



Reveal the true nature of the subsurface

## GAIN A RELIABLE UNDERSTANDING OF SUBSOIL STRUCTURE AND HETEROGENEITY

Integrate geostatistics into your modeling workflow to uncover deeper insights, reduce uncertainty, and make smarter, risk-informed decisions with confidence.

HYDROCARBON EXPLORATION  
GAS STORAGE  
HYDROGEOLOGY  
CIVIL ENGINEERING CONSTRUCTION  
GEOTHERMAL ENERGY

# Geostatistics, Your Key to Smarter Subsurface Decisions

Understanding the structure and behavior of the subsoil is crucial for success in a wide range of applications, whether it is **Oil and Gas exploration**, **underground gas storage**, **groundwater management**, **civil engineering**, or **geothermal energy development**. Yet, the ground beneath our feet is anything but uniform. Subsurface heterogeneity and limited visibility can lead to unexpected soil conditions, causing delays, dry wells, and costly overruns.

Geostatistics equips geomodelers with powerful tools to build more accurate and reliable subsurface models. It transforms sparse data into comprehensive geological insights, revealing patterns, reducing uncertainty, and guiding risk-aware decisions.



## OIL & GAS

Maximize oil recovery



## GAS STORAGE

Optimize gas injection capacity



## HYDROGEOLOGY

Better manage groundwater resource



## CIVIL ENGINEERING

Reduce the risk of work disruption



## GEOTHERMAL ENERGY

Maximize reservoir potential

## Why Geostatistics? Smarter Data. Stronger Models. Better Decisions.

### • Data integration & Quality Control

Geostatistics merges and cleans diverse datasets boosting consistency, accuracy, and trust in your model inputs.

### • Variability Analysis

By analyzing spatial variability, geostatistics reveals the hidden patterns and behaviors of soil properties, unlocking a deeper understanding of subsurface heterogeneity.

### • Geological Modeling

Geostatistics produces realistic geomodels that honor geological relationships, reproduce facies accurately, and reflect true subsurface complexity.

### • Property Characterization

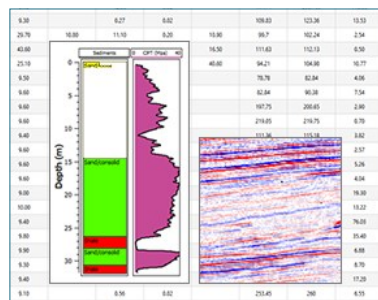
Techniques like kriging consider spatial correlations and geology to deliver robust, high-resolution maps of soil and rock properties.

### • Sampling Optimization

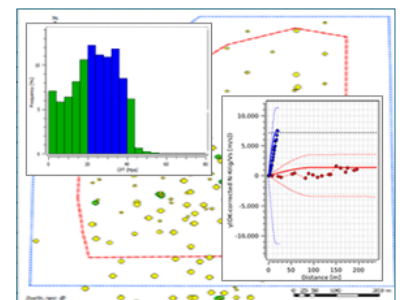
Geostatistics helps design efficient, cost-effective sampling strategies, optimizing the placement of wells and measurement point.

### • Uncertainty & Risk Assessment

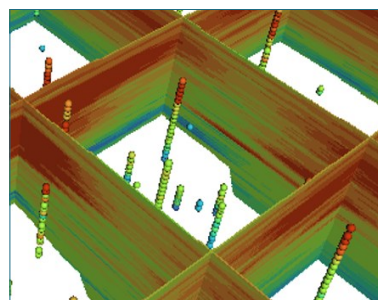
Geostatistical simulations replicate the natural variability of subsurface conditions, enabling robust uncertainty quantification and better risk-informed decisions.



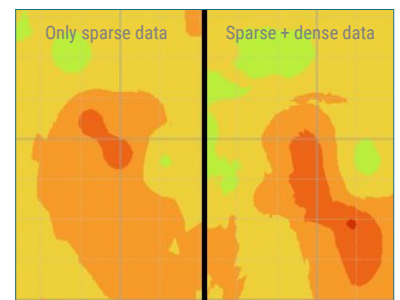
Integrate, analyse and use all available data, including well or borehole logs, seismic data, geophysics, and in-situ tests.



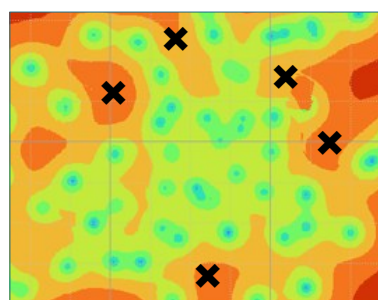
Investigate how soil properties such as strength compaction, permeability, porosity, or resistivity, evolve in space.



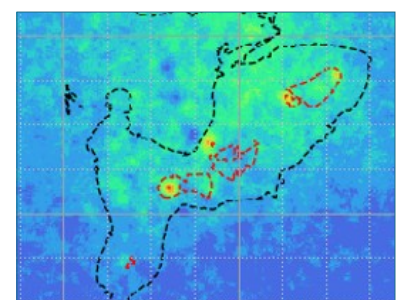
Capture complex facies relationship and account for nonstationarity and anisotropy in your geological model.



