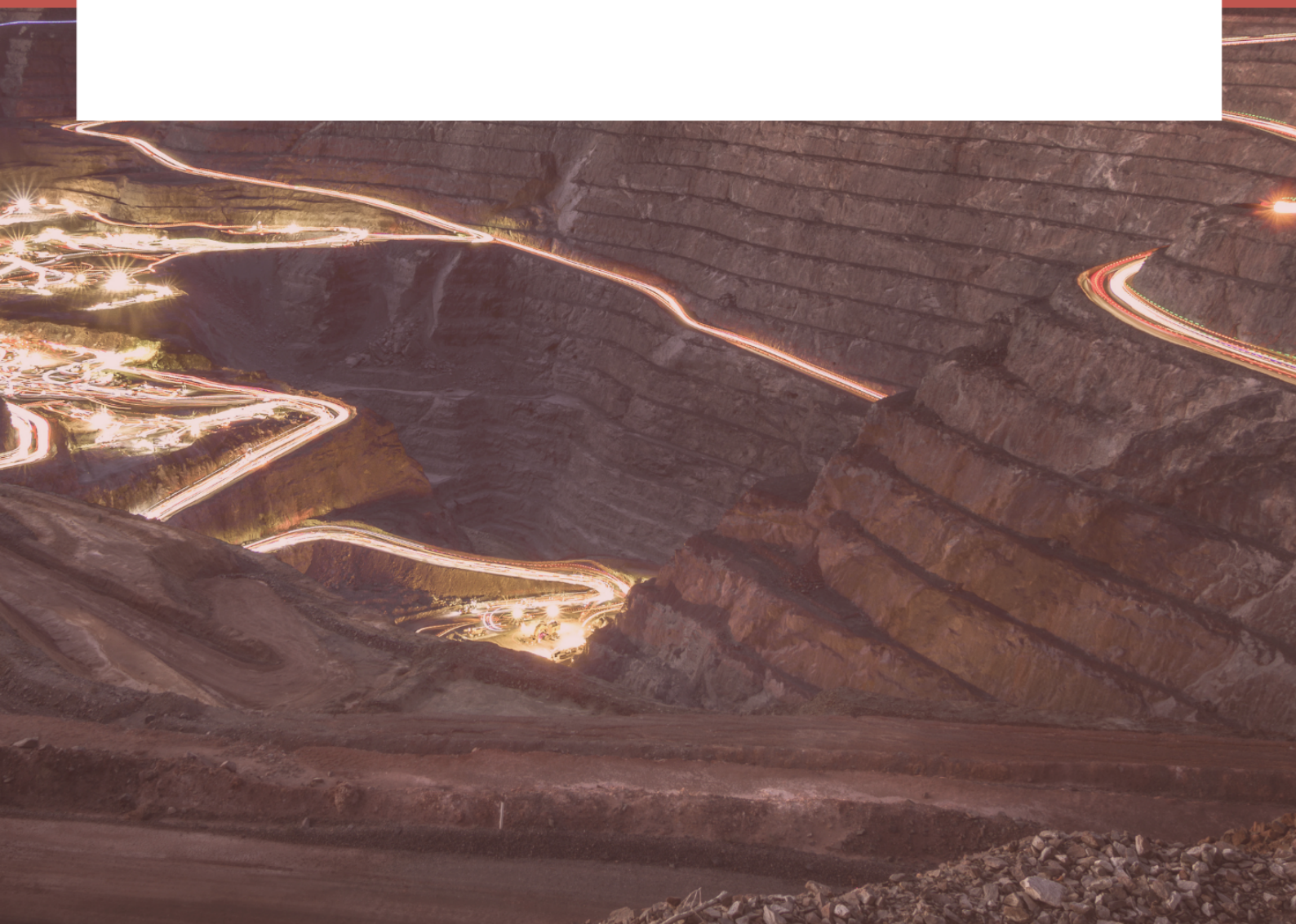
DATAMINE

STUDIO NPVS+

Release Notes

Studio NPVS+ 1.2 Beta



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Legal Disclaimer

The product described in this documentation may be connected to, and/or communicate information and data via, a network interface, which should be connected to a secure network. It is your sole responsibility to ensure a secure connection to the network and to establish and maintain appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of antivirus programs, etc.) to protect the product, the network, your systems, and the interface against any kind of security breach, unauthorised access, interference, intrusion, leakage, damage, or corruption or theft of data. We are not liable for damages or losses related to any such security breach, unauthorised access, interference, intrusion, leakage, damage, or corruption or theft of data.

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Overview

Studio NPVS+ is a strategic mine planning system that optimises both mine design and schedule in the search for maximum NPV. Studio NPVS+ features a powerful and flexible schedule generation engine that significantly reduces the time and effort to produce a reliable and practical schedule.

Studio NPVS+ is one of several products in the Studio product family, which includes:

- **Studio EM** for exploration data analysis and modeling.
- **Studio Geo** is for geological and structural modeling.
- **Studio Mapper** for geological face mapping and reporting.
- **Studio Maxipit** for blended pit optimization (coming soon!)
- **Studio NPVS+** for strategic open pit optimization, design and enhanced scheduling.
- **Studio OP** for open pit design and operational scheduling.
- **Studio RM** for mine geology, reserve modeling and resource estimation.
- **Studio Survey** for open pit and underground mine surveying and reporting.
- **Studio UG** for underground mine design and scheduling.

Further Information

This document includes cumulative releases notes for Studio NPVS+ 1.2 Beta. As such, release notes are listed for all minor updates of the current major version, in reverse chronological order.

Release notes for other versions of Studio NPVS+ are available via the Support Portal
https://www.dataminesoftware.com/support/.

For the complete Studio NPVS+ documentation, see
https://docs.dataminesoftware.com/StudioNPVS.

Studio NPVS+ 1.2 Release Notes

> **Note**: Your product supports long field names by default and some functions may now generate field names greater than 8 characters which may be concatenated by very old versions of software when saved.

Key Improvements

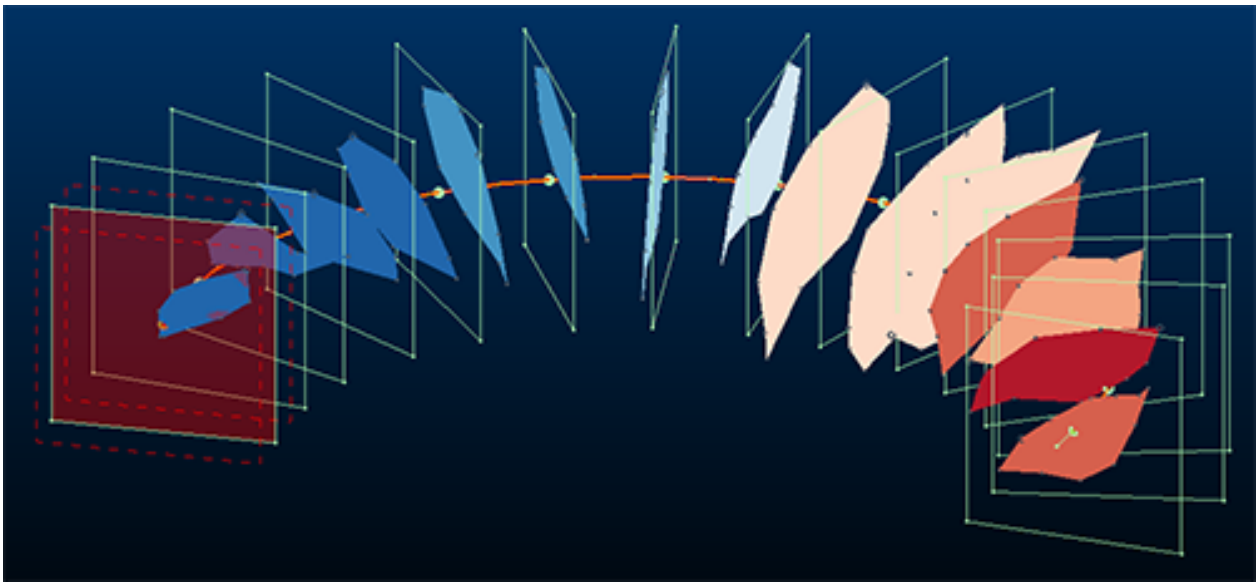
Commands & Processes

This update sees the introduction of some new wireframe data commands to make viewing and saving wireframe data easier, and other improvements:

- `assign-attributes-by-selection-order` – You can now automatically apply a suffix or prefix to alphanumeric attribute values generated by selection order.
- `COMPMAX` has been created. Similar to `COMPSE`, this is a new process for optimised drillhole compositing to find maximum ore/waste composite intervals using configurable cutoff, ore/waste length, and optional zone constraints.
- `dtm-create` – We added a new "Make diagonals consistent" option to Create DTM so triangulation is consistent and volumes match expectations where point data is the same across multiple data objects.
- We have updated `generate-outlines` so that you can now decide the scope of outlining and object output (same object, new object, different object) using a simple-to-use pop up screen.
- `grid-dtms` – You can now calculate and output True Dip data when creating the minimum or maximum elevations of points belonging to multiple (and potentially overlapping) wireframe surfaces.
- `extend-string-to-wireframe-intersect` - A new command that extends the final segment of a string using its current azimuth and dip to terminate on a wireframe surface.
- `filter-wireframe-off` – Hide selected wireframe data without removing it from memory. If no wireframe data is selected when the command is run, you are asked to select a wireframe face. In this way, faces can be successively removed. This command can also be found on the **Format** ribbon.

- `hide-non-selected-wireframes` – Hide unselected wireframe data, leaving only selected wireframe data visible. Useful for focusing on a subset of wireframe data in a dense set. This command can also be found on the **Format** ribbon.
- `import-maps-to-files` – We have improved the import-maps-to-files command for local databases to support more map types, add georeferenced-data filtering and automatic loading of imported results into the 3D window with default templates.
- `insert-string-wfm-points` - A new command that adds one or more vertices to string data at its intersection point(s) with a target wireframe.
- `write-selected-wireframes` – Save currently highlighted (selected) wireframe data to an external Datamine file. Data can be selected by any method, including the selection of independent triangles. This command can also be found on the **Data** ribbon.

