



Integrated Geoscience Services



Being an innovator means having great technology and understanding how to apply it. That is the key.

Innovation = technology + approach

Our Innovation

Geomodeling defines innovation through our approach and technology.

The latest technology enables Geomodeling to provide seismic interpretation and geological modeling services that go beyond other traditional methods of interpretation, by providing acute details of industry challenges that many other companies cannot provide.

Our approach, together with the latest software technology, enables our customers to see our innovation that revolutionizes the discovery and evaluation of the assets of their reservoirs.



Innovation

Who is Geomodeling

As the leading innovator in geoscience software and services, Geomodeling offers integrated, multi-scale, shared earth modeling solutions by combining stratigraphic visualization and multi-attribute correlation with the latest geological heterogeneity modeling techniques. We have assembled a team of experienced geoscientists to deliver the qualified expertise that you expect to have working on your business opportunities.

Our Expertise

Defining your Goals

Aligning your reservoir knowledge with your business goals.

By understanding your business and its goals, our team of reservoir specialists will work with you to scope your project to deliver true business value. We can assist you with aligning the challenging questions in your reservoir and delivering knowledge.

Delivering Knowledge

Examining potential in your reservoir.

Everyone wants the best from their reservoir. By combining technological advancements and our approach to your business goals, Geomodeling delivers the best for enhancing your reservoir knowledge to extract the potential in your reservoir.

Optimize your Business

Delivering workflows that suit your culture and optimize performance.

Return on investment is what you are seeking at the end of the day - and what we are here to assist you in achieving. Our proven workflows are designed to support your goals and achieve the information you want from your reservoir.

We live innovation.



Going beyond traditional methods of interpretation.

Innovation = technology

Our Technology

We designed our software with the goal of maximizing revenue and reducing costs with our unique seismic interpretation, visualization, and reservoir modeling software. Our workflow-driven solutions assist geologists, geophysicists, and reservoir engineers to obtain detailed results, achieving maximum reservoir performance with reduced risk and uncertainty.

VisualVoxAt™

Seismic Attribute Interpretation Software

VisualVoxAt is integrated software for seismic attribute generation, visualization, calibration, classification, and interpretation. VisualVoxAt enables us to visualize your data at multiple seismic resolutions and quickly identify the attributes that impact hydrocarbon distribution.

SBED™

Cross-Scale Geological Modeling Software

SBED is the only software for small-scale (centimeter- to meter-scale) geological heterogeneity modeling and upscaling. It enables us to model the small-scale bedding structures that impact fluid distribution. With the software's built-in upscaling function, we can integrate these small-scale effects into large-scale reservoir models and decrease the uncertainty in reservoir predictions.

SBEDStudio™

Geological Scenario Modeling Software

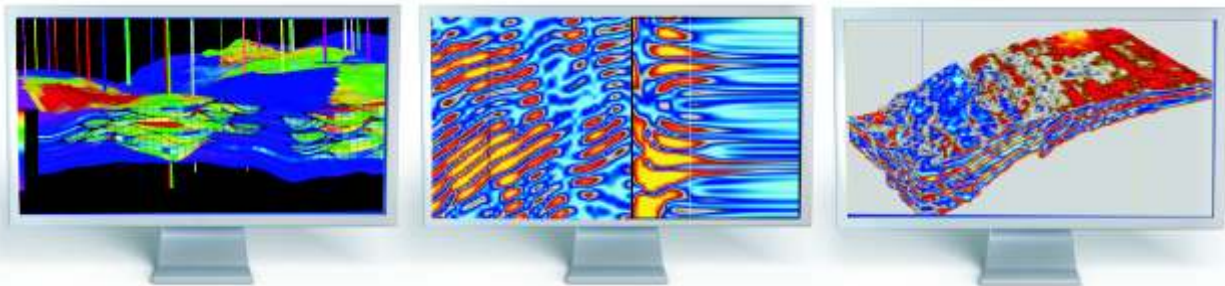
SBEDStudio reservoir modeling software integrates well log, seismic, stratigraphic, lithofacies, and petrophysical data to build geologically realistic models for predicting reservoir production profiles and managing reservoir risk.