Combine sparse and dense correlated data into a co-kriging process to produce more accurate models.



Identify areas requiring additional sampling from uncertainty maps to reduce uncertainty and improve map reliability.



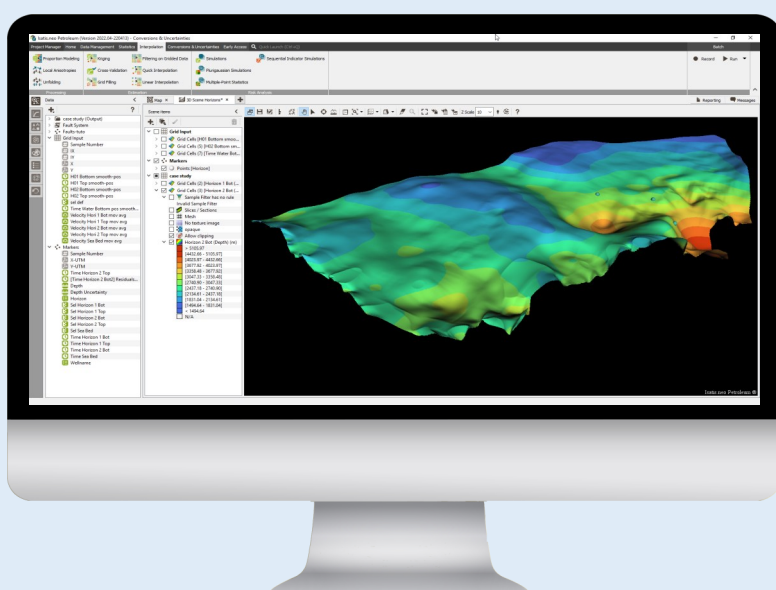
Compute multiple realizations of soil properties and derive distribution curves and probability maps.

# We Guide You from Data to Decision

With 40 years of expertise, **Geovariances** is a **trusted global leader in advanced geostatistics**. We provide cutting-edge software, expert consulting, and tailored training to empower industries worldwide.

**Our mission? To help you unlock the full potential of your data, enhancing decision-making, reducing uncertainty, and driving performance across your processes.**

## Our flagship software solution



**>>> 500+ CORPORATE USERS**



### Premium Geostatistics. Smarter Decisions.

Isatis.neo is powerful software solution for high-level insights and risk-informed decisions across your most demanding projects.



### All-in-One Advanced Solution

Isatis.neo offers a full suite of innovative geostatistical tools, from data analysis and 3D visualization to modeling and risk assessment, all in one powerful platform.



### High Performance. Fully Customizable

Built for speed and reliability, Isatis.neo combines cutting-edge algorithms with batch processing and Python scripting to automate workflows and tailor solutions to your project.

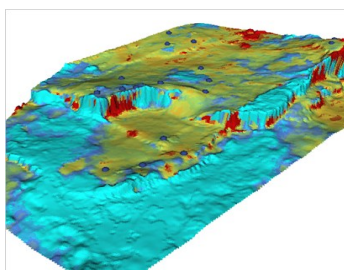


### Smart, Intuitive User Experience

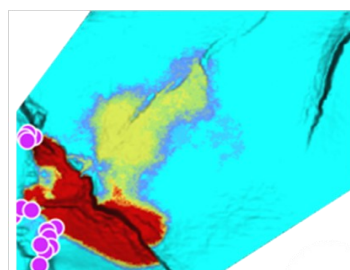
Isatis.neo features a modern, streamlined interface, intelligent optimization tools, and a responsive Help Desk and online user guide to support you every step of the way.

## Conversions & Uncertainties Workflow

**Unlock greater confidence in your reservoir evaluations with Isatis.neo's advanced time-to-depth conversion workflow.** This innovative tool combines industry-leading seismic conversion capabilities with comprehensive uncertainty analysis, enhancing volume estimation accuracy and enabling more reliable assessments of reservoir economic feasibility.



Velocity map



Traps and spill points

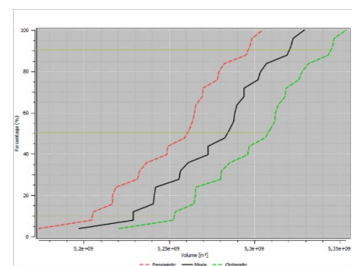
### FROM

- Depth markers, time horizons, velocity maps, and uncertainties
- Faults positions and uncertainties
- Misties interpretations



