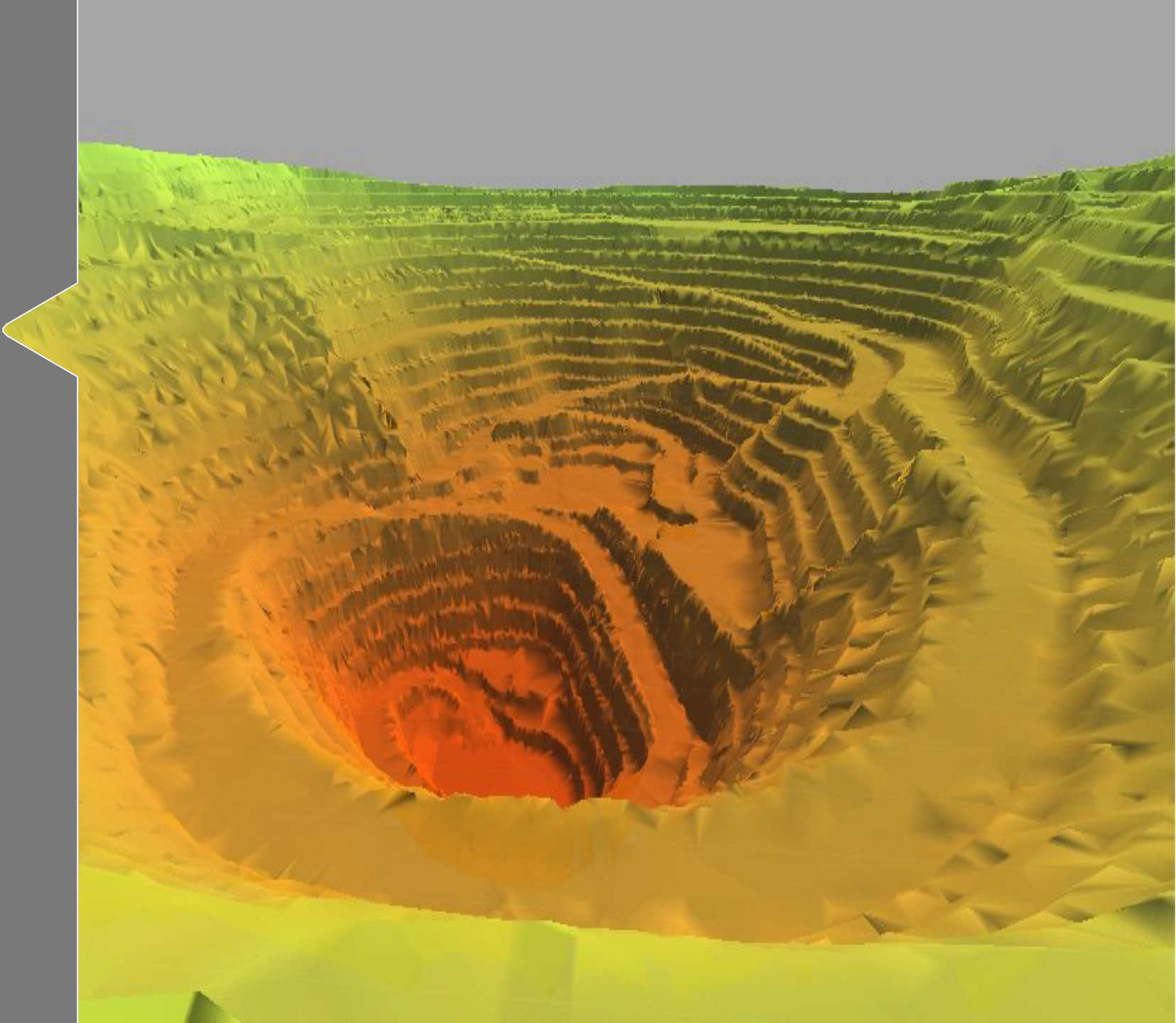
o-pitblast

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Topography Module

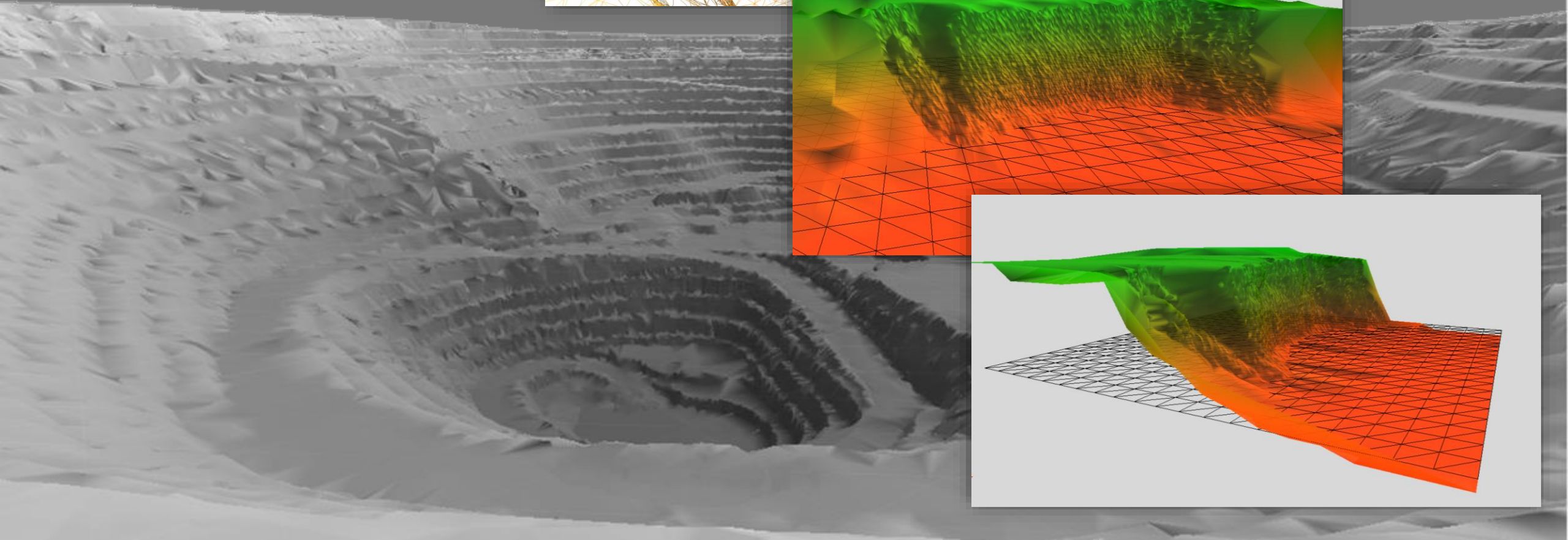
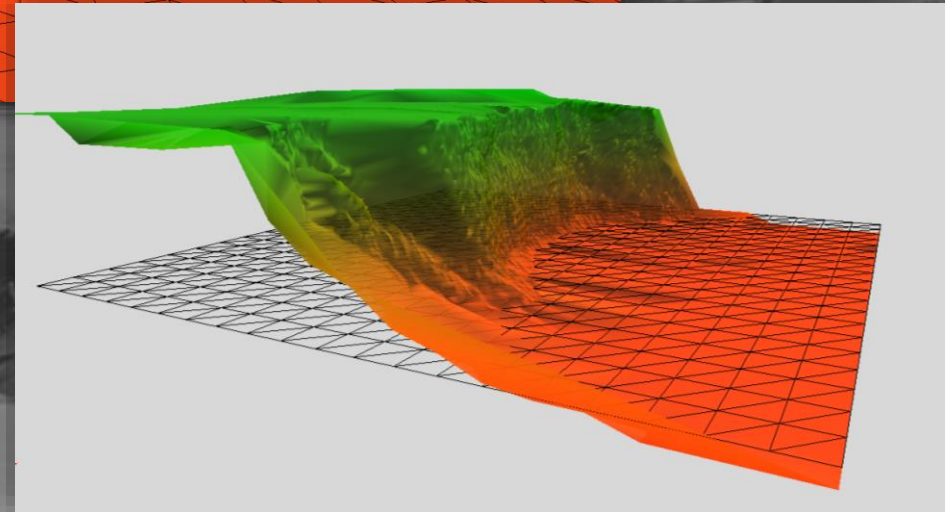
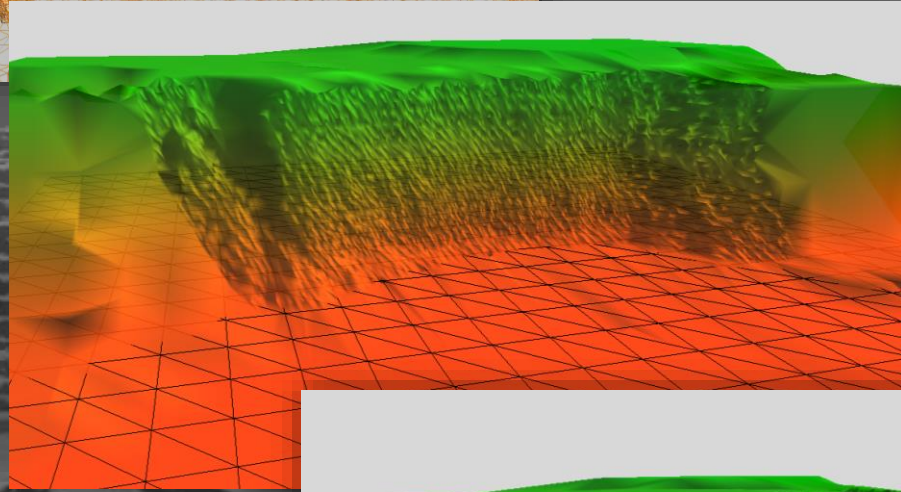
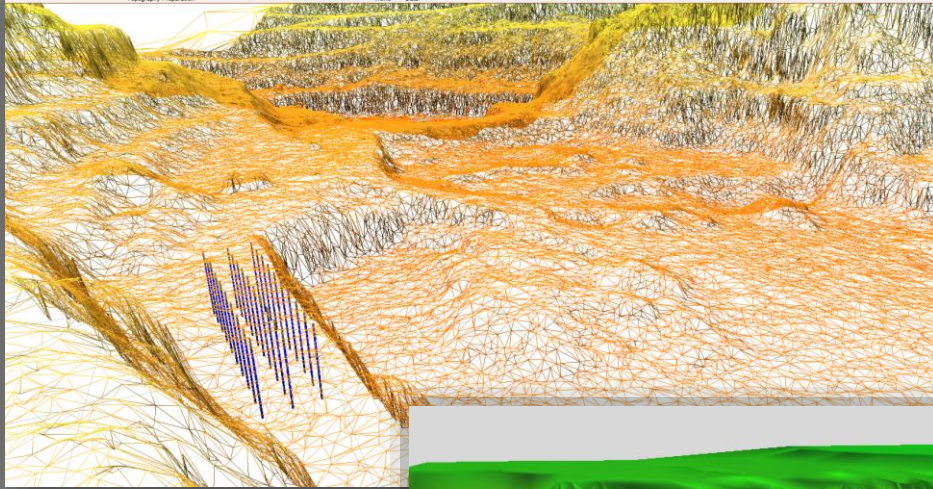
- Import and export topography
- Edit Terrain
- Georeferenced Terrain
- Drone Compatibility