Create Multiple Sections



The new **Create Multiple Sections** feature significantly streamlines the process of generating and managing sets of parallel or string-based sections for geological analysis and planning. Previously, 3D window users had to manually create each section or edit section definition files outside the 3D environment, which was time-consuming and prone to error—especially when dealing with off-azimuth sections that required manual coordinate calculations. With this enhancement, you can now quickly define multiple sections in parallel, along a string, or per string, directly within the 3D window, using intuitive controls for orientation, spacing, and reference points.

Choose fixed or relative section orientations, and automatic or manual reference points, and dynamic adjustment of section spacing and dimensions based on the loaded data. Sections can be saved as definition files for reuse and further analysis, ensuring seamless integration with existing workflows. By automating complex tasks and providing a user-friendly interface, this tool addresses a common gap in geological modelling workflows, empowering you to generate comprehensive section sets with minimal effort and maximum accuracy.

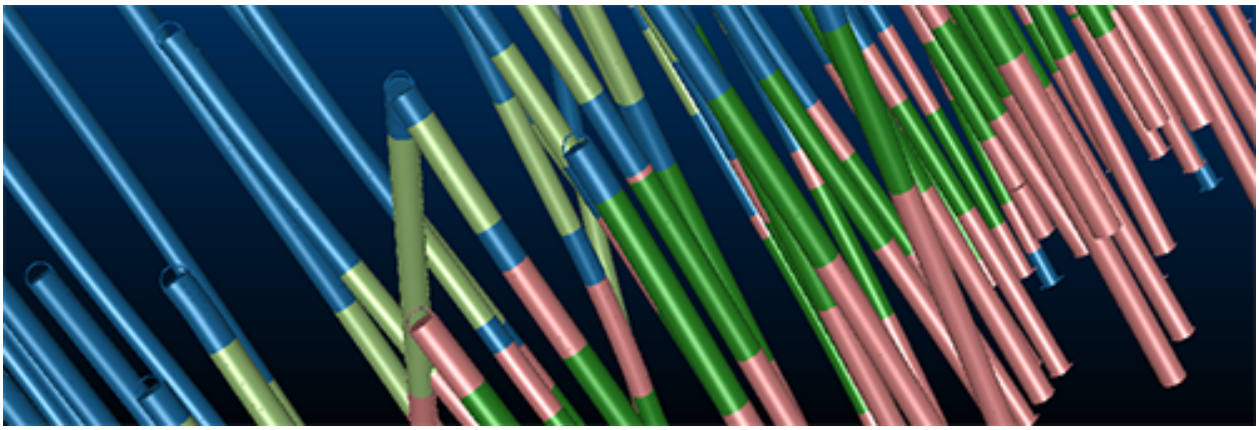
Access the new functionality using the **3D View** ribbon (**Sections >> Multiple Sections**) or run the command `create-multiple-sections` (quick keys "cms").

Access the new function by running the command `create-multiple-sections` (quick keys "cms").

Boolean Key Field Support

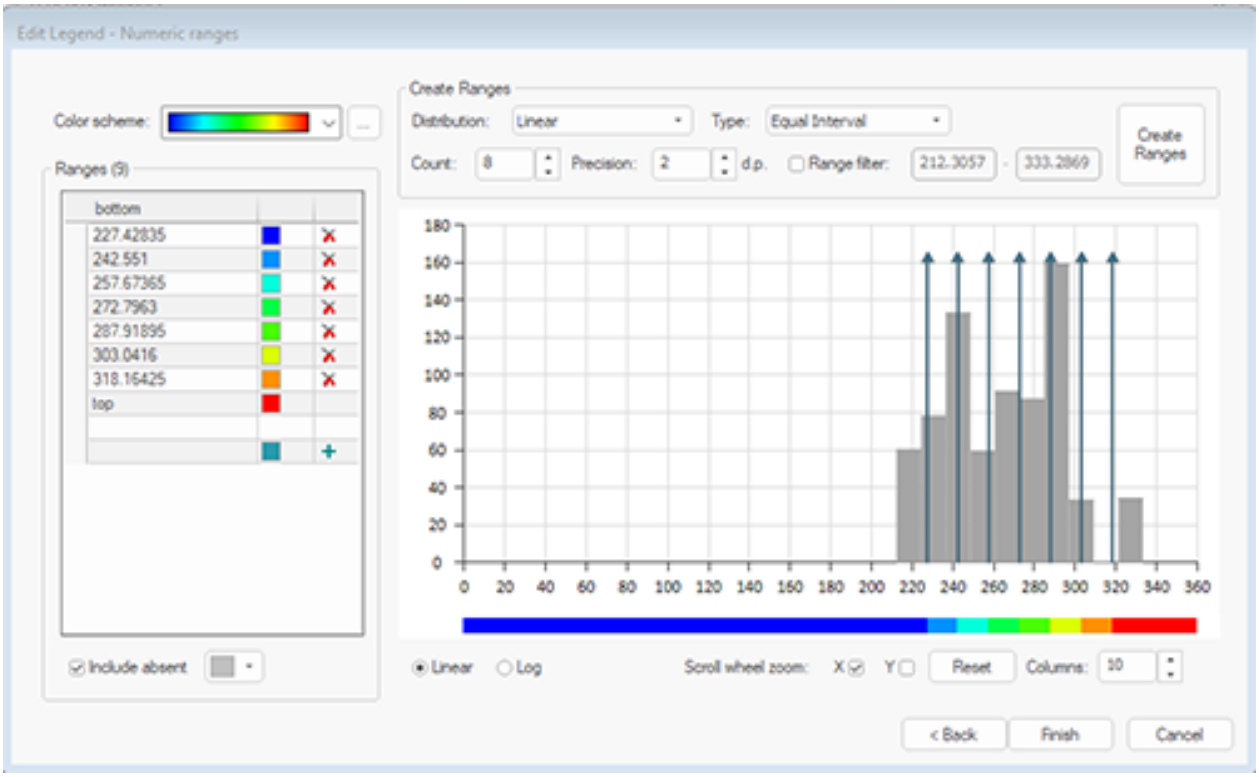
To add a new dimension to our powerful boolean tools, **Wireframe Union**, **Wireframe Intersection**, **Wireframe Difference**, **Strings from Intersections**, and **Extract Separate** commands now support key field filtering on both input wireframes and output control for single-object or grouped multiple-object results, including value-combination grouping when both key fields are set.

3D Window Speedups



As part of an ongoing campaign, our Optimization team have been working hard to improve the performance of 3D window visualization. This update sees significant improvements to the display of drillholes rendered as cylinders, even with a high number of drillholes displays.

Edit Legend Wizard



In 2025, we introduced a new wizard to take the hassle out of creating a new legend of any type (unique values, range, filter). This was particularly helpful when generating legends from loaded data object values, but also made light work of setting up and managing unique value and filter intervals.

Now, we've extended this facility to existing legends, meaning you can edit legends in a similar way to creating them, using the popular range generation and gap-filling tools already available.

To access this facility, pick a legend and click **Edit Legend** in the **Legends Manager**.

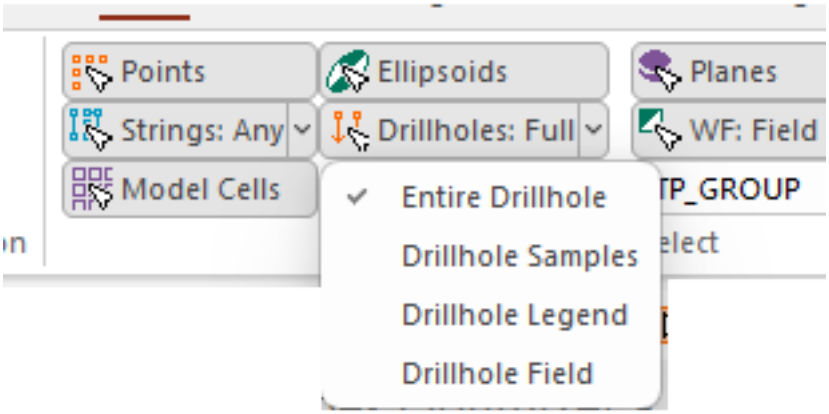
RocScience Dips Export Driver

A new **RocScience Dips** export driver has been added to the Data Source Drivers set to allow you to export string data in the Dips format, describing dip, dip direction and midpoint coordinate.

Manage Multiple Overlays

You can now select and perform functions such as unloading and deleting on multiple overlays at once, via the **Project Data** control bar (this facility will not be back-ported to the legacy **Sheets** bar). You can also control the visibility of multiple overlays simultaneously (even for overlays in different 3D folders).

Selection Settings Simplified



You wanted more intuitive data selection, so we've rationalized and simplified the **Home** ribbon's presentation of these options to make things a lot clearer. Now, a toggle shows, for each data type, whether that data type is selectable or not and we've tackled the more complex case of wireframe data selection by giving access to the various options (by field, by group, by filter and so on) in the same area.

Ribbon Standardization

We have made the **Edit**, **Report**, **Model**, **Digitize** and **Format** ribbons consistent across products, with common functions laid out in an identical manner. Product-specific additions still exist, and these are also presented consistently if they appear in multiple products. Wireframing functions are also standardized within the existing ribbons for Studio EM and geology products (**Explicit**, **Wireframe**)planning products, where they have been renamed to **Wireframe Design** and **Wireframe Tools**.

Help files have been updated to reflect these changes.

Triangulation Control

The key change for this interim maintenance update is 'constant triangulation', providing tools to ensure that functions that rely on calculating the difference between surfaces, such as cut and fill operations and Studio Survey EOM open pit reports, don't generate unwanted, trivial data fragments unexpectedly in unmined areas. This logic works in parallel with existing fragment removal options, which remain available.

For more information, search your help file for "consistent triangulation".

Documentation & eLearning

- **Multiple Cases** The ongoing **Studio Documentation Refresh** project continues unabated with hundreds more topics reviewed, reformatted and (in some cases) rewritten. We're still on track to complete this project in 2026.

