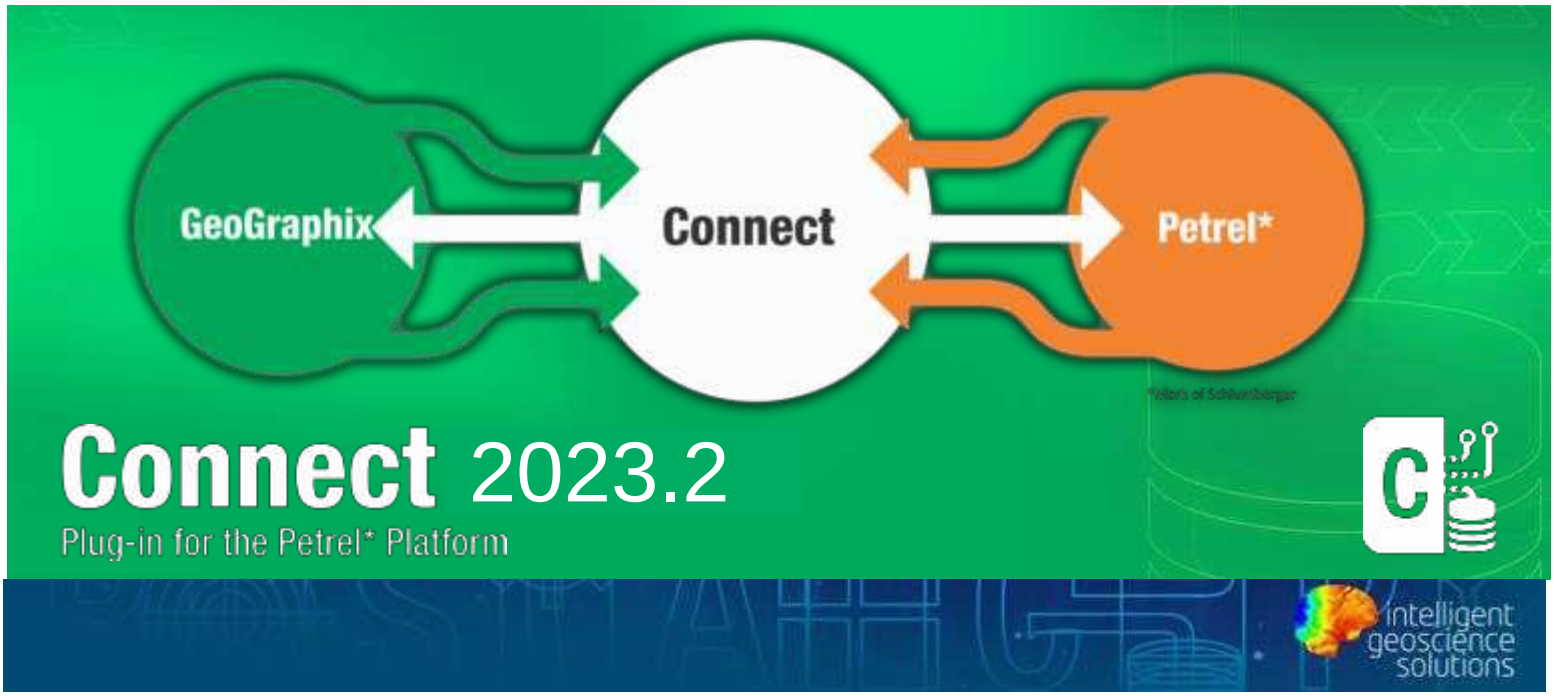

GVERSE® Connect

Plug-in for the Petrel* Platform

Data interoperability is critical in accurately characterizing reservoirs and maximizing productivity of the entire asset team. GVERSE Connect was developed to address the need for data interoperability between the Petrel® E&P software platform and GeoGraphix®, ultimately letting users solve complex business problems efficiently by providing application choice. GVERSE Connect transfers well, seismic and map data to maintain an integrated interpretation environment, enabling efficient data exchange between two industry-leading E&P technologies and giving geoscientists the ability to use "best-of-breed" applications without data migration issues and related delays.

