

Isatis.neo 2026.1

Release Notes



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Published: Monday, July 13, 2026

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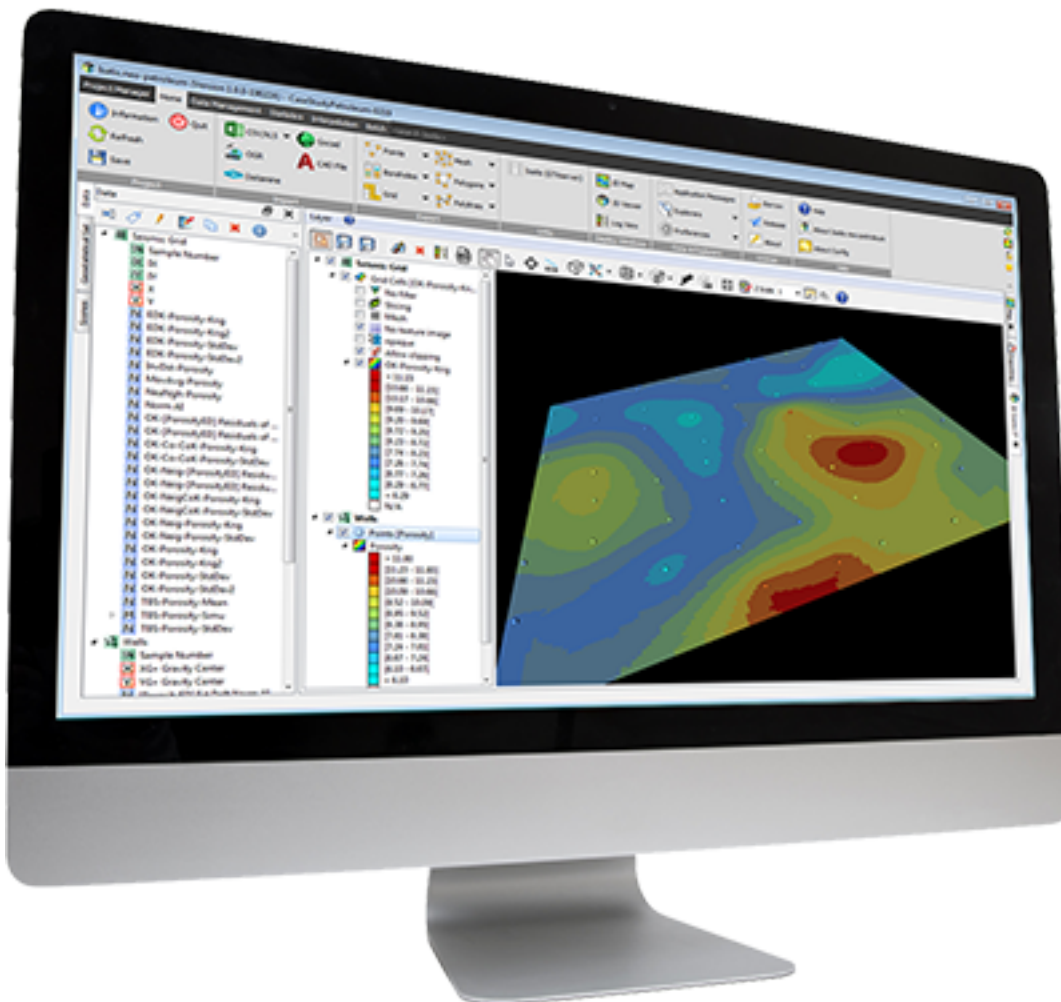
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Overview

Isatis.neo is a sophisticated solution offering unmatched flexibility for geostatisticians and mineral resource estimation geologists. It provides a wide range of statistical and geostatistical tools designed to efficiently achieve precise resource estimations while addressing unique project challenges. Automatic parameter settings streamline processes, while advanced users can modify parameters for greater precision and control. Its intuitive interface, combined with cutting-edge parallelised algorithms, ensures both ease of use and high-performance computing. With Python integration for enhanced extensibility and batch processing capabilities that guarantee traceability and reproducibility, Isatis.neo enables seamless adaptation to various configurations and empowers users to customise their workflows with confidence.



Licensing

Before installation of the new Isatis.neo version, please check that your license is still covered by a maintenance contract and/or your license key is still available. By default, license keys are valid for 12 months. They are compatible with all the software versions that will be released during the validity period of your maintenance contract.

Site licenses need to be installed on your license server by your license administrators. For the cloud licenses, a new license file will be automatically deployed on Geovariances' servers.

For **Isatis.neo-mining**, we now provide a version on the [Customer Support Portal](#) and on Geovariances' [website](#) compatible with **Datamine License services** and **Geovariances License Manager** (RLM). You will only have to choose one of the License system during the installation.

Please contact us via the [Customer Support Portal](#) for any information regarding your license and maintenance contract.

Project compatibility

Your projects are automatically converted into the new format when you open them.

Platforms and Requirements

Before installing Isatis.neo, please make sure that the following software products are also installed on your Personal Computer:

- Windows 10 or 11 (64 bits only) or Linux Ubuntu 20.04 or higher - on PCs with Intel compatible processors are supported by Isatis.neo.
- An HTML 5.0 compliant browser such as Google Chrome (recommended, Firefox or Microsoft Edge are also supported).

Note: NVIDIA graphic cards with the most recent drivers are recommended for the use of the 3D Viewer. AMD/ATI cards with recent drivers are also supported. Intel graphic cards are known to cause some problems during 3D graphic rendering.