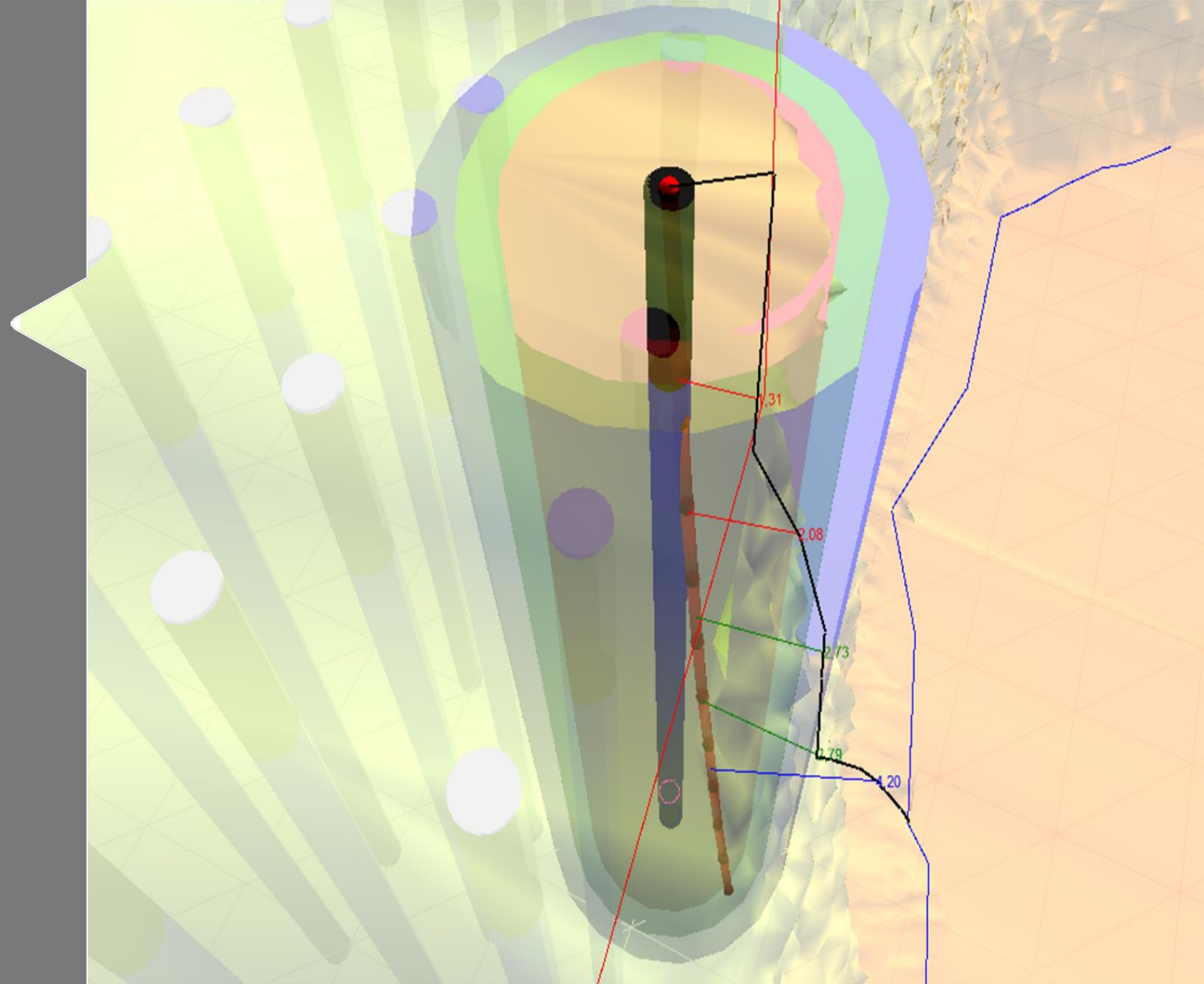
Features

- Different views
- Terrain expansion
- Bench bottom adjustments



Borehole Module

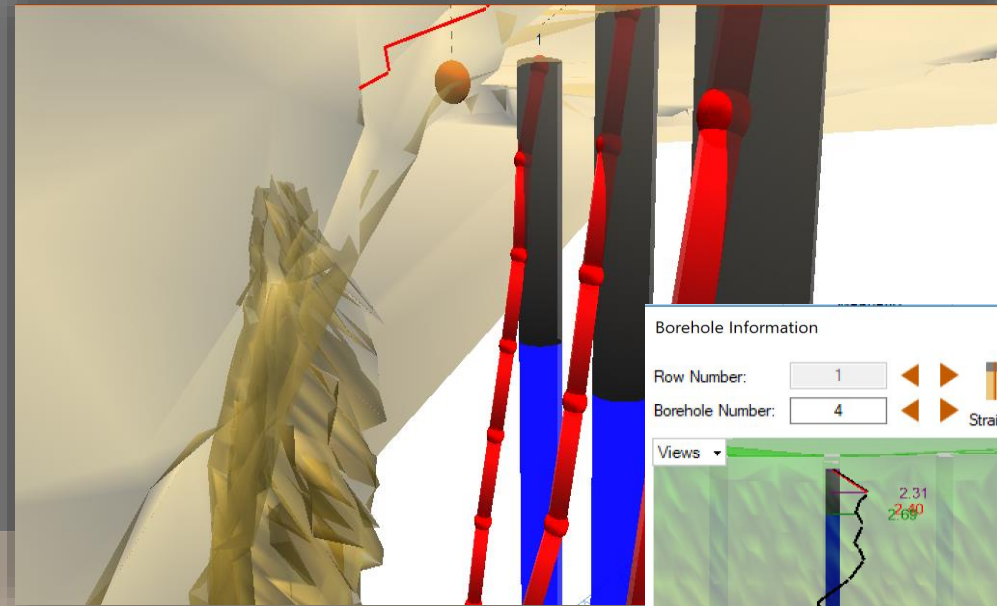
- Import Pattern
- Create Pattern
- Adjust Borehole Geometry
- Edit Hole type
- Pre-Split Design