Improvements

- **Multiple Cases** Project Data control bar functionality has been standardized across the Studio range.
- **NVPSPLUS-629** Updated the offline Start Page to use the latest Datamine logo image in the project list.
- **NVPSPLUS-588** We have fixed an issue where destination dump capacities in Maroma were not being enforced, so tonnes sent now respect the configured limits.
- **NVPSPLUS-540** The **Bench Advance** screen's Max Benches column is now wider.
- **NVPSPLUS-505** Your **Start Page** now features an "Open MineTrust Project" button to open a shared project directly from the cloud.
- **NVPSPLUS-453** Additional save and close options are now available on the Scheduling Setup screen.
- **NVPSPLUS-449** MSO2NPV is now accessible on the **Model** ribbon under **Mining >> Update with MSO**.
- **CORE-10528** We have simplified unloading multiple objects from the Project Data Bar by showing a single confirmation prompt instead of repeated pop-ups.
- **CORE-10479** The rendering of drillhole traces has been optimized, providing performance improvements during visualization.
- **CORE-10413** Updated Block Model command icons to align with Project Data Bar visuals, including consistent purple block model styling and revised Combine/Extract object icons.
- **CORE-10389** Updated the Independent View option label to 'Automatically synchronize overlays' to reflect current overlay inheritance behavior in multi-window workflows.
- **CORE-10367** **COMBTRI** performance has been improved, and now provides ZONE keyfield support.
- **CORE-10359** Improved the DmToDmxConverter fix option to handle trailing spaces and unordered strings in DMX files during comparison.
- **CORE-10303** **DILUTMOD** has been refactored for faster performance and now supports alphanumeric ROCK fields, and exclusion of selected cells from dilution.
- **CORE-10270** The unsupported Mining Power Pack utility has been retired and removed from Studio products, replaced by newer charting functions and enhanced Excel output from processes.

- **CORE-10257** Improved **Edit Attributes** performance for wireframes to prevent long delays when applying attribute changes in affected Studio workflows.
- **CORE-10244** **GRIDDC** and **STATCOM** now support @EXCEL=2 to generate Excel output with a workbook name based on the selected output file name.
- **CORE-10233** Removed in-app screen recording and custom VR object sound functionality to eliminate dependency on deprecated DirectShow components.
- **CORE-10233** We have removed the redundant “Save to Project” choice in popups so new 3D objects always save to disk, with project storage handled via Data Object Manager or project archiving if required.
- **CORE-10216** The minimum volume cleanup tolerance in cut and fill functions has been reduced from 0.05 to 0.001.
- **CORE-10177** Drillhole selection methods are now available on the Home ribbon.
- **CORE-10169** Manual pit design commands are now available on the Digitize ribbon.
- **CORE-10138** We have speeded up the loading of Datamine files and updating the Project Data control bar.
- **CORE-10176** Additional documentation has been added for **EXTRA** relating to potential field name ambiguity.
- **CORE-10166** We have removed the deprecated graphics window popup from **SWATHPLT** so that it no longer appears or shows related messages.
- **CORE-10103** Refactored **ADDMOD** to improve performance by incorporating recent processing optimizations.
- **CORE-10101** The **MAKEDTM** process has a new parameter (@DIAGONAL) to emulate the "Make Diagonals Consistent" switch of the interactive dtm-create screen.
- **CORE-10087** **REBLOCK** has been refactored to improve performance and now handles prototype sizing and custom field names more reliably. Density calculations, alpha-field handling, and related output-field behaviour are now more consistent, including when using non-default density, fill-volume, and void-volume field names.
- **CORE-10086** Improved **DmFile performance for DMX files** by optimising default row handling and cache usage to significantly speed up file operations.
- **CORE-10080** Your product now warns you where your graphics capabilities don't match a minimum OpenGL standard required to operate correctly.

- **CORE-10073** The performance of reading and writing Datamine files has been improved, offering general speedups in many functional areas.
- **CORE-10071** The **COPY** process is now much quicker.
- **CORE-10048**We have updated `generate-outlines` so that you can now decide the scope of outlining and object output (same object, new object, different object) using a simple-to-use pop up screen.
- **CORE-10043** The **Add to Project** screen now appears more quickly where the local PC has multiple networked drives available.
- **CORE-10035** We have improved the import-maps-to-files command for local databases to support more map types, add georeferenced-data filtering and automatic loading of imported results into the 3D window with default templates.
- **CORE-10034** The "Make Diagonals Consistent" DTM feature is now accessible from a script.
- **CORE-10206** You now have separate **Import >> Datamine** and **Import >> External** buttons on the Data ribbon so you can clearly choose whether to add Datamine project files or import and convert external files. Icons for all import and load functions have also been updated.
- **CORE-10021** You can now avoid potential field name and function name ambiguity in the same transform using square brackets to explicitly declare field names.
- **CORE-10009** **COMBMOD** is now significantly faster, including workflows that create new prototypes from multiple rotated block models that share the same rotation but have different origins or offsets. ADDMOD and SLIMOD also benefit because they now use the refactored COMBMOD internally.
- **CORE-10004** Added a new “Make diagonals consistent” option to **Create DTM** so triangulation is consistent and volumes match where point data is the same across multiple data objects.
- **CORE-9986** Default font lookups have been optimized, providing performance enhancements.
- **CORE-9922** Data type filtering commands on the Report ribbon are now supported by undo/redo.
- **CORE-9917** When translating 3D data (translate-point, translate-string and so on) by script, a `RepeatCount` final parameter now accesses the "Repeat" functionality of the interactive command.
- **CORE-9903** Cancelling the Import Data screen no longer shows an additional "Unable to create..." message before returning you to the application.

- **CORE-9902** Clarified SELWF SELECT behavior for DTM (1/2) versus wireframe surface (5/6), including open-surface any-hit logic and closed-surface parity-based selection expectations.
- **CORE-9902** Start Page online/offline controls have been reorganized to make their usage clearer.
- **CORE-9895** You can now create a new drillhole attribute using the **Assign Lithology** task.
- **CORE-9895** New wireframe filtering commands have been added to the **Format** ribbon. A new selected wireframe saving command has been added to the **Data** ribbon.
- **CORE-9847** The **Project Data** bar now shows the active section in bold, for clarity.
- **CORE-9846** The **Project Data** bar now highlights unsaved object data changes in italics.
- **CORE-9839** A new context-sensitive **Logs** ribbon reimplements log sheet functions.
- **CORE-9835** **COMBTRI** can now receive up to 62 input files.
- **CORE-9771** A new command - `switch-drillhole-selection` - lets you pick drillhole data either as entire holes, **FROM**-**TO** intervals, the current display legend or any nominated unique attribute value.
- **CORE-9752** Reloading a script now runs a check for unsafe syntax and displays a warning if it is found.
- **CORE-9751** The **DTS** ribbon no longer appears if DTS is not installed.
- **CORE-9739** The **ROTORDER** process now appears on the **Data** ribbon (**Transform** group).
- **CORE-9664** The folder browser displayed by the New Project Wizard has been updated.
- **CORE-9603** `insert-offsets` is now available on the **Digitize** ribbon (Outlines menu).
- **CORE-9597** An issue causing a texture to not georeference correctly has been resolved.
- **CORE-9559** You can now select multiple folders in the Project Data bar, allowing expanding and collapsing of multiple items.
- **CORE-9558** We have aligned the Project Data bar and 3D view trees so that points, planes, ellipsoids, strings, drillholes, wireframes, block models and sections now use the same icons.

- CORE-9556 The **Project Data** bar now includes a useful toolbar of file-related functions.
- CORE-9457 Creating an alphanumeric legend on a large block model is now quicker.
- CORE-9429 The **Save Data/Set Auto Reload** screen now has another option to allow file save prompts and browsers to be hidden during saving, saving with a default file name if a file association doesn't already exist.
- CORE-9425 The **Independent View** screen now has a check box to select whether new 3D object overlays should be automatically added, this defaults to unchecked.
- CORE-9424 Added the **COMPMAX** process for optimised drillhole compositing to find maximum ore/waste composite intervals using configurable cutoff, ore/waste length, and optional zone constraints.
- CORE-9381 **Report** ribbon items that are common to all Studio products now appear in the same arrangement throughout the product range. Product-specific items remain.
- CORE-9380The **Model** ribbon is now presented consistently across the Studio product range.
- CORE-9379The **Explicit** and Wireframe ribbons are now consistent in Studio EM and geology productsWireframing functions have been split into two ribbons; Wireframe Design and Wireframe Tools - this change is consistent throughout all Studio planning products.
- CORE-9377 **Home** ribbon functions common to all Studio products now appear in the same arrangement throughout the product range. Product-specific items remain.
- CORE-9355 Long field name support is now provided and expected in all Studio products.
- CORE-9096 **BOOLEAN** process now supports optional KEY_W1 and KEY_W2 fields to run operations per key value and preserve grouped output.
- CORE-9095 **Wireframe Difference** now supports key field filtering on both input wireframes and output control for single-object or grouped multiple-object results.
- CORE-9093 **Wireframe Extract Separate** now supports key field selection on both input wireframes and output options for a single object or multiple new objects.
- CORE-9092 **Wireframe Intersection** now supports key field filtering on both input wireframes and output control for single-object or grouped multiple-object results.

- **CORE-9091** **Wireframe Union** now supports key field selection on both input wireframes and output options for a single object or multiple new objects.
- **CORE-9090** **Strings from Intersections** now supports key field filtering on both input wireframes and output control for single-object or grouped multiple-object results, including value-combination grouping when both key fields are set.
- **CORE-9056** Project file browsers have been updated in line with modern Studio product file types.
- **CORE-8970** Data selection toggles and options have been simplified on the Home ribbon.
- **CORE-8886** **DILUTMOD** now accepts alphanumeric ROCK field values when identifying dilution boundaries.
- **CORE-8821** We have improved handling of large LIDAR files so high-point-count datasets can now be imported and viewed reliably.
- **CORE-8603** A new command - `insert-string-wfm-points` - adds one or more vertices to string data at its intersection point(s) with a target wireframe.
- **CORE-8602** A new command - `extend-string-to-wireframe-intersect` - extends the final segment of a string using its current azimuth and dip to terminate on a wireframe surface.
- **CORE-8569** Enhanced error reporting has been added to the `fillet-single-string-point` command.
- **CORE-8547** Icons on the Add New File screen have been updated.
- **CORE-8520** The **Digitize** ribbon has been standardized across all Studio products, although product-specific options still exist.
- **CORE-8491** The **Drillhole Planner** now automatically saves your settings (including dip convention) on closing and reinstates them when reopening. A Reset button has also been added.
- **CORE-8432** Feedback information when using extend-segment-virtual-intersect has been improved.
- **CORE-8432** The **grid-dtms** command can now output True Dip values in addition to thickness analysis.
- **CORE-8050** The object name for convert-wf-hull and wireframe-section screens is now editable by default.
- **CORE-7975** You can now edit existing legends using the **Format Legend** wizard, as well as creating them.
- **CORE-7930** **DILUTMOD** can now exclude selected cells from dilution by using the EXCLUDE field together with the EXCLDVAL parameter.