Further Information

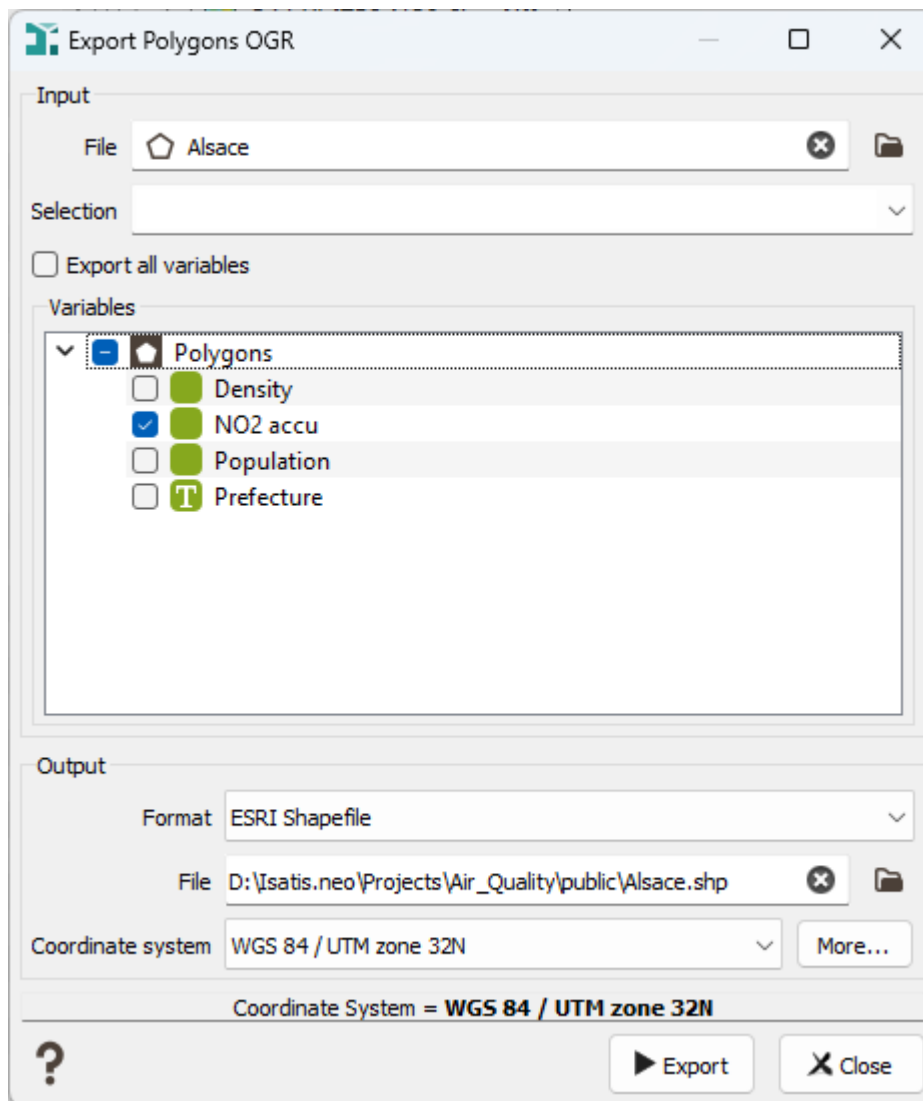
This document includes cumulative release notes for Isatis.neo. Release notes for other versions of Isatis.neo are available via the [Customer Support Portal](#) or via the Geovariances' [website](#).



Isatis.neo 2026.1

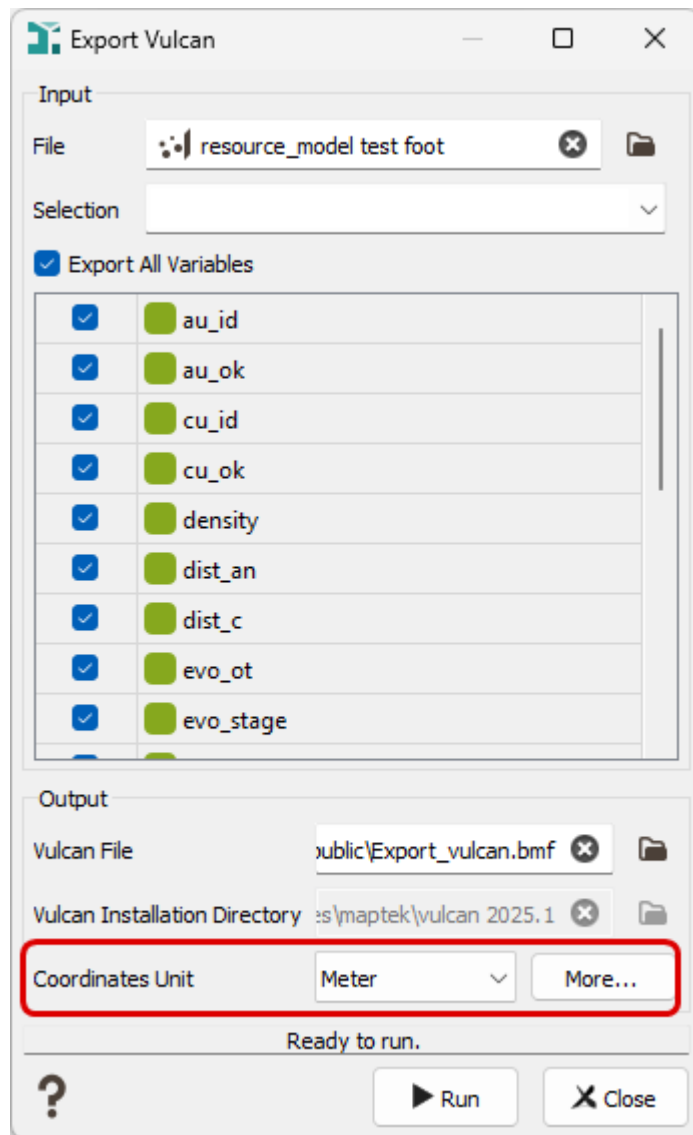
Home

- The **export of polygon data to OGR** formats has been enhanced. In addition to geometry, you can now **export associated variables** when available. Support for the **GeoJSON** format has also been added, providing greater flexibility for data exchange and interoperability.



- Vulcan import and export** tasks now include a **coordinate unit selector**. Because Vulcan files do not store coordinate unit information, you can now specify the unit used by the Vulcan file during import or the unit to write during export. Isatis.neo then performs the required coordinate and block-size

conversions automatically.

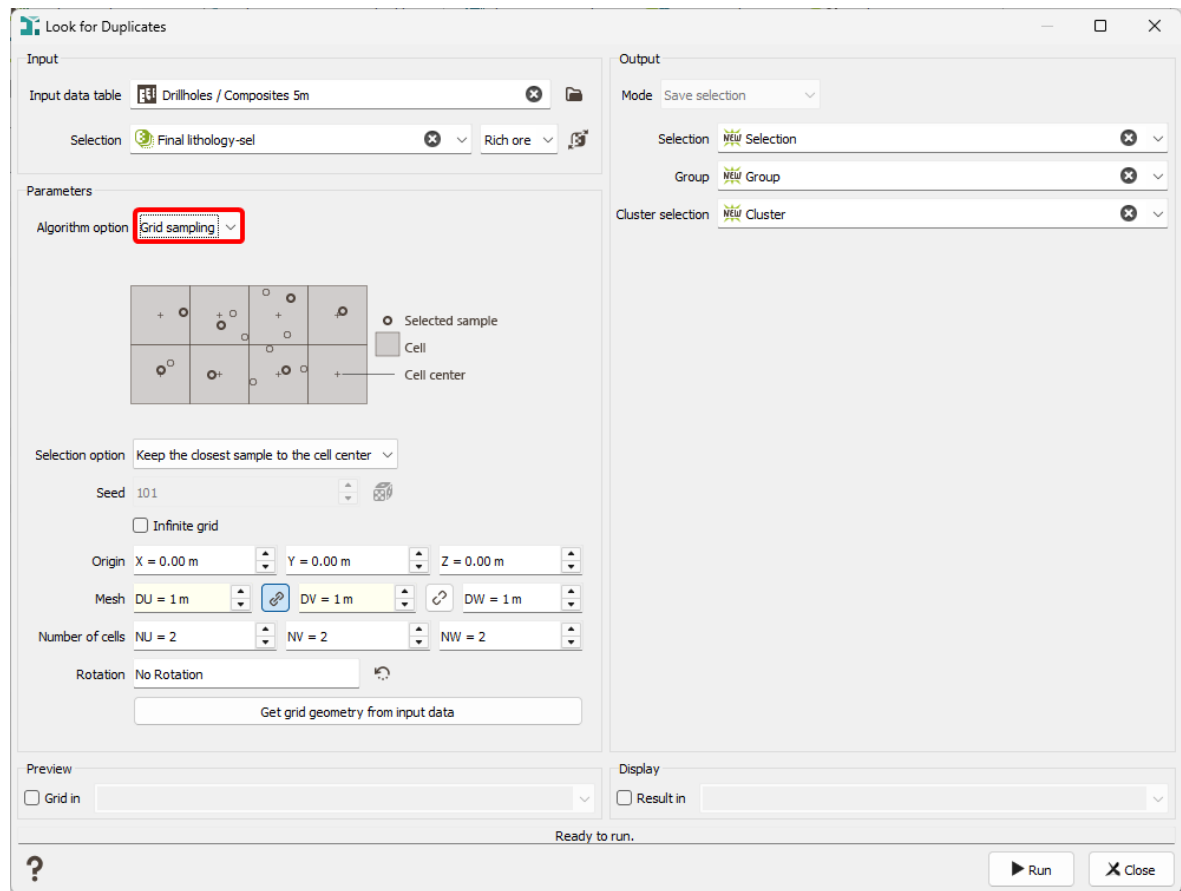


Data Management

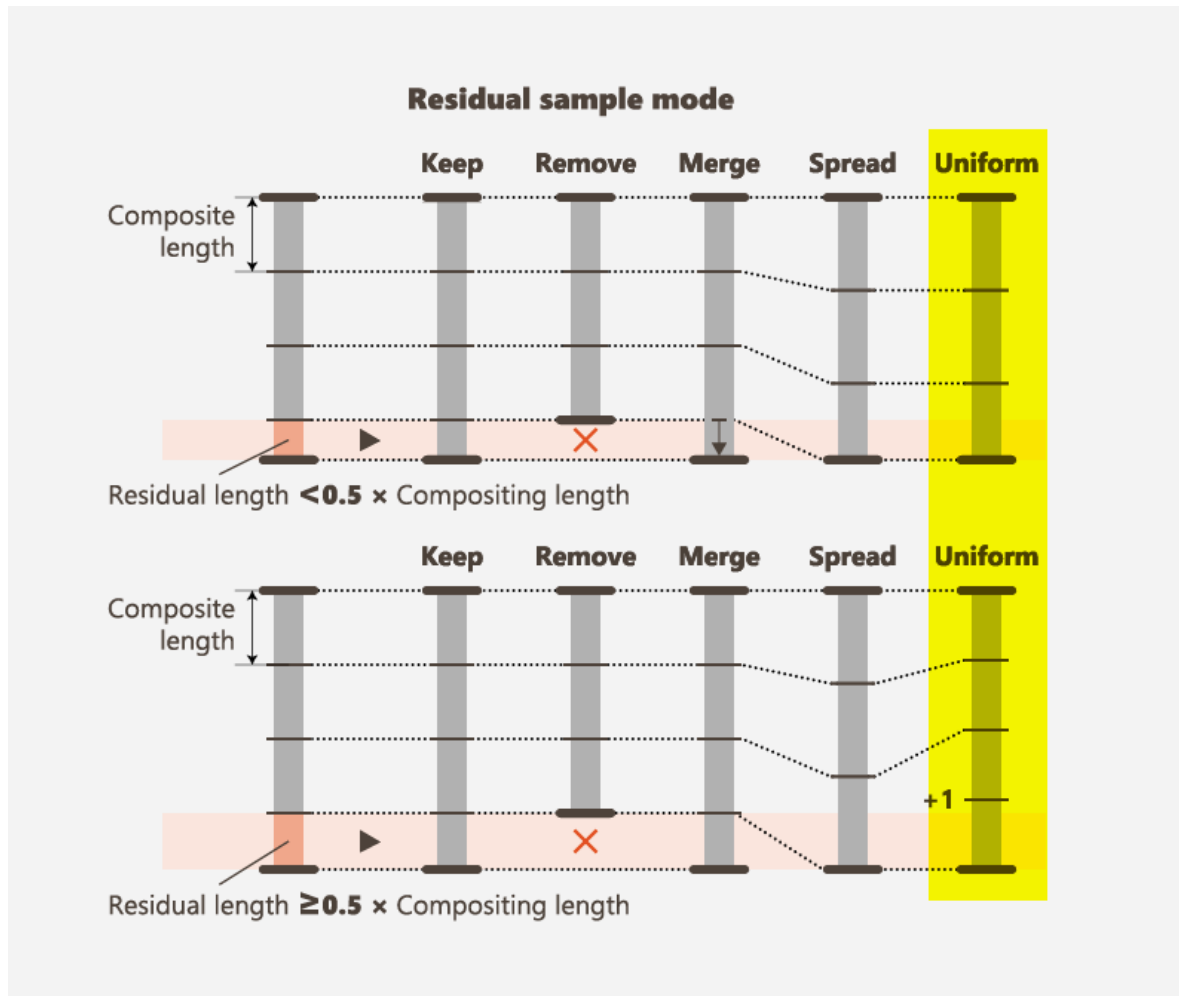
- The **Look for Duplicates** task now includes a new **Grid sampling** algorithm. This mode creates a subsample by selecting **at most one input sample per cell of a regular virtual grid**, making it easier to thin dense datasets and avoid keeping several nearby samples in the same area.

Two selection modes are available: you can either **keep the sample closest to the cell center** or **keep a random sample** within each cell. The grid

geometry can be defined manually or initialized automatically from the input data, and a **preview grid** can be displayed directly in a 2D or 3D scene to help you validate the sampling settings.



- In **Compositing**, a new **Uniform composite residual spreading** mode is available to manage residuals when compositing by length. This mode is similar to the classical spread mode but allows the creation of an additional composite when the residual length is **greater than half the target composite length**. The total interval is then evenly redistributed, resulting in composites with strictly uniform lengths and avoiding overly long composites.