Features

- See burden and spacing
- Change borehole position
- Rows edition
- Check the real deviation
- Define your type of borehole



Borehole Information

Row Number:

Borehole Number:

Views

Geometry | Charge | Timing | Others

Hole Diameter (mm): 102mm

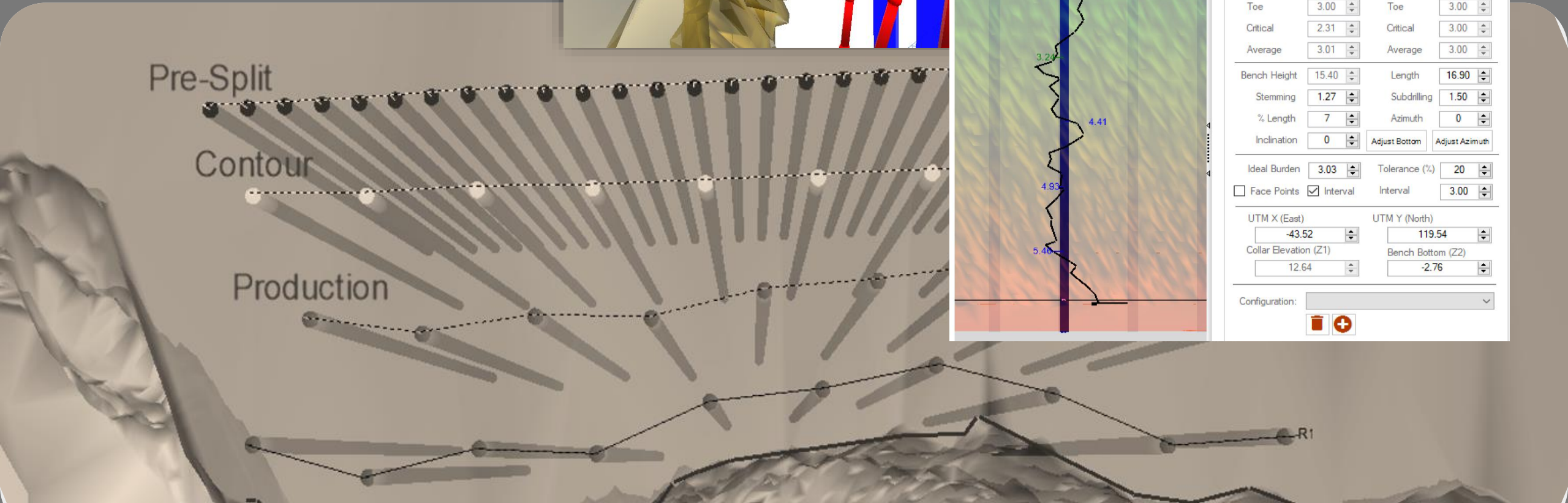
Burden (m)		Spacing (m)	
Crest	<input type="text" value="3.01"/>	Crest	<input type="text" value="3.00"/>
Toe	<input type="text" value="3.00"/>	Toe	<input type="text" value="3.00"/>
Critical	<input type="text" value="2.31"/>	Critical	<input type="text" value="3.00"/>
Average	<input type="text" value="3.01"/>	Average	<input type="text" value="3.00"/>

Bench Height	<input type="text" value="15.40"/>	Length	<input type="text" value="16.90"/>
Stemming	<input type="text" value="1.27"/>	Subdrilling	<input type="text" value="1.50"/>
% Length	<input type="text" value="7"/>	Azimuth	<input type="text" value="0"/>
Inclination	<input type="text" value="0"/>	<input type="button" value="Adjust Bottom"/>	<input type="button" value="Adjust Azimuth"/>

Ideal Burden	<input type="text" value="3.03"/>	Tolerance (%)	<input type="text" value="20"/>
<input type="checkbox"/> Face Points	<input checked="" type="checkbox"/> Interval	Interval	<input type="text" value="3.00"/>

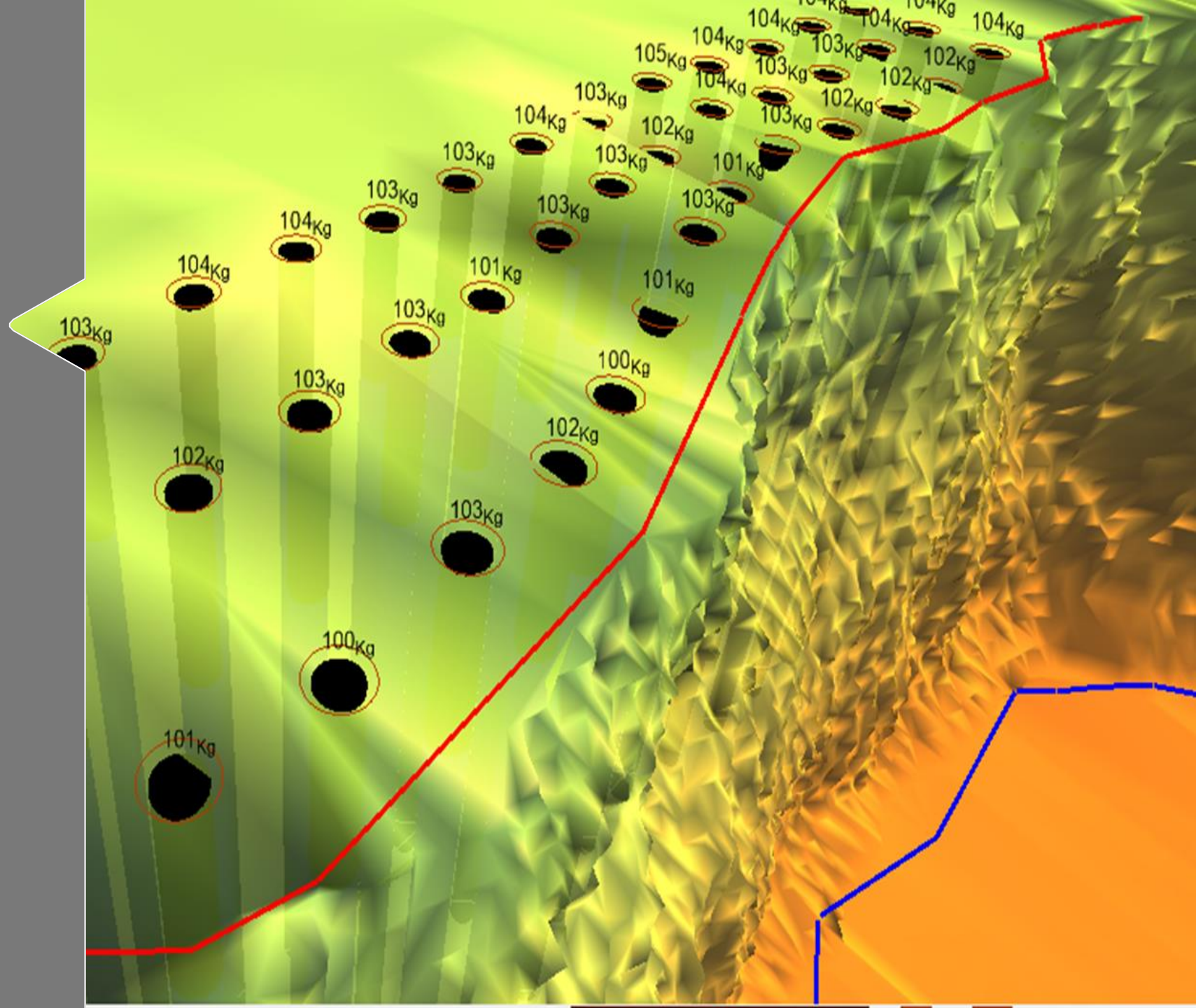
UTM X (East)	<input type="text" value="-43.52"/>	UTM Y (North)	<input type="text" value="119.54"/>
Collar Elevation (Z1)	<input type="text" value="12.64"/>	Bench Bottom (Z2)	<input type="text" value="-2.76"/>

Configuration:



Charge Module

- Charge Rules
- Bulk Explosives
- Cartridge Explosives
- Boosters





Features

- Add charge
- Create charge rule
- Manually feeding

Borehole Information

Row Number:

Borehole Number: Straight Critical

Views

Geometry Charge Timing Others

Packing Factor (%):

Quantity of Elements:

Nr	Explosive	Qty	%
1	Booster 450	1,00 ud	<input type="checkbox"/>
2	Cartridge 3Kg	1,00 ud	<input type="checkbox"/>
3	Anfo 0,8	6,48 m	<input checked="" type="checkbox"/>

Total Charge: 42,2 Kg
Hole Volume: 68,1 m³
Powder Factor: 0,620 H

Save Charge R

Edit Charge Rule

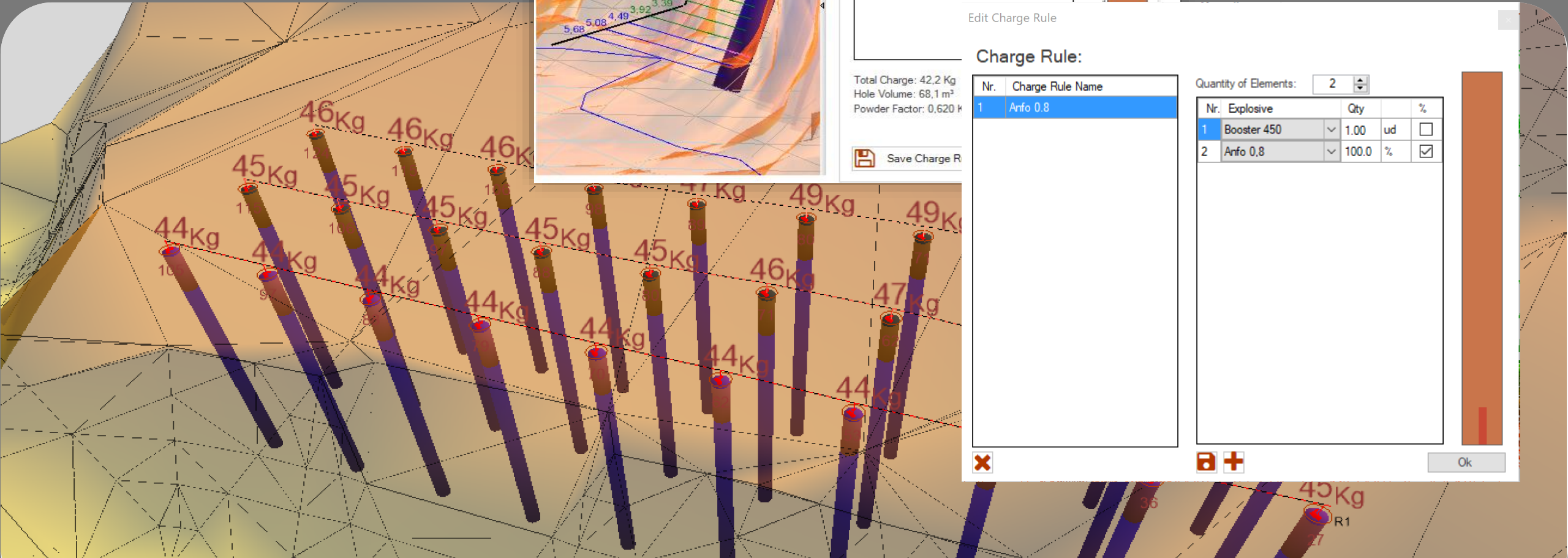
Charge Rule:

Quantity of Elements:

Nr.	Charge Rule Name
1	Anfo 0,8

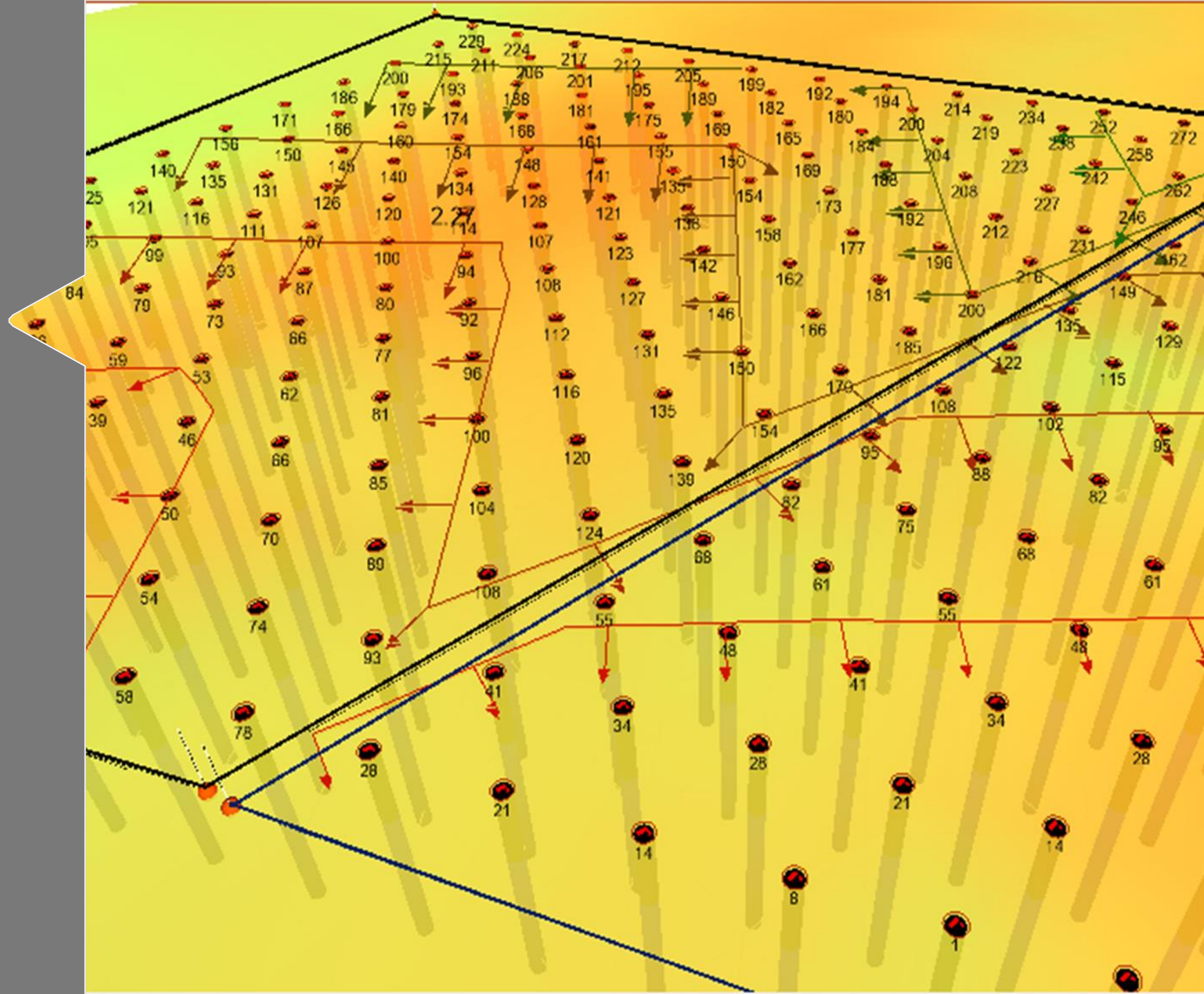
Nr.	Explosive	Qty	%
1	Booster 450	1,00 ud	<input type="checkbox"/>
2	Anfo 0,8	100,0 %	<input checked="" type="checkbox"/>

Ok



Timing Module

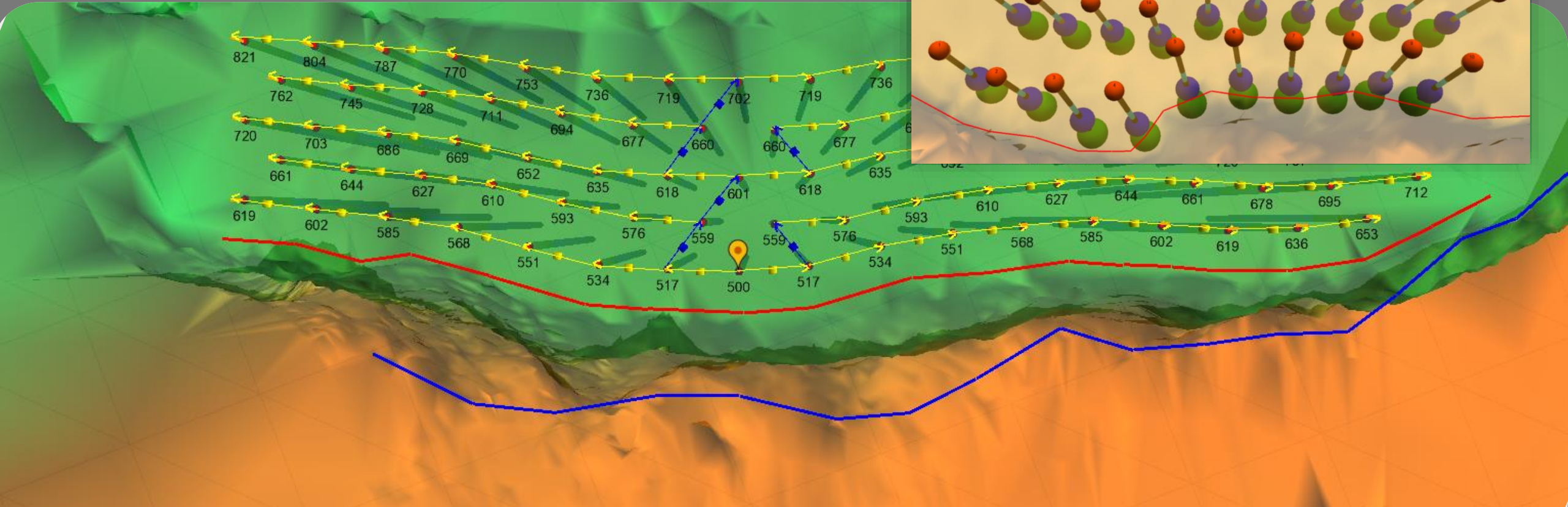
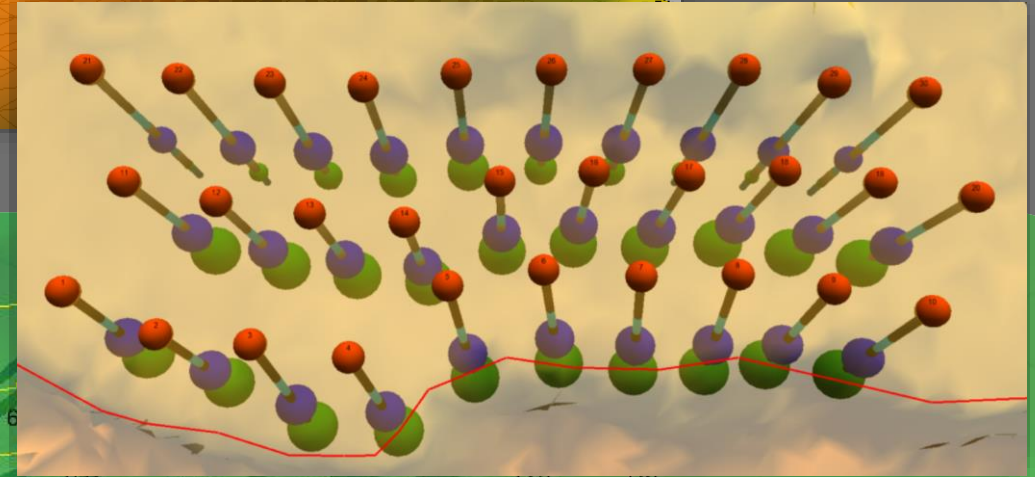
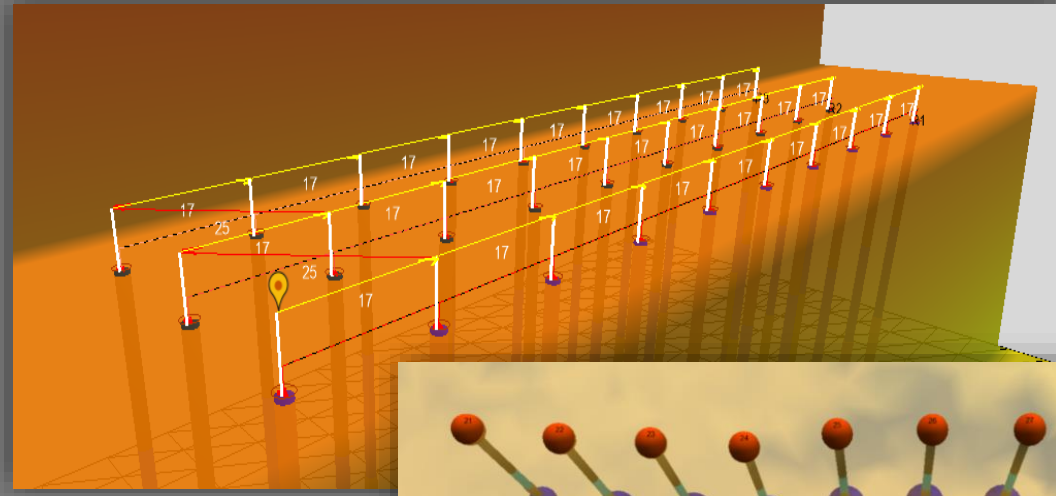
- Non-Electric
- Electronic
- Contour Lines
- Movement Direction
- Simulation
- Histogram
- Automatic MIC adjustment





Features: non-electric

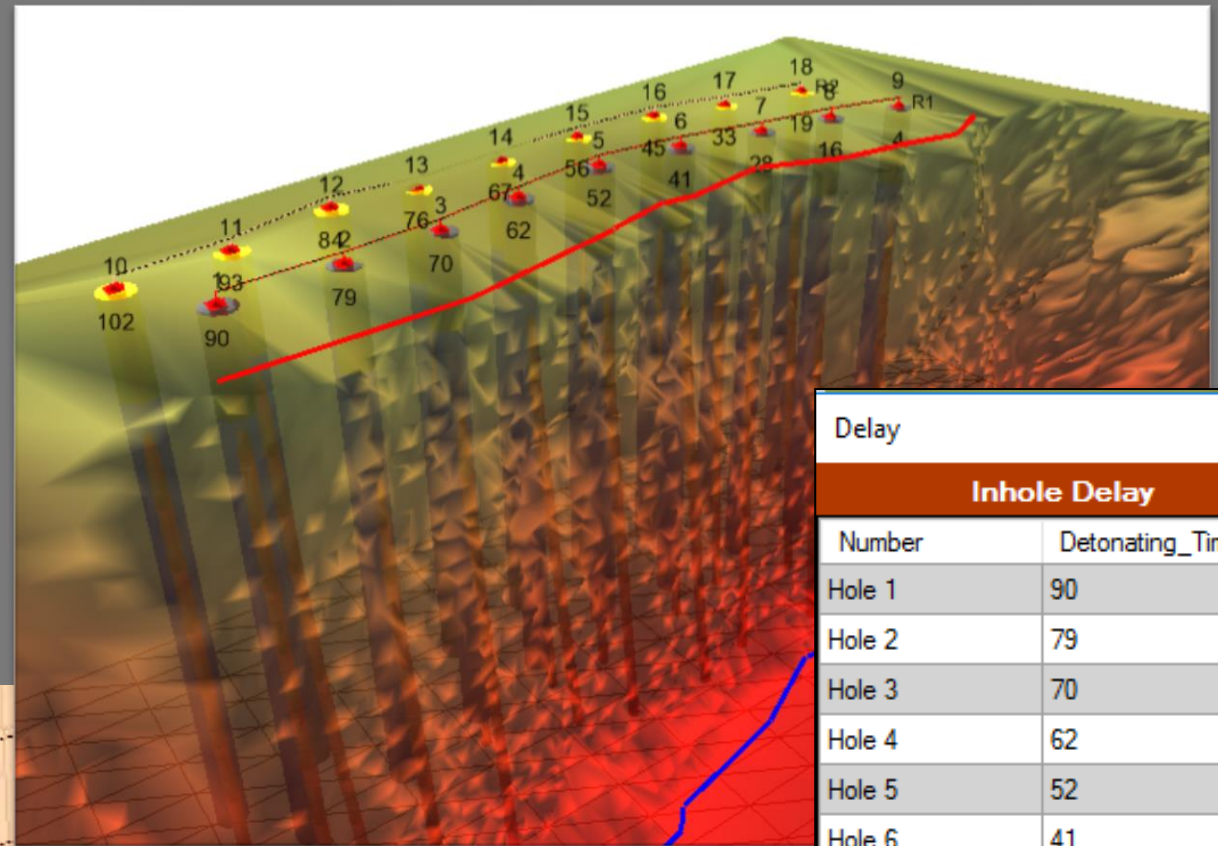
- Add surface and in-hole detonators
- Decks option
- Time tool option
- Initiation Hole



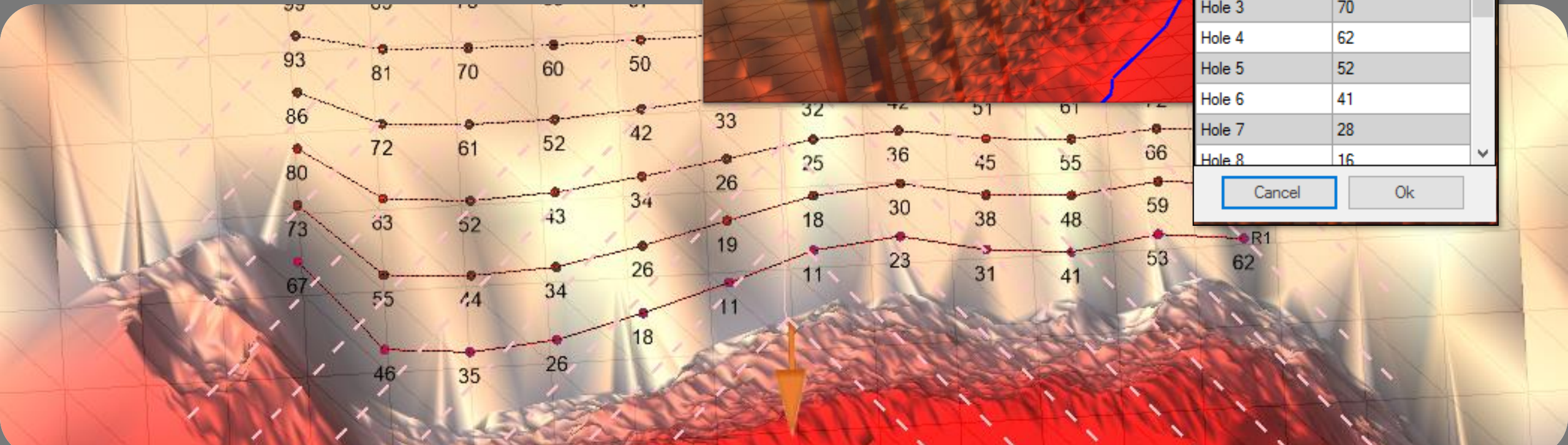


Features: electronic

- Create a direction vector
- Center lift
- Time tool option
- Change BRB, BRS, angle or azimuth
- Edit time hole by hole
- Decks option

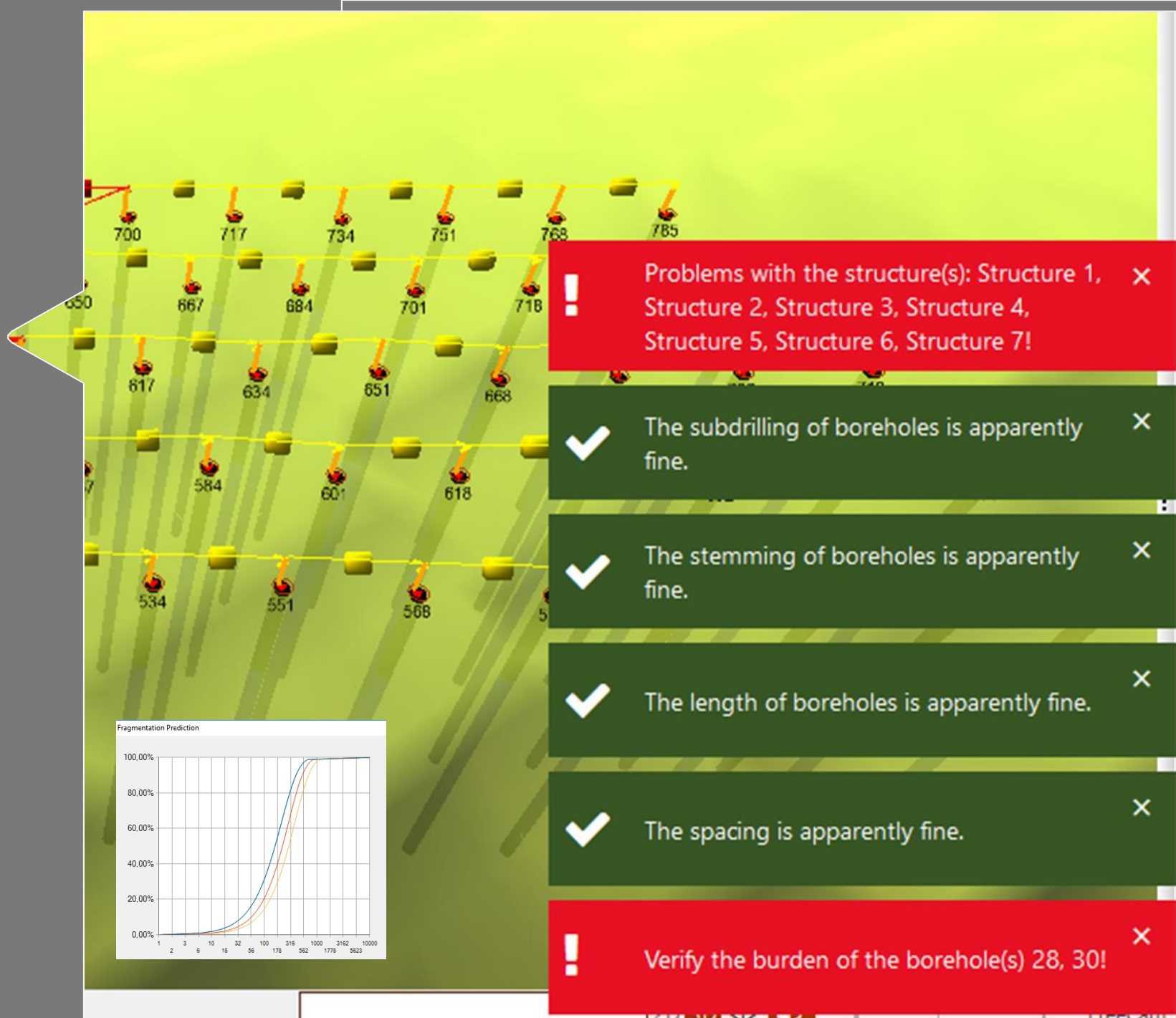


Inhole Delay	
Number	Detonating_Time
Hole 1	90
Hole 2	79
Hole 3	70
Hole 4	62
Hole 5	52
Hole 6	41
Hole 7	28
Hole 8	16



Blast Results Module

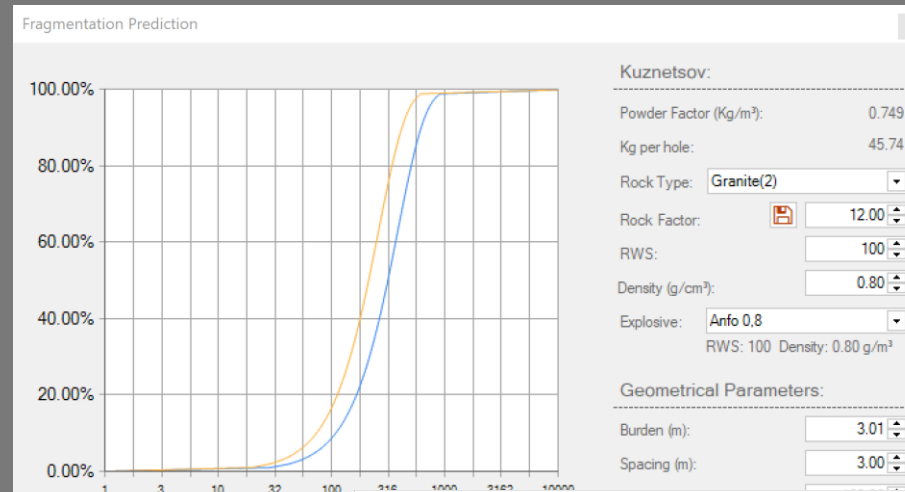
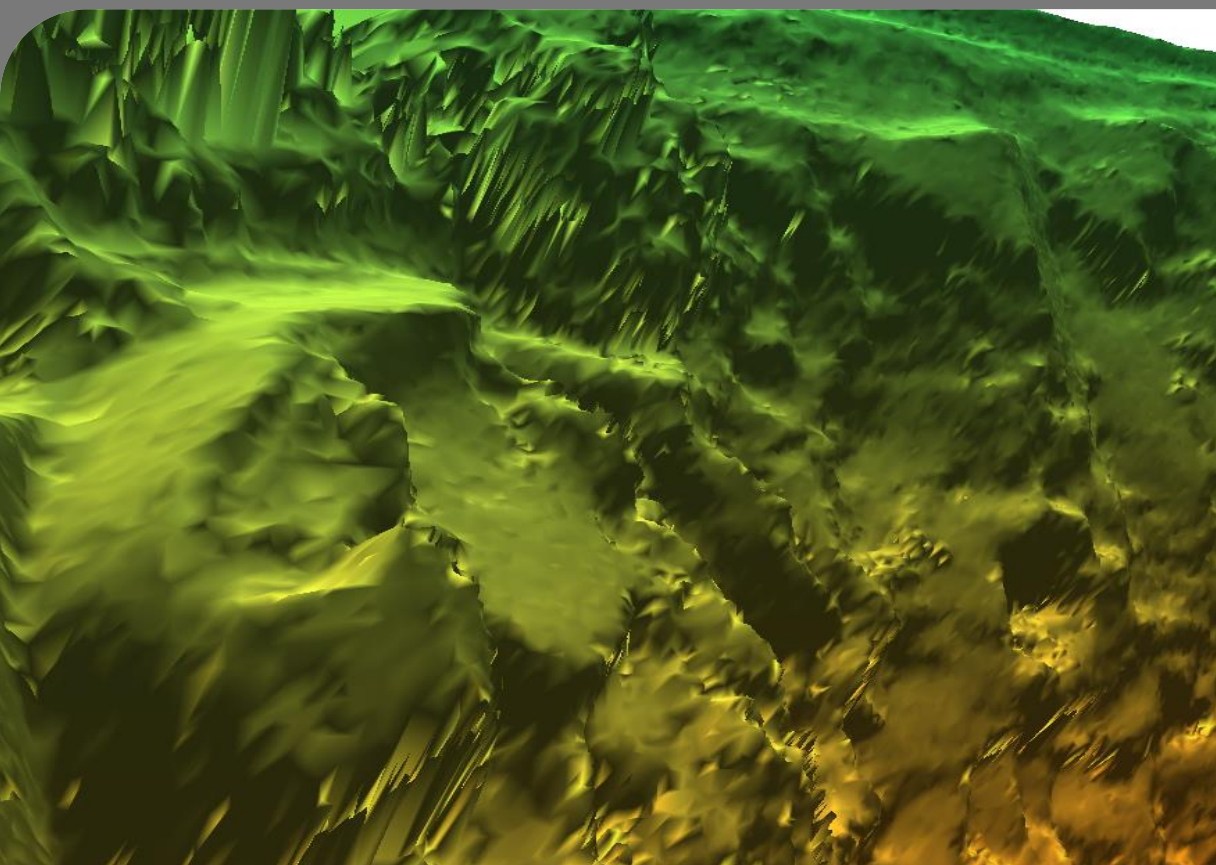
- Predict Fragmentation
- Blast Optimization:
 - Blast Pattern Expansion
 - Fragmentation Adjustment
- Quality Assurance Warnings





Features

- Fragmentation prediction
- Blast optimization
- Add extra costs



Warning: This prediction model is based on Kuznetsov

Optimization

Geometry:
 Diameter (mm): 102
 Bench High (m): 10.00
 Burden (m): 2.73
 Spacing (m): 3.82
 Subdrilling (m): 1.28
 Stemming (m): 1.91

Blast:
 Number of Holes: 96
 Number of Rows: 3
 Volume (m³): 10,000.00

Costs:
 Initiation (per hole): 10.00
 Explosive (per Kg): 4.00
 Drilling (per meter): 7.00

Geology:
 Rock Factor: 10.00

Explosive:
 Density (Kg/m³): 1,200.00
 RWS: 100

Fragmentation:
 Limit (%): 90
 Oversize (mm): 500

Information:
 Powder Factor (Kg/m³): 0.881
 Specific Drilling (m/m³): 0.1082

Constraints:

Spacing by Burden	1.00	≤	1.40	≤	1.40	✓
Stemming by Burden	0.70	≤	0.70	≤	1.00	✓
Subdrilling by Burden	0.30	≤	0.47	≤	0.50	✓
Uniformity Index	0.70	≤	1.81	≤	2.20	✓
Stiffness Ratio	3.66	≥	3.00	≥	3.00	✓
Volume (m³)	10006.22	≥	10000	≥	10000	✓
Oversize (mm)	500.00	≤	500	≤	500	✓

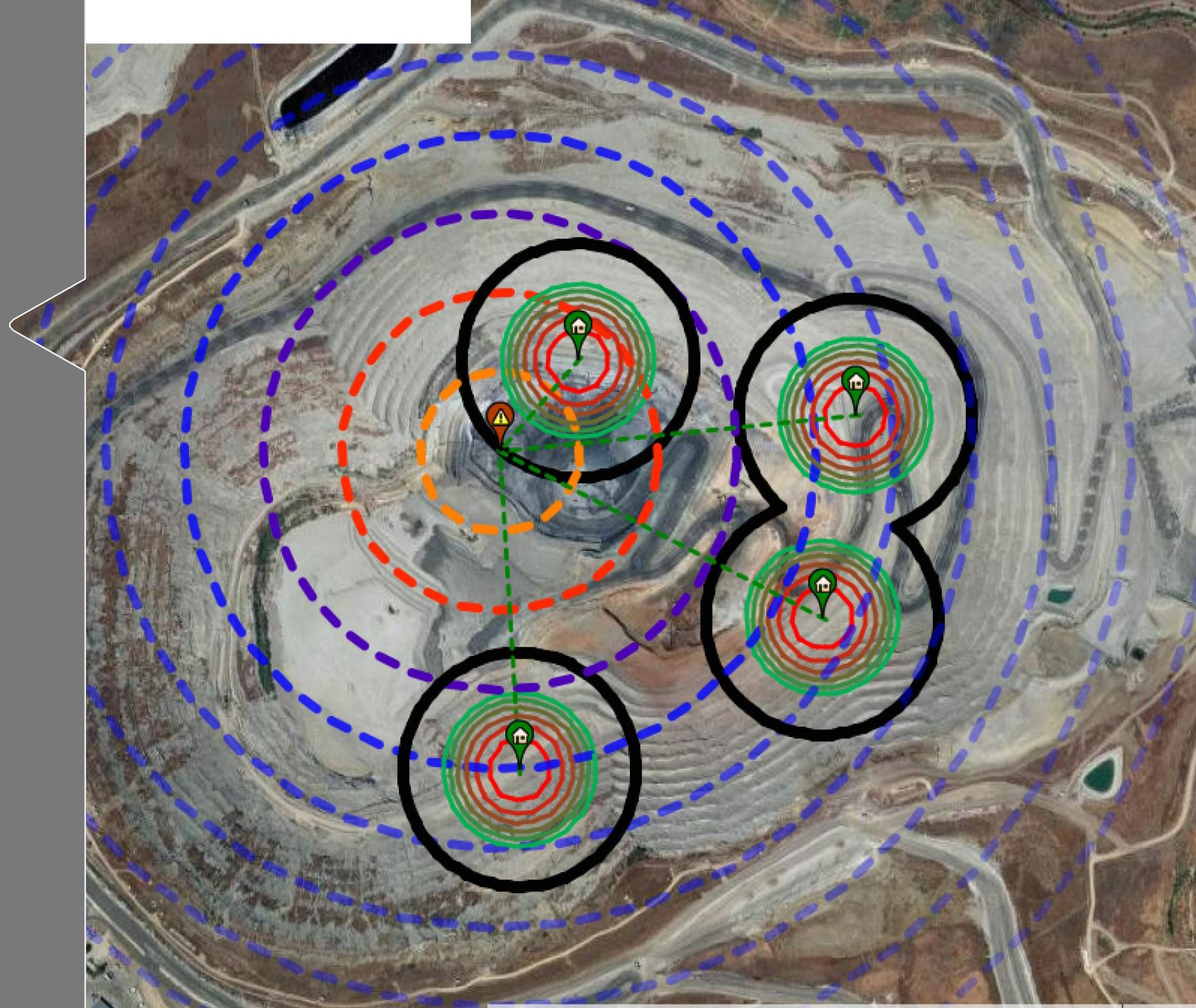
Cost (\$): \$43,817.83

Find optimized values | Apply Pattern | Get Values From Design | Ok

Warning: This prediction model is based on GRG Nonlinear optimization model. Actual results may be different.

