



Geophysics 2019.2

Powerful seismic interpretation for your play



GVERSE® Geophysics

Seismic Interpretation Software

A powerful 2D and 3D seismic interpretation system for rapid prospect generation.

GVERSE® Geophysics software is a fully integrated 2D and 3D seismic interpretation system that provides a full range of fit-for-purpose interpretation capabilities, attribute analysis and mapping tools. Whether exploring complex structural areas or looking for subtle stratigraphic traps, today's geoscientist can use the many tools of GVERSE Geophysics to solve these otherwise challenging problems.

Key Benefits

- Maximize your investment with full integration between our geological, geophysical and mapping tools.
- Make quick, accurate structural or stratigraphic interpretations with an extensive toolset for horizon, fault and geobody interpretation.
- Work with large seismic files and hundreds of thousands of wells without compromising performance even on off-the-shelf hardware.
- Perform your everyday synthetic modeling using a built-in editor without a separate license.
- Gain deeper insights into subsurface structures and data in our specialized 2D & 3D viewers.
- Experience fast, reliable depth conversion and velocity modeling with real-time updates for well plans.
- Obtain a better understanding of your seismic data with on-the-fly attribute computation.
- Leverage a simple, intuitive UI to focus solely on making decisions that matter.

Key Features

Full Integration with GeoGraphix

Share data between all our geophysical, geological and mapping tools using the **tight integration** within the GeoGraphix suite for a more efficient asset team. Make faster and more informed decisions – qualities essential to today's fast-paced E&P environment.

Effortless Data Management

Perform rapid interpretation in large **2D, 3D or combination projects** with our **64-bit architecture**. Manage all your seismic surveys easily with **multiple data versions** for each survey. Quickly convert SEG-Y data to our **proprietary brick format** for optimized data access using **versatile SEG-Y readers** built to handle most commonly encountered scenarios. Easily **balance 2D, 3D and 2D-3D datasets** including **automatic calculation** of phase, gain & time relationships.

Integrated Synthetic Modeling

Create or edit synthetic seismograms using simplified workflows in a **dedicated synthetic view**. **Display seismic, horizons and formation tops** and tie synthetic traces using **shift, stretch and squeeze** in the dedicated view or directly in 3D. **Calculate optimum time and phase shifts** to maximize correlation between synthetic and seismic. Save synthetics and time-depth tables **directly in WellBase**. Synthetic modeling in GVERSE Geophysics has **no separate license** requirement.

Blazing Fast 3D Visualization

Built on an **engine designed for seismic** and related data, it's never been easier to **view your seismic, horizons, faults, wells and wellbore data and much more in the 3D space**. Work with **very large seismic files without compromising performance** using our groundbreaking LOD format. Use **advanced visualization techniques** like voxel rendering, co-blending, selective transparencies and more to visualize subsurface structures like never before and gain deeper insights into your data to make better decisions for your play.

Extensive Horizon Interpretation

Access **multiple manual and automatic picking modes** to quickly mark seed picks and **track horizon surfaces across multiple 2D and 3D surveys**. Utilize extensive **validation options** and QC features like **confidence, pick order, pick type and pick relationship displays** for faster QC and more accurate picking. Interpret in thrust-faulted areas with **multi-z horizon picking** (2D seismic only). Access a full set of **horizon operations** including copying, snapping, smoothing, merging and dip and azimuth calculations.

Accurate Fault Interpretation

Mark and edit fault segments on vertical or horizontal seismic displays or directly in the 3D view. **Interpolate the fault surface automatically** with fault triangulation algorithms that deliver accurate and reliable results. **Assign, unassign or reassign fault segments** individually or in bulk directly from seismic sections or 3D view. Use the **correlation window** to assist fault picking in difficult areas or noisy data. Calculate **fault heaves automatically** with fault polygons.

Comprehensive Geobody Interpretation

Pick structures on seismic and attributes volumes and **save them as geobodies**. Interpolate seed picks or **track signatures automatically** to extract geobodies from seismic data. **Drape data** directly on your geobodies, **show intersections** with seismic sections, **calculate volumetrics** and a lot more to better understand your reservoirs and subsurface structures.

Robust, Reliable Depth Conversion

Experience fast and reliable depth conversion algorithms with an **extensive set of options**. Use **four types of velocity models** including the ability to set an **external seismic volume** as a model. Create surfaces with the unique **three component horizons** using a comprehensive set of **horizon conversion options**. Keep your seismic backdrops in GVERSE Geomodeling up-to-date by incorporating changes to formation picks in real-time with **dynamic depth conversion**. Switch to Depth Mode in time interpretations and **convert time scene to depth, on-the-fly**. QC your velocity data with a variety of **velocity QC tools** and **visualize data from velocity models** on seismic sections. **Full integration** between our geophysics and geology tools lets you utilize all available data when making key decisions for exploration or field development.

Extensive Indigenous Mapping Capability

Fulfill most of your mapping needs with the built-in mapping framework. Create **multiple base maps** with a unique set of display parameters and color palettes. **Grid and contour** your maps and surfaces and display **contour or color density maps** for time, velocity, depth or seismic attribute surfaces. Access the **full set of gridding operations** when mapping data with geophysical and geological integration. Measure **planimeter and linear distance** on map and 3D views.

Simple Attribute and Surface Calculations

Compute surface attributes with the Attribute and Surface Calculator which comprises **multiple attribute options** in an **easy to use interface**. Calculate attributes within a time window, between horizons or about a selected horizon using the **flexible windowing options** or do **horizon-to-horizon or surface-to-surface** calculations for 2D or 3D horizon surfaces. **Extract seismic data at well locations** and save as a log curve in the active curve set.

Ease of Use & True Mobility

Leverage the latest in technology to **minimize your learning curve** and focus on what's important. **Enhance productivity** with many usability features like multi-screen support, dockable windows, a sleek ribbon-based interface, saving and sharing work as sessions and much more. Work in **remote, desktop, mobile or remote environments** and accommodate large regional projects while reducing need for IT support.

Requirements

To run the application, you need one of the following operating systems installed on your system:

- Windows® 7 Professional x64
- Windows® 7 Enterprise x64
- Windows® 7 Ultimate x64
- Windows® 10 Professional x64
- Windows® 10 Enterprise x64

Hardware

Minimum

- 2.4 GHz 64-bit processor
- 8 GB RAM
- Any DirectX 11.1 capable card comparable with Nvidia® GeForce GTX 430 with 1GB VRAM. DirectX is not shipped with GeoGraphix 2019.1. You must download and install it separately.
- 1366 x 768 screen resolution

Recommended

- Quad 3.2 GHz 64-bit processor
- 32 GB RAM
- Any DirectX 11.1 capable card comparable with Nvidia® GeForce GTX 1060 with 6GB VRAM. DirectX is not shipped with GeoGraphix 2019.1. You must download and install it separately.
- Solid state hard disk (SSD)
- 1920 x 1080 screen resolution

Licenses

The following licenses are required to run the software:

- GeoGraphix license version 2019.2
- GVERSE® Geophysics license version 2019.2