



# Afraid to get into geostatistics?

What if a new software solution made the experience easier?

**Isatis.neo Petroleum Edition is a smart and powerful software solution in geostatistics for reservoir modeling.** Featuring an intuitive user interface, it results from Geovariances' dual commitment to developing breakthrough technology and making first-class geostatistics accessible to more users.

Isatis.neo Petroleum Edition meets the fundamental geomodeler's requirements. The software enables thorough data analysis and visualization, high-quality horizon mapping, and robust reservoir characterization. It allows you to carry out extensive uncertainty and risk analyses that improve your decision-making process. It also offers a preconfigured workflow for time-to-depth conversion, automatic trap and associated spill points identification, volumetrics, and uncertainty quantification all along the process.

Building workflows is smooth with Isatis.neo Petroleum Edition and makes it a scalable software solution.

Isatis.neo Petroleum Edition is part of the **Isatis.neo software** product line.

# Why Isatis.neo?

- It is designed for the highest performance, with an intuitive user interface for ease of use and cutting-edge parallelized algorithms.
- Users quickly get to grips with software's use.
- Workflows can be created and adjusted to each company's specific processes and automated to streamline teams' daily tasks.
- Geovariances' 35-year expertise in geostatistics-based software development in partnership with the French Mining School of Paris ensures a robust and reliable software solution.

## **ISATIS.NEO KEY FEATURES**

- Integrated and powerful application for Exploratory Data Analysis in univariate and multivariate contexts.
- Automatic sample clustering for the definition of homogeneous geological facies classes. Border analysis.
- Built-in tools for well discretization, data declustering,
  PCA, MAF, PPMT, Kriging Neighborhood Analysis, crossvalidation, variable capping, unfolding.
- Classical interpolation methods (nearest neighbor, inverse distance, moving average, moving median).
- Industry-standard estimation methods (point, block, on subblocks, simple, ordinary, universal, multivariate, spline, linear kriging, kriging with external drift, MIK).
- Advanced estimation methods (rescaled cokriging, kriging with uncertain data, faults, filtering model components, Mixed Support Kriging, using local parameters, using Sampling Density Variance, conditional expectation).
- Conditional and non-conditional simulations (SGS, TBS, and SPDE).
- Genuine simulation post-processing for robust uncertainty and risk analysis.
- Estimation validation / Simulation validation.
- Sequential Indicator Simulations, Plurigaussian simulations, and Multiple-point Statistics for reservoir geology modeling.
- Python functionalities and coding.
- Great interoperability.

### FULLY EXPLORE YOUR DATA



An integrated and user-friendly application for Exploratory Data Analysis enables the fast computation and display of various statistics (i.e., histograms, boxplots, cross-plots, swath-plots, probability plots, Hscatter plots), variograms, and Gaussian anamorphosis, just by simple drag and drop of variables. All the inputs users need for kriging or simulation (variogram models, stationarity options, anamorphosis function) are stored in a single dedicated object. It guarantees consistency and makes further parameter setting more straightforward.

### QUICKLY GET RELIABLE ESTIMATES



Kriging options are grouped into one single dialog box and selected with a mouse click, simplifying the settings choices. Systematic naming of output variables, based on a pre- or user-defined convention, saves users' time, and ensures name consistency across different models.

### CUSTOMIZE AND AUTOMATE YOUR WORKFLOWS



Workflows can easily be recorded in batch files and run again interactively or automatically when new data comes in. They can also be used to test different scenarios quickly. Batch files also provide perfect support to keep full track of processes for auditing purposes. When combined with Python coding functionalities (with access to a wide range of Python libraries), it gives Isatis.neo almost infinite capabilities.

### QUICKLY PRODUCE YOUR STUDY REPORTS



An integrated word processor facilitates reporting. The tool allows users to copy views, graphics, and message contents to a report as the project progresses. Users can then edit texts to their needs and export the report in pdf format.