Technology

+ approach

Our Approach

Our approach encompasses expert-defined workflows, unique to Geomodeling. These workflows enable us to deliver stratigraphic detail that would otherwise be missed using other competitive techniques. Our approach also enables a faster turnaround for decision-making, high stratigraphic detail, and an opportunity to map permeability throughout the reservoir.

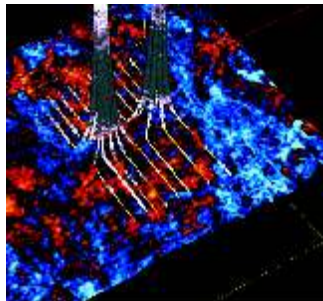




Creating a faster turnaround
for making decisions.

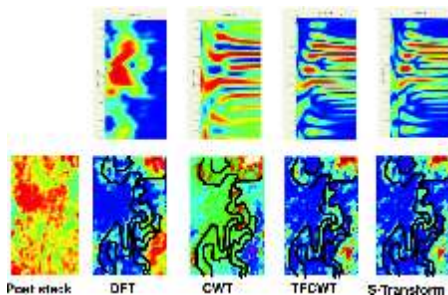
Expert Defined Workflows

Seismic Interpretation



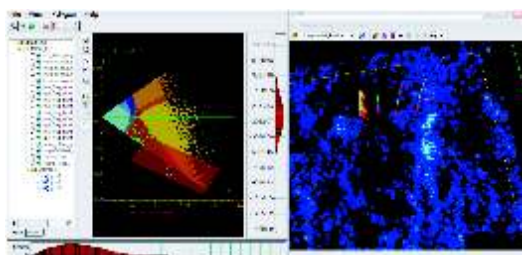
SVA Stratigraphic Volume Analysis

- High-performance rendering technology lets you render stratigraphic layering with opacity
- Enable workflows that reveal subtle geological detail
- Enable quick understanding of details of complex fluvial environments as 3D stratigraphic volumes, not maps
- Enable rapid fault interpretation in structural environments
- Save space and time by generating and analyzing attributes only over stratigraphic package



ISI Interactive Spectral Interpretation

- High-performance leading-edge algorithms for revealing details hidden at specific frequencies, including thin-bed detection
- Workflows that enable rapid identification of critical frequencies
- Unique technology to isolate, mix, and visualize multiple frequencies to solve specific problems

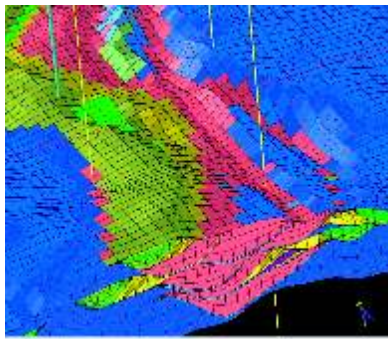


MAC Multiple-Attribute Correlation

- High-performance GPU-based cross-plot rendering of seismic and other data
- Enable correlations on large amounts of data at groundbreaking speeds
- Rapidly calibrate well data to seismic
- Power tools to correlate seismic attributes to geology
- Cross-plot based opacity

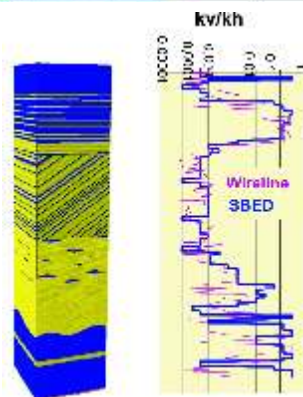
Approach

Geological Heterogeneity Modeling



PFM Process-Guided Facies Modeling

- Simulate stratigraphic layering based on geological processes
- Enable realistic modeling of lithofacies
- Honour rock properties' distribution (K_v , K_h) within lithofacies
- Retain critical detail while upscaling from near wellbore to reservoir grid

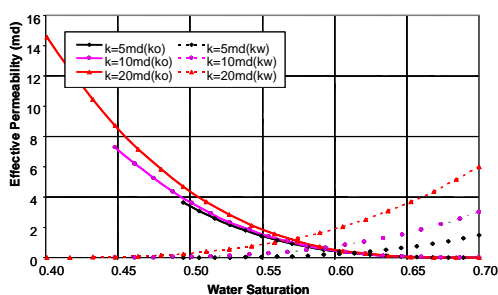


TPM Total Property Modeling

- Identify reservoir flow characteristics
- Use near wellbore modeling to preserve geological detail at core scale
- Improve NTG estimation
- Preserve distribution of reservoir properties from core to reservoir scale
- More realistic cut-off valves for volumetric estimation

NGU Next Generation Upscaling

- Incorporate critical geological elements into simulation grid
- Full 3D grid architecture incorporates flow characteristics based on realistic geological processes
- Provide proven single and multi-phase upscaling to determine relative permeability distributions
- Outputs include full three-dimensional property (K_x , K_y , K_z) tensors
- Integrate property data across multiple scales of observation





Geomodeling delivers a full scale analysis of your reservoir - or any part of it.

Consulting Services

Quantitative Core Interpretation

- Geologically interpret cores for heterogeneity modeling
- Classify flow units and rock type
- Estimate statistics of bedding structure parameters
- Interpret lithofacies
- Estimate bioturbation and fracture intensity
- Estimate distribution of rock properties for each rock type
- Prepare input for near wellbore heterogeneity modeling and upscaling

Geological Corelation

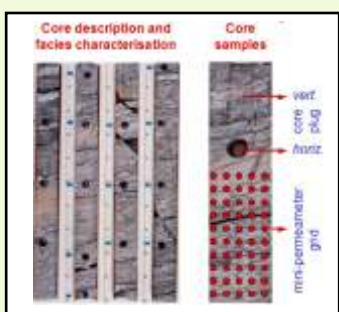
- Interpret facies in a stratigraphic framework
- Correlate well tops based on sequence stratigraphic principles
- Define conditioning data to build reservoir models

Near Wellbore Modeling & Upscaling

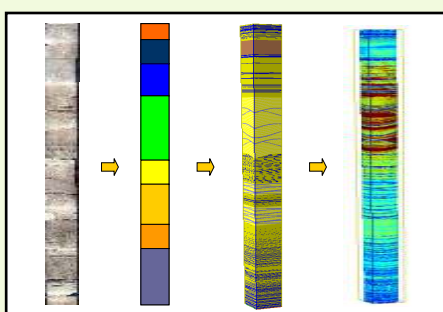
- Build near wellbore 3D heterogeneity models
- Upscale effective properties from core plug to well log and geocellular scale
- Estimate representative elementary volume (REV)
- Upscale statistics of porosity, permeability, and NTG from core to reservoir grid scale, and present results as direct input for reservoir property modeling

Multi-Phase Upscaling

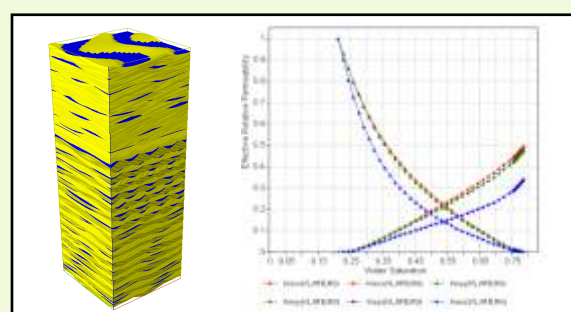
- Model heterogeneity related to multi-phase flow
- Provide facies dependent pseudo-functions at flow grid scale that are upscaled from core data



Quantitative Core Interpretation



Near Wellbore Modeling & Upscaling



Multi-Phase Upscaling

Insight

Seismic Interpretation

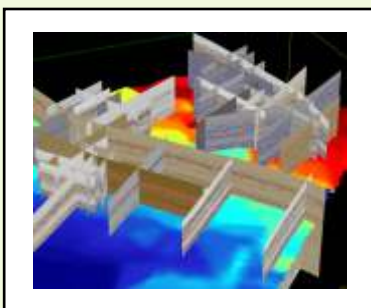
- Synthetic seismogram to tie well tops and horizons
- 2D and 3D structural interpretation and mapping
- Build velocity maps
- Time-depth conversion
- Prospect volume estimates

Advanced Seismic Attribute Analysis for Reservoir Characterization

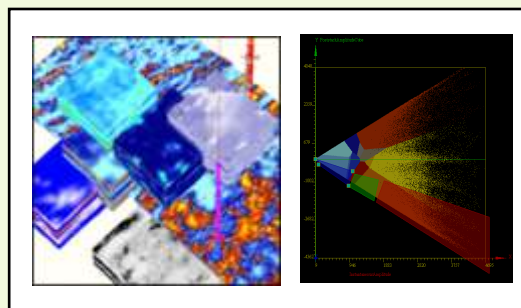
- Use spectral decomposition to detect thin bed reservoirs
- Model stratigraphic grids and analyze attributes
- Calculate and interpret seismic attributes in interval, horizon, and volume for mapping structural, stratigraphic, and lithological prospects
- Reduce attribute redundancy by principal component analysis
- Calibrate well data with multi-attributes
- Classify and map seismic facies volumes
- Interpret AVO attributes to detect hydrocarbons
- Correlate waveforms to map oil/gas boundary in thin-bed reservoirs
- Detect thin-bedded reservoirs with volume visualization of multiple attributes

Reservoir Heterogeneity Modeling

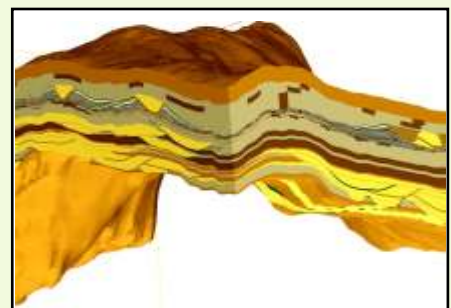
- Build reservoir framework based on seismic interpretation
- Simulate facies model based on geological process or geostatistical methods
- Simulate porosity and permeability models conditioned to well and seismic data
- Upscale from geocellular grid to flow simulation grid



Seismic Interpretation



Advanced Seismic Attribute Analysis for Reservoir Characterization



Reservoir Heterogeneity Modeling



Sharing our innovation through services, software, support, and training.



Training

Geomodeling offers training sessions for new and existing users. The sessions guide trainees through many relevant topics in VisualVoxAt, SBED, and SBEDStudio software by means of interactive demonstrations and practical exercises.

Whether you are a newcomer in the industry or a seasoned professional, Geomodeling covers the bases in delivering courses that suit your needs and skill level. Corporate training packages are also available at your request and at your location.

Count on us

Providing solutions

At Geomodeling, it's about our clients. We are committed to providing the highest standard in customer service through services, software, support, and training.

It's all in the Delivery

We define our working relationship with you by:

- delivering faster turnarounds on decision-making
- reducing uncertainty and assisting you in managing risk more effectively
- assessing reservoir potential at multiple scales
 - beyond those of conventional technologies
- supplying proven workflows designed to support your goals and achieve the information and performance you desire from your reservoir

All designed to save you time and money - to assist in improving your oil recovery and your return on investment.





Contact Us

Canada

Geomodeling Technology Corp.
1100, 665 - 8 Street SW
Calgary, Alberta T2P 3K7
Canada

Tel +1 403 262 9172
Fax +1 403 262 9171

canadainfo@geomodeling.com

China

Geomodeling Beijing Technology Corp.
Zhongguancun Software Park
Suite 1214 or 1217, Building 3B
Haidian District, Beijing 100094
China

Tel +86 10 8282 5668
Fax +86 10 8282 5669

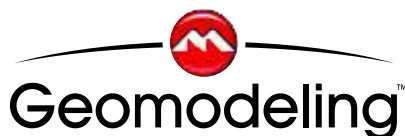
chinainfo@geomodeling.com

USA

Geomodeling Corp.
2825 Wilcrest Drive, Suite 218
Houston, Texas 77042
USA

Tel +1 832 239 5990
Fax +1 713 972 1249

usainfo@geomodeling.com



www.geomodeling.com