Vibration Module

- Attenuation Law
- Add Critical Structures
- Critical Blast Area
- Google Maps



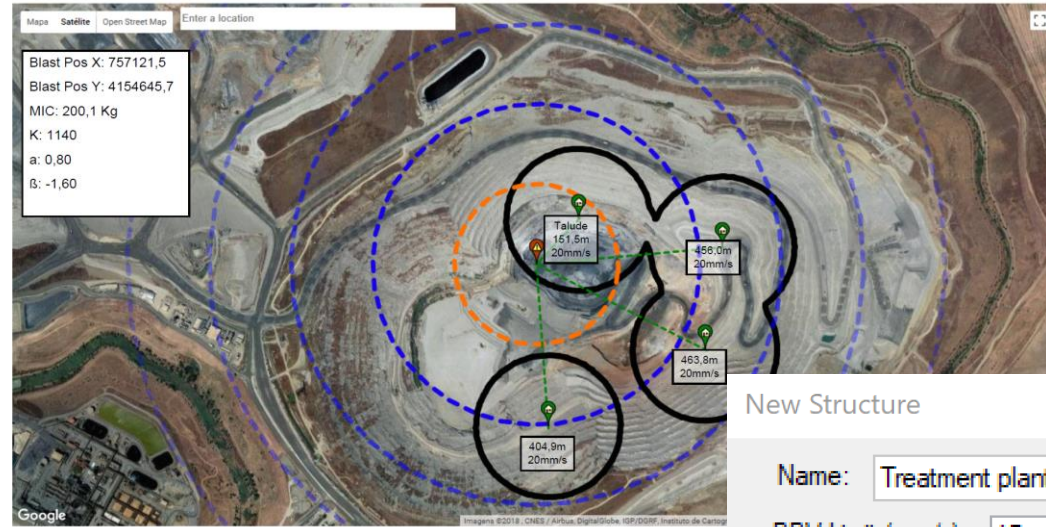


Features

- PPV prediction
- Report picture
- UTM corrections



Blast Plan
Blast ID:



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New Structure

Name: Treatment plant

PPV Limit (mm/s): 15

Color: ■

Utm X: 757406.000

Latitude: 37.504615

Utm Y: 4154838.000

Longitude: -6.087992

Acceleration (m/s²): 200.00

Freq. (Hz): 5.00

Cancel

Ok

O-PitCloud

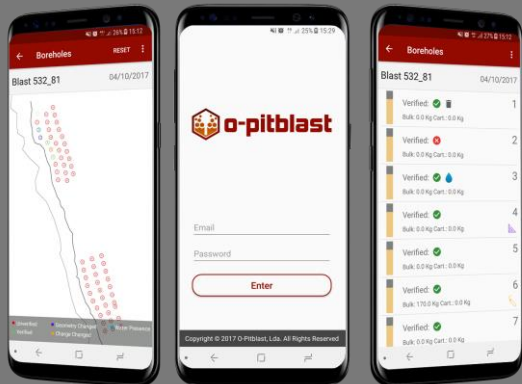
- Save Blast
- Share Between Coworkers
- Create Projects
- Connect with Mobile Devices
- Upload seismographic information





O-PitApp

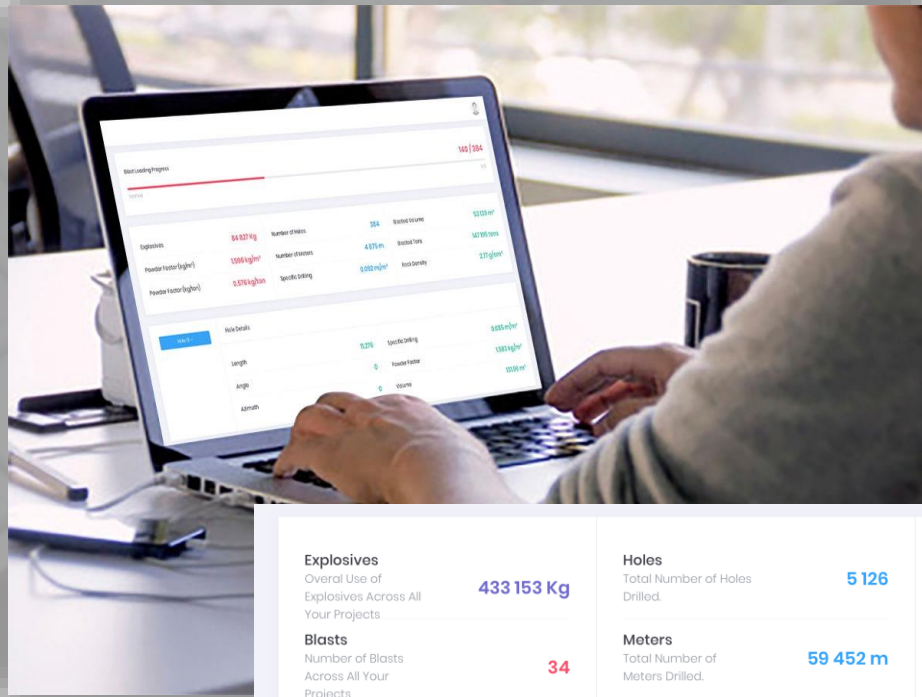
- See your boreholes pattern on 2D/3D view
- Automatic Blast Report
 - Planned vs Actual
- Field Real Information
 - Holes Geometry
 - Real Kg's
 - Watered Holes
 - Deleted Holes
 - Re-drilled holes



O-PitAnalytics

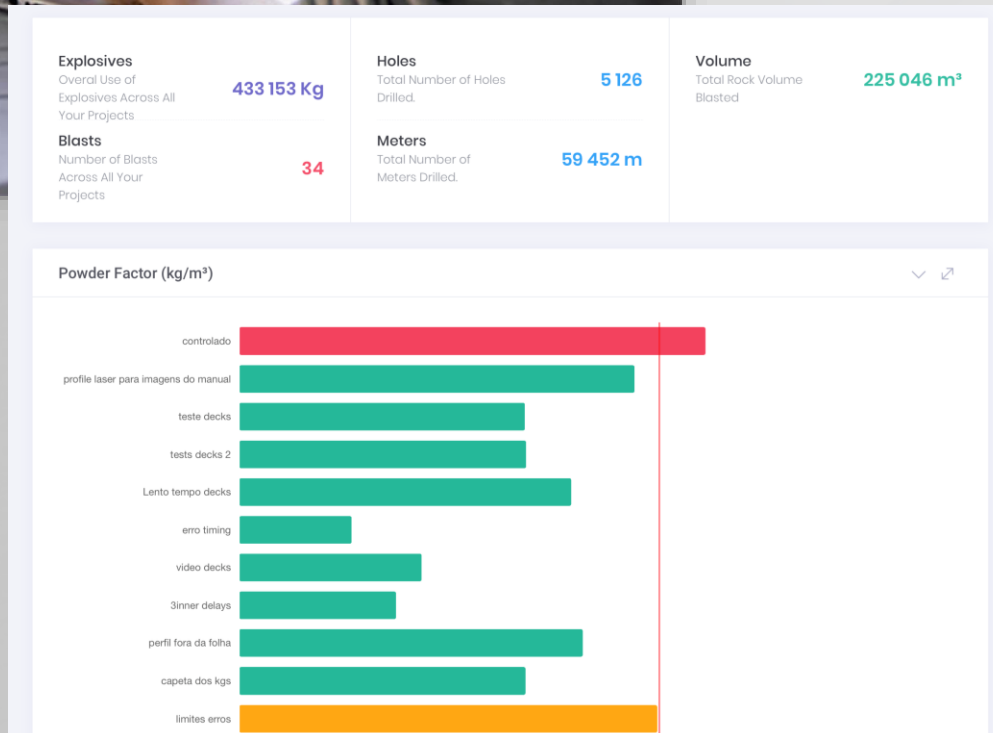
- Multi project analysis
- Costs reduction
- Performance analysis
- Project management





Features

- KPI Control
- Blast monitoring
- Errors reports
- Control blast loading process in real time





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