Data can be transferred to an empty project (in either vendor's system) or into an existing project, and the transfer rules are configurable according to the data management policies of the organization.

Bidirectional data transfer for the following data types is supported:

- Well data - which includes headers, directional surveys, well tops, log curves, velocity surveys and faults.
- Horizons and faults marked on 2D and 3D volumes.
- 2D and 3D seismic data[1].
- XYZ surfaces generated in either application.

The plugin uses Ocean* software development framework to bridge the applications.

Benefits

Using this plug-in, data can be transferred to an empty project (in either vendor's system) or to an existing project that the user would like to append or update. The transfer rules are configurable to allow necessary adjustments according to the data management policies of the organization.

- **Increased User Productivity:** For organizations that using both Petrel and GeoGraphix, the data transfer time will be exponentially faster than using manual data transfer methods.
- **Optimized Reservoir Characterization:** By combining the strengths of both software solutions into one interpretation, an optimized characterization of the reservoir can be produced.
- **Reduced Costs:** GeoGraphix provides an affordable, comprehensive and performant solution for daily interpretation needs and compliments the nature of Petrel's high science, higher cost solution for reservoir modeling. Rightsizing the software solution to the user's needs, while enabling full data interoperability, provides an opportunity to dramatically reduce licensing costs and associated annual maintenance and support fees.
- **Quick Adoptability:** Easy and fast transfer of well data into GeoGraphix enables the user to take advantage of GeoGraphix's geophysical, geological, petrophysical and map production capabilities, for faster, efficient and more accurate interpretation.

Key Features

- Transfer for well headers, formation and fault picks, deviation surveys, velocity surveys (time-depth tables) and log curves between GeoGraphix & Petrel.
- Well filters and support for GeoGraphix AOIs limit data transfer to required wells and spatial extents.
- Data filters on top of well filters and AOIs only move what you need. Specify the formations, faults and log curves to transfer. Choose sources and stratigraphic columns for reading or writing picks.
- Match deviation surveys with exposure to three calculation methods.
- Single-click transfer of horizon, fault, surfaces and seismic data. Seismic data is only transferred from Petrel to GeoGraphix.
- Move color palettes from Petrel to GeoGraphix to recreate seismic and surface visuals. Read or write seismic interpretation data directly to/from any GVERSE Geophysics interpretation.
- Fully configurable conflict resolution rules cater to all transfer scenarios.
- Detailed logs for all transfer activity provide comprehensive auditing and reporting of transfer failures to take corrective action as required.

Discover your efficiency with GeoGraphix:

- **Integrated solution:** GeoGraphix is an integrated geoscience interpretation system that supports large multidiscipline work groups simultaneously in the same project. Using the GeoGraphix for Petrel plugin enables Petrel users to transfer smaller GeoGraphix datasets into their Petrel projects for efficient reservoir modeling.
- **Powerful, multi-well petrophysical analysis and modeling** within GeoGraphix can be applied to Petrel well data from individual wells to multi-well, multi-zone projects.

- **Leading edge mapping:** Leverage advanced GeoGraphix mapping and GIS capabilities. In a few easy steps, Petrel surfaces are transferred into GeoGraphix to produce presentation quality maps.
- **Field/Well Planning:** Take advantage of the field and well planning capabilities in GeoGraphix for planning horizontals in unconventional plays.

What's New in GVERSE Connect

Compatibility with Petrel Versions 2023.x

GVERSE Connect 2022.2 supports compatibility with Petrel versions 2019.x through 2023.x.

Performance Improvements

Performance of the Formation Tops and Log Curves transfer has been optimized significantly.

Well Attribute Mapping

GeoGraphix header fields can now be mapped to custom well attributes in Petrel while transferring well data from GeoGraphix to Petrel.
Similarly, Petrel well attributes can be mapped to the header fields in GeoGraphix while transferring well data from Petrel to GeoGraphix.