### TO

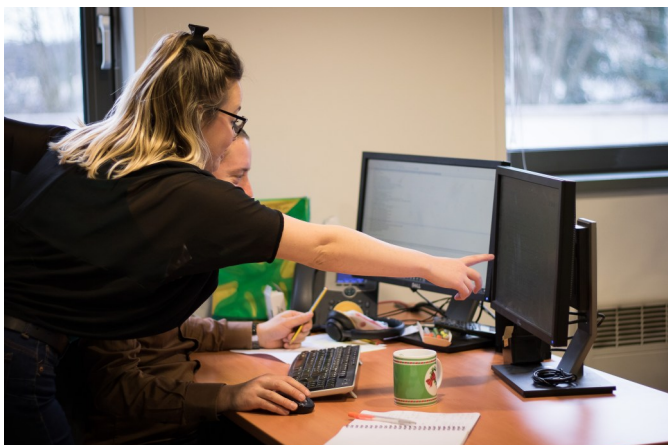
- Depth and velocity maps
- GRV and P10, P50 and P90 scenarios of volumes
- Spill point locations
- Probability of closing



Distribution curve and histogram of recoverable reservoir volume

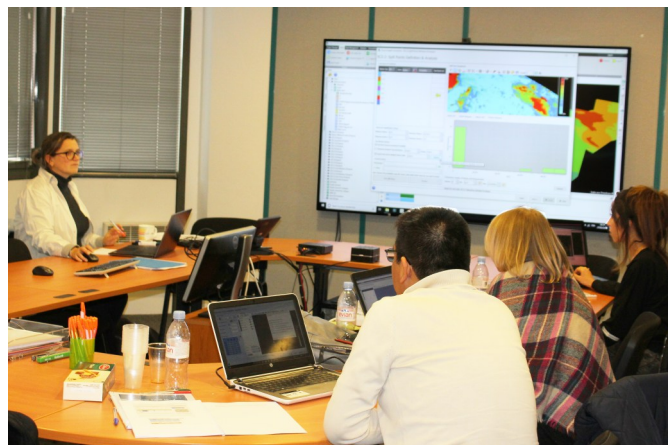
# How We Empower Your Success

## High-level Consulting Services



At Geovariances, our consultants deliver **high-impact, results-driven support** tailored to your operational goals. With deep industry knowledge and a commitment to best practices, they are equipped to **solve complex challenges** across a range of sectors. Recognized experts in their fields, our team actively contributes to international conferences and scientific publications, ensuring you benefit from the latest thinking and real-world experience.

## Comprehensive Training Program



Develop your team's geostatistical expertise with our **wide range of practical training courses**. Designed to match your industry and project needs, our short courses combine theory with hands-on experience to accelerate skill development. Delivered online or on-site, or in a hybrid format, in English or French, our training empowers professionals to apply geostatistics confidently and effectively in their daily work.

## OUR TRAINING COURSES



**An overview of geostatistics for the Oil & Gas industry**  
1 day



**Data analysis, mapping and subsurface property modeling with geostatistics**  
2 days



**Multiple-point statistics with Isatis.neo**  
2 days



**Geological modeling by geostatistics**  
3 days

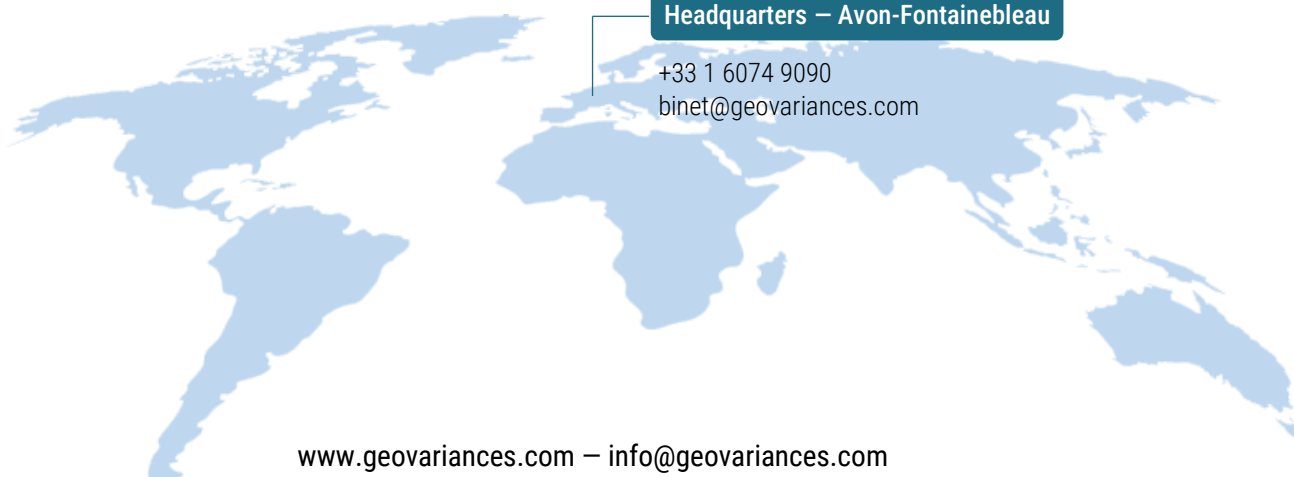


**Advanced geostatistics for reservoir characterization**  
3 days



**Seismic data filtering and depth conversion with geostatistics**  
2 days

## Get in Touch Now



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