- **CORE-7272** The **Edge Editor** is now available in this product. Use it to dynamically adjust string edges. Find it on the **Digitize** ribbon.
- **CORE-7176** You can now choose your gradient convention when running the `connection-on-grade` command.
- **CORE-7175** You can now change the default gradient convention when using the `string-at-gradient-on-wf` command.
- **CORE-7173** We have updated the **create-ramp-string** command default values as you requested.
- **CORE-6862** Improved rendering performance for large drillhole datasets displayed as cylinders, reducing UI lag during interaction and display updates.
- **CORE-6308** You can now **edit the existing image registration** of a loaded pictures object using a new menu option on the Sheets or Project Data control bar.
- **CORE-4893** **DILUTMOD** now runs much faster when applying dilution to block models.
- **CORE-4838** We have added an option for **SWATHPLT** (@EXCEL=2) to name Excel output workbooks after the SWATH output file so multiple swath plot sheets can be generated without overwriting each other.
- **CORE-3656** Updated missing and outdated icons across context menus, toolbars, and panels (Load, Data Selection, Project Data, Data Object Manager, etc.).
- **CORE-3204** The new **Create Multiple Sections** tool lets you create sections throughout your data using a range of options.
- **CORE-1953** Hide selected wireframe data (`filter-wireframe-off`), hide unselected wireframe data (`hide-non-selected-wireframes`) and write selected wireframe data to a file (`write-selected-wireframes`) using new commands.
- **OP-3893** Design Direction controls on the Preparation screen no longer appear if there are no FXS design data.

Utilities & Supporting Services

- **CORE-9967** The DM to DMX file converter is now supported by a desktop shortcut.
- **CORE-9760** "MineScape Block Model" no longer appears in the Data ribbon's "External" menu as it is now fully integrated with the Data Source Drivers collection.

- **CORE-8754** A new **RocScience Dips** export driver has been added to the Data Source Drivers set to allow you to export string data in the Dips format, describing dip, dip direction and midpoint coordinate.

Documentation

- **CORE-10516** A technical note (TN00453) has been created to explain **EXTRA**'s solution for resolving field and function name ambiguity. This is available on the Customer Portal, or you can get a copy from your local Datamine agent.

Scripting & Automation

- **CORE-7319** We have added new IEw3DObject methods FindPairwiseIntersections and FindPairwiseIntersectionsEx to find intersecting wireframes with common volume, including a maximum overlap volume option.

Documentation & eLearning

- **Multiple Cases** The ongoing **Studio Documentation Refresh** project continues unabated with hundreds more topics reviewed, reformatted and (in some cases) rewritten. We're still on track to complete this project in 2026.

Automation

- **NVPSPLUS-XXX** TBC

Defect Fixes

- **NVPSPLUS-631** The Esc key now works correctly to cancel Digitize and Wireframe Design commands in Studio NPVS+.
- **NVPSPLUS-606, NPVSPLUS-605** SCH solutions now save correctly by handling mismatched hyphen/underscore (and space) characters in material names.
- **NVPSPLUS-596** We have updated targets so they now support setting period lengths for variable length periods.
- **NVPSPLUS-589** Destinations now correctly honour the “accepts material after period” setting so material only starts being sent there from the specified period.
- **NVPSPLUS-587** Fixed an issue where using "Mining cost per volume unit" could write doubled mining-cost values to the exported economic block model, while in-application summaries and reports remained correct.
- **NVPSPLUS-585** We have fixed an issue where summaries and reports displayed “invaliddatetime” when you opened projects created in older NPVS+ versions in a newer version.
- **NVPSPLUS-575** We have fixed SCH Options so that custom Optimality Gap values between 0.5 and 10 are correctly saved, validated, and passed through to the XML.
- **NVPSPLUS-550** Stockpile tonnes are no longer double-counted for the Tonnes Mined target.
- **NVPSPLUS-459** We have fixed an issue where pit walls could form near-horizontal sections at slope region boundaries so they now follow the defined slope angles correctly.
- **NVPSPLUS-543** Copying scheduler settings that include haulage to a scenario that has not yet had haulage initialized no longer triggers incorrect messaging.
- **NVPSPLUS-495** Importing a simulated GRA element now expects a file of the default file format (previously it was expecting .dm regardless).
- **NVPSPLUS-464** Fixed an issue where SCH report haulage (DbyM) columns could appear with zeros and cause subsequent columns to be offset.
- **CORE-10533** Opening a Studio project archive with only loaded data contents no longer triggers automatic file conversion outside the archive contents.
- **CORE-10480** Fixed Project Data Bar section formatting so active sections are shown in bold as expected, including when section definitions have child entries and saved/unsaved state changes.

- **CORE-10432** Fixed a regression where wireframe intersections in section view could jump between the section centre and back while panning with Filled Solid enabled.
- **CORE-10402** The Legend Preview window now redraws itself when the legend is changed in any way.
- **CORE-10400** Fixed the Edge Editor Help button so it now opens the correct help topic instead of an invalid page path.
- **CORE-10399** Fixed an issue where textured wireframes could lose their texture display after reopening a project; textures now render correctly on project reload.
- **CORE-10352** Fixed a crash when importing certain Deswik wireframe files via drag-and-drop or Data >> External >> Wireframe >> Deswik.
- **CORE-10315** Logsheets now retain their chosen template when you print, preview, or switch holes using data from a FusionX database.
- **CORE-10298** An issue preventing the import of a very large Surpac block model has been resolved.
- **CORE-10285** Updated Report >> Statistics Processes ribbon icons in Planning products to use the latest icon set, including restoring the missing Summary Statistics menu icon.
- **CORE-10255** REBLOCK no longer expands the prototype model by an extra cell in X, Y, or Z when using the super process.
- **CORE-10239** We have corrected several typos in the TRIVAL parameter descriptions to improve clarity.
- **CORE-10235** The INTEXT process help page now has the correct browser tab and search results text.
- **CORE-10217** We have corrected a long-standing typo and spacing issue in the message shown when you open a Studio product with a profile from an earlier version.
- **CORE-10215** You now see more consistent block model slices when viewing oblique sections, with missing stripes in intersection mode fixed.
- **CORE-10198** We have fixed an issue where saved DTM wireframes could display as strings with unexpected XP/YP/ZP attribute columns.
- **CORE-10183** An issue that could causing instability when loading certain points and points-like data files has been resolved.
- **CORE-10180** A rare issue that could result in field names becoming truncated has been resolved.

- **CORE-10174** Fixed a crash when scripting creates a new single-precision .dm file from a schema containing column names longer than 8 characters.
- **CORE-10172** In the TRIVAL process the message reporting the number of output records is no longer repeated multiple times.
- **CORE-10164** When STATS is run with @PRINT=0 the message: "WEIGHTING FIELD: ...." is no longer output multiple times
- **CORE-10151** SWATHPLT no longer uses substitution variable names as file names if output files SWATH1 and/or SWATH2 are not defined.
- **CORE-10126** TONGRAD now warns if you use the same field for multiple outputs in dmx and continues using only the first occurrence.
- **CORE-10076** Create Model Prototype now previews rotated block models in the correct location.
- **CORE-10057** An issue causing a driver load error message, when converting Leapfrog data via the Data Converter, has been resolved.
- **CORE-10053** An issue preventing the display of context-sensitive help of some Data Source Driver screens has been resolved.
- **CORE-10038** Loaded block model prototypes are now listed as expected in the Project Data bar's 3D folder.
- **CORE-10020** The Project Wizard's help button now displays the expected help content.
- **CORE-10019** An issue causing HOLES3D to fail where a field name also matched an EXTRA function name, has been resolved.
- **CORE-10011** The quick key for `doughnut-storage-switch` has been changed to "ddss" to avoid ambiguity with the delete-string-segment command.
- **CORE-9985** The GetTag method on the DmFile table object now returns the expected tag value using Javascript.
- **CORE-9984** We have fixed an issue in the Project Data bar where the first item in a top-to-bottom Shift-select could become unselected if it was scrolled out of view while selecting multiple items.
- **CORE-9978** Fixed an issue where starting New Project while another project is open could show an unnecessary script error after cancelling or declining the prompt.
- **CORE-9873** Swipe selection can now be used when selecting samples using the Assign Lithology tool's Paint mode.
- **CORE-9863** An issue causing unexpected rendering of block model cuboid edges with clipping applied.

- **CORE-9825** SWATHPLT is now faster when @ANGLE1,2 and 3 = 0 (unrotated swaths).
- **CORE-9799** We have updated DMX model loading so that dragging and dropping a DMX file that is already loaded now creates a new overlay instead of showing an error, while other load methods keep the existing warning.
- **CORE-9697** An issue causing WIREPE to create strings at incorrect intervals has been resolved.
- **CORE-9680** The @CHECKROT parameter is now working as expected in SELPER.
- **CORE-9657** We have updated the MineScape Model Importer so it can no longer be opened multiple times at once, preventing the system instability caused by closing one of the duplicate dialogs.
- **CORE-9634**An issue causing SELPER to print unexpected output file alphanumeric values has been resolved.
- **CORE-9576** If section auto-alignment is enabled, this is now applied as expected when swapping sections via the Sheets control bar.
- **CORE-9557** We have updated the Project Data bar so grids and sections are no longer underlined.
- **CORE-9535** Ellipsoid selection buttons (Home ribbon) are now only enabled if ellipsoid data is loaded.
- **CORE-9302** Solid Hull key field processing now correctly applies grouping per key value, so hull generation respects selected key fields (for example, LEVELID) instead of producing a single whole-solid hull.
- **CORE-9271** You can now successfully use the Studio RM Fusion Driver to import and reload FusionXl database tables.
- **CORE-9183** SWATHROT now runs as expected in Studio RM.
- **CORE-9064** An issue causing some parts of a rotated model to be ignored when using SWATHPLT has been resolved.
- **CORE-8492** The Find Command screen now lists 'tra' as the quick key for string and point translation commands.
- **CORE-8819** You can now redo `extend-segment-virtual-intersect` operations as expected.
- **CORE-8494** An intermittent issue that could cause your application to stop processing commands such as unload-all, has been resolved.
- **CORE-7416** We fixed a crash/freeze in the Image Registration (georeferencing) tool that occurred when using high-resolution (4K) monitors.

- **CORE-7057** Fixed an issue where Calculate Wireframe Volume did not report separate volumes and spatial statistics for each key field value, ensuring results are now correctly split by the selected key field.
- **CORE-3801** REBLOCK can now preserve regular subcells along zone boundaries when reblocking to larger parent cells, helping retain geological domain precision across boundary changes.
- **CORE-3559** We have fixed the Table Editor's Variogram-Model definition so the data definition for GRADE and GRADE2 fields are now alpha (A24), not numeric.

Studio NPVS+ 1.1 Release Notes

Key Improvements

Haulage Integration

The **Haulage Analysis** tool is now integrated with the Scheduler to allow computing cycle times and truck hours required to move the material from all sources (pushbacks and stockpiles) to destinations (processing plants, stockpiles, and waste dumps).

Studio NPVS+ employs a one-step optimization of the haulage plan, combining the "scheduling" and "haulage analysis" functions without the need for iteration. By optimizing the mining schedule directly for truck hours, you can reduce the maximum truck fleet size and delay the expansion of the truck fleet, while still meeting all other scheduling objectives.

The Haulage Information screens are also supported by new context-sensitive help files.

Multiple File Loads

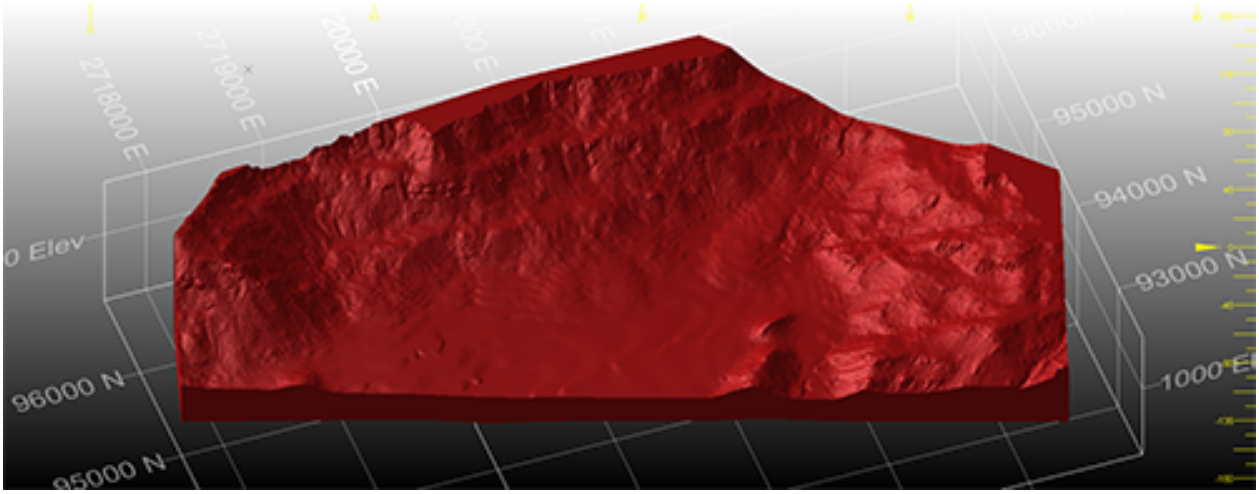
You can now import or load multiple files in one operation using new multi-file options. Just pick the files you want to load using a simple browser, and Studio does the rest. You still get to specify load and importation settings, including those specific to a particular driver, but now you can complete the process in a fraction of the time.

To access this function, click **Add to Project** or **External** on the **Data** ribbon and pick your files.

Either import multiple files to the project or load them directly into memory. These files can be of the same type and format or different ones, meaning you can pick a batch of files of various formats (CAD, BMF, DMX and more) and either add them to the project or load and display them after importation and conversion. This makes light work of importing files from other projects and applications.

To use the previous driver selection method, use a menu option to pick a data type or select the new "by driver" option for project import.

Leapfrog Data Import



You can now import Leapfrog mesh (.msh) and Leapfrog Project Model (.lfm) files using a new Data Source Driver. Data is imported as wireframes.

If importing a Leapfrog Project Model file, you can choose to import all associated mesh data or a subset, and can choose the attribute to use to store the original mesh name, making downstream data management much easier.

The new formats are also supported by Studio's drag-and-drop facility, meaning you can drag one or more files into the 3D view and default load settings are used to create the relevant objects in memory and display them.

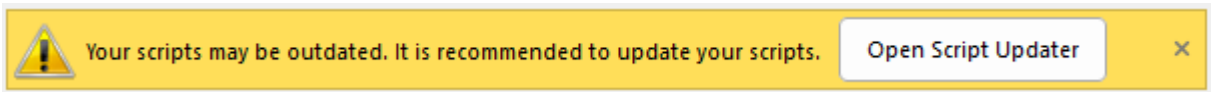
Safer Scripting

To maintain the highest level of local data security, we've rigorized our scripting interface in Studio products to provide a way to securely instantiate approved ActiveX objects through automation scripts. This provides a safer and more marshalled automation environment.

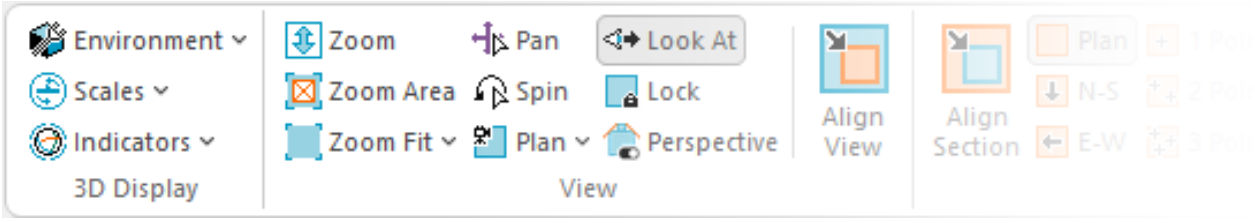
In brief, we've introduced a new Studio application method (CreateObject) that can be used in place of the deprecated `new ActiveXObject("Prog.ID");` instruction. A call to something like `window.external.System.CreateObject ("Prog.ID");` allows approved ActiveX objects to be instantiated to support your scripts. Most importantly, the ones that provide the highest risk are blocked.

The **Datamine Studio Script Updater**, accessible via your **Home** ribbon, can update your scripts either individually or as a batch, automatically making them safer to use.

If you load a script that looks like it could benefit from additional protection, a banner appears atop your display area. This also provides access to the conversion utility:



Ribbon Standardization

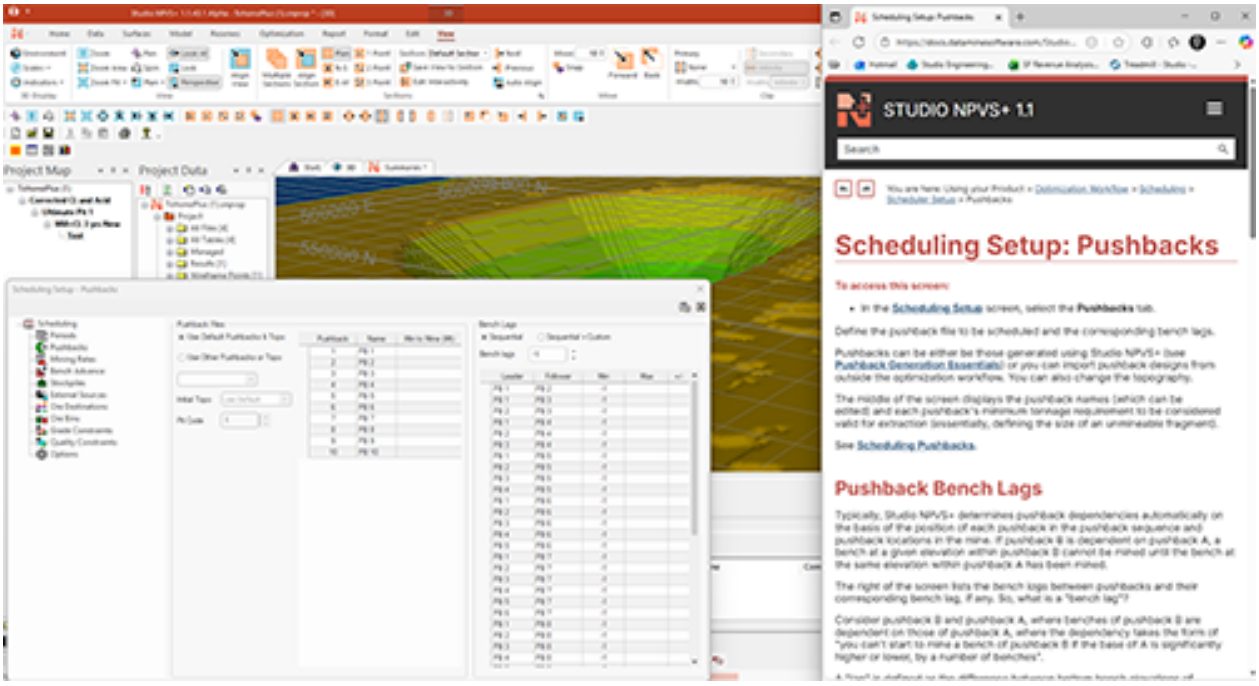


Following your requests to adopt a more consistent ribbon layout between Studio products for core (shared) commands, we've made a few changes for this update. This means your familiarity with one Studio is now useful if using another product in the Studio range. Where possible, we have standardized command grouping and positions for the **Data**, **Format** and **3D View** ribbons. We've maintained specific layouts where a particular operating domain demands it, such as grade estimation, resource modelling, pit design and field mapping functions, so these aren't changing.

We will continue to standardize our ribbons, where appropriate, in future releases.

Improved Documentation

As part of a wider campaign to improve how we support our customers, the Studio NPVS+ help file gets a big refresh with this update. Moving away from the "field details" approach and towards a more intuitive activity-based method, the new help files don't just explain what something does, in isolation, but how it forms part of a larger flow of activities to create the desired result.



Reference information still exists, but is presented more appropriately, meaning the information you want isn't hidden somewhere in the 10,000+ page collection that supports your product. In addition, stale information is being progressively renewed, and a tighter workflow adopted to ensure all application changes are considered when our documentation team works on new content for each release.

Other Command & Process Updates

- `COPYMOD` now supports retrieval criteria.
- A new command `digitise-doughnut` lets you create data representing fully enclosed internal structures.
- `smooth-gradient` can now be used to fully smooth (start to end) preselected strings.
- `REBLOCK` now supports retrieval criteria.
- `INTEXT` can now process data using either a data definition (INDD) file or a SETTINGS file, or neither.
- `WIREFILL` now supports retrieval criteria.

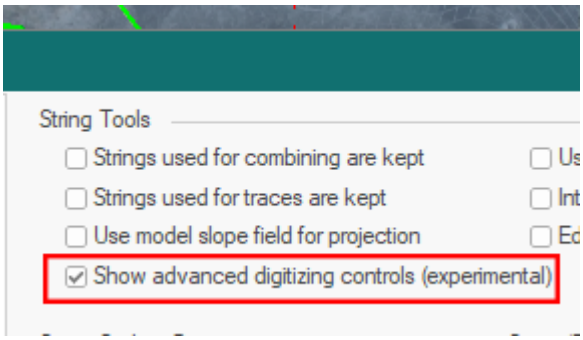
Early Access Features

Advanced Digitizing Controls

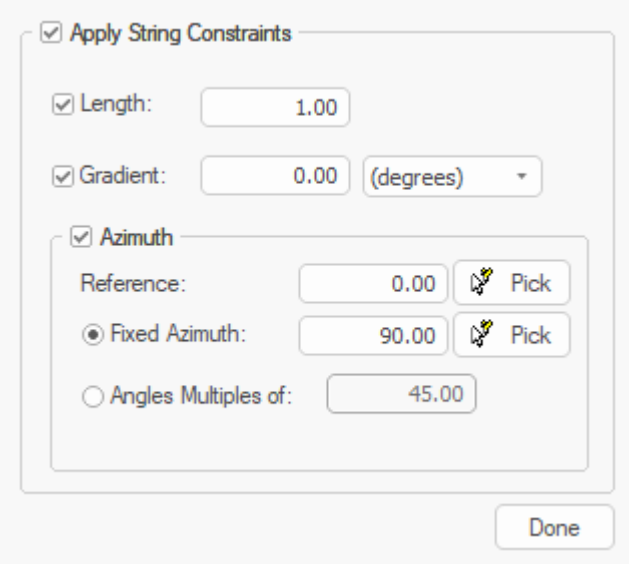
As part of a wider campaign to improve and extend our digitizing tools, we've introduced a new way of creating new string data in this update, and we'd love to know what you think before we finalize things.

`new-string`, arguably the most commonly used design command in any Studio product, has been extended over the years and also supported by a range of other design functions to enhance more 'managed' digitizing often required in the mine planning domain, where design drafting with precise string properties can be critical to an effective design and schedule. The `extend-string` command has been similarly enhanced.

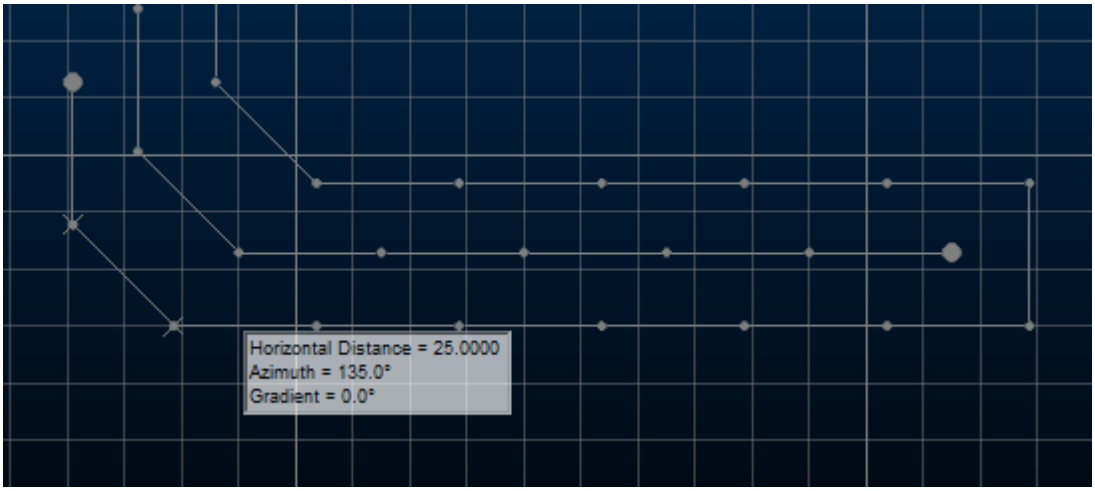
`new-string` and `extend-string` can run in an enhanced mode in this update. By default, both commands behave as before, but there's a new project setting that allows advanced settings to be applied during digitizing to constrain the orientation of the next string segment you create. Located on the **Points and Strings** screen, check **Show advanced digitizing controls** to activate enhanced mode for **new-string** and **extend-string**:



The next use of either command displays a popup allowing you to constrain the length, azimuth and gradient of the next string edge. For constrained angle changes, you can also ensure azimuth changes are made in fixed amounts from the previous string segment:



This can help to ensure operational and design constraints are honoured during digitizing, saving time later by editing and adjusting design data. Help files for both commands have been updated to explain how to use the new controls. You can also press F1 when the new popup displays during digitizing.



Please let us know what you think of this early-access feature. We value your feedback!

All Improvements

- **NVPSPLUS-565** Project Data control bar functionality has been standardized across the Studio range.
- **NVPSPLUS-552** User interface profile commands have been added to the Home ribbon.
- **NVPSPLUS-540** The Bench Advance screen's Max Benches column is now wider.
- **NVPSPLUS-504** Studio NPVS+ documentation has been overhauled (online and offline content).
- **NVPSPLUS-497** The Pushback Settings wizard now has independent context-sensitive help for each page (press F1).
- **NVPSPLUS-494** An issue causing unnecessarily high ore waste dumping has been resolved.
- **NVPSPLUS-493** Haulage Information help files have been reformatted and rewritten to match Studio NPVS+ functionality.
- **NVPSPLUS-493** Haulage screens have been updated to remove references to redundant MAO functions.
- **NVPSPLUS-482** The date and time of generated charts and reports is now displayed.
- **NVPSPLUS-467** Warehousing mode help has been expanded to explain that mixed stockpiles with initial tonnage must be empty at the end of the schedule.
- **NVPSPLUS-465** Haulage Information screens now link to new context-sensitive help files.
- **NVPSPLUS-463** The Quality Constraints Scheduler settings page has been reorganized to make it more intuitive,
- **NVPSPLUS-456** Quality constraint **Min** and **Max** values can now be expressed as standard numeric values or multiples of thousands or millions.
- **NVPSPLUS-447** When defining Quality Constraints, **Add** and **Delete** buttons now appear above the **Global Targets** area.
- **NVPSPLUS-445** Added a Truck Hours target in Quality Constraints with units set to Truck Hours and fixed, non-editable coefficients that update automatically based on haulage information.
- **NVPSPLUS-444** Haulage parameters are now honoured by Maroma-solved schedules.
- **NVPSPLUS-439** Pushback computation is now much quicker, particularly where a large number of pushbacks are being calculated.

- **NVPSPLUS-380** You can now access Default Project Settings and toggle the display of the Tasks Pane using the Home ribbon.
- **NVPSPLUS-188** When resizing the **Quality Constraints** screen, the Variables table now resizes, not the Global Targets area.
- **NVPSPLUS-183** This version includes an update to the Maroma solver (v1.8.1.3).
- **NVPSPLUS-180** When setting Quality Constraints, you can now insert earlier periods.
- **NVPSPLUS-160** Min to mine is now applied by period, not total.
- **NVPSPLUS-143** Documentation has been added to explain the impact of multi-core processing on schedule optimization results.
- **CORE-9827** .dmx.tmp files are now ignored by the **Project Files** and **Project Data** control bars.
- **CORE-9775** As part of the project to standardize Studio ribbons, icon updates have been made.
- **CORE-9732** Read-only DM files are now converted to read-only DMX files during project or utility-initiated conversion.
- **CORE-9711** Documentation for `EXTRA`'s RAND and RANDBETWEEN numeric functions has been improved.
- **CORE-9649** Block model fields in the Text Importer are now ordered more sensibly.
- **CORE-9604** The default field of view angle for new projects is now 45 degrees (set-view-fov command).
- **CORE-9586** To increase system security, we have blocked the display of online content in the Customization window.
- **CORE-9583** In Files, Fields and Parameters screens running in Dark mode, text in dropdowns is now more readable.
- **CORE-9579** `COMPDH` now supports up to 5 ZONE fields to composite within, and five optional fields DOM1 to DOM5 can now be specified to record dominant categorical values (by length) within each composited sample.
- **CORE-9578** The Script Recorder now generates syntax that aligns with Datamine's safer scripting policy.
- **CORE-9574**The legacy script converter utility has been removed from product distributions.
- **CORE-9561** Rationalization of baggage files for help systems means Studio installation file sizes are now smaller.

- **CORE-9551** The **Datamine Studio Script Updater** has been provided to automatically convert your scripts to more protected versions.
- **CORE-9550** The Studio scripting environment now offers a safer scripting syntax, minimizing the potential impact of malicious thread actors.
- **CORE-9546** New calculated (virtual) fields are now available to calculate the dip angle (**_PDIP**) and direction (**_PDIPDIR**) of the best fit plane through a data object.
- **CORE-9542** A more secure mechanism for data object automation has been implemented. Consult your online help for more details.
- **CORE-9540** You can delete selected 3D overlays of the Project Data using the <DELETE> key.
- **CORE-9539** The **CalculateEdgeMetrics**() method now calculates values for the final edge of a closed perimeter.
- **CORE-9528** The Plots window **Section** and **View** ribbons now have new icons.
- **CORE-9526** It is now quicker to read and process DMX files containing alphanumeric columns.
- **CORE-9522** `WIREFILL` now supports retrieval criteria.
- **CORE-9521** `COPYMOD` now supports retrieval criteria.
- **CORE-9519** `REBLOCK` now supports retrieval criteria.
- **CORE-9490** The Text Importer can now be automated using any Studio product.
- **CORE-9482** The `switch-drillhole-points-traces` command is now available on the Format ribbon (Display Mode group).
- **CORE-9474** The **Text Importer** and `INTEXT` documentation has been extended and corrected.
- **CORE-9473** `INTEXT` can now process data using either a data definition (INDD) file or a SETTINGS file, or neither.
- **CORE-9449** The **CENTRE** file for the `ELLIPSE` process is no longer dependent on search, variogram or zone parameter file inputs.
- **CORE-9409** An issue causing an unsorted block model to become locked after a previous attempt to load it has been resolved.
- **CORE-9398** In `COMPDH` it has always been the case that if the **LENGTH** field in the input sample file is not equal to **FROM** - **TO** the **LENGTH** field is set to **TO** - **FROM**. This behaviour remains, but a maximum of 10 messages are issued in a process run.

- CORE-9383 The **3D View** ribbon layout is now consistent between Studio products.
- CORE-9382 The **Format** ribbon layout is now consistent between Studio products.
- CORE-9378 The **Data** ribbon layout is now consistent between Studio products.
- CORE-9359 Your product now includes a new control bar: **Project Data**. This combines the power of previous bars to categorize and display files, loaded objects and plot data.
- CORE-9391 When using the Text Importer, you can now import alphanumeric trace and absent values into a destination field that is numeric.
- CORE-9340 Unload all overlays of a specific data type using a new **Sheets** and **Project Data** control bar menu option.
- CORE-9301 Legend controls within various screens have been reverted to more popular legacy behaviour (with improvements) and restyled.
- CORE-9277 Quick Filter drop down lists now inherit the current look and feel theme.
- CORE-9252 Project data bar icons for the Plots and 3D folders have been updated.
- CORE-9233 By request, flat-rendered wireframes are now less shiny.
- CORE-9229 **Text Importer** scenario files (.dminsv) now appear in the Project Data control bar.
- CORE-9228 If opening a Text Importer scenario, file detection has been improved and you can now browse for missing files.
- CORE-9103 The **Project Data**, **Loaded Data** and **Holes** control bars now inherit visual themes.
- CORE-9097 An issue that could make data picking difficult where data was precisely coincident with the section plane has been resolved.
- CORE-9082 **Drillhole Importer** now recognizes "Hole_ID" as a BHID mapping type.
- CORE-9014 All commands relating to the obsoleted **Visualizer** window have been removed from the application.
- CORE-8999 Tooltips have been added to the **Group Lithology** and **Assign Lithology** tasks.
- CORE-8980 When adding a new unique value legend item in the New Legend Wizard, you can now add any other colour to the current pallete.
- CORE-8839 Documentation on snapping to a grid has been improved.

- **CORE-8805** File case names are now preserved in the default overlay when dragging and dropping files into the 3D window.
- **CORE-8763** 3D properties and similar screens now use a clearer and expanded toolset for legend management. See you help file for more details.
- **CORE-8699** An issue causing the `insert-by-segment-length` to fail when working with large data has been resolved.
- **CORE-8673** Issues causing unpredictable selection behaviour (or presentation of selected data) in the Plots window have been resolved.
- **CORE-8654** Selecting the outer boundary of a plot sheet now enables the **Manage** ribbon (not the **Home** ribbon as previously).
- **CORE-8625** **Drillhole importer** now recognizes more field names when automatically mapping to system fields.
- **CORE-8519** Studio Data, Report and 3D View ribbons have been made standard in all Studio products other than Studio Mapper.
- **CORE-8510** The **Project Data** control bar now displays files external to the project folder with the same vertical line indicator as the Project Files control bar.
- **CORE-8196** `MODSPLIT` can now output either **MODELOUT**, **FULLMOD** or both. Previously, both outputs were always generated.
- **CORE-8143** It is now quicker to close a project without saving it.
- **CORE-7746** A new command `digitise-doughnut` lets you create complex string data in relation to an external perimeter and one or more closed internal strings.
- **CORE-7506** The **Drillhole Planner** now inherits the current visual theme.
- **CORE-7272** The **Edge Editor** is now available in this product. Use it to dynamically adjust string edges.
- **CORE-6637** This update features early access to a preview of our advanced string digitizing controls. Constrain the azimuth, length and gradient of new string segments as you draw. Enable this beta functionality using the **Project Settings** screen.
- **CORE-5878** The Project Data bar now permits multiple item selection.
- **CORE-5550** `smooth-gradient` can now be used to fully smooth (start to end) preselected strings.
- **CORE-1878** You can now import or load multiple files in one operation using new multi-file options.
- **GEO-718** The layout of the **Drillhole Importer** screens has been improved.

Utilities & Supporting Services

- **CORE-9629** This update includes an upgrade to the mesh wireframing engine (2.0.2.54).
- **CORE-9577** Your product installs a major update to License Services (7.0). This introduces encrypted traffic options for enhanced data traffic security.
- **CORE-9536** The Start Page environment has been made more secure.
- **CORE-9481** Data Source Drivers now export virtual data columns.
- **CORE-9362** If using the DmFile SDK, reading and writing records is now twice as fast as before.
- **CORE-8826** You can now import MineScape prism models where data overlaps in Z.
- **CORE-8524** An encrypted traffic option is now available to License Services server administrators. Requires a compatible client installation (7.0 or higher).
- **CORE-8524** We have added a new driver! Import UBC voxel model data using the new **Geosoft** driver option.
- **CORE-8160** The MineScape Block Model Importer has been added to the Data Import screen as a new driver: "MineScape strata model".
- **CORE-6521** You can now import and load Leapfrog mesh and project model file data using a new Data Source Driver.
- **MSO-1558** Documentation for MSO version 5.0 has been completed for this version.
- **MSO-1581** Evaluation method descriptions on the **Report** screen have been updated for consistency and clarity.

Documentation & eLearning

- **Multiple Cases** The ongoing **Studio Documentation Refresh** project continues unabated with hundreds more topics reviewed, reformatted and (in some cases) rewritten. We're still on track to complete this project in 2026.
- **NPVSPLUS-521** Additional information on the "Min to Mine" setting has been added to the Scheduler settings **Pushbacks** help file.

Defect Fixes

- **NVPSPLUS-597** We have fixed the Mining Blocks file so waste tonnages now correctly match the scheduler and legacy Fresh PBs reports.
- **NVPSPLUS-573** We have fixed the pushbacks report so that Mined Total now correctly includes all waste tonnes, matching the scheduler's total mined tonnes.
- **NVPSPLUS-512**An issue causing quality constraints to be violated where negative coefficients existed has been resolved.
- **NVPSPLUS-511** Added all individual waste rock types as separate quality constraint inputs (including when haulage is undefined) and ensured their targets are correctly written to the XML for scheduling.
- **NVPSPLUS-498** Fixed an issue where Quality Constraints *Min* and *Max* values were incorrectly divided by the selected multiplier when adding a new target variable definition period.
- **NVPSPLUS-496** Scheduler settings screen fields now expand or contract correctly according to screen size.
- **NVPSPLUS-491** An issue causing the Scheduler to fail when only one core was specified in Default Settings has been fixed.
- **NVPSPLUS-473** The MAO/MFO tab is no longer displayed in the Summaries window.
- **NVPSPLUS-458** The Reclaim from stockpile initial tonnage is now included in ore tonnage target.
- **NVPSPLUS-452** An issue causing system instability after defining quality constraints has been resolved.
- **NVPSPLUS-451** You can now visualize the schedule model after creation as expected.
- **NVPSPLUS-450** A ratio target is now correctly ignored by the scheduler if disabled.
- **NVPSPLUS-422** Mining Dilution and Mining Recovery labels now fully appear in Economic Settings.
- **NVPSPLUS-409** Stockpile values are no longer converted when units are changed.
- **CORE-9921** EXTRA's FLDFAIL parameter's default value of 1 has been reinstated (previously 0) to match earlier application versions.
- **CORE-9919** An issue causing system failure, if v1 or v2 commands were used in conjunction with plane alignment options, has been resolved.

- **CORE-9875** An issue preventing the initial display of colour chips on the Assign Lithology screen has been resolved.
- **CORE-9868** A data-specific issue causing Deswik import to fail has been resolved.
- **CORE-9855** An issue causing issues when snapping and zooming in conjunction with vertical 3D scene exaggeration has been resolved.
- **CORE-9826** An issue preventing the successful import of Deswik wireframe data has been resolved.
- **CORE-9761** Picking of data symbols rendered in 2D in screen space can now be selected as normal.
- **CORE-9745** An issue causing `REBLOCK` to delete the input block model, if additive fields are used, has been resolved.
- **CORE-9717** The Project Data Bar's "Create from Loaded Data" menu option now works as expected.
- **CORE-9716** Grids and Sections folders can no longer be removed from the Project Data bar.
- **CORE-9714** An issue causing the incorrect rendering of 3D drillhole cylinders has been resolved.
- **CORE-9710** Modeless dialogs are now reset as expected when a default profile is reinstated.
- **CORE-9700** When translating strings, points or wireframes, decimal values now persist correctly between dialog sessions.
- **CORE-9673** 3D overlay group projections in Plots now react immediately to Project Data or Sheets control bar changes.
- **CORE-9670** The `UNFOLD` wizard now has context-sensitive help.
- **CORE-9653** When importing DXF/DWG points data, the 'Include Hatches' option is no longer displayed.
- **CORE-9642** 3D window axis and scale indicators now hide and show immediately following window configuration changes.
- **CORE-9631** The `INTEXT` process no longer stalls indefinitely if settings are unexpected.
- **CORE-9622** An issue causing `SELWF` to run more slowly than expected has been resolved.
- **CORE-9618** An issue causing move-points to pick an incorrect target has been resolved.
- **CORE-9615** An issue preventing the import of a Vulcan block model has been resolved.

- **CORE-9613** An issue causing incorrect display of Information Mode output, if the 3D view was orthogonal to the active section, has been resolved.
- **CORE-9595** The Command Toolbar contents are now more easily visible in Dark mode.
- **CORE-9582** The Move String command is now available again on the ribbon.
- **CORE-9562** Crash reports are now registering successfully in Freshdesk.
- **CORE-9537** DMX files input to transform-coordinates now generates output files usable by Datamine Supervisor.
- **CORE-9518** You no longer see an empty message box when trying to save an object to an open DMX file.
- **CORE-9517** The Text Importer is now storing the Delimeter correctly if not a comma.
- **CORE-9509** The Text Importer now reads fixed width values correctly.
- **CORE-9503** "Ignore Clipping" instructions at the overlay level are now applied immediately.
- **CORE-9499** An issue preventing string editing in plan view with >1 exaggeration in Z has been resolved.
- **CORE-9419** The Point Cloud Reconstruction wizard now automatically generates a scenario on entering a new scenario name.
- **CORE-9403** An issue causing the incomplete display of model cells in intersection at some section orientations has been resolved.
- **CORE-9370** An issue causing unexpected data rounding in `TRIFIL` has been resolved.
- **CORE-9357** `WIREFILL` now correctly interprets default plane information, and a @PLANE parameter is added to allow behaviour override.
- **CORE-9353** An issue causing `SELWF` to fail when processing retrieval criteria has been resolved.
- **CORE-9348** The select-perimeter command no longer behaves inconsistently when called from a script.
- **CORE-9264** An issue causing incorrect IJK values to be generated via the Text Importer has been resolved.
- **CORE-9236** An issue causing the incorrect alignment of a georeferenced image has been resolved.
- **CORE-9231** An issue preventing the successful reinstatement of a UI profile has been resolved.
- **CORE-9100** When transforming coordinates, and converting EPSG 5533 to WGS 84 and exporting to Earth, Lat/Long columns are no longer inverted.

- **CORE-9012** When transforming geographic coordinates, you can now generate output files on a non-primary drive.
- **CORE-8952** The zoom command now accurately centers the screen if the scene is exaggerated.
- **CORE-8794** An issue causing clipped block model data to be rendered invisible, when the clipping section deviates from the major axes, has been resolved.
- **CORE-8696** An issue causing smooth-gradient (smg) to fail with a large string data file has been resolved.
- **CORE-8632** Importing Deswik wireframe data now imports all available attributes. Previously some were not imported.
- **CORE-8582** An issue causing unexpected view navigation in scenes with vertical (Z) exaggeration has been resolved.
- **CORE-8259** 3D window section clipping is now reapplied correctly when the section corridor width is changed.
- **CORE-8052** An issue causing **SAMPOUT** to be created incorrectly when writing alphanumeric fields has been resolved.
- **CORE-7929** 3D plot overlay labels now react to clipping settings as expected.
- **CORE-6800** Studio now supports the concept of a temporary session-only data attribute.
- **CORE-5413** **REBLOCK** no longer fails if there is a space in the file in the project folder.
- **CORE-5270** Unable to cancel (ESC Key) Set Section about a single point
- **CORE-5137** Adding a trailing space to a new project name no longer causes Studio to create 2 project folders.

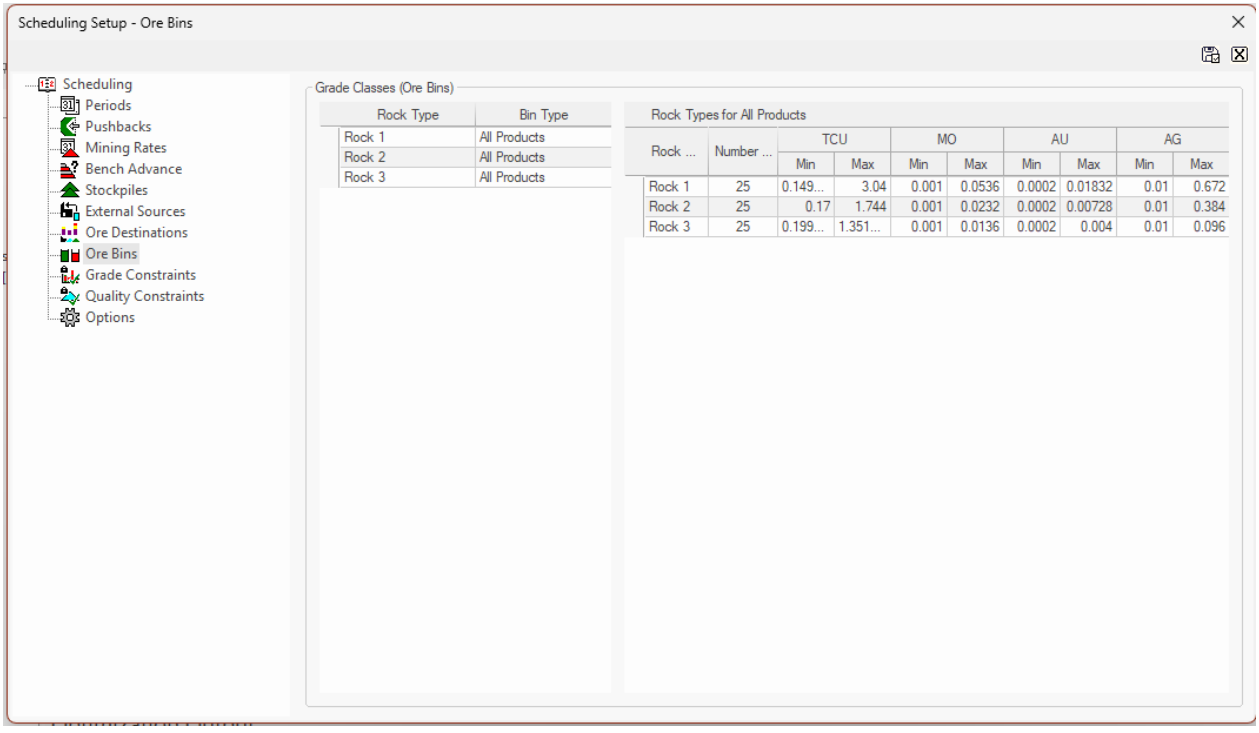
Studio NPVS+ 1.0 Release Notes

> **Note**: Studio NPVS+ does not currently support Multimine projects. This facility will be available in a future version.

Studio NPVS+ 1.0 represents a significant step forward in software for strategic mine planning.

Based on the tried and trusted Studio NPVS technology, Studio NPVS+ is a supercharged evolution with a more powerful and flexible scheduling solver - **Maroma**. Go from resource model to a LOM plan in two days instead of two weeks.

Maroma is a new mixed integer programming solver tailored for mine planning optimization and similar problems. It incorporates the BZ linear programming algorithm, embedding it into a new integer programming framework. This enables Studio NPVS+ to solve very large-scale optimization problems that are unsolvable with conventional solvers, and to solve problems of smaller scale much faster than would be otherwise possible.



The Maroma scheduling console in Studio NPVS+

So what does this mean, in practical terms? For strategic mine planners, **Studio NPVS+** significantly extends the reach of software to solve strategic operation challenges. It does this by:

- Providing a truly optimized schedule combining scheduling, MAO, and MFO at the same time, keeping schedule runs to an absolute minimum. MAO and MFO are no longer required (and are not available in Studio NPVS+).
- Supporting multiple parallel constraints simultaneously, taking full advantage of your processing power.
- Being flexible enough to deal with variable length periods.
- Presenting a simplified workflow coupled with easier and more intuitive controls.

Accessible using the familiar **Optimization** task bar, and replacing the legacy scheduling, MAO and MFO functions, Maroma is designed to be far easier to access and use than legacy functions, and anything else on the market.

A key benefit of the Maroma solver is its ability to solve problems previously out of reach of other engines, and that it takes more parameters into account when providing a solution that meets constraints and capabilities of the mine. For example, Studio NPVS (the predecessor) would often require multiple, iterative runs of the schedule and a (at least) a run of MAO to produce a practical schedule, possible MFO as well.

Studio NPVS+ greatly reduces the number of attempts to reach the final schedule, ready for downstream operation planning and design. It also makes MAO redundant, speeding up the task even further.

So, whilst a single Maroma run may take longer than a single run of the old Scheduler, with **Studio NPVS+** the overall time spent in creating the optimal schedule is greatly reduced, and no longer the domain of experienced users, requiring much less fine-tuning of parameters to solve the most practical schedule to meet input parameters.

Studio NPVS+ is Datamine's platform for future development of strategic planning functionality. It's a great time to start using this game-changing product that really puts you in touch with the long term plan.

Studio NPVS+ Licensing

Studio NPVS+ requires a dedicated license. You cannot activate Studio NPVS+ with a legacy Studio NPVS license.

Contact Datamine to discuss a transition to Studio NPVS+.

Studio NPVS+ Key Benefits

Other than the significant benefit of a more advanced scheduler, Maroma offers the following key advantages over other strategic planning products:

Flexible Stockpiling

The speed achieved by Maroma is partly gained by the way in which it treats *stockpiles*. For each parcel, there is a decision variable for each mining period and each of its possible destinations. If a parcel is mined in a particular period and sent to a stockpile, there is a separate decision variable for each of the later periods that it can be reclaimed and sent to the plant. Maroma defines two kinds of stockpiles: **Warehouse and Mixed.**

See Mixed & Warehouse Modes.

Combined Scheduling Solution

Maroma produces a truly optimized schedule combining all capabilities of the previous scheduler plus integrated support for MAO and MFO. All parameters are considered in the same run, eliminating the need for separate parameters for schedule refinement.

Parallelization

Maroma can consider multiple parallel constraints simultaneously, meaning a solution is more considerate of the combination of constraints specified.

> **Note**: As scheduler runs always make use of available cores, there is no need (nor is it possible) to add a schedule run to a batch, as in the predecessor Studio NPVS application. You can still batch process the economic model, ultimate pits and pushbacks in **Studio NPVS+**.

See Using Multiple Cores for Scheduling.

Flexible Periods

Maroma can deal with variable length periods easily.

See Scheduling Setup: Periods.

Accessiblility

We've considered not only the power of the scheduling engine, but also how you use it. We've taken a long look at how our users typically engage with strategic planning software and designed a simplified workflow, coupled with an easier to use and more intuitive user interface.

Moving from Studio NPVS to NPVS+?

The transition from Studio NPVS to Studio NPVS+ is simple.

- Studio NPVS+ can open all Studio NPVS and NPV Scheduler projects.
- A new project file with a **.snpvsp** extension is created in your project folder.
- All settings except SCH / MAO are preserved.

Other things to consider:

- Studio NPVS cannot open a Studio NPVS+ project.
- You can run Studio NPVS and Studio NPVS+ on the same machine concurrently (if both licenses are available).
- 3D data generated by Studio NPVS+ can be loaded into any Studio product.
- Studio NPVS+ can read DM and DMX files, but generates DMX format files by default.
- Studio NPVS+ is now Datamine's focus of future development for strategic open pit planning and core system functionality. It's a great time to transition to the new product.

DATAMINE

STUDIO NPVS+

Datamine enables efficient and sustainable mining through the application of world-leading technology and services.

Read the Docs

docs.dataminesoftware.com

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