Datum Handling while Transferring Horizons and Faults

When horizons and faults are transferred from GeoGraphix to Petrel, appropriate datum conversion is applied to these objects with respect to the Project Reference Datum (PRD) values set in Petrel.
Similarly, when horizons and faults are transferred from Petrel to GeoGraphix, appropriate datum conversion is applied to these objects with respect to the Interpretation Datum value set in GeoGraphix (GVERSE Geophysics).

2D and 3D Seismic Data Transfer from GeoGraphix to Petrel

2D and 3D seismic data can now be transferred from GeoGraphix to Petrel. 2D seismic data includes 2D programs, 2D lines and subsequent versions. 3D seismic data includes 3D surveys and subsequent versions.

Transfer Log Curves from Petrel to GeoGraphix

Log curve data can be transferred from Petrel to GeoGraphix in new or existing curve sets.

Transfer Modeled Curves (UDE) from GeoGraphix to Petrel

You can now transfer UDE curves from a selected UDE set from GeoGraphix to Petrel.

Filter Log Curves Using PRT Template

Log curves can now be selected from Project and System templates in GeoGraphix when log curves are being transferred from GeoGraphix to Petrel.

Log Curves in Data Tree

A dialog has been created which lists all the global curves in Petrel. All the curves can be viewed at one place and the required curves can be easily selected for transfer.

Auto Contour Surfaces in GeoGraphix

When surfaces are transferred from Petrel to GeoGraphix, they display in correct spatial dimensions and Z units. Additionally, contours are enabled on each displayed surface, by default.

Updated "Overwrite" Functionality for Formation Tops/Fault Cuts

Improvements have been made to the Overwrite functionality while transferring formation tops and/or fault cuts. When Overwrite option is used for formation tops or fault cuts, only those records are overwritten that are different than the ones currently in the destination project. The time stamp information is also transferred and helps in identifying the overwritten records.

Saved Search to Filter Objects in Petrel

Saved search entries can be created in Petrel and are used to filter wells. These saved search entries are available for selection in the Data Filter drop-down list. When a saved search entry is selected, the Wells node in the Selection panel is filtered to show only those wells that are part of the saved search.

Add Coordinate Reference System (CRS) Information to Transfer Log

After transferring any item from GeoGraphix to Petrel or vice versa, the Transfer log displays the CRS information of the active GeoGraphix and Petrel projects.

Append Well Number to Name

An option has been added to append the well number with well name when data is transferred from GeoGraphix to Petrel.

Compatibility Matrix

GVERSE Applications	GeoGraphix Supported GeoGraphix Versions											Supported Petrel* Versions (Applicable for GVERSE Connect Only)						
	2023.2	2023.1	2022.1.5	2022.1	2019.4.4	2019.4.2	2019.4	2019.3.x	2019.2.x	2019.1	2017.3.x	2020.x to 2023.x	2019.x to 2022.x	2019.3 to 2021.1	2019.3 to 2020.5	2019.3 to 2020.3	2018.2	2017.x
Connect 2023.2	✓											✓						
Connect 2022.2		✓											✓					
Connect 2022.1			✓											✓				
Connect 2019.4.3				✓	✓									✓				
Connect 2019.4.2				✓	✓										✓			
Connect 2019.3.x						✓										✓		
Connect 2019.2							✓	✓									✓	✓
Connect 2019.1								✓	✓	✓								✓

Requirements

Software

The software that must be installed on the system running the plug-in are as follows:

- GeoGraphix Discovery 2023.2
- Petrel 2020.x through 2023.x
- LMKR License Management Tool 2019.3 for Connect license.
- The LMKR License Management Tool (LMT) must be installed to configure the Connect license.
- Microsoft® Visual C++ Runtime 2013
- Adobe Reader for selected help files (optional)

Operating System

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

- Windows® 10 Professional x64 (recommended)
- Windows® 10 Enterprise x64 (recommended) Windows®11 Professional x64
- Windows® 11 Enterprise x64

Note: It is recommended to use the latest Microsoft® service packs and security patