

# MINESCAPE

One platform, endless possibilities

## MINESCAPE 2026 RELEASE NOTES

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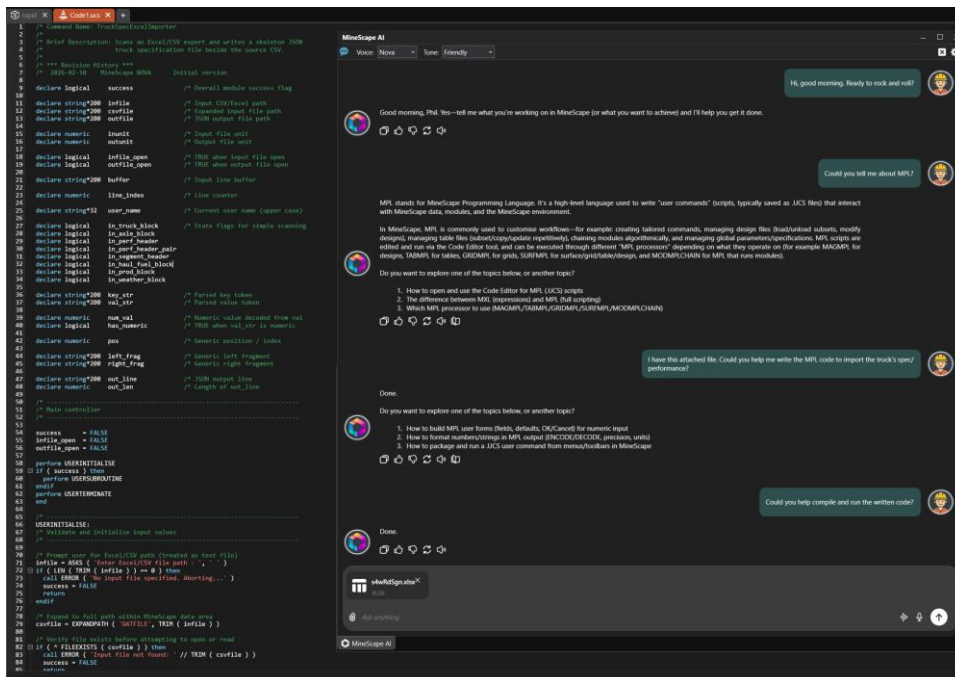
# What's New

Explore the latest enhancements and additions in MineScape 2026. This summary highlights key changes - full details are available in the Help documentation.

**NOTE:** Starting from MineScape 2026, **Tactical Scheduler**, **Long Range Scheduler**, and **Digital Twin & Simulation** applications now use SQLite by default. No installation is needed for the SQLite. Only **GDB** and **UG Survey** continue to use SQL Server.

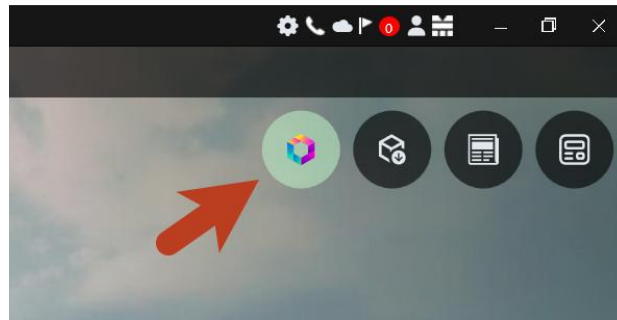
## Introducing MineScape AI

**MineScape AI** is a built-in AI assistant designed to support mining workflows directly within MineScape. It helps users access information, analyse supported files, execute selected commands, and generate or refine MPL scripts.



MineScape AI Dock

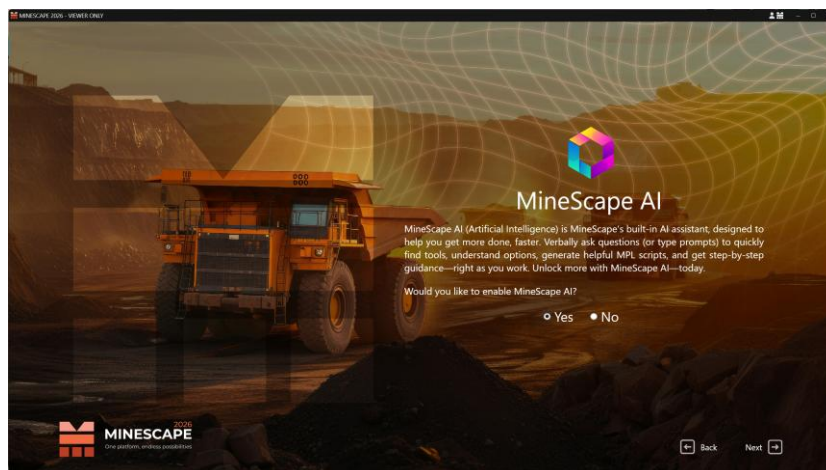
Available from multiple locations within MineScape, including the **Start Page** when enabled, MineScape AI supports both text and voice interaction, allowing users to work with the assistant in a way that suits their environment.



*MineScape AI on Start Page*

Security and data protection are central to its design. Safeguards are implemented to prevent the processing of personally identifiable information (PII), enabling **MineScape AI** to be used confidently in enterprise environments.

**MineScape AI** is an optional feature. During installation, users can choose whether to enable it. The setting can also be changed after installation using the MineScape Admin Settings tool.



*MineScape AI Activation Prompt During Initial Setup*

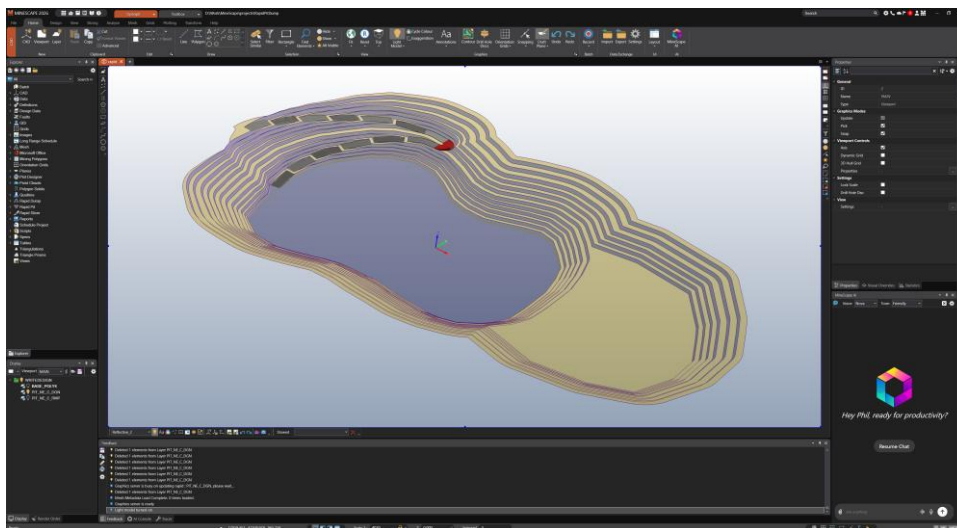
## Start Page and Workspace Redesign

The **Start Page** has been redesigned with a modernised layout and expanded functionality. A Notification Dock provides direct access to updates, while **Help** is now available from the main navigation. Products and Apps have been updated with new items, renamed entries, and refreshed icons. The Projects Area is presented as an expandable dock, supporting search and favourites for easier access. New themes, icon colour cycling, and tag options offer greater personalisation.



*MineScape 2026 Start Page*

The MineScape workspace introduces a refined interface with a dedicated **Toolbox**, moving popular tools out of the Quick Access Toolbar and into a centralised list. The **CAD** Window has been updated with a new design, featuring a grey background and bevelled window styling. The Status Bar now includes a CAD Interaction Controls for frequently used options, alongside enhanced display of units and orientation.

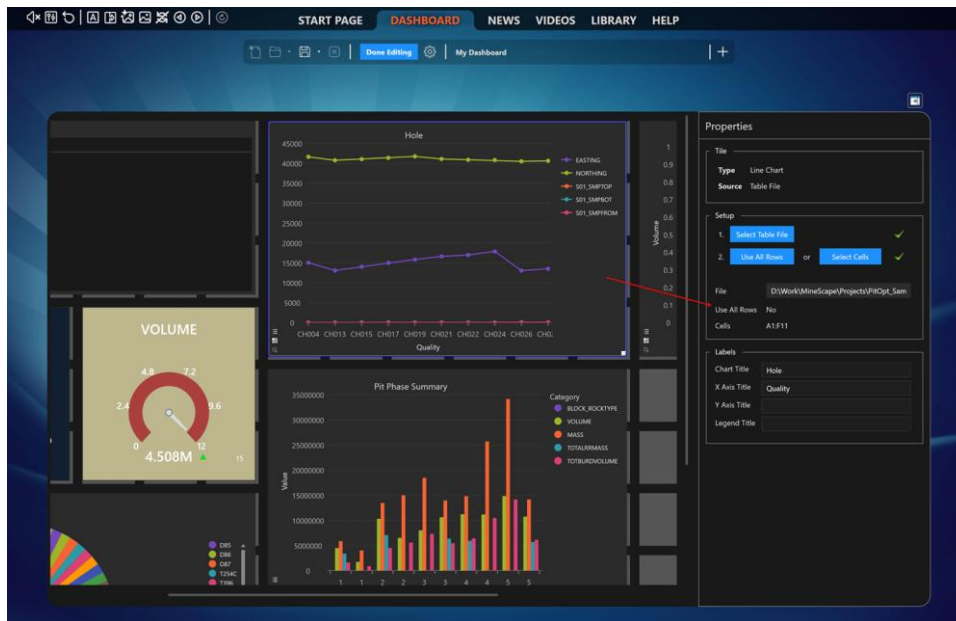


*MineScape 2026 Workspace*

## Dashboard

The enhanced MineScape **Dashboard** retains its interactive features for tracking, analysing, and visualising data in a central view, with improvements to the user

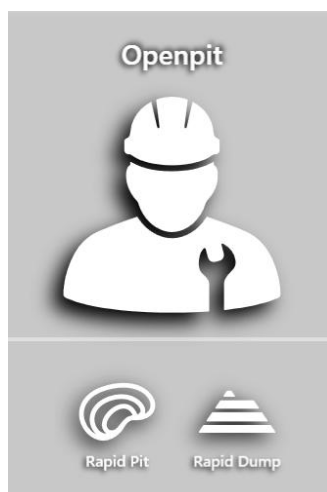
interface, tile editing and resizing workflows, and global settings for dashboard layout.



*Properties Panel Appears After Clicking a Tile in Edit Mode*

## New Rapid Features in Openpit

This release introduces two new Rapid applications: **Rapid Pit** and **Rapid Dump**. These applications are designed to make pit and dump design faster, more interactive, and fully integrated with **CAD**. Each application includes dedicated features that provide instant visual feedback as parameters are adjusted, allowing users to design and refine more efficiently.

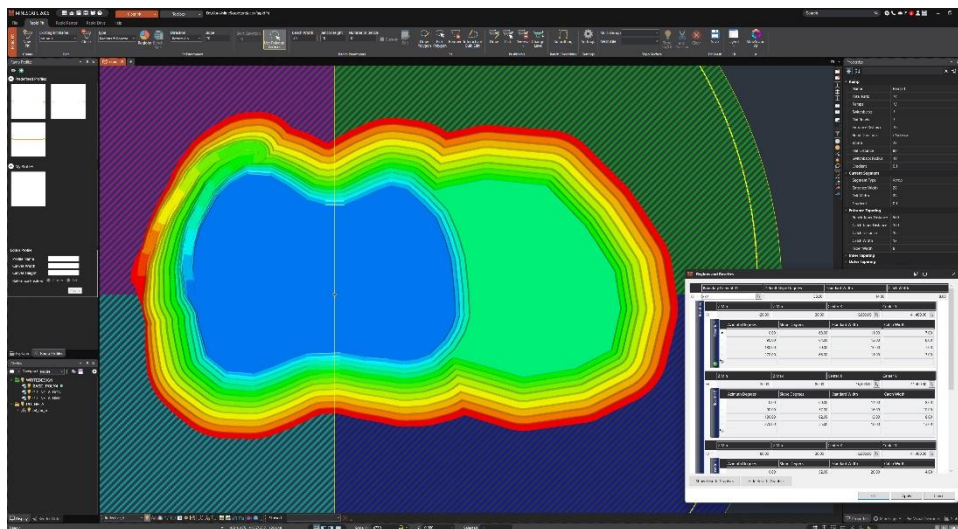


*Rapid Pit and Rapid Dump Apps*

Rapid design tools within **Openpit** are parameter-driven engineering tools. Generated geometry reflects the design values entered by the user. Appropriate mining design knowledge is required to produce operationally realistic results.

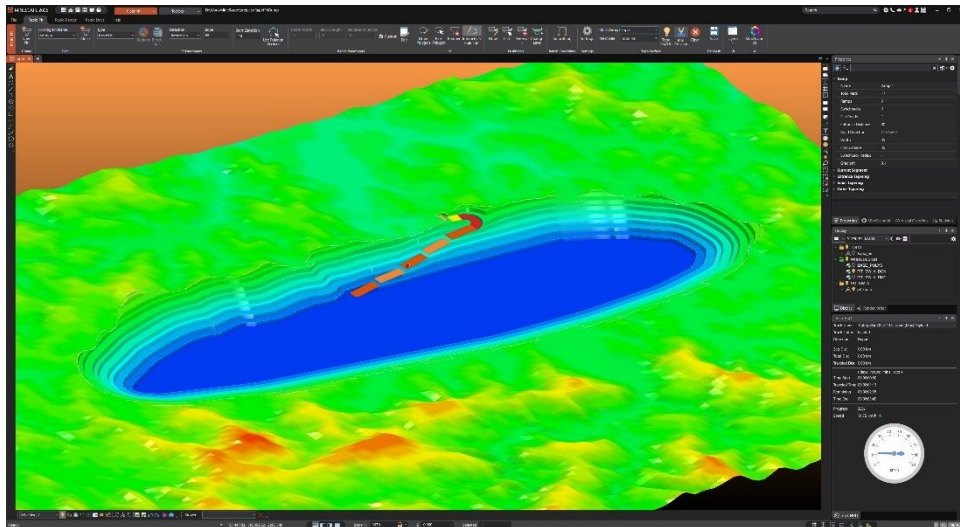
## Rapid Pit

**Rapid Pit** introduces interactive, scenario-based pit design within **Openpit**. A Rapid Pit scenario defines the working environment for generating and refining pit geometry, with design updates reflected instantly in the **CAD** Window.



*Pit Built With Regions and Rosettes*

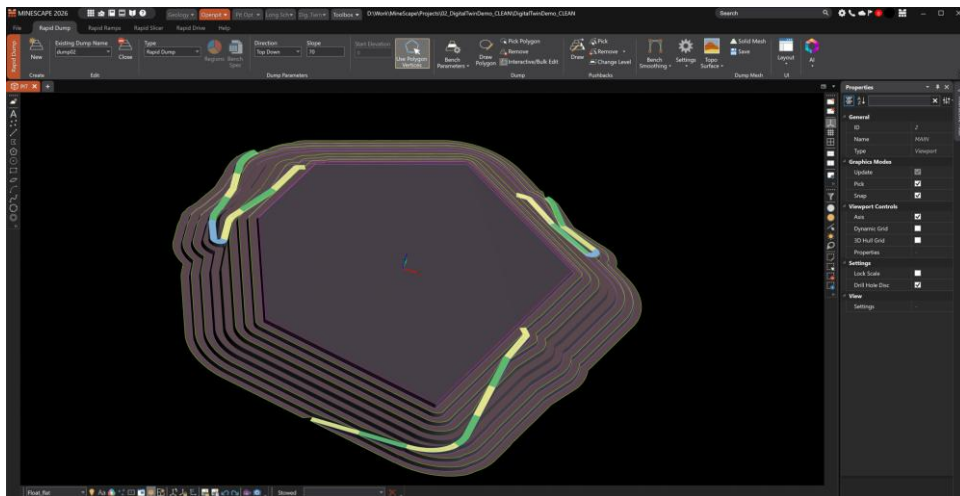
Pits can be created using multiple generation methods, and refined through bench customisation, pushbacks, and bench smoothing. Integrated ramp tools support haul road design, including switchbacks and access ramps, while trimming against topographic surfaces allows the pit to be aligned with existing terrain.



*Pit Trimmed Against Topo Saved as Mesh*

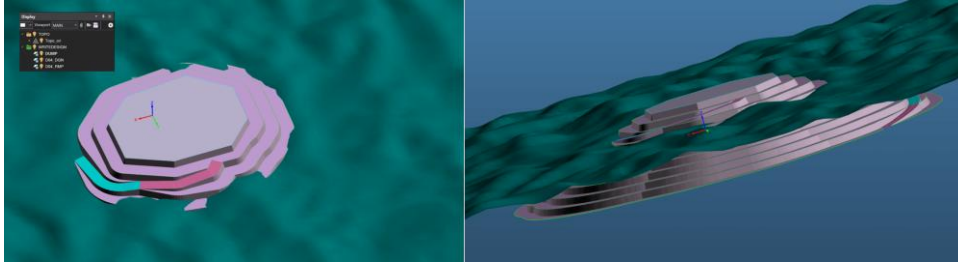
Final designs can be saved as meshes, capturing benches, ramps, and trimming results as permanent outputs.

## Rapid Dump



*Temporary Dump Graphic*

**Rapid Dump** brings interactive dump design in the **CAD** Window, with instant on-screen updates as parameters change. Work is organised around a single Rapid Dump scenario, which holds the active temporary dump graphic and its design settings. From an initial polygon and key inputs, users refine benches, add and edit ramps, and trim to a topographic surface.



*Temporary Dump with Ramp Trimmed to Topo*

This app integrates three tools: **Rapid Ramps** (ramp design), **Rapid Slicer** (conversion of a solid mesh into dump blocks for scheduling), and **Rapid Drive** (truck movement simulation). Final designs can be saved as meshes or exported as a solid mesh for downstream use.

## Rapid Ramps

**Rapid Ramps** provides an interactive way to create and edit haul roads as part of pit and dump designs. It is available in both the **Rapid Pit** and **Rapid Dump** Apps, ensuring a consistent workflow across scenarios. Users can define ramp parameters such as gradient, width, direction, and entrance distance, then add ramps manually, automatically, or by defining a centre-line. Specialised features such as switchbacks, flat ramp segments, and access ramps can also be applied.



*Ramps*

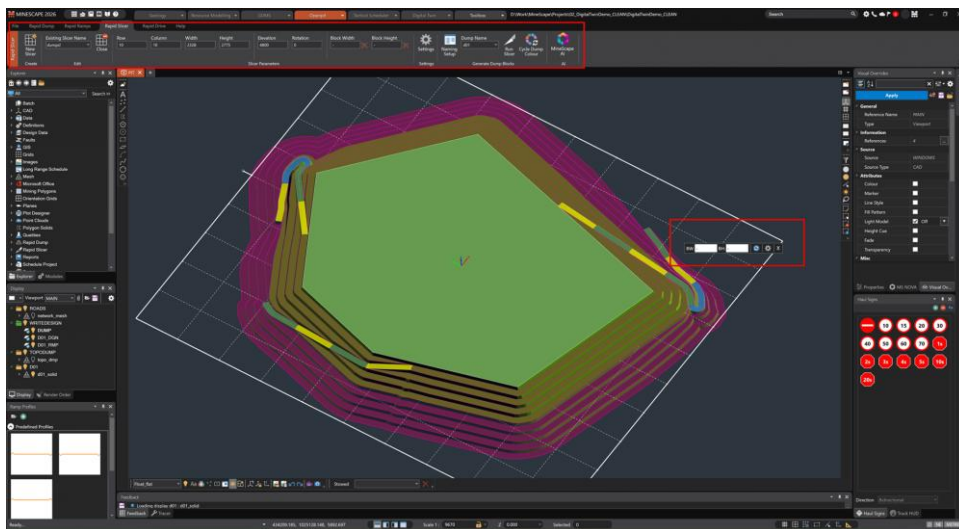
Ramps can be refined using ribbon tools, edited through the **Properties** Dock, or shaped with ramp profiles. Colour settings and tapering controls provide additional flexibility, with all updates applied instantly in the **CAD** Window. This makes ramps an integrated and adaptable part of the overall design.



*Ramp Profiles*

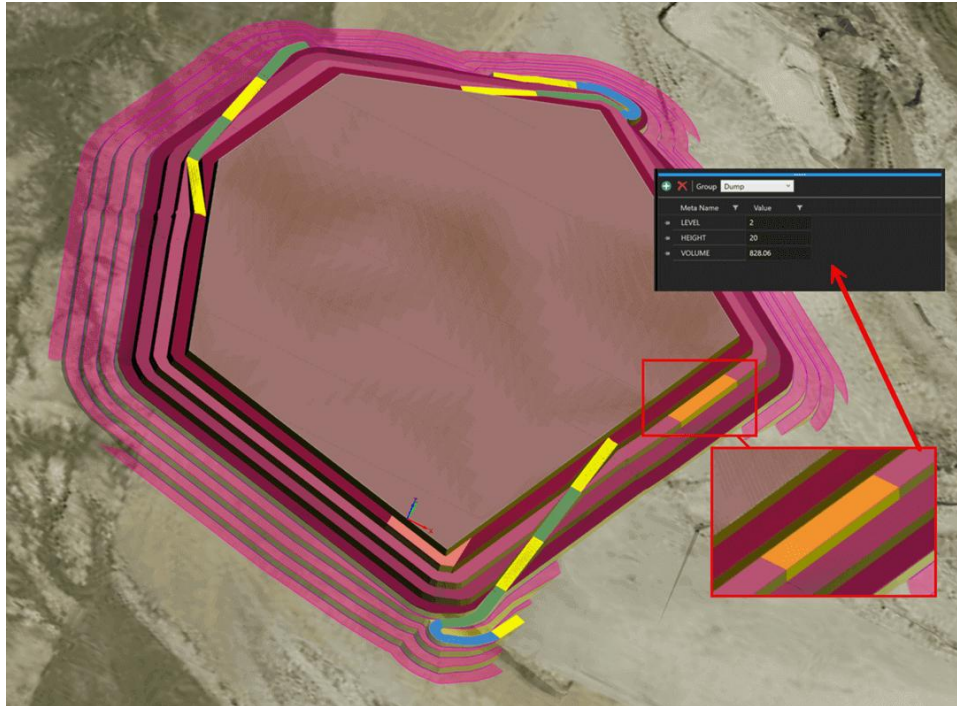
## Rapid Slicer

The enhanced **Rapid Slicer** converts solid meshes generated by **Rapid Dump** into dump blocks, with metadata used in the scheduling process.



*Parameters Are Editable from the Tab and Toolbar*

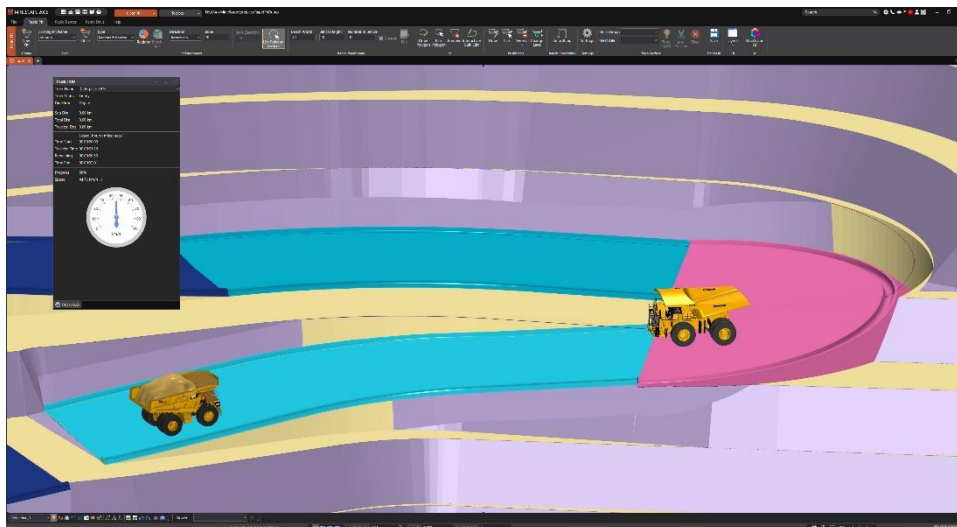
This tool allows users to create a new slicer or load an existing one, with parameters editable from both the **Rapid Slicer** Tab and the **Slicer** Toolbar. Users can also define metadata naming for the generated dump blocks.



*Dump Block Metadata Used in Scheduling Process*

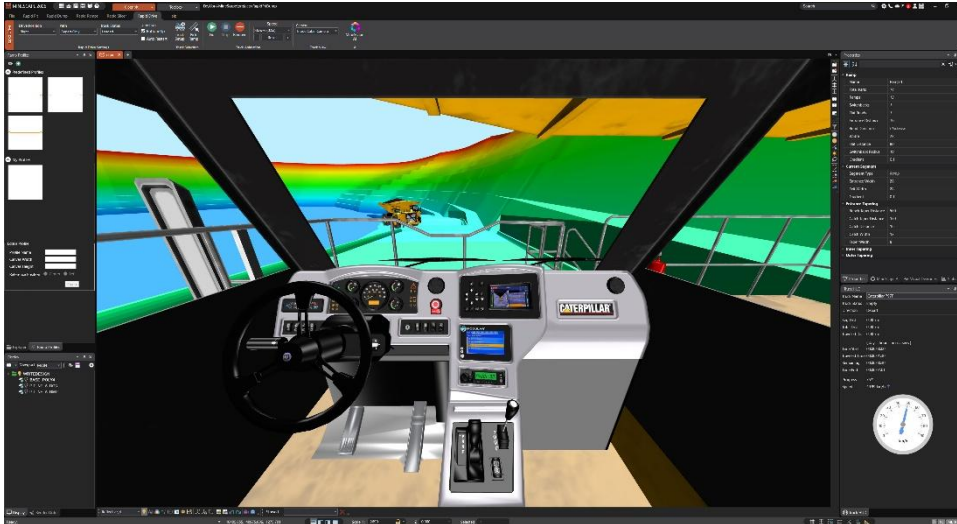
## Rapid Drive

**Rapid Drive**, introduced as part of the **Rapid Pit** and **Rapid Dump** Apps, provides an interactive way to simulate truck movement on ramps within both Rapid Pit and Rapid Dump scenario. Trucks can be placed directly in the **CAD** Window, with each ramp supporting up to three simulations based on drive position. The feature connects to the haulsim database, which stores and manages the simulation data.



*Truck Simulation*

Users can configure truck models and specifications, define operating parameters, and run customisable simulations. The **Truck HUD** Dock displays live statistics throughout playback, while animation controls and camera views provide flexibility in observing truck behaviour from different perspectives.



*Inside Cabin View*

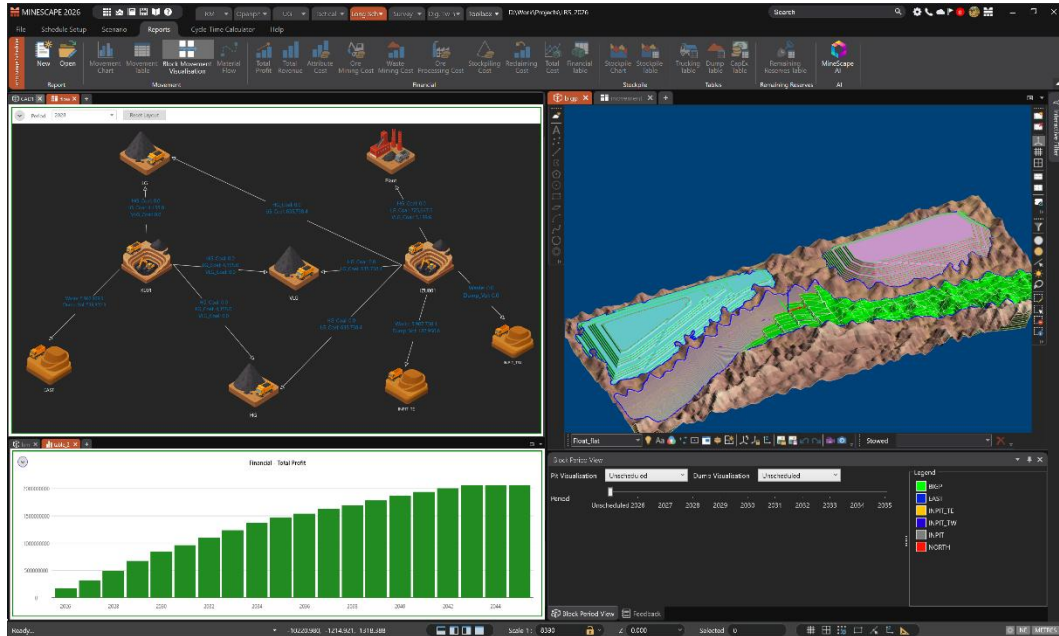
## Long Range Scheduler

MineScape 2026 introduces the **Long Range Scheduler** (MineScape LRS), a scenario-based schedule optimisation engine for multi-year surface coal planning. MineScape LRS converts pit, dump, stockpile, and haulage models into time-phased schedules that maximise Net Present Value (NPV), allowing users to test strategic assumptions and immediately compare financial outcomes at the scenario level.

### Key features include:

- NPV-driven optimisation with configurable time periods and discounting
- Global, Forward, and Sliding Window strategies with constraint control
- Integrated cost, revenue, and general constraint modelling
- Built-in **Cycle-Time Calculator** for haulage effort integration
- Robust financial and movement reports with interactive charts and detailed tables that can be analysed side-by-side

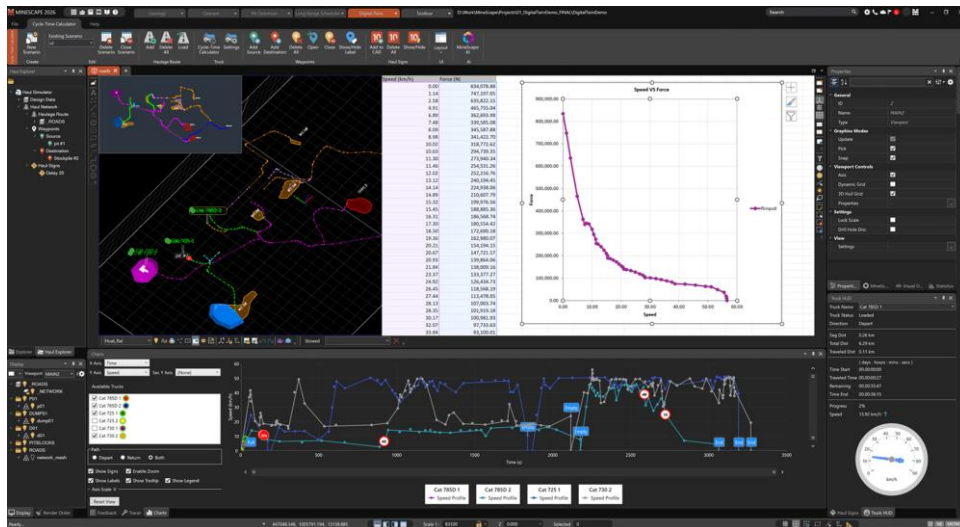
- **Material Flow** diagrams for location-based routing visibility
- 3D Block Period View to visualise pit depletion and dump build-up per period



## Digital Twin and Simulation

This release introduces three new applications under the **Digital Twin & Simulation** Product: **Cycle-Time Calculator**, **Haul Simulator**, and **GPS**. Together, they enable cycle time estimation, fleet haulage simulation, and real-time equipment visualisation to support operational planning and analysis within MineScape.

## Cycle-Time Calculator



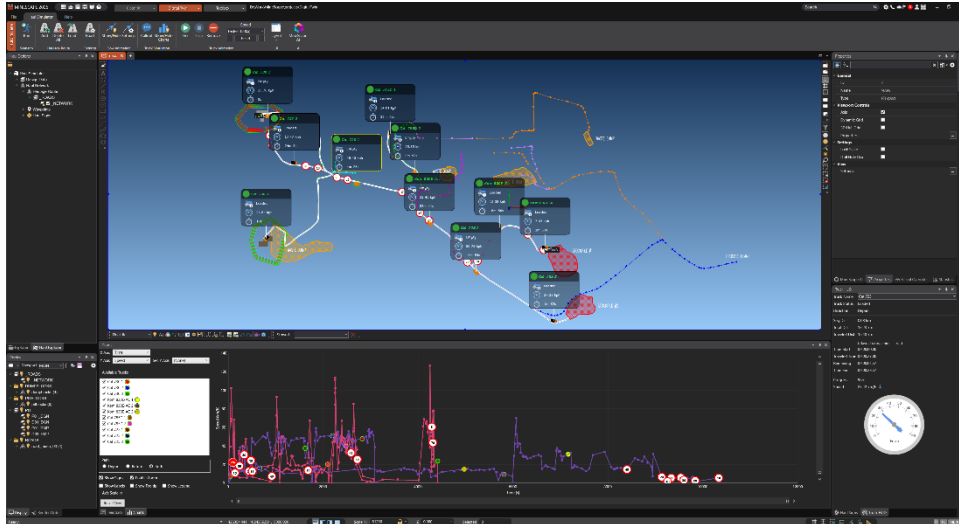
*Cycle-Time Calculator Workspace with Generated Report and Haul Simulator Chart Dock*

The **Cycle-Time Calculator** App enables scenario-based modelling of truck haul cycle times and fuel consumption across mining operations. It evaluates haul routes between pits, dumps, process plants, and stockpiles while accounting for road conditions, elevation profiles, loading state, rolling resistance, and operational delays.

The app also integrates with Rapid Pit and Rapid Dump Scenarios to incorporate ramp geometry in haul calculations and validates haul profiles against grade and distance limits. Calculated cycle times and fuel consumption can be exported to Excel and used as operational inputs for the **Haul Simulator** App, supporting more consistent haulage simulation and production planning.

## Haul Simulator

**Haul Simulator** enables fleet-level haulage simulation using scenarios defined in the **Cycle-Time Calculator**. It models multiple trucks operating concurrently across defined haul routes, allowing users to evaluate fleet sizing, dispatch timing, and routing strategies under realistic operational constraints.



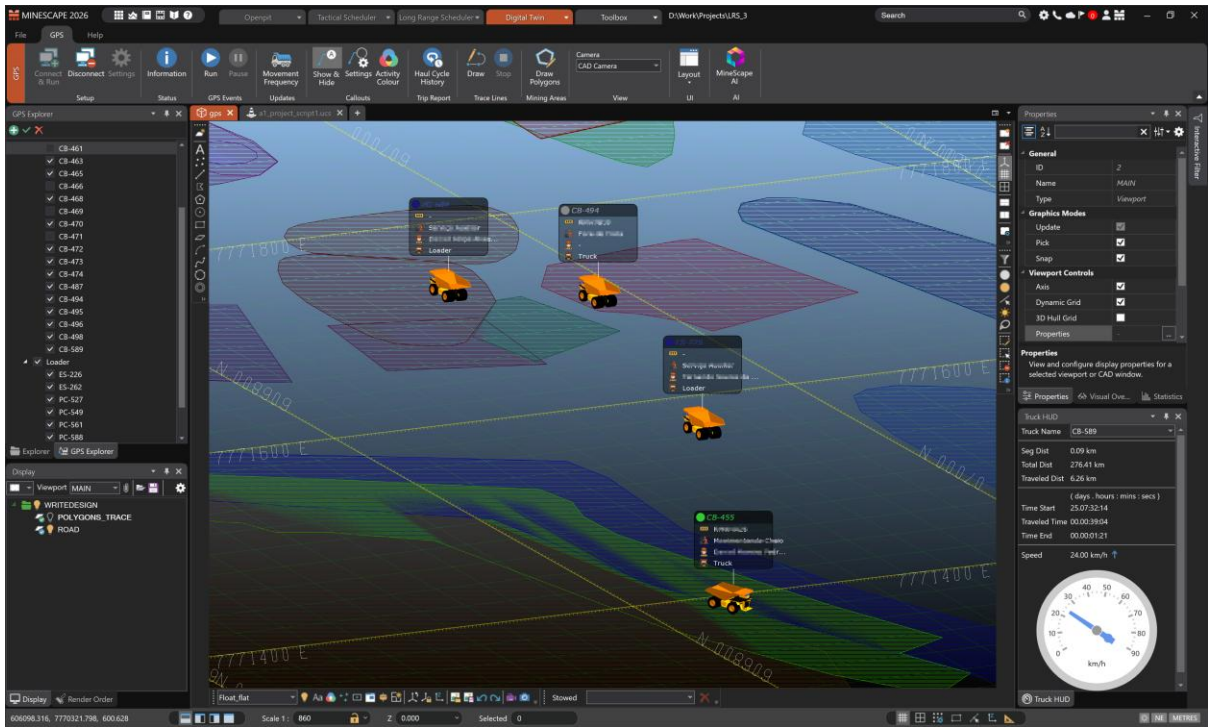
*Haul Simulator*

The simulator supports single and multiple scenario modes, configurable truck numbers, staggered start delays, and interactive playback controls. Integrated performance analytics provide time- or distance- based analysis of operational metrics, enabling assessment of fleet interaction, congestion, and production behaviour prior to site implementation.

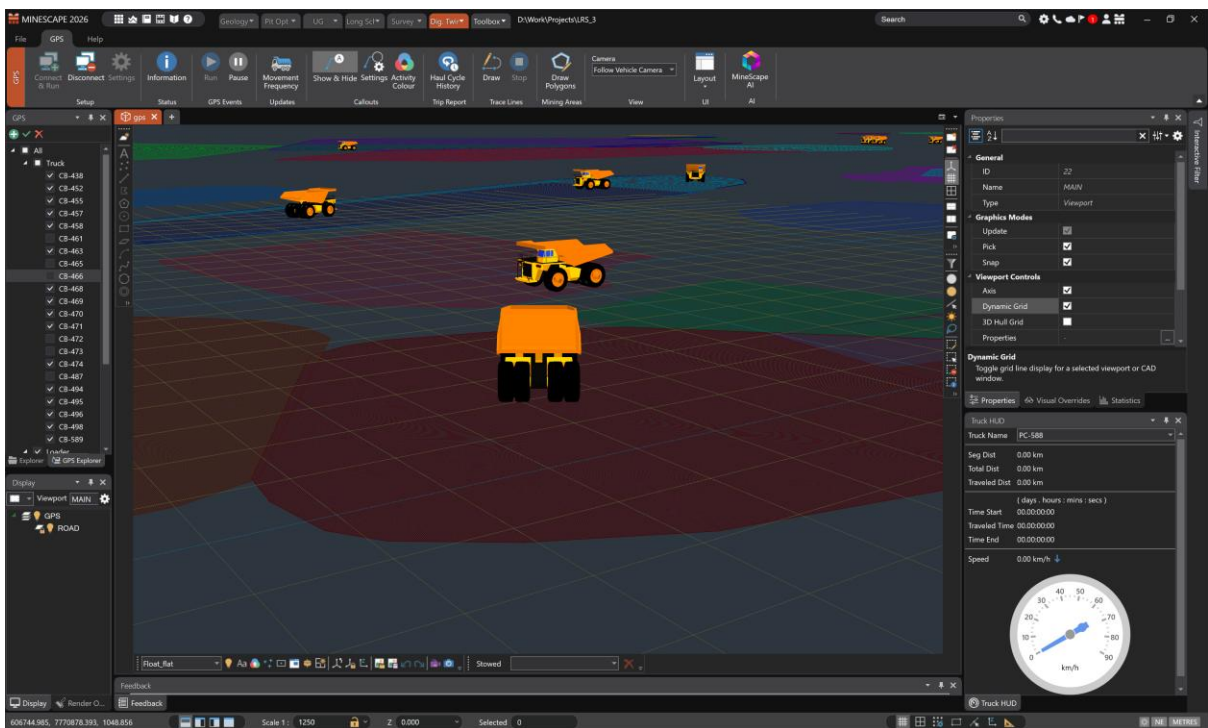
## GPS

The new **GPS** App enables real-time visualisation of mining equipment directly within the MineScape 3D CAD environment. The app connects to Sodep Minetrack and retrieves live equipment position and activity data, displaying trucks and other fleet assets within their actual mining areas in the design window.

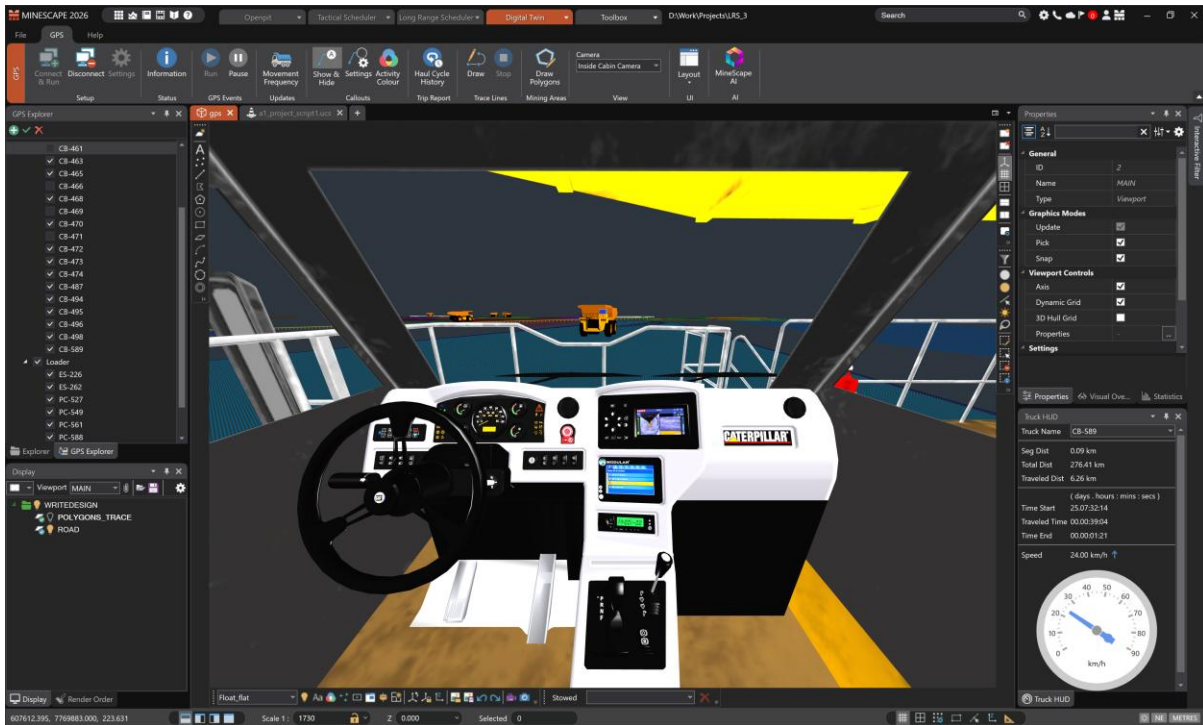
Information like equipment locations, activities, and drivers can be displayed. Users can choose to monitor equipment movement in three camera modes: **CAD Camera** View, **Follow Vehicle** View or **Inside Cabin** View. GPS event can also be updated according to configurable retrieval intervals, so users can view fleet movement in true spatial context rather than relying on standalone reports or external dashboards.



CAD Camera



Follow Vehicle Camera



*Inside Cabin Camera*

## CAD Enhancements

### Increased Vertex Limit for Selected Elements

MineScape 2026 increases the maximum number of vertices or points for the element types LINES, POLYGON, and POINTS from **4,094** to **16,382**.

This change affects any elements that belong to these types, such as points, line, polygon, rectangle, arc, circle, and many more.

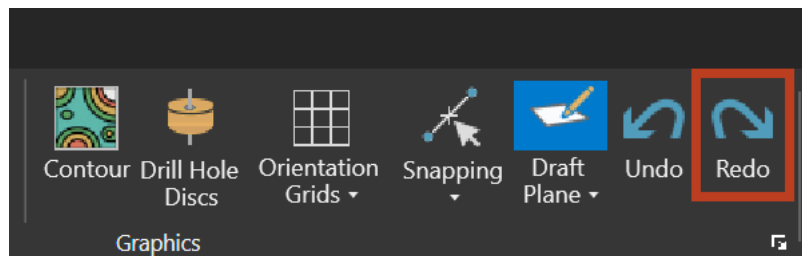
**IMPORTANT:** Elements created in MineScape 2026 with more than 4,094 vertices or points are not supported in MineScape 2023 or earlier.

### New Redo Function

This release introduces a **Redo** Option to complement the existing **Undo** functionality. **Redo** allows actions that were undone to be restored, making it easier to recover from unintended changes.

**NOTE:** In multi-user environments, undo and redo actions may fail if another user modifies the same .DGN file at the same time, particularly during operations involving named elements or element IDs.

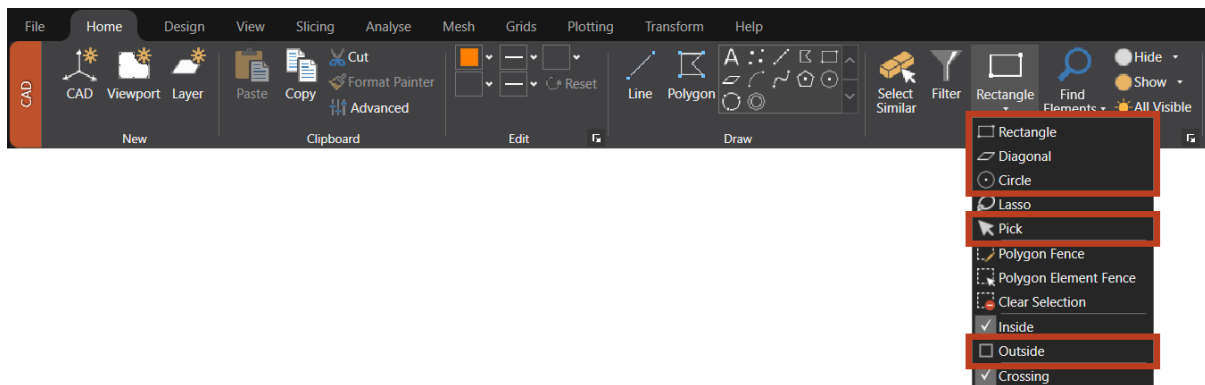
The **Redo** Option is available on the **Home** Tab of the **CAD** Ribbon, within the **Graphics** Group. It can also be accessed using the **Ctrl + Y** hotkey.



*Redo Option Highlighted in the Graphics Group of the CAD Ribbon*

## New Selection Tools and Expanded Modes

This release introduces four additional selection tool options accessible from the **CAD** Ribbon or Status Bar – **Rectangle**, **Diagonal**, **Circle**, and **Pick**. These tools offer greater flexibility for defining selection areas directly in the **CAD** Window.

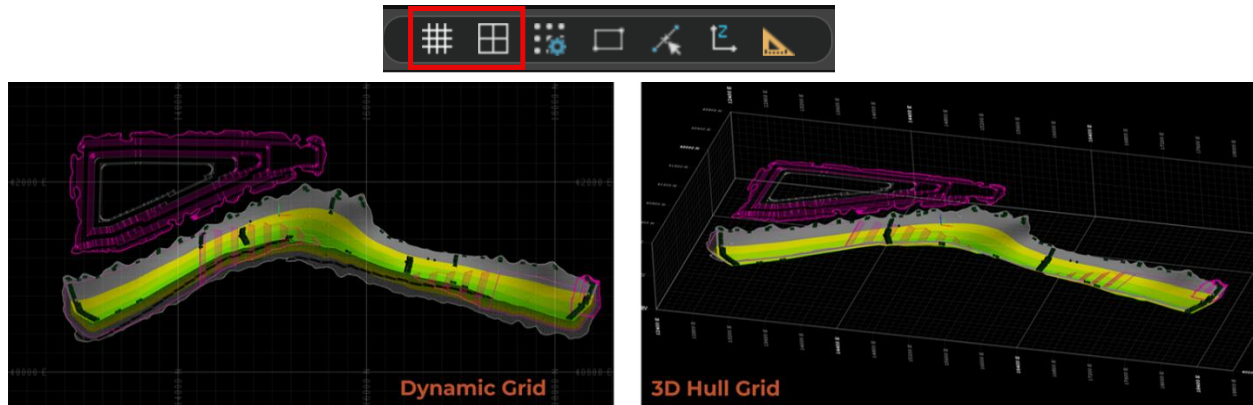


*New Selection Tools and Modes*

In addition, a new **Outside** selection mode had been added alongside the existing **Inside** and **Crossing** modes. This enhancement allows users to include only elements fully outside the selection area, enabling more targeted and precise selection workflows.

## Dynamic Grid and 3D Hull Grid

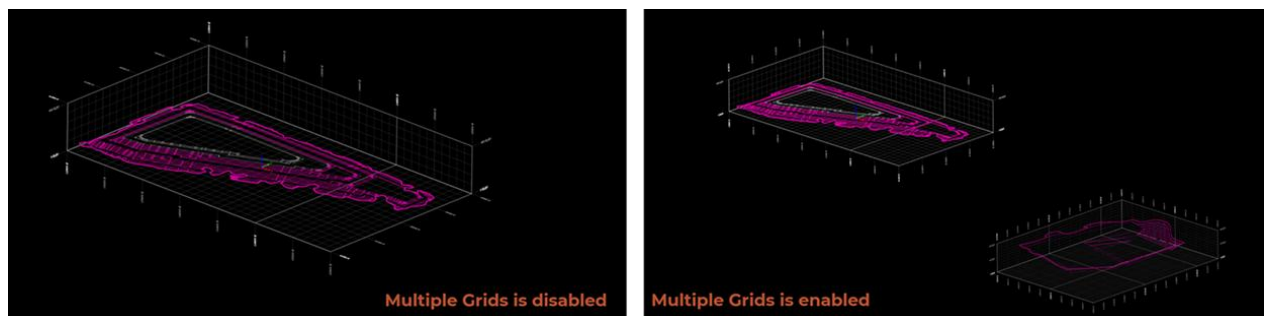
This release introduces two options of displaying grid in the viewport, **Dynamic Grid** and **3D Hull Grid**.



*Dynamic Grid and 3D Hull Grid*

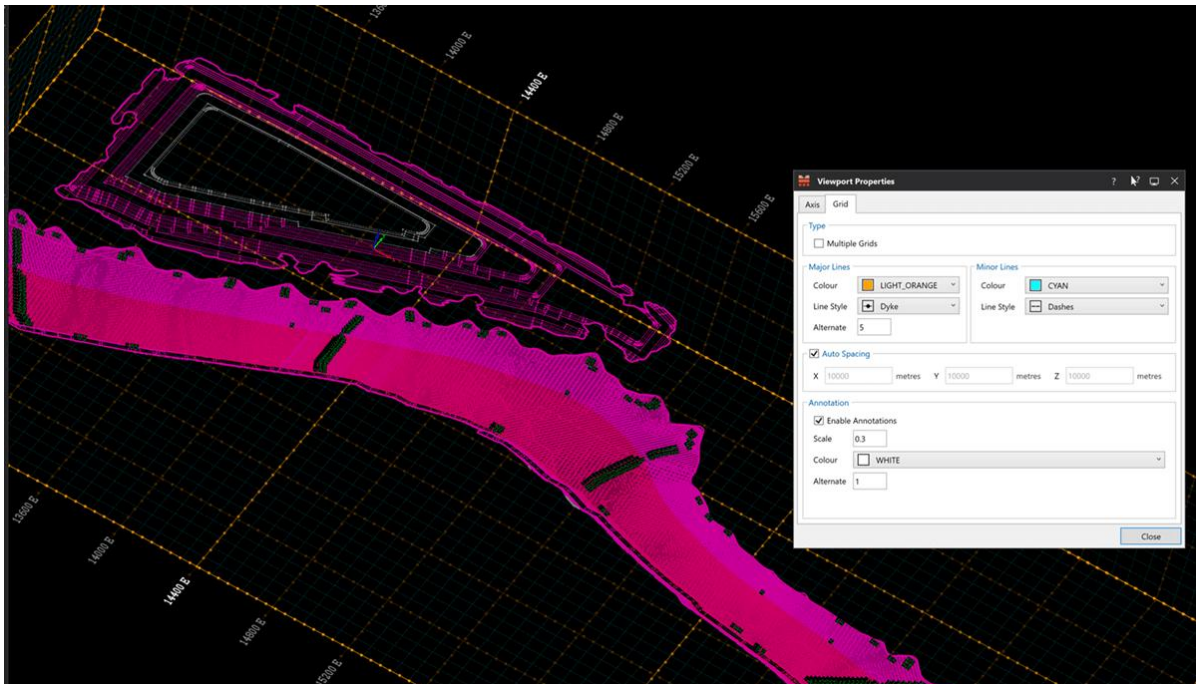
The **Dynamic Grid** automatically adapts to zoom, rotation, and panning, increasing spacing when too dense and decreasing it when too sparse.

Meanwhile, the **3D Hull Grid** wraps around the data range cube, providing clearer spatial context. This option also supports displaying multiple grids in the viewport for non-intersecting elements from different display lists.



*Disabled and Enable Multiple Grids*

Both grids can be modified based on users' preferences, including line color, line types, annotation interval, size, color, and more.

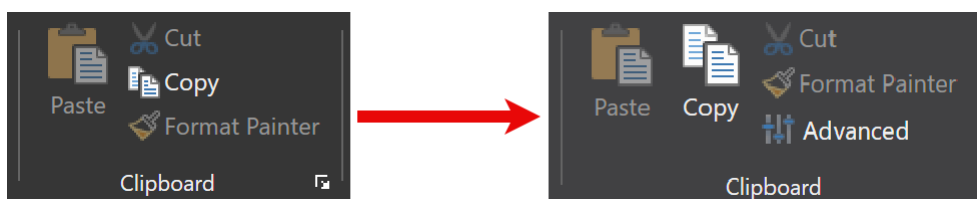


*Modified Hull Grids*

These options are available in the **CAD** Ribbon's **View** Tab, within the **Viewport** Group, under the **Axes** Option, as well as the **CAD Viewports** Toolbar, and the CAD Interaction Controls in the Status Bar.

## Updated the Clipboard Group layout

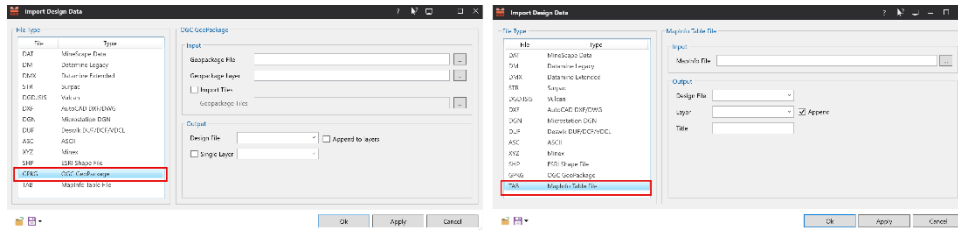
The **Copy** button is now positioned next to **Paste** and uses a larger icon. The **Advanced** dialog launcher is now available as a button under **Format Painter**.



*Updated Clipboard Group Layout*

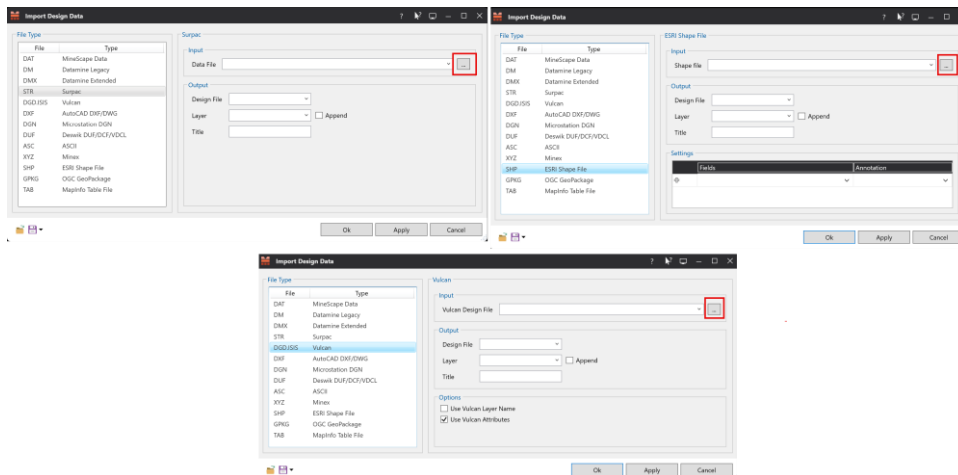
## Improved Import Option

The **Import Design Data** Form in the **CAD » Data Exchange » Import** now supports exporting GeoPackage and MapInfo Table files into MineScape **Design File**.



*Import Design Data Supports Geopackage and MapInfo Table File*

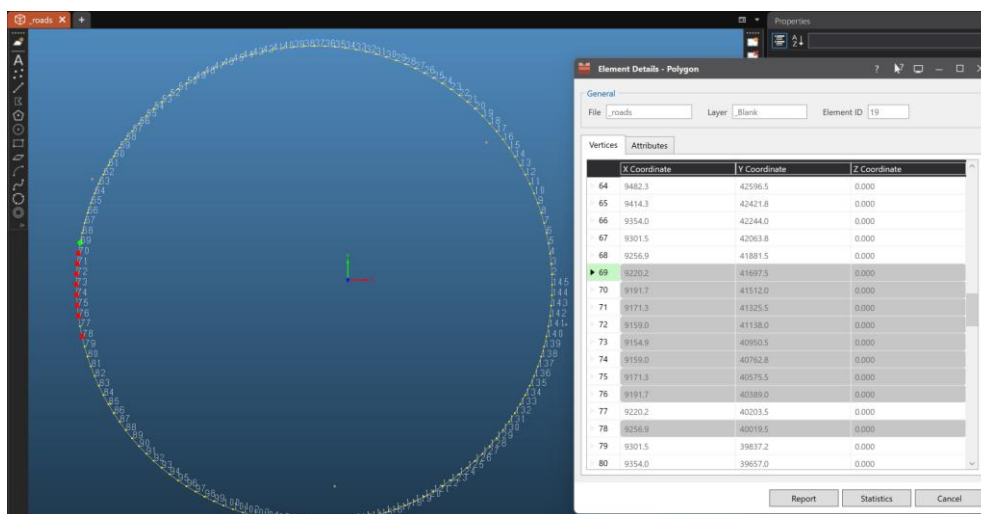
Users can also browse files outside the project directory for Vulcan, Surpac, and Shape File types.



*Browsing Outside Project Directory is Supported for Surpac, Vulcan, and Shape File*

## Vertex Highlighting

When users select vertices in the **Element Details** Form, the corresponding vertices are highlighted in the **CAD** Window with red filled markers. The active vertex is displayed in green to distinguish it from other selected vertices.

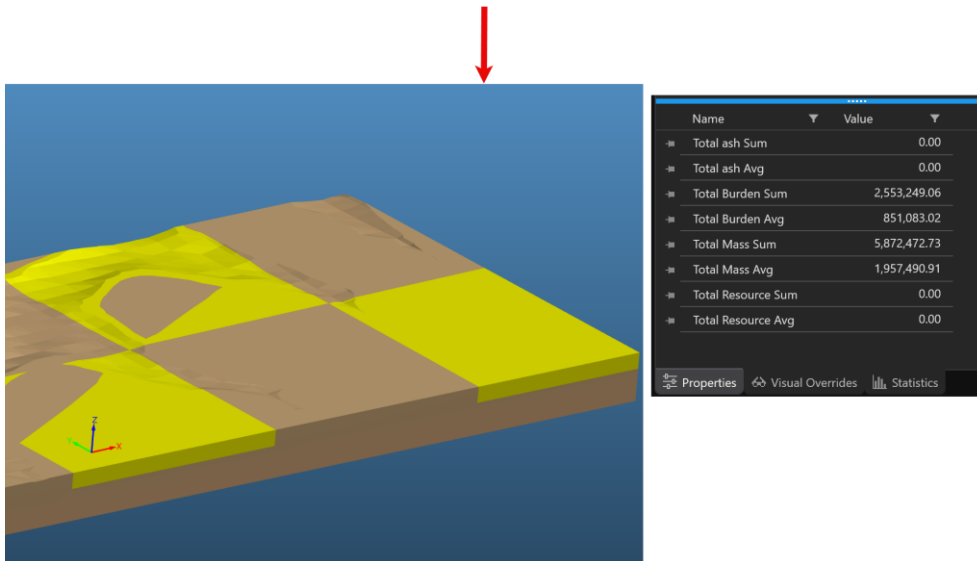
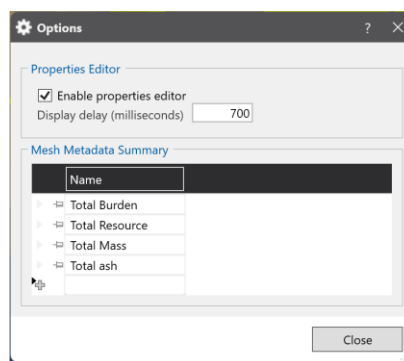


*Vertex Highlighting*

# Mesh

## Mesh Metadata Summary

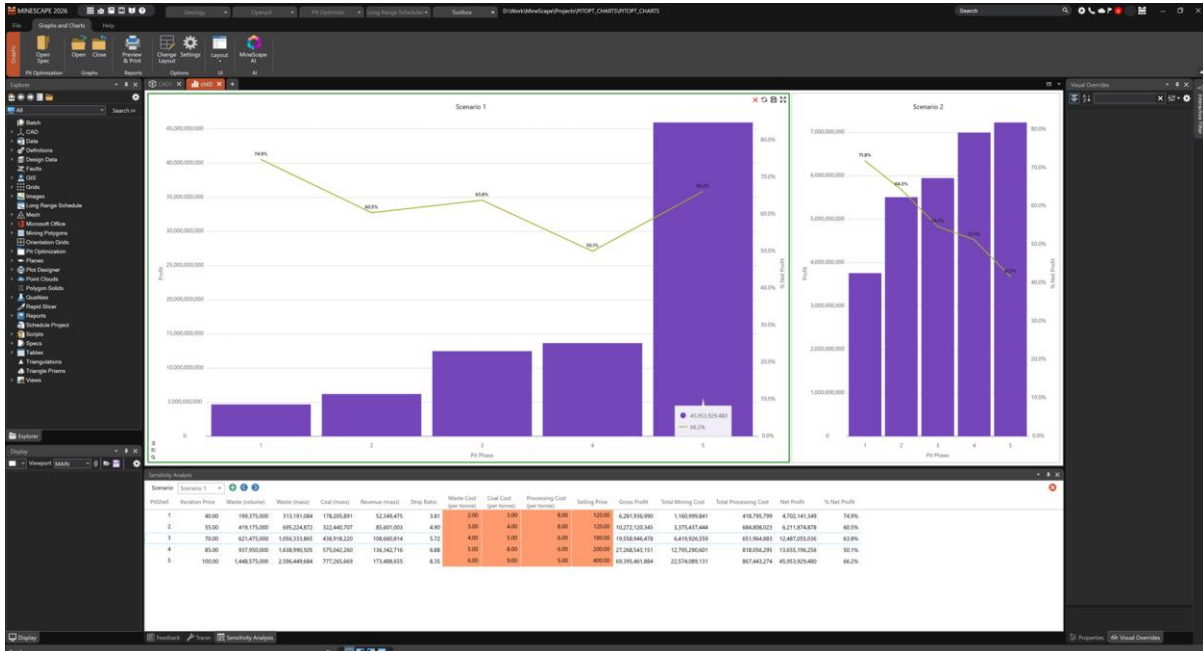
Added **Mesh Metadata Summary** in the **Options** Form of the **Properties** Dock. Users can specify metadata fields with numeric values (for example, *Total Burden*, *Total Resource*, or *Total Mass*). When multiple mesh blocks are selected in **CAD**, the **Properties** Dock displays the **Sum** and **Average** values for each configured metadata field.



Metadata Summary

# Pit Optimizer

## Sensitivity Analysis



*Sensitivity Analysis App*

The new **Sensitivity Analysis** App in the **Pit Optimizer** product streamlines the evaluation of Stratigraphic Optimizer results. Specification files can be loaded to automatically generate charts and tables, eliminating the need for manual graph preparation.

The application enables rapid scenario comparison to identify the most economically robust outcome. Calculations update automatically as assumptions change, ensuring profits and costs are recalculated in real time. Customisable layouts support clear visual interpretation, and results can be exported to PDF for efficient reporting and stakeholder communication.

## New Columns in Optimization Reserve Report

The **Pit Optimization Summary Reserves** Report in the **Stratigraphic Optimizer** App now displays **Quality** and **RR Mass** columns. The **Quality** Columns reflects the quality selected in the **Intervals/Quality** Sub-node, while **RR Mass** is calculated as the **Mining Recovery % Expression Field** multiplied by the **Interval Mass**.

**PIT OPTIMIZATION SUMMARY RESERVES REPORT**  
05-Mar-26 15:43:02

| Optimization | Interval        | Volume           | Mass             | Interval Area   | VL Thick    | RR Mass          | Checkbookes Volume | Checkbookes VL Thick | Interbookes Volume | Interbookes VL Thick | Poring Volume | Poring Au Thick | Underbookes Volume | Underbookes VL Thick | Quality ASH   | Quality CV       | Quality ID    | Quality IM     | Quality RD    | Quality TS    | Quality VM     |  |
|--------------|-----------------|------------------|------------------|-----------------|-------------|------------------|--------------------|----------------------|--------------------|----------------------|---------------|-----------------|--------------------|----------------------|---------------|------------------|---------------|----------------|---------------|---------------|----------------|--|
| Phase: 0     | Area:           |                  |                  |                 |             |                  |                    |                      |                    |                      |               |                 |                    |                      |               |                  |               |                |               |               |                |  |
| 0            | UNASSIGNED      | 0.0              | 0.0              | 0.000           | 0.0         | 0.000            | 0.0                | 0.0                  | 0.0                | 0.0                  | 0.0           | 0.0             | 0.0                | 0.0                  |               |                  |               |                |               |               |                |  |
| 0            | S01             | 0.0              | 0.0              | 0.000           | 0.0         | 0.0              | 0.0                | 0.0                  | 0.0                | 0.0                  | 0.0           | 0.0             | 0.0                | 0.0                  |               |                  |               |                |               |               |                |  |
| 0            | S05             | 480.0            | 421.2            | 0.010           | 0.00        | 421.2            | 0.0                | 0.0                  | 0.0                | 0.0                  | 0.0           | 0.0             | 480000.0           | 10.00                | 5.1183        | 6317.5624        | 1.2982        | 13.8768        | 1.3813        | 0.8135        | 41.3617        |  |
| 0            | S06             | 112009.4         | 145967.6         | 8.825           | 0.00        | 145967.6         | 2078.9             | 0.00                 | 11272.2            | 0.00                 | 0.00          | 0.00            | 62980154.4         | 30.00                | 4.3579        | 6372.6331        | 1.2989        | 13.0517        | 1.3070        | 0.4957        | 40.0871        |  |
|              | <b>Subtotal</b> | <b>112009.4</b>  | <b>146388.7</b>  | <b>8.825</b>    | <b>0.00</b> | <b>146388.7</b>  | <b>10479031.2</b>  | <b>0.00</b>          | <b>11272.2</b>     | <b>0.00</b>          | <b>0.00</b>   | <b>0.00</b>     | <b>62980154.4</b>  | <b>30.00</b>         | <b>4.3611</b> | <b>6370.3997</b> | <b>1.2990</b> | <b>13.0511</b> | <b>1.3058</b> | <b>0.4970</b> | <b>40.0891</b> |  |
|              | <b>Total</b>    | <b>112009.4</b>  | <b>146388.7</b>  | <b>8.825</b>    | <b>0.00</b> | <b>146388.7</b>  | <b>10479031.2</b>  | <b>0.00</b>          | <b>11272.2</b>     | <b>0.00</b>          | <b>0.00</b>   | <b>0.00</b>     | <b>62980154.4</b>  | <b>30.00</b>         | <b>4.3611</b> | <b>6370.3997</b> | <b>1.2990</b> | <b>13.0511</b> | <b>1.3058</b> | <b>0.4970</b> | <b>40.0891</b> |  |
| Phase: 1     | Area:           |                  |                  |                 |             |                  |                    |                      |                    |                      |               |                 |                    |                      |               |                  |               |                |               |               |                |  |
| 1            | UNASSIGNED      | 0.0              | 0.0              | 0.000           | 0.0         | 0.000            | 0.0                | 0.0                  | 0.0                | 0.0                  | 0.0           | 0.0             | 0.0                | 0.0                  |               |                  |               |                |               |               |                |  |
| 1            | S01             | 122009.0         | 159048.0         | 15.240          | 0.00        | 159048.0         | 17518888.2         | 0.00                 | 0.0                | 0.0                  | 0.0           | 0.0             | 0.0                | 0.0                  | 4.8034        | 6334.2085        | 1.2970        | 13.0999        | 1.3080        | 0.1580        | 38.8829        |  |
| 1            | S02             | 90009.1          | 118875.1         | 7.600           | 0.00        | 118875.1         | 1613881.8          | 0.00                 | 1787000.0          | 0.00                 | 0.00          | 0.00            | 42575.3            | 7.00                 | 5.9910        | 6026.8035        | 1.3006        | 13.1844        | 1.3095        | 0.1661        | 38.8621        |  |
| 1            | S03H            | 81304.3          | 105121.1         | 44.340          | 0.00        | 105121.1         | 272027.8           | 0.00                 | 3802308.0          | 0.00                 | 0.00          | 0.00            | 43198              | 8381.8638            | 1.2987        | 13.9981          | 1.3054        | 1.3054         | 1.0773        | 41.1059       |                |  |
| 1            | S03             | 400000.0         | 400000.0         | 15.000          | 0.00        | 400000.0         | 70612.0            | 0.00                 | 1788900.0          | 0.00                 | 0.00          | 0.00            | 0.0                | 0.0                  | 2.2099        | 6255.4051        | 1.3054        | 12.2514        | 1.3068        | 1.1038        | 40.2184        |  |
| 1            | S03L            | 790238.9         | 1020427.2        | 44.800          | 0.00        | 1020427.2        | 4245.5             | 0.00                 | 37529.4            | 0.00                 | 0.00          | 0.00            | 0.0                | 0.0                  | 3.8771        | 6245.1038        | 1.2913        | 13.0450        | 1.3028        | 1.1038        | 39.3602        |  |
| 1            | S04             | 188380.0         | 2444702.5        | 171.000         | 0.00        | 2444702.5        | 8452006.1          | 0.00                 | 4018802.2          | 0.00                 | 0.00          | 0.00            | 0.0                | 0.0                  | 3.0164        | 6325.2451        | 1.2995        | 12.8150        | 1.3023        | 0.7342        | 39.7052        |  |
| 1            | S05             | 1893951.0        | 2462700.3        | 389.200         | 0.00        | 2462700.3        | 2717548.1          | 0.00                 | 3250193.2          | 0.00                 | 0.00          | 0.00            | 0.0                | 0.0                  | 5.1345        | 6317.6089        | 1.2988        | 13.0511        | 1.3022        | 0.7958        | 41.1214        |  |
| 1            | S06             | 2088765.3        | 2684819.7        | 502.800         | 0.00        | 2684819.7        | 2491974.4          | 0.00                 | 3790104.7          | 0.00                 | 0.00          | 0.00            | 9120070.5          | 4.00                 | 4.3672        | 6373.2981        | 1.2988        | 13.0955        | 1.3058        | 0.4980        | 40.0891        |  |
|              | <b>Subtotal</b> | <b>7626115.1</b> | <b>9624908.8</b> | <b>1818.800</b> | <b>0.00</b> | <b>9624908.8</b> | <b>284811974.1</b> | <b>0.00</b>          | <b>157099427.0</b> | <b>0.00</b>          | <b>0.00</b>   | <b>0.00</b>     | <b>96200517.7</b>  | <b>67.0</b>          | <b>4.6771</b> | <b>6336.7731</b> | <b>1.2965</b> | <b>12.9482</b> | <b>1.3086</b> | <b>0.6492</b> | <b>40.0891</b> |  |
|              | <b>Total</b>    | <b>7626115.1</b> | <b>9624908.8</b> | <b>1818.800</b> | <b>0.00</b> | <b>9624908.8</b> | <b>284811974.1</b> | <b>0.00</b>          | <b>157099427.0</b> | <b>0.00</b>          | <b>0.00</b>   | <b>0.00</b>     | <b>96200517.7</b>  | <b>67.0</b>          | <b>4.6771</b> | <b>6336.7731</b> | <b>1.2965</b> | <b>12.9482</b> | <b>1.3086</b> | <b>0.6492</b> | <b>40.0891</b> |  |

Quality and RR Mass Columns in the Pit Optimization Summary Reserves Report

## Tactical Scheduler

**Tactical Scheduler** has been enhanced with the following updates to better reflect operational constraints, enabling a more realistic short- and medium-term planning:

## Database Upgrade

Starting from MineScope 2026, **Tactical Scheduler** uses SQLite database, which is automatically included in the MineScope installation. A database is created automatically when creating a schedule project.

Scheduling database from MineScope 2023 can be imported by selecting **Schedule Setup » Setup » Database » Import from SQL Server** Option.

**IMPORTANT:** Sequences from scheduling 2023 version cannot be used. To run them again and be able to use the animation and create reports, users must set an activity to the sequence and destination to every block.

## Scenario

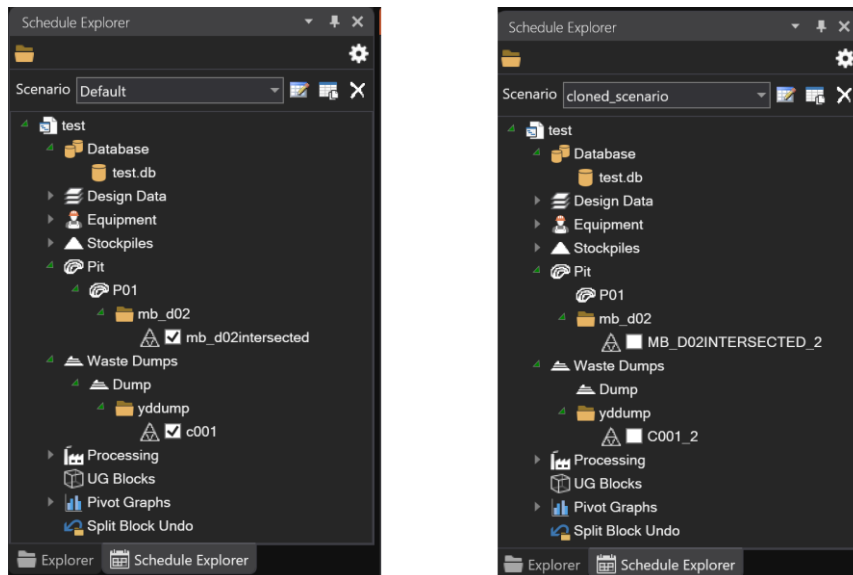
Scheduling projects are now scenario-based. When users create a new scheduling project, MineScope automatically creates a default scenario. Users can access scenarios in the **Schedule Explorer** Dock.

**NOTE:** When upgrading a project from MineScope 2023 Scheduling, the system also automatically creates a default scenario.

With scenarios, users can:

- Clone a scenario

This action creates an exact copy of the schedule including meshes, activity map, sequence, material flow, and equipment. Database and scheduling report are not cloned. The cloned mesh file names includes a suffix *\_[scenario ID]*.

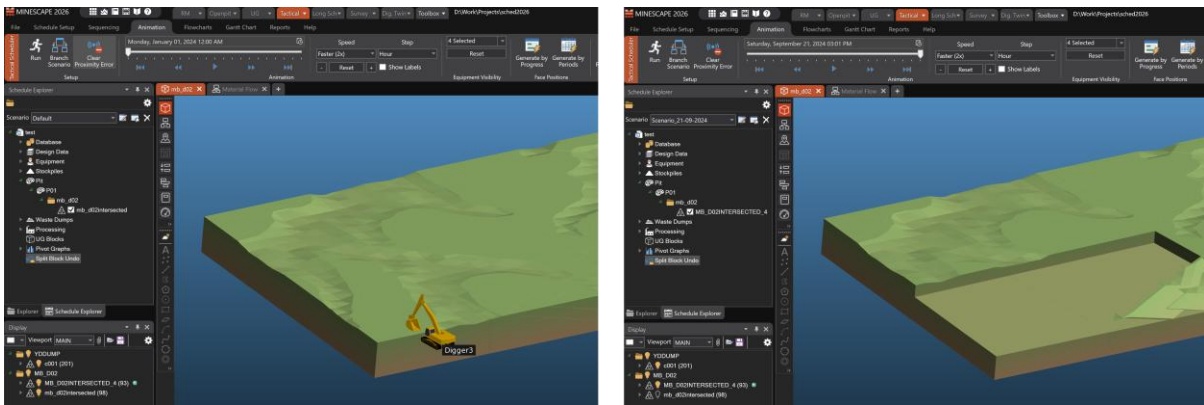


*Default Scenario (Left) and Cloned Scenario (Right)*

- Branch a scenario

Branching a scenario allows users to test short-range alternatives from a selected period. Branching copies the same items as cloning, except for the database and reports. However, the meshes reflect the excavation state at that period. This option is available in the **Sequencing » Setup » Branch Scenario**.

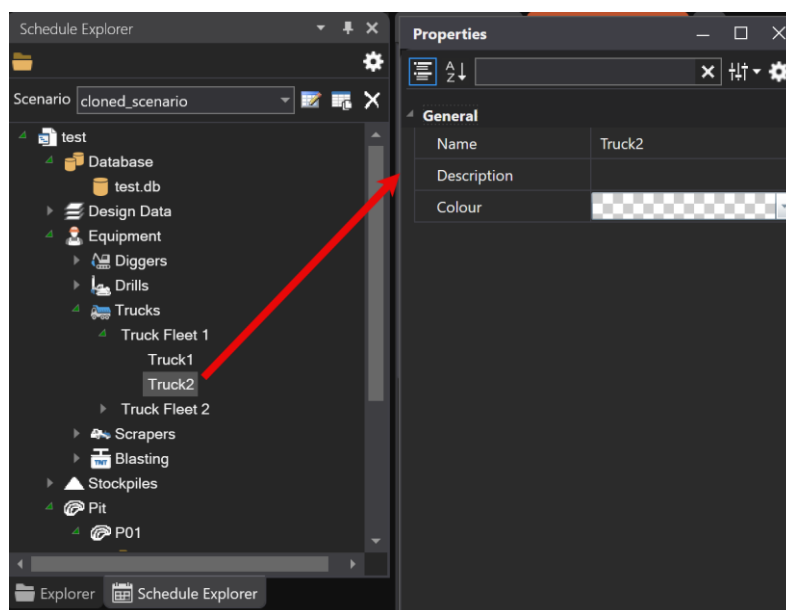
For example, the mesh at Period 39 shows the excavation progress compared with Period 1, as illustrated in the image below.



*Block Excavation Difference in Branch Scenario*

## Enhanced Schedule Explorer

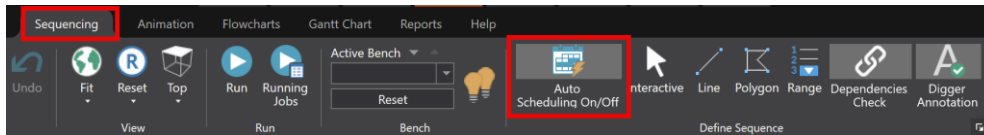
Users can now view equipment and locations directly from the **Schedule Explorer Dock**. Selecting an equipment/location allows users to make simple edits like changing an equipment name or colour from the **Properties Dock**.



*Schedule Explorer Enhancement*

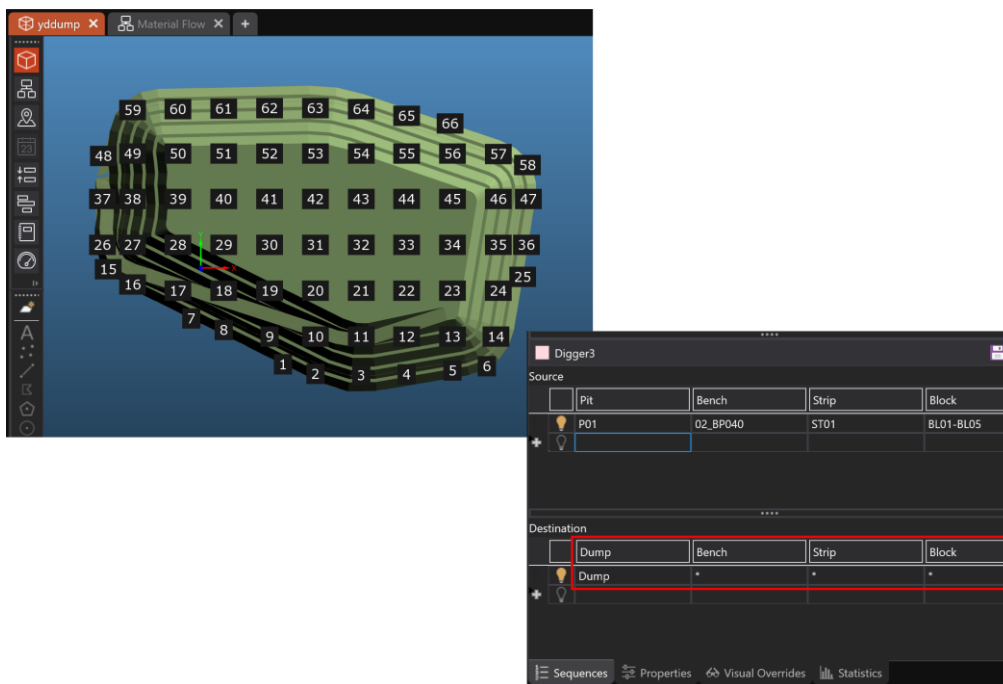
## Auto Scheduling

**Auto Scheduling** assigns block sequences without manual picking. To enable this feature, go to the **Sequencing » Define Sequence » Auto Scheduling On/Off** Option



*Auto Scheduling Option*

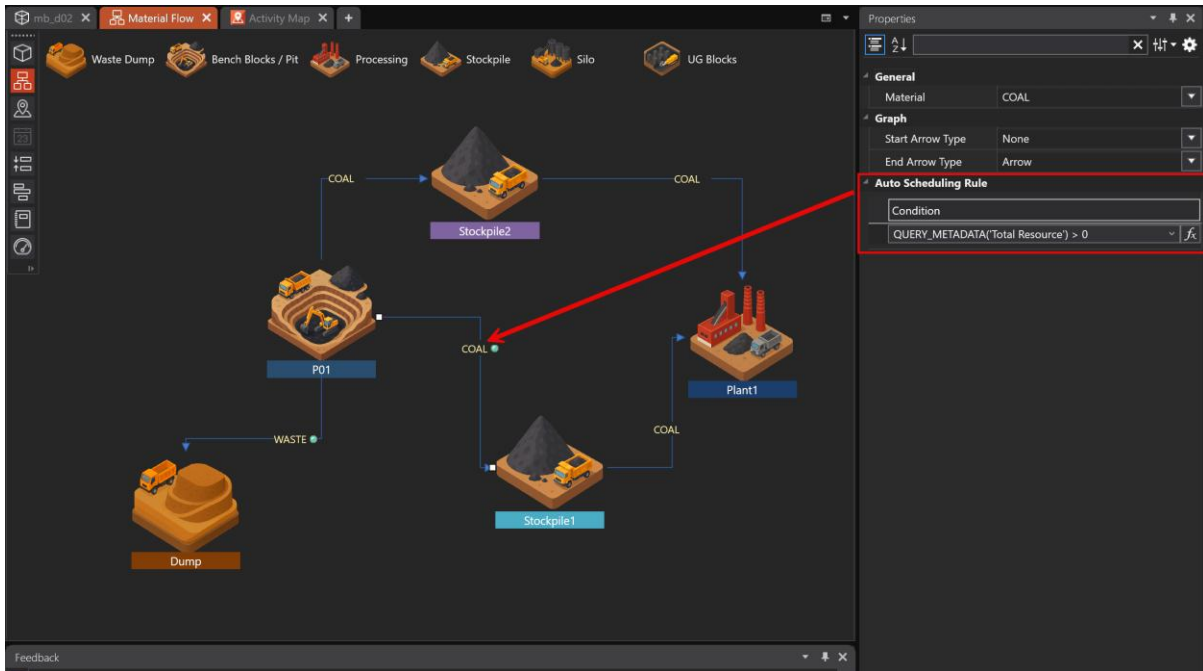
When enabled, the **Sequence** Dock displays **Source** and **Destination** tables. Users specify the pit, bench, strip, and block to include in the calculation. The names must match the metadata values (for example, *P01* for the pit). To include all benches, strips, or blocks, users can enter an **asterisk (\*)**.



*Auto Scheduling Formula*

Users must also define block destinations in the **Material Flow**. Selecting a connection arrow displays the **Auto Scheduling Rule** in the **Properties** Dock, where users can define a condition for each material movement. A green dot next to the material name indicates that a rule is created for that material.

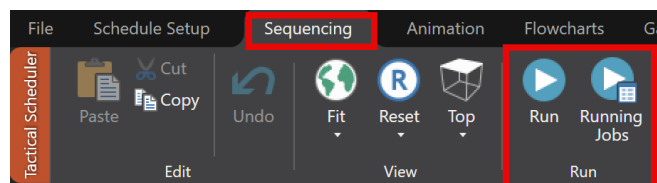
For example, the condition `QUERY_METADATA('Total Resource') > 0` can be used to direct coal material to a stockpile.



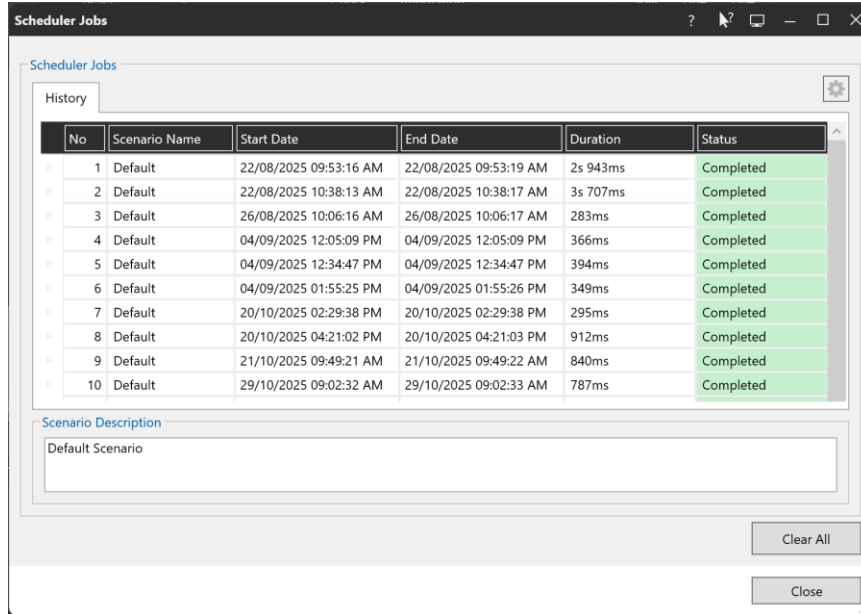
*Auto Scheduling Rule in the Material Flow*

## On-demand Sequence Recalculation

Sequence updates no longer trigger automatic recalculation after every change. Because of this enhancement, all **Recalculate All Sequences** Buttons have now been removed and replaced by a **Run** Button. Users can apply multiple edits to the sequence and execute the calculation once by clicking **Run**, which will run all sequences. Each run is recorded in the **Running Jobs** log for visibility of executed jobs.



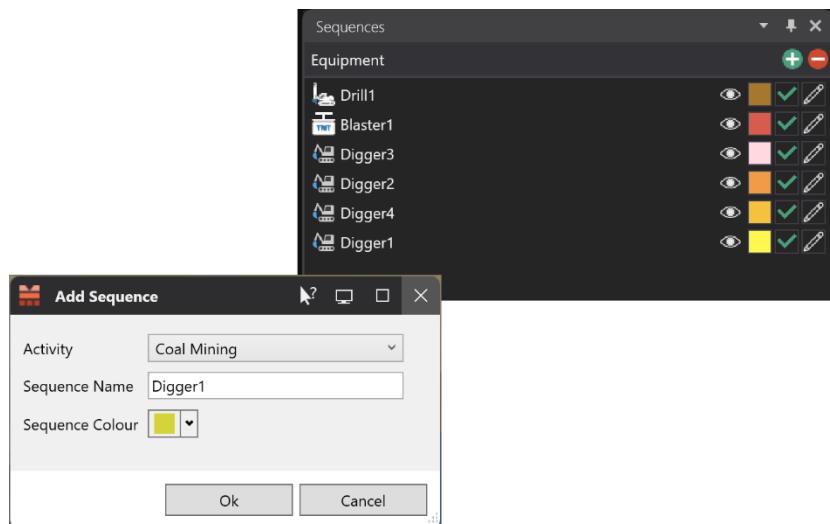
*New Run and Running Jobs Option*



Scheduler Jobs Form

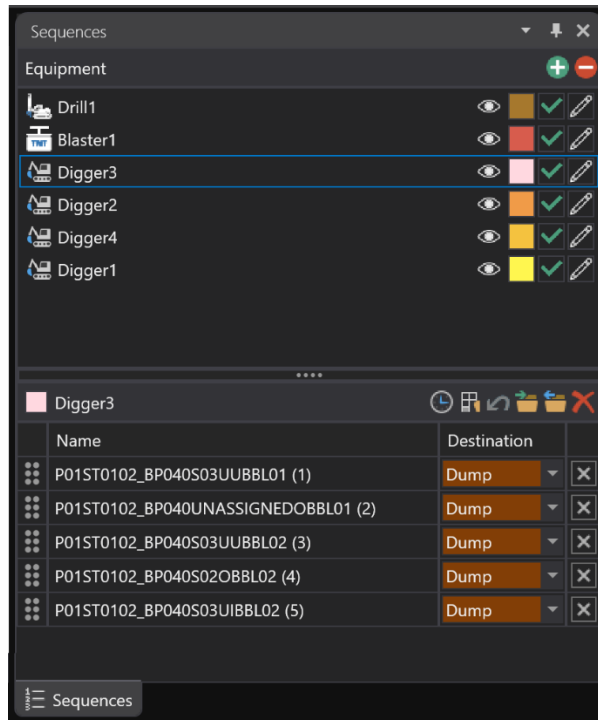
## Improved Sequencing Workflow

The **Activity** and **Destination** Toolbars have been removed to simplify the sequencing workflow. The **Add Sequence** Form now includes an **Activity** Field. When users select an activity, the equipment defined in the **Activity Map** is automatically included, and the **Sequence Name** defaults to the assigned equipment.



A New Activity Field in the Add Sequence Form

Users can now assign a **destination** to each scheduled block directly in the **Sequence** Dock using a **Destination** dropdown list. Multiple blocks can be updated at once by selecting them and pressing **Ctrl + A**.



*New Destination Dropdown List in the Sequence Dock*

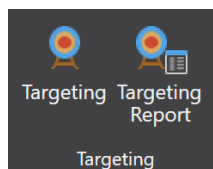
## Quality and Quantity Targeting

Quality and quantity targeting helps maintain a consistent plant feed while meeting defined product quality specifications. Targets can be evaluated per period, cumulatively, or over a rolling period to support short- and medium-term production control.

Users can configure targeting in **Schedule » Setup » Targeting » Targeting**.

Results are generated as an Excel report containing both tables and charts, and are saved to the following location:

`[minescope_project]/scheduling/[scheduling_project_name]`



*Targeting Option*

Targeting Report

Scenario: Default

Table | Chart

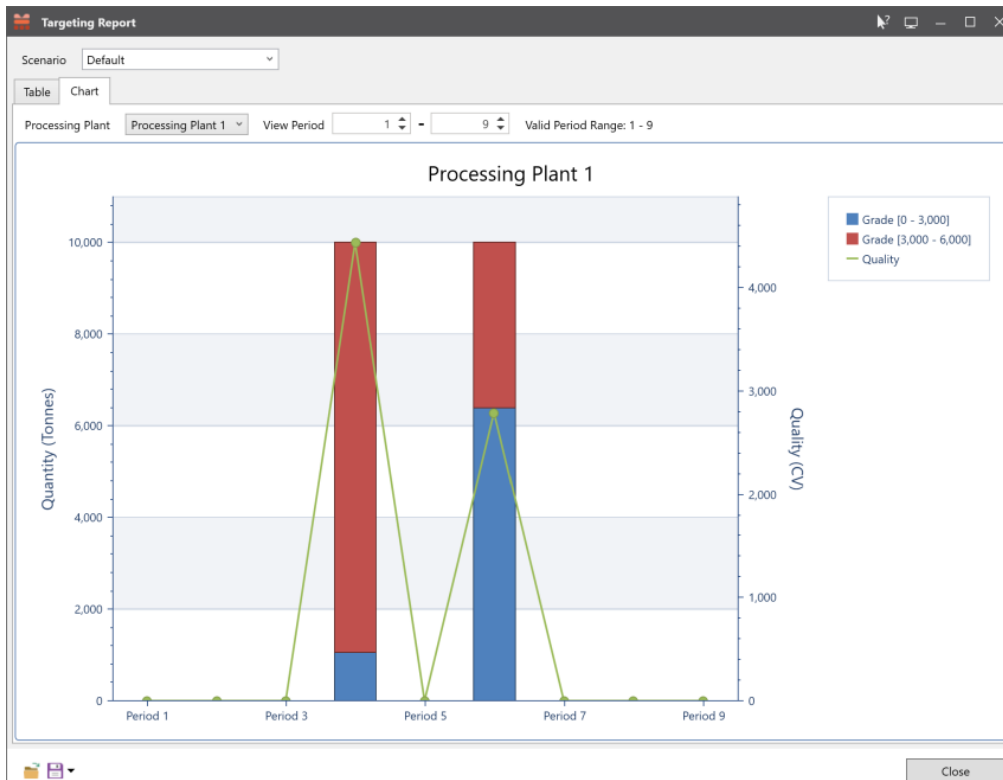
G3

| Location | P01        | Material   | WASTE      | Priority        |               |
|----------|------------|------------|------------|-----------------|---------------|
| Period   | Start Date | End Date   | Quantity   | Blocks          | Target Status |
| 1        | 01/01/2024 | 07/01/2024 | 201,355.00 | P01ST0102_BP04C | Success       |
| 2        | 08/01/2024 | 14/01/2024 | 205,659.74 | P01ST0102_BP04C | Success       |
| 3        | 15/01/2024 | 21/01/2024 | 208,862.50 | P01ST0102_BP04C | Success       |
| 4        | 22/01/2024 | 28/01/2024 | 208,862.50 | P01ST0102_BP04C | Success       |
| 5        | 29/01/2024 | 04/02/2024 | 208,862.50 | P01ST0102_BP04C | Success       |
| 6        | 05/02/2024 | 11/02/2024 | 215,700.92 | P01ST0102_BP04C | Success       |
| 7        | 12/02/2024 | 18/02/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 8        | 19/02/2024 | 25/02/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 9        | 26/02/2024 | 03/03/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 10       | 04/03/2024 | 10/03/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 11       | 11/03/2024 | 17/03/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 12       | 18/03/2024 | 24/03/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 13       | 25/03/2024 | 31/03/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 14       | 01/04/2024 | 07/04/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 15       | 08/04/2024 | 14/04/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 16       | 15/04/2024 | 21/04/2024 | 216,370.00 | P01ST0102_BP04C | Success       |
| 17       | 22/04/2024 | 28/04/2024 | 230,062.79 | P01ST0102_BP04C | Success       |
| 18       | 29/04/2024 | 05/05/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 19       | 06/05/2024 | 12/05/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 20       | 13/05/2024 | 19/05/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 21       | 20/05/2024 | 26/05/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 22       | 27/05/2024 | 02/06/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 23       | 03/06/2024 | 09/06/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 24       | 10/06/2024 | 16/06/2024 | 231,000.00 | P01ST0102_BP04C | Success       |
| 25       | 17/06/2024 | 23/06/2024 | 231,000.00 | P01ST0102_BP04C | Success       |

Quantity Targeting | Sheet2 | Sheet3

Close

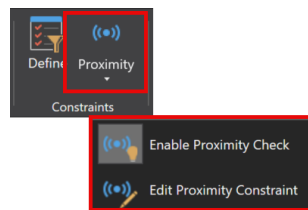
Quantity Targeting Report



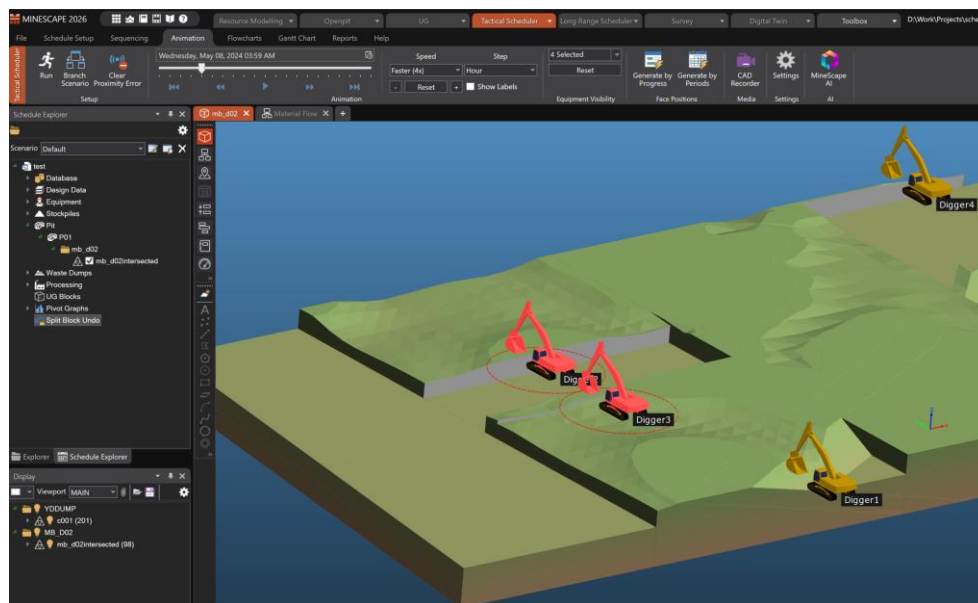
Quality Targeting Chart

## Equipment Proximity Checks

Users can enable equipment proximity constraint to maintain a safe distance between equipment. This check applies when running the animation. If equipment moves closer than the defined limit, visual alert is displayed. To enable this option, go to **Scheduled Setup** » **Constraints** » **Proximity**.



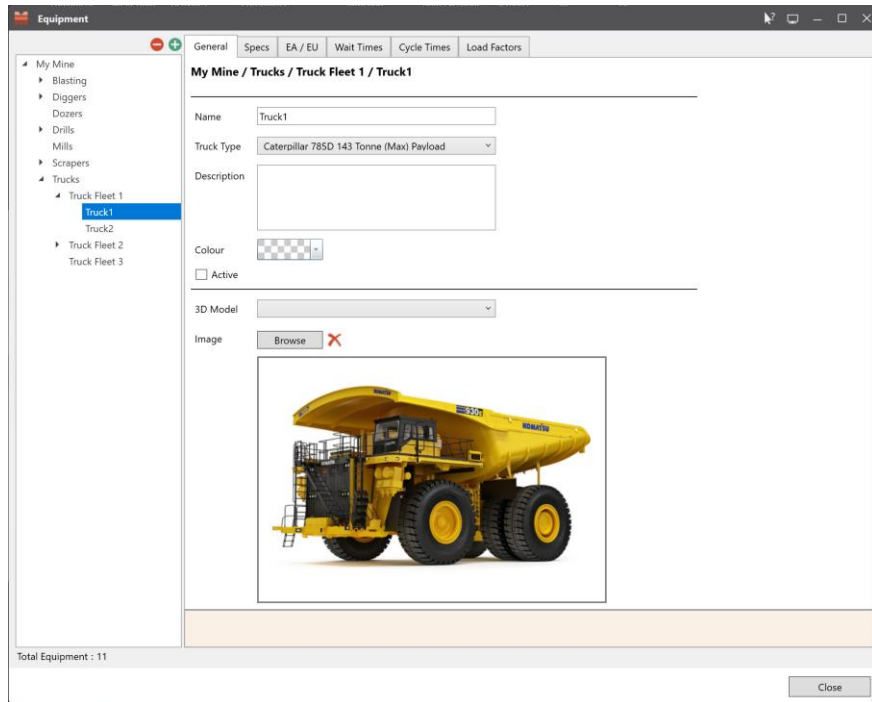
*Proximity Option*



*Equipment Limit Between Digger 2 and 3 are Breached*

## Unified Equipment Library

Users can now add and manage equipment, availability, wait times, cycle times, and load factors in one central form. Truck spec information is also available with options to adjust, export, and import Rimpull or Retarder Curves. This option is available in the **Schedule Setup** » **Equipment** » **Equipment** Option.

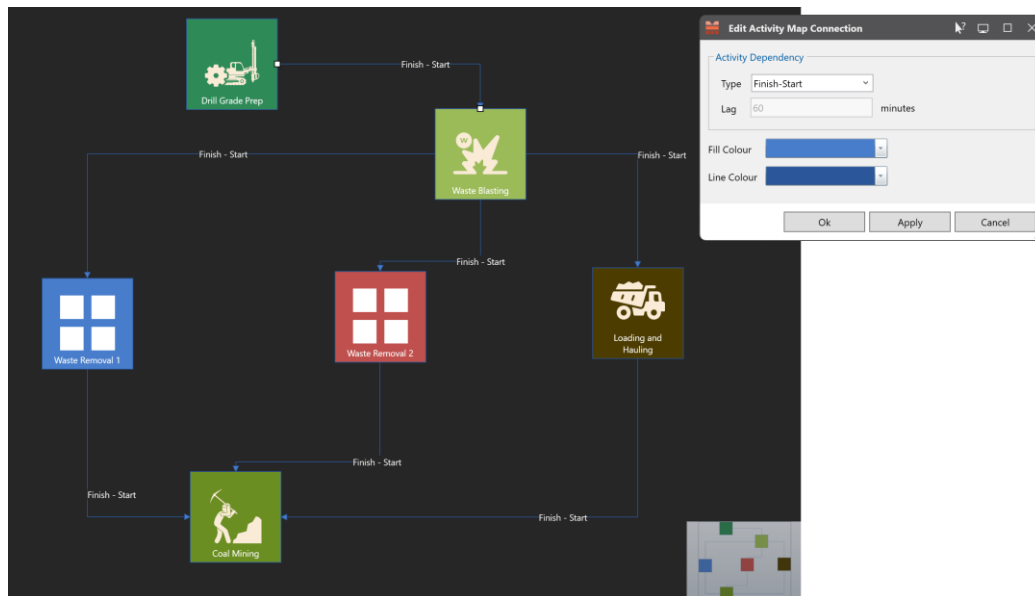


*New Equipment Form*

## Dependency Relationships in the Activity Map

The **Activity Map** has been improved as follows:

- New dependency relationship between activities using Finish–Start, Start–Start, Finish–Finish, and Start–Finish rules. A lag time can be entered (in minutes) to offset equipment start times and reflect real operating delays between tasks.



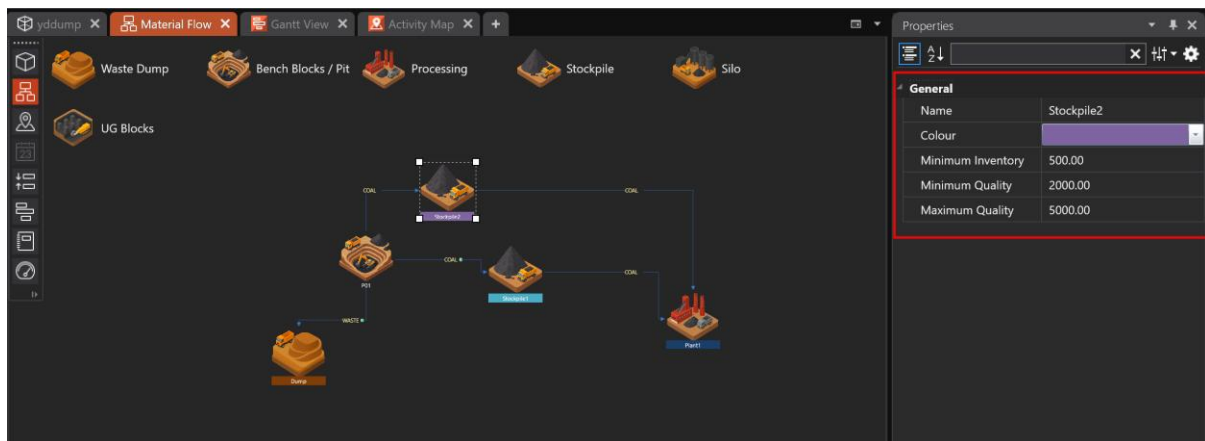
*Activity Dependency Relationship*

- New equipment fields on the right side of the **Activity Map**. One activity now can only be assigned to one production equipment, but can have multiple trucks of the same fleet type

## Improved Material Flow Creation

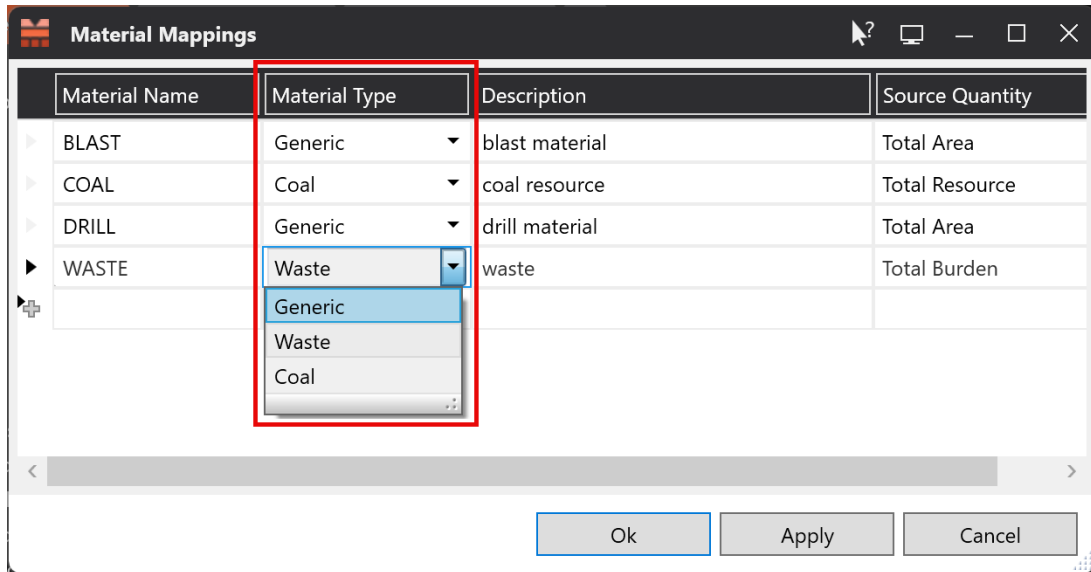
**Material Flow**, previously called **Mine Map**, has been enhanced with the following updates:

- Directly edit the source and destination information from the **Properties Dock**. Right-clicking a node will no longer display an input form.



*Source and Destination Input from the Properties Dock*

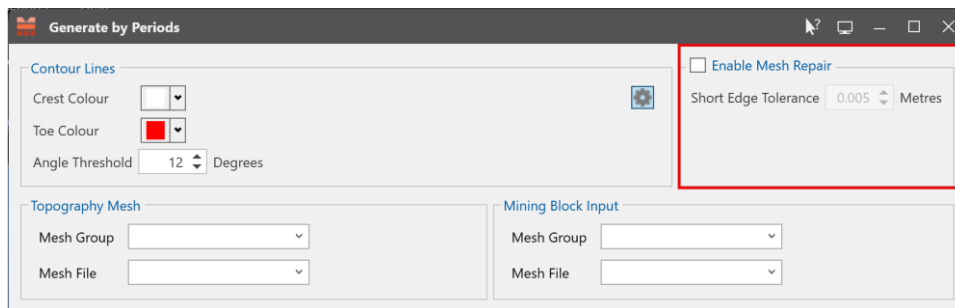
- When clicking a Stockpile node, the following input fields become available in the **Properties Dock**: **Maximum Inventory**, **Maximum Quality**, and **maximum Quantity**. These can be used for quality or quantity targeting
- Added a **Material Type** column to the **Material Mappings** Form. Each material must be assigned as **Generic**, **Coal**, or **Waste**. This assignment determines the excavation priority when users select the **Run** Button in the **Sequencing** Tab or run the sequence animation. The excavation order is: **Generic** → **Waste** → **Coal** (highest to lowest priority)



*New Material Type Column*

## Noise Reduction for Pit face Position Output

Added an **Enable Mesh Repair** Checkbox to the **Generate by Periods** and **Generate by Progress** Forms for pit face positions. This option helps reduce noise in face position lines, producing cleaner contour and boundary line outputs.



