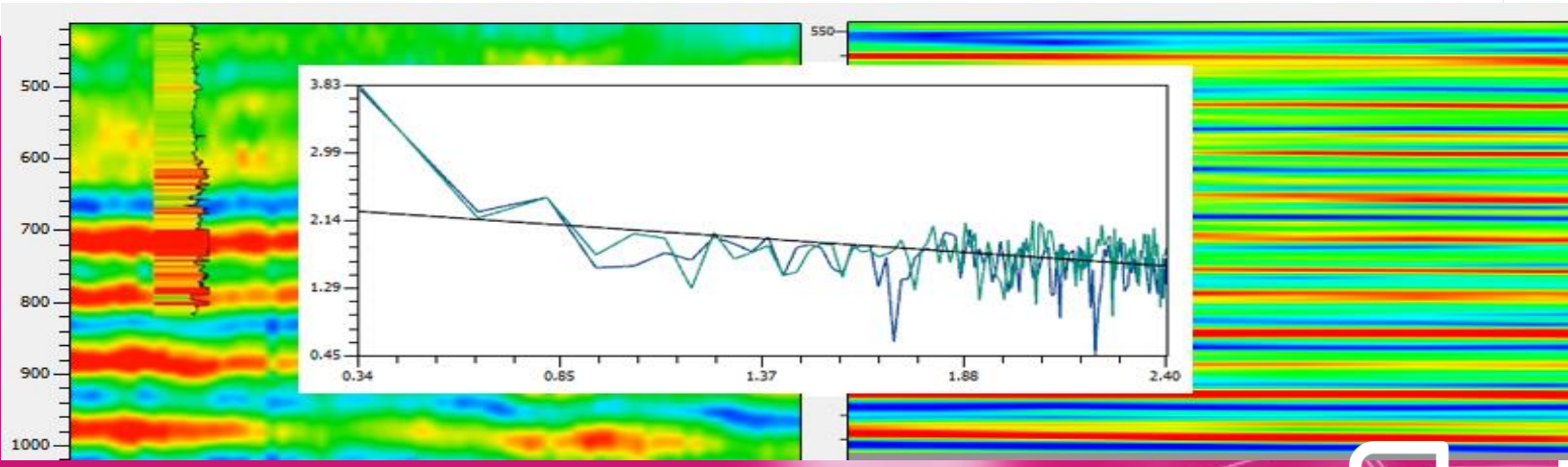

Inversion 2017.3

Enhanced interpretation, reservoir prediction and geosteering*

*Powered by FracGeo

intelligent geoscience solutions

GVERSE® Inversion

Enhanced Interpretation, Reservoir Prediction and Geosteering

**Powered by FracGeo*

GVERSE Inversion is a colored inversion solution that provides a rapid, yet robust way to derive geological details in the form of a relative and absolute impedance. When geosteering through a reservoir, the high resolution impedances calculated by the colored inversion ensure that the well is drilled through an ideal reservoir. GVERSE Inversion is completely integrated with the GeoGraphix® suite of products.

GVERSE Inversion is accessed from the GVERSE Geophysics application. The plug-in receives seismic, interpreted horizons, and well data from GVERSE Geophysics, processes it, and returns the inverted volume to GVERSE Geophysics. To launch the plug-in, open the GVERSE Geophysics module, and then select Tools >> GVERSE Inversion.

Benefits

High Resolution Results for Better Well Planning, Geosteering, and Completions

The resulting impedance data provides a high resolution view of the reservoir and landing zone with the spatial resolution that inherently comes with seismic data. This information can be used to determine the best wells to drill, the optimum landing zones, and provide a better understanding of where and how completions should take place along a well.

Simple, Fast, and Robust Algorithm
The only inputs for this inversion are the acoustic impedance logs, interpreted horizons, and seismic data to use. With this information, an inversion operator is constructed to quickly transform the seismic amplitude into impedance volume.

Capability of GeoGraphix with Technology of FracGeo
Integration of GVERSE Inversion into GeoGraphix allows one to easily create and view the resulting impedance volume and use the derived reservoir information to easily adjust any well locations and geosteering or completion plans.

Key Features

Data Loading and Management

- Direct access to the required well data, interpreted horizons, and seismic data directly from your GeoGraphix projects
- Resulting impedance volume can be saved into GeoGraphix project database

Background Model

- Calculates a background acoustic impedance model from the acoustic impedance logs and interpreted surfaces.
- Used to normalize the relative acoustic impedance to contain similar ranges of acoustic impedance as the well logs. Background model is used as an input in the Colored Inversion
- Results in the absolute acoustic impedance.

Colored Inversion

- Minimizes the input required from user
- Calculates an operator to transform the seismic data to impedance data using the selected seismic data and acoustic impedance logs. Real-time inversion operator calibrated by viewing the amplitude spectra of the seismic data and acoustic impedance logs used to construct the colored inversion operator
- Preview the resulting impedance volume on a given inline, crossline, or closest line to a selected well before launching the calculation over the area of interest.

Requirements

Hardware (Minimum)

- 2.4 GHz 64-bit processor
- 8 GB RAM
- NVidia GeForce 400 series or ATI Radeon HD 5000 Series or Intel HD Graphics in Intel Haswell processors

Hardware (Recommended)

- Quad 3.1 GHz 64-bit Intel class or better
- 16 GB RAM or greater
- NVidia GeForce GTX 970
- Dual 21-inch monitors

Software

- GeoGraphix 2017.3

Operating System(s)

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