

**Aegis 2025.1**

# Release Notes



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AEGIS

 DATAMINE

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# Overview

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Aegis, comprising Aegis Designer and Aegis Analyzer, is created by mining engineers to design blasts for underground mines, including slot design and placement, charging, priming, timing, and more. With its extensive range of editing tools, Aegis Designer enables the creation of drill and blast patterns for an entire stope in seconds, allowing engineers to easily explore alternative designs. By swiftly generating customisable reports and IREDES exports, it facilitates the rapid transition of actionable designs into production. Aegis Analyzer is the most advanced underground blast analysis program globally and enables engineers to observe how changes to a pattern impact fragmentation, tonnage, cavity, costs, and profit. It is used to optimise ring patterns to maximise recovery, productivity, and profitability.

## Further Information

This document includes cumulative release notes for Aegis 2025.

Release notes for other versions of Aegis are available via <https://docs.dataminesoftware.com/Aegis/index.htm> or the Support Portal <https://www.dataminesoftware.com/support/>.

# Aegis 2025.1 Release Notes (June 2025)

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## Tangential Drilling

Support for tangential drilling configurations has been added, allowing users to offset the pivot point from the hole line to suit specific drill types. This enhancement introduces additional tangential mast dimension properties to the drill definition in the database and updates the pivot representation to eliminate duplicate pivot reporting, while maintaining compatibility with older projects and drills by defaulting new values to zero.

## Ring Sets Variables

Ring Sets now support custom Variables (variable-value pairs), similar to those available in Scenarios. These variables can be accessed in report templates using expressions such as `~ringset.variables.<VariableName>` or dynamically with square bracket notation (e.g., `~ringset.variables[{'Key' + '1'}]`), enabling flexible referencing in custom formulas.

## Variables for Points, Polylines, and Wireframes

Custom Variables have also been introduced for Points, Polylines, and Wireframes, expanding the reporting capabilities of these object types. These variables can be used within report templates to build advanced criteria expressions that reference variable names and values, enabling more precise control over which objects are included in report output. They are supported in the Conditional Style Grids for Points, Polylines, Wireframes, and in Remote Drilling's Ring View and Report Editor.

## Planes Variables

Planes also now support custom Variables (variable-value pairs), which can be accessed and displayed using a new report item called the Plane Table, available under Project Report Items in the Report Editor. The Plane Table includes one row per plane and provides columns for core properties such as name, normal vector,

and distance from origin, with additional fields for tags, comments, and variables. Users can incorporate these variables into custom formulas using the `Variable (<variable name>)` function, filter and sort by any column, and export reports with localized names and values. Filtering and sorting are available for all columns, including variable and vector fields, with behavior consistent with other Aegis report tables.

## Wireframe Evaluation

A new wireframe evaluation workflow has been introduced, allowing users to perform basic or block model evaluations directly on one or more selected wireframes without needing to generate shapes from rings. Evaluation results are stored within the project and accessed via wireframe properties, with each wireframe retaining only the most recent evaluation result to ensure clarity and relevance. The wireframe properties also display the options used to generate the evaluation, providing full transparency into how the results were calculated.

## Wireframe Table

A new Wireframe Table report item has also been added to the Report Editor under the Project items collection. This table includes one row per wireframe and supports a wide range of customizable columns for properties such as name, type, volume, evaluation results, tags, and variables. Evaluation values such as volume, tonnage, density, and attributes are drawn from the most recent mesh evaluation for each wireframe. The table supports filtering and sorting and allows advanced formulas and symbol references.

## Hole Length Rounding

A new option has been added to the context menu in the Holes Grid, allowing users to round the lengths of selected holes to a specified increment, with customizable rounding direction (nearest, up, or down). This feature helps standardize hole lengths based on operational constraints, and includes safeguards and clear error messaging to ensure valid input values and compatibility with drill capacity limits.

## Charge Length Custom Formulas

Two new custom formula functions have been added to support more detailed charge data analysis in tables where each row represents a hole, specifically the Ring Table on the Ring Page, the Hole Table on the Ringset Page, and the Extended Hole Table on the Scenario Page. The formula `ChargeLengthForExplosive ('ExplosiveName')` returns the total length of all charges using the specified explosive (explosive names are not case-sensitive), while `DeckLength (DeckIndex)` returns the length of the charge at the specified index in the hole (with index 0 for the first charge); both functions return 0 for invalid inputs to maintain consistent totals in the table.

## Drill Convention Formatting for Minnovare CORE Exports

Target Dip (Hole Rotation) and Target Dump (Ring Dump) values exported to Minnovare CORE are now formatted according to each drill's rotation and dump conventions. After formatting, the values are converted back to doubles to meet CORE's numeric input requirements, ensuring accurate and consistent data integration.

## Improved Folder Access Handling

Aegis now checks for read/write access to the default root folder on startup and displays a localized warning if access is blocked, the folder is missing, or an error occurs.

## Fixed Issues

- **Fixed Exception in Merge Rings After Deleting Blasts**  
An exception occurred when changing the primary ring after applying a merge and deleting blasts. The command is now correctly reverted before conflict checks, preventing the error.
- **Reduced Risk of Exception When CADEntity Block Is Missing**  
An exception could occur if a block reference was added to the viewport before the related block was defined. Aegis now includes additional checks to reduce the likelihood of this issue, though it may still occur in rare cases.

- **Fixed Ring Marker Highlight Not Updating**  
In both Long Section and Plan views, the highlight on the selected ring marker line did not update when switching between fixed and regular marker types. The line segments are now recalculated when the marker type changes, ensuring the highlight displays correctly.
- **Fixed Email Button in Exception Viewer Not Responding**  
The Email button in the Exception Viewer did nothing if the logs folder was missing. A fallback handler has been added to allow the button to function even when the logs directory does not exist.
- **Fixed Missing Log Files in Aegis**  
Log files were not being created when Aegis started, leaving the logs folder empty. The logging configuration has been corrected to ensure new log files are generated as expected.
- **Fixed Freeze on Splash Screen When Slot Templates Are Corrupt**  
Aegis could freeze indefinitely on the splash screen if a corrupt slot template was present. The error handling has been improved to prevent the freeze and instead display a message informing the user of the problem.
- **Handled Null Reference Exception in Hole Layout Control**  
A potential null reference exception could occur when interacting with the Hole Layout Control, likely due to a temporary absence of expected ring data. Additional checks have been added to ensure objects are valid before use, preventing the error from occurring.
- **Fixed Evaluation Results Appearing on Original Break Wireframe**  
Running a block model evaluation on a break wireframe added to the project could cause the results to appear on the original wireframe. This has been fixed so that evaluation results now display only on the evaluated wireframe.
- **Improved Pivot Accuracy When Dragging Holes Near Void Walls**  
Dragging a hole so that its mast intersects vertical void walls could cause the pivot point to shift unpredictably. The pivot calculation now accounts for changes in mast limits during editing, significantly reducing alignment issues.
- **Fixed IREDES Form Not Updating Coordinate System Section Immediately**  
The IREDES Drill Coordinate System section was only enabled or disabled after reopening the form, based on the previous checkbox state. This section now updates immediately when the "Apply transformation to hole coordinates when writing IREDES file" checkbox is toggled.
- **Fixed Incorrect Pivot Alignment When Copying Rings**  
When copying holes between rings, fixed pivots were not aligning correctly, causing holes to appear out of place. The pivot handling has been updated to ensure copied holes correctly match the fixed pivot positions of the target ring.
- **Fixed Missing C++ Redistributable in Aegis Installer**  
The Aegis installer did not include the required Microsoft Visual C++



Redistributable, which could cause certain features to fail on new machines. The redistributable is now bundled with the installer to ensure all necessary dependencies are available.



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## Read the Docs

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