*Enable Mesh Repair Checkbox*

## Plot Designer

### Updated the Default Font from Arial to Calibri

When users create a new Plot Design file using any template, the text now uses **Calibri** as the default font.

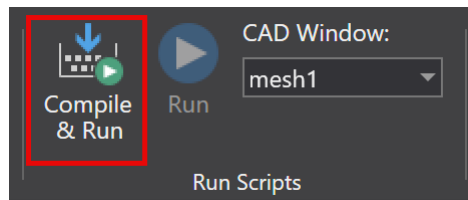
## Code Editor

Several functionalities have been added to the **Code Editor** Ribbon:

### New Compile & Run Button

This command compiles the current .UCS file into a .UCB file and then runs it. If a .UCB file with the same name exists in the local project directory, MineScape replaces it with the newly compiled file.

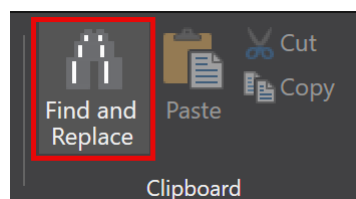
If a .UCB file with the same name exists outside the local project directory, the compilation is cancelled and MineScape displays a message. Users must save the .UCS file with a different name before compiling again.



*New Compile & Run Button*

### New Find and Replace Button

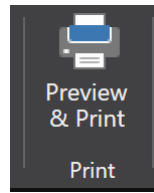
This function allows users to search for text in the current document or selected text and optionally replace matches. It supports common search options, including case sensitivity and whole-word matching.



*New Find and Replace Button*

### New Preview & Print Button

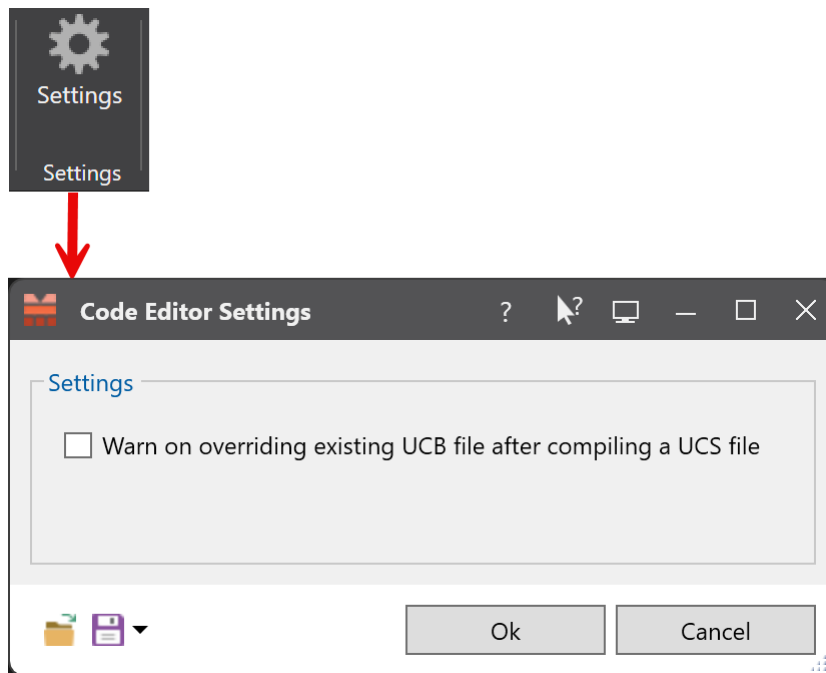
Added a print and print preview functionality, allowing users to preview MPL scripts and print them using the selected printer and page settings. Print and print preview are always displayed in light mode, regardless of the current editor theme.



*New Preview & Print Button*

## New Settings Button

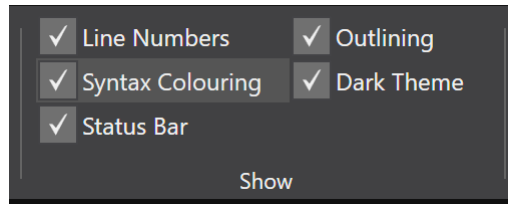
When clicked, a dialog box displays containing the **Warn on overriding existing UCB file after compiling a UCS file** Checkbox. When *ticked*, MineScape displays a confirmation message if an existing .UCB file is detected during **Compile & Run**, allowing users to choose whether to overwrite the file. When *unticked*, MineScape automatically overwrites the existing .UCB file without prompting.



*New Settings Button*

## New Functions in the Show Group

The **Show** Group added **Status Bar**, **Outlining**, and **Dark Theme** Functionalities. **Ruler** Function has been removed.



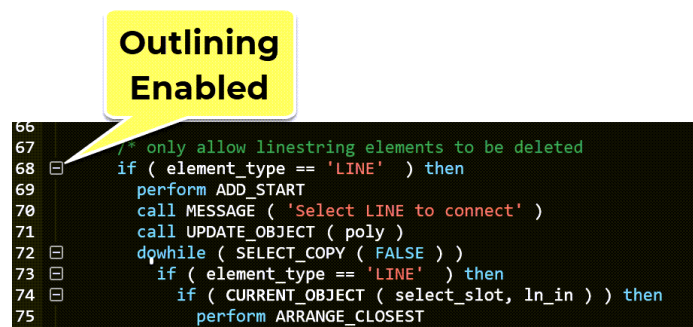
*New Functions in the Show Group*

- **Status Bar:** Display the current line and column at the bottom right of the Script Editor. The default is *ticked*.



*Status Bar Enabled*

- **Outlining:** Enable or disable outlining control to expand or collapse sections of code in the Script Editor. The default is *ticked*.



*Outlining Enabled*

Outlining is applicable for the following statements:

- **if ... then ... endif**
- **dowhile ... enddo**
- **for ... do ... endfor**
- **Dark Theme:** Switch between dark or light theme

# Defect Fixes

## Core

- Fixed a crash that occurred when opening multiple **Element Details** Forms [47139]
- Fixed an issue where input fields in several forms in the **Mining Blocks** app and **Tactical Scheduler** were displayed larger than intended [47202]
- Fixed an issue where MineScape SDK failed to be installed because a newer version of .NET SDK was present in the machine [46992]
- Fixed an error that occurred when importing AutoCAD files using **Browse** to select the input file [47761]
- Fixed an issue where a newly created display definition was not automatically selected after creation [52323]
- Fixed an issue where the **Project Properties** Form couldn't be closed after selecting its help link [48234]
- Fixed an issue where the MineScape **Archive & Recover** Tool couldn't be started [52784]
- Fixed an issue where the **Email Address** wasn't populated automatically in the **Report a Defect** Form [50496]
- Fixed an issue where searching for **Coordinate System Settings** returned results from both the **Mesh** and **Point Cloud** Tabs when the **Drone Survey App** was loaded, instead of being available only under **Drone Survey > Point Cloud** [52647]
- Fixed an issue where the project quadrant could change when opening the **Edit Project Properties** Form if the quadrant was not specified in the .MNSPROJ file. MineScape now uses **NE** as the default quadrant when no value is defined. [54024]
- Fixed an error that occurred when opening a layer [53757]

## CAD

- Fixed an issue where drill hole vertices weren't highlighted in the **CAD** Window when selecting random rows in the **Element Details** Form [47102]
- Fixed an issue where the hotkey for exaggeration function didn't work properly [47497]
- Fixed an issue where the scale in the **Status Bar** was not updated according to the entered value [51318]
- Fixed an issue where only grid values from the primary grid file were displayed after merging it with several other files [43926]
- Fixed an issue where a line style pattern appeared flipped when exported as a PDF file [51910]
- Fixed an issue where opening, closing and then reopening the **Import Design Data** Form caused the input fields to become disabled [47463]
- Fixed an issue where black texts were not visible on either a black or white background [47981]
- Fixed an error that occurred when creating a new data file using the **Feature Format** Form [53028]
- Fixed an issue where selecting multiple mesh blocks in the **DisplayDock** caused the viewport node to be highlighted instead of the selected blocks [43189]
- Fixed a crash that occurred when deleting mesh triangles [53444]

## Mesh

- Fixed an issue where a mesh could not be created using the **Mesh by Polygon** Function when the polygon ID was missing from the input form. A confirmation message has been added for validation. [48131]
- Fixed an issue where surface definition wasn't created when creating mesh in batch [50643]

- Fixed an issue where registering elements onto a nominated surface mesh failed when more than 100 elements were selected due to batch processing errors [46135]
- Fixed an error that occurred when running the **Register** Option after a drape process, which unloaded the nominated mesh [53027]
- Fixed an issue where a mesh was not fully generated when the **Unit Parameterization Segments between Tielines** option was enabled in the **Create Solid** Option [43340]
- Fixed an issue where users could not switch from flat light models (Flat, Float\_Flat, or Bright) to Basic [51380]
- Fixed an error that occurred when importing a mesh file with a large number of metadata [47466]
- Fixed an issue in the **Import Mesh Metadata** Form where metadata checkboxes were duplicated after selecting **Clear Selection** [47455]
- Fixed an issue where the **Overwrite Mesh File** Option was ignored after being enabled and then disabled, causing MineScape to repeatedly generate duplicate mesh files instead of respecting the overwrite setting [52866]

## Dashboards

- Fixed an issue where the arrow in the gauge chart was positioned incorrectly [41571]

## GDB

- Fixed an issue where an excel report couldn't be created because of a mismatch found in the interval/sample [47478]
- Fixed an error that occurred after clicking the **Builder** Option from the **Maintenance** Tab [51823]
- Fixed an issue in the **GDB CSV import** Form where **HOLEID** was not copied to **HOLENAME** when **HOLENAME** was missing [48697]
- Fixed an issue where random symbols appeared in the module log [48190]

- Fixed an issue where temporary design files created during the **Hole Plot** process were not deleted if an error occurred [48253]
- Fixed an issue where the **Hole Depth Mismatch** Form expanded vertically when reopened if previously loaded hole data was present [47480]
- Fixed an error that occurred when opening **Query Builder** [53090]
- Fixed a crash that occurred when importing a .CSV file [53095]

## Geostatistics

- Fixed an issue where MineScape froze when opening the newly-created study file [53662]
- Fixed an issue where MineScape froze when selecting a study file [53414]

## Stratigraphic Modelling

- Fixed an issue where an incorrect message was displayed when importing drill holes [50881]
- Fixed an issue where specs files of **Formula Editor** were saved in incorrect path when using **minsite** location [47588]
- Fixed an issue where importing drill holes didn't display content preview in the **Drill Hole Import – CSV** Form [52867]
- Fixed an error that occurred after ticking the **Has Header** Checkbox during a drill holes import process [52871]
- Fixed an issue where MineScape displayed incorrect error message when running multipart reserve [43212]

## Block Model

- Fixed an issue where the block model visual wasn't displayed according to **Boundary Polygon** setting inputted in the **Block Model Defaults** Form [47273]

## Mining Blocks

- Fixed an issue where restoring a spec file resulted in fewer mining blocks being created than expected [53186]
- Fixed an issue where Total Burden was missing from the mesh metadata [53546]
- Fixed an issue where mining blocks could be missing when slicing separated meshes (island meshes) [53186]
- Fixed an issue where users were able to add or delete rows in the table grid within the **Block Naming** Node of the **Create Mining Blocks for Multi-Benches** Form [52146]

## Dragline

- Fixed an error that occurred when loading the **Dragline** App from the app switcher in the MineScape workspace if the app was not loaded from the **Start Page** [48467]
- Fixed an issue where dumping small volume toward a highwall failed [52739]
- Fixed an issue where scenario files could be overwritten when recreating blocks if a default scenario template was created and added. MineScape now includes validation to prevent the use of predefined constants and correctly handles case sensitivity when generating scenario and report file names. [53115, 52857]

## Tactical Scheduler

- Fixed a crash that occurred when importing sequence [51255]
- Fixed a missing ribbon menu issue after closing and reopening the **Material Flow** tab when **Tactical Scheduler** was launched from the App Switcher [51501]

- Fixed an issue in **Pivot Grid** reports where charts appeared too small when exported to Excel, and some data was missing when exported to PDF
- Fixed an issue where users couldn't select material name other than WASTE in **Material Flow** [53653]
- Fixed an issue where an activity started later than the pre-defined time in underground scheduling [53799]
- Fixed an issue where animation didn't run as expected [54299]
- Fixed an error that occurred when running a sequence after undoing a split block [54218]
- Fixed an issue where metadata import could reorder existing metadata entries. MineScape now updates existing metadata in place, and only appends new metadata entries to the end of the list [47465]

## Longwall

- Fixed an issue where creating a new longwall or pillar scenario and unticking layers in the **Explorer** Dock did not hide graphics from those layers in the **CAD** Window [51870]

## Room & Pillar

- Fixed an issue where right-clicking the **Scenario** Field in the **Interactive Pillar** Tab from the **Room & Pillar** App displayed a blank menu instead of the context menu [53166]
- Fixed a crash that occurred when drawing pillar using **Average** limit [53269]
- Fixed an error that occurred when performing **Join** and **Split Pillars** [53375]

## Longwall

- Fixed an issue where **Pillar Start Offset** setting wasn't honoured for external gates when generating longwall layouts [45131]

- Fixed an error that occurred when generating longwall and pillar interactively [53290]
- Fixed an issue where drawing longwall interactively using **Average** limit resulted in incorrect face access length [53267]
- Fixed an issue where a longwall layout couldn't be limited using an existing boundary polygon [53373]
- Fixed an issue where a longwall layout was generated without honouring the defined boundary polygon [44820]

## Drone Survey

- Fixed an issue where two LAS files had different Z values even though they share the same coordinates [51908]

## Quakes

- Fixed an issue where an error message displayed when opening the **Import Quakes** Form [54037]

## Plot Designer

- Fixed an issue where local custom variables were not printed correctly in a batch plotting [48319]
- Fixed an issue where viewports did not move smoothly near the grid when grid alignment was enabled [45458]
- Fixed an error that occurred when creating a new measured viewport without setting the X and Y positions [52439]
- Fixed a crash that occurred when copying a plot design file [52711]
- Fixed an issue where containers were positioned outside the margins after changing the paper orientation [46292]
- Fixed an issue where MineScape lost focus and moved behind other applications after deleting a plot design from the MineScape **Explorer** [52438]

- Fixed an issue where running batch plotting caused font sizes to appear different between the PDF output and the container [45993]
- Fixed a crash that occurred when running batch plotting using a template that contained a write design reference whose layer was not open in **CAD** [48123]
- Fixed an issue where plot designs loaded with the paper zoom and locations incorrectly centered, and the plot ruler misplaced [52407]

## MineTrust

- Fixed an error that occurred when expanding a folder under the **Managed Folder** Node [52764]
- Fixed an issue where MineScape couldn't connect to the MineTrust server even though the server URL is saved in the **Options** Button [50170]
- Fixed an issue where a warning message unexpectedly appeared when checking in files [50172]

## Removed

- Removed the **Ruler** Checkbox from the **Show** Group in the **Code Editor** Ribbon
- Removed hotkey **Shift + E** for **Exaggeration** Function [52856]