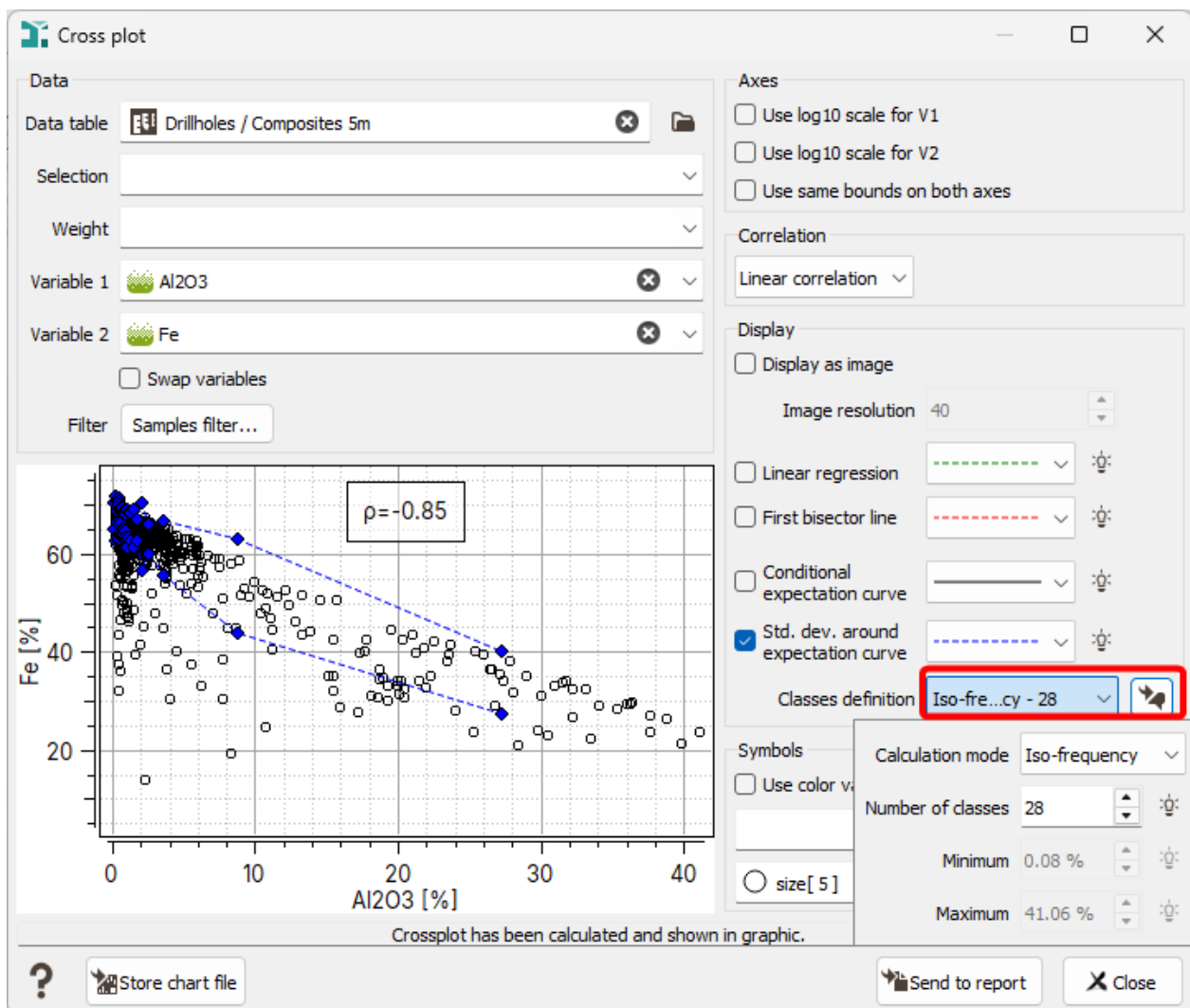


For example, if an assay length is **18 m** and the composite length is **5 m**, the classical spread mode produces three 6 m composites, whereas this mode produces **four 4.5 m composites**. This ensures more consistent support and composite lengths closer to the target value.

Statistics

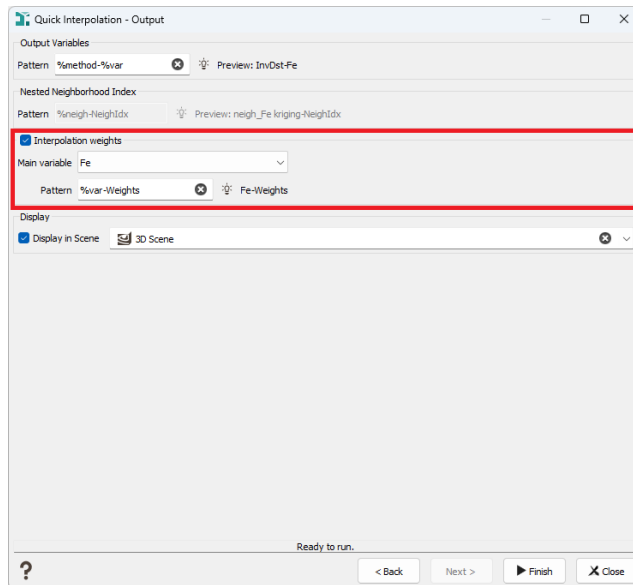
In **Cross plot**, the **Conditional expectation curve** now supports **iso-frequency classes**. With this new mode, each class contains the same number of data points, providing a more balanced representation of the relationship between the conditioning and target variables when the data distribution is uneven.

When using this mode, only the **Number of classes** needs to be defined. As with the regular mode, the associated conditional expectation statistics can be printed in the **Messages** window and stored in a **Chart File** for further analysis.



Interpolation

- **Quick Interpolation** now supports **saving interpolation weights**. For each target point, the sum of the interpolation weights used for the selected variable can be stored. When multiple input variables are defined, only the weights associated with the **Main** variable are saved. An automatic naming pattern can be used to define the output variable name.



Quick Interpolation

Input Data Table
 Selection : Drillholes / Composites Sm
Variable #1 : Fe
Variable #2 : Al2O3
Output Data Table
 Selection : Block model 75x75x15m / Grid Cells
Variable #1 : InvDist-Fe
Variable #2 : InvDist-Al2O3
Interpolation Type : Inverse Distances Power = 2
Calculation Mode : Block
Block Discretization : NJ = 5, NV = 5, NW = 3
Neighborhood : Advanced: Existing Moving
Neighborhood Name : neigh_Fe kriging
Special options :
 : Use local anisotropies

Moving neighborhood from ellipsoid

Ellipsoid parameters

Ellipsoid rotation	Dip = 15° Dip Azimuth = N270° Pitch = 150°
Ellipsoid size (radius)	300 m, 500 m, 50 m
Use anisotropic distances	Yes
Number of angular sectors	4
Maximum number per sector	8
Split ellipsoid vertically	No

Advanced selection parameters

Apply heterotopic search	No
Select all the samples in the target cell/block	No

Shortcuts parameters

Minimum number of samples 4

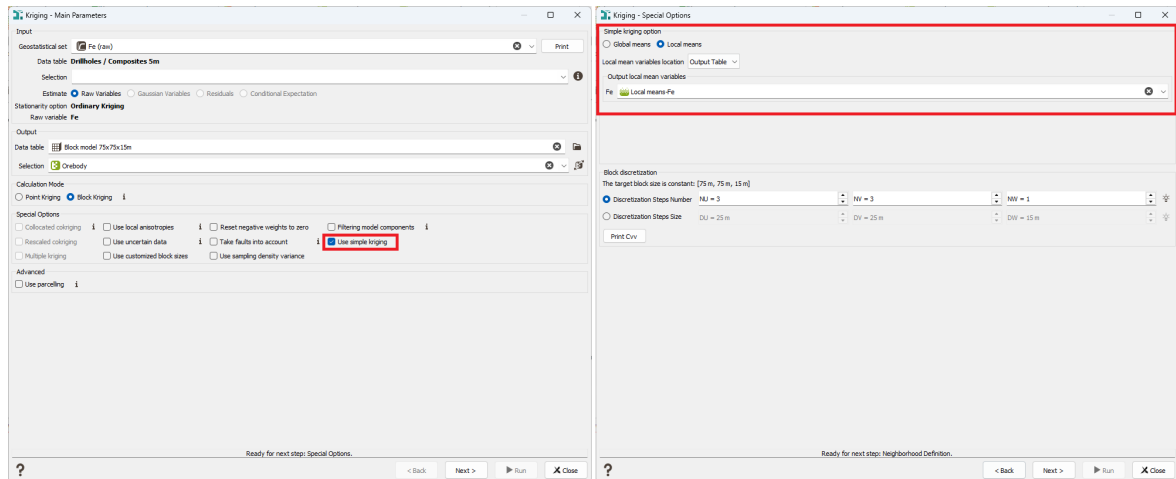
Variable Statistics

	Total Count	Defined Count	Mean	Variance	Standard Deviation	Coefficient of Variation	Minimum	Maximum
InvDist-Fe [%]	7529	7197	65.93	5.933	2.44	0.03695	42.10	68.97
InvDist-Al2O3 [%]	7529	7015	0.97	0.3557	0.60	0.6179	0.18	6.99
Fe-Weights [%]	2767	2767	0.04	1.700E-03	0.04	1.141	0.00	0.33

- A new **Use simple kriging** option has been introduced for both **Kriging** and **Simulations** workflows. It allows users to perform Simple Kriging even when the input Geostatistical Set is defined with Ordinary Kriging (stationarity option). Simple Kriging assumes a known mean, which can be defined either as a **constant value** or as **locally varying means**, and requires a strictly stationary model consistent with the variogram definition.

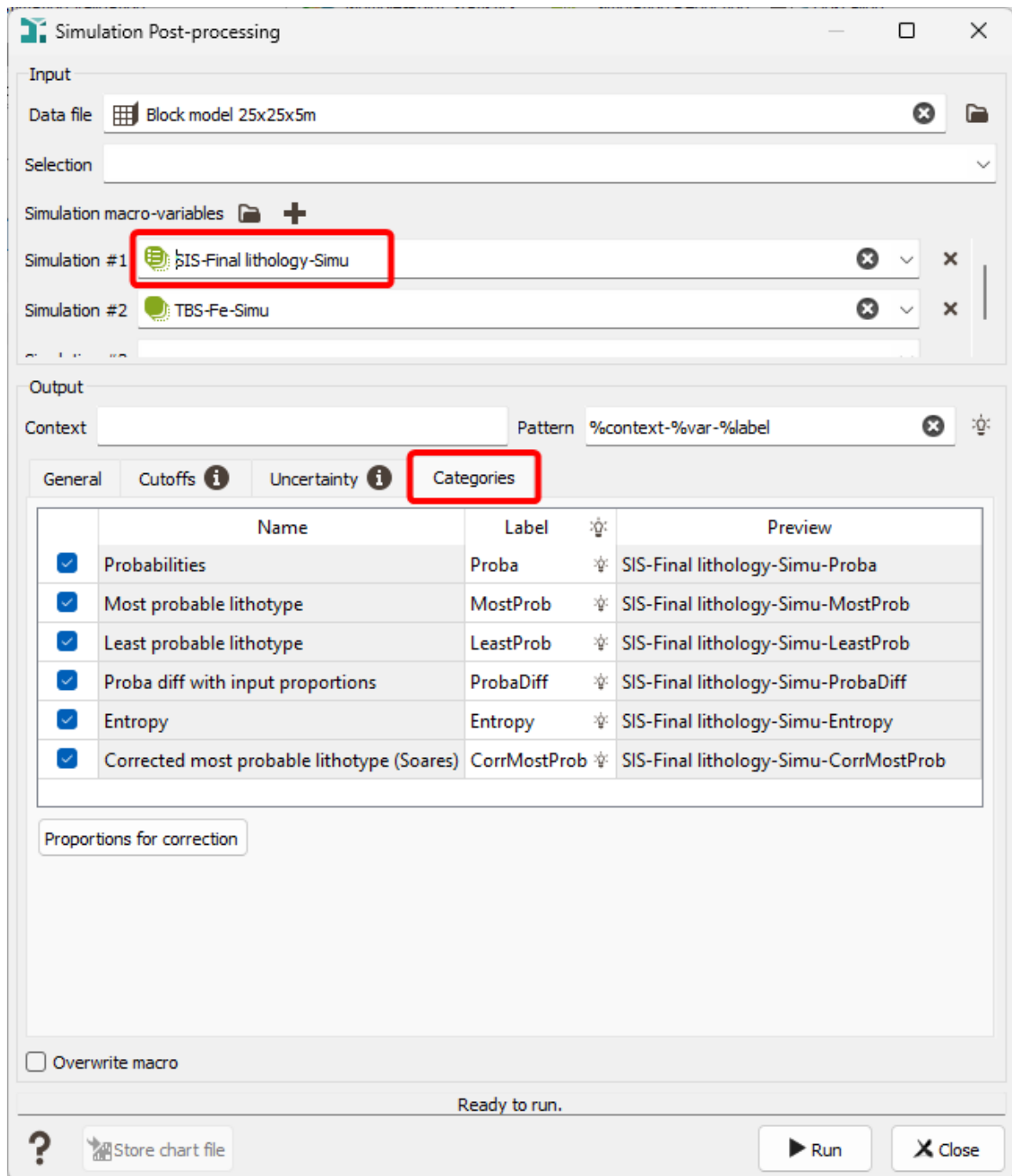
For simulations, this option is available for SGS and conditional TBS methods. By default, SGS simulations are performed using Simple Kriging with a mean equal to 0, while TBS simulations use Ordinary Kriging unless the option is activated.

This option is not compatible with the use of known drift(s).



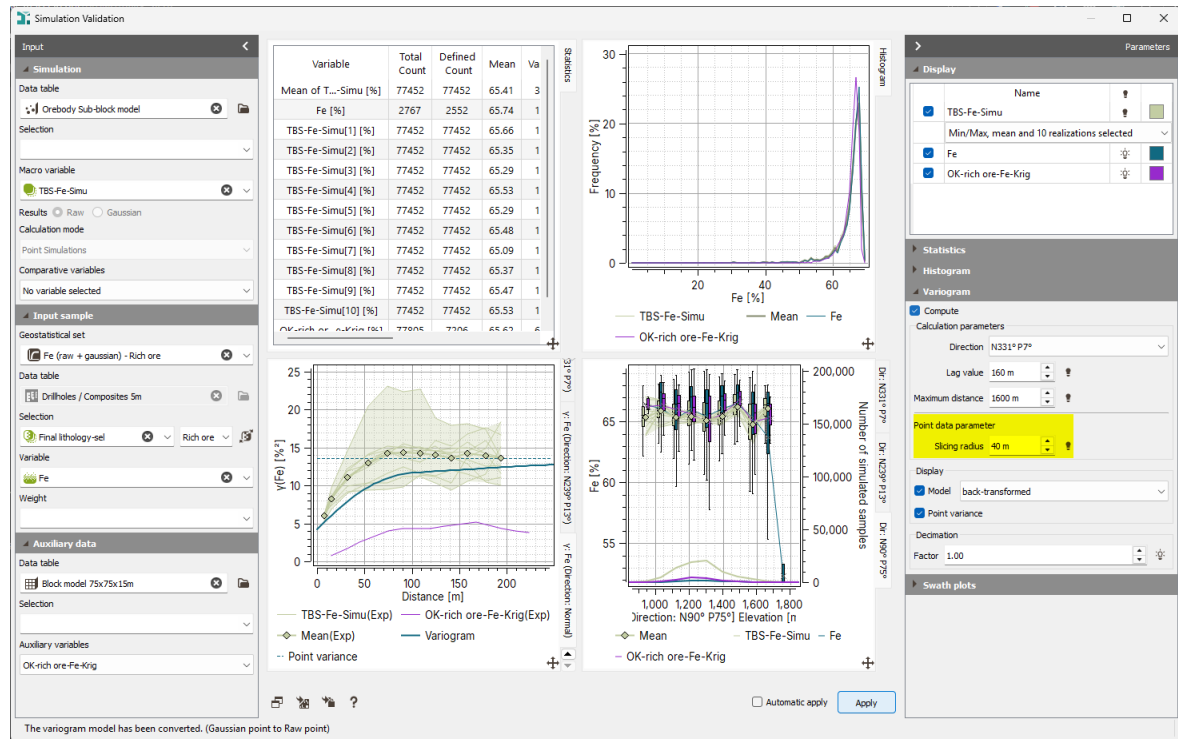
- **Simulation Post-processing** now supports **categorical simulations**, in addition to numerical simulation sets. This enhancement makes it possible to compute dedicated post-processing results from categorical realizations without rerunning the simulations.

A new **Categories** tab gives access to outputs such as **category probabilities**, **most probable** and **least probable categories**, **probability difference**, **entropy** and the **Soares uncertainty criterion**. When available, the proportions used during the simulation are also reused to initialize the default proportions for these calculations.



- In **Simulation Validation**, the calculation of directional variograms has been enhanced for variables defined on **points or sub-blocks**, including the simulation macro-variable as well as comparative and auxiliary variables. In addition to the **lag** and **maximum distance**, the calculation now also takes into account the **Slicing Radius** in 3D, or the **Slicing Width** in 2D.

An **Angular Tolerance** of **45°** is also applied in the calculation, even though it is not displayed in the interface. This provides a more explicit control of the directional variogram computation used to validate simulation results against associated variables.



- In the **Upscaling** task, a new option is available when using the **Categorical** mode to **control how statistics are organized** in the table produced at the end of the run. Statistics can be displayed **by variable** (one table per output variable with one row per category) or **by category** (one table per category with one row per output variable).

Upscaling

Input

Grid: Block model 25x25x5m

Selection: Orebody

Weight: [Dropdown]

Density: ☒ None ☐ Constant ☐ Variable

Main variable: TBS-Fe-Simu

Auxiliary variables: [Add]

Data #1: [Dropdown]

Parameters

☐ Moving ☐ Fine-to-coarse ☒ Categorical

Categorical variable: Domains

Output

Context: [Dropdown] Pattern: var-%label

General **Thresholds** **Uncertainty**

	Name	Label	Preview
☒	Mean	Mean	TBS-Fe-Simu-Mean
☒	Standard deviation	StdDev	TBS-Fe-Simu-StdDev
☐	Variance	Var	TBS-Fe-Simu-Var
☐	Coeff. of variation	CV	TBS-Fe-Simu-CV
☐	Minimum	Min	TBS-Fe-Simu-Min
☐	Maximum	Max	TBS-Fe-Simu-Max
☐	Quantiles	q	TBS-Fe-Simu-q[5.00 %]

Quantiles: 5.00; 25.00; 50.00; 75.00; 95.00 %

Order statistics table: ☐ By variable ☒ By category

☒ Only print a table in Messages (variables won't be saved)

☐ Overwrite macro

Ready to run.

[?] [Store chart file] [Run] [Close]

Statistics for North

	Total Count	Defined Count	Mean	Variance	Standard Deviation	Coefficient of Variation	Minimum	Maximum
TBS-Fe-Simu-Mean [%]	127901	127901	65.11	0.000	0.00	0.000	65.11	65.11
TBS-Fe-Simu-StdDev [%]	127901	127901	0.30	0.000	0.00	0.000	0.30	0.30
TBS-Fe-Simu-M[[40.00,50.00]] [%]	127901	127901	46.49	0.000	0.00	0.000	46.49	46.49
TBS-Fe-Simu-CI[90.00 %] [%]	127901	127901	1.05	0.000	0.00	0.000	1.05	1.05
TBS-Fe-Simu-CI[95.00 %] [%]	127901	127901	1.27	0.000	0.00	0.000	1.27	1.27

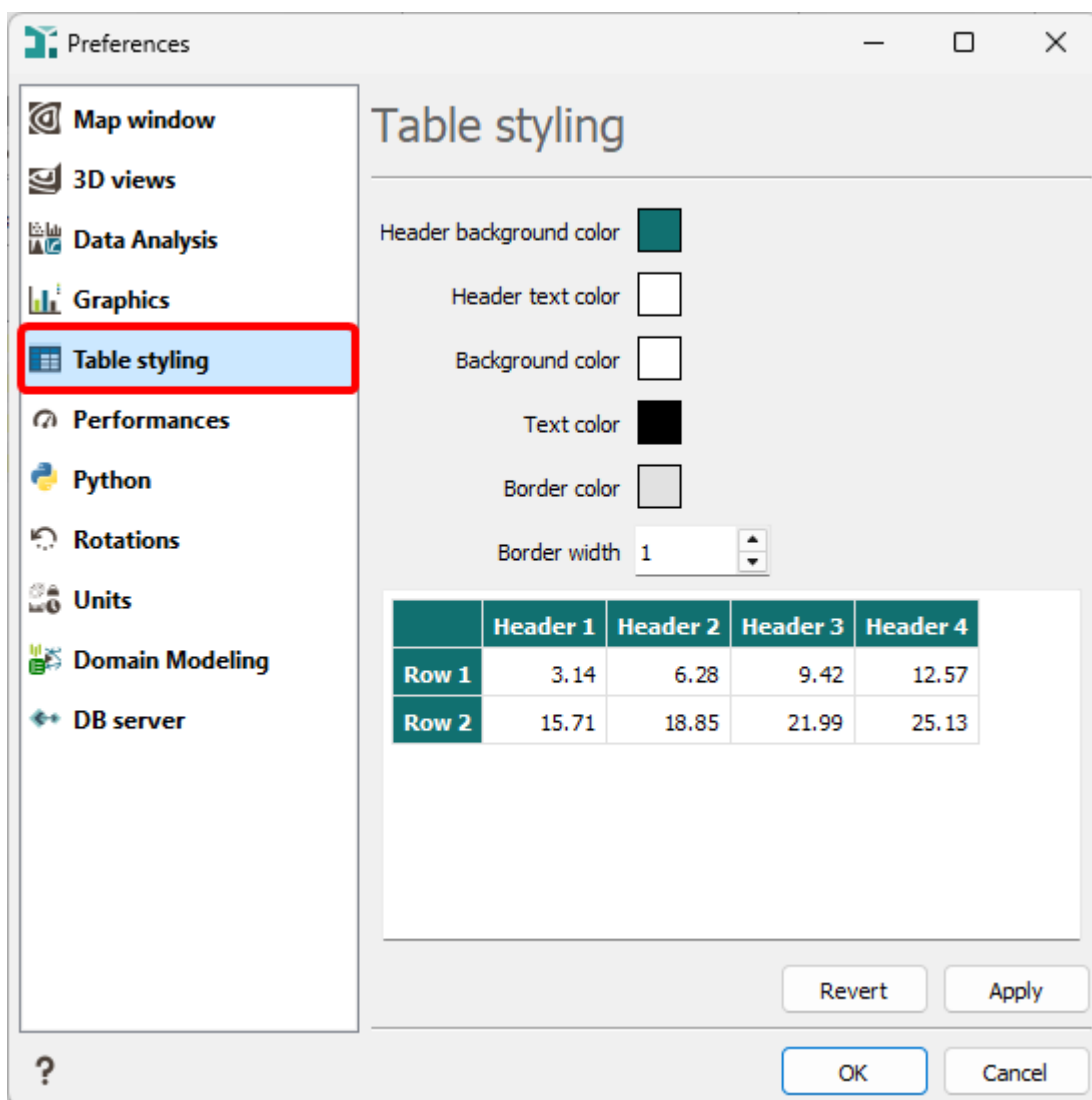
Statistics for South

	Total Count	Defined Count	Mean	Variance	Standard Deviation	Coefficient of Variation	Minimum	Maximum
TBS-Fe-Simu-Mean [%]	74793	74793	66.55	0.000	0.00	0.000	66.55	66.55
TBS-Fe-Simu-StdDev [%]	74793	74793	0.26	0.000	0.00	0.000	0.26	0.26
TBS-Fe-Simu-M[[40.00,50.00]] [%]	74793	74793	46.93	0.000	0.00	0.000	46.93	46.93
TBS-Fe-Simu-CI[90.00 %] [%]	74793	74793	0.87	0.000	0.00	0.000	0.87	0.87
TBS-Fe-Simu-CI[95.00 %] [%]	74793	74793	1.08	0.000	0.00	0.000	1.08	1.08

Display

New **Table styling** preferences are now available to define the default display parameters used for tables in **Isatis.neo**. These settings apply to tables displayed in the interface, such as statistics produced in the **Messages** window at the end of a run or statistics panels or directly in some tasks such as **Grade Tonnage Curves and Tables**.

You can now customize the **header background color**, **header text color**, **cell background color**, **text color**, **border color** and **border width**. A preview area is available in the preferences to visualize the final table appearance before applying the settings.



Defect Fixes

ING-5430 - Imputation

Multivariate imputation now performs a more robust check of the **geoset covariance matrix** before running. If the matrix is not invertible, the process stops earlier and displays a **clearer error message**, rather than failing later during the computation.

ING-5476 - General

Tasks now consistently detect **duplicate output variable names**, preventing misleading error messages and unexpected validation failures when renaming outputs.

ING-5481 - 3D Viewer

The **picking table** now keeps the **correct column width** and no longer resets its selection when a new point is picked or the input support is modified.

ING-5485 - Grade Tonnage Curves and Tables

Grade-Tonnage Curves now display the **correct statistics** when switching between point and block anamorphosis, using the discretized model for the mean and standard deviation.

ING-5489 - Cross-Validation

Cross-validation now correctly handles **unique neighborhoods**, preventing some samples from being incorrectly excluded when the neighborhood size matches the data extent.

ING-5490 - MPS

MPS simulations now **run faster** when using an output **selection**, fixing a **performance** issue that could significantly slow down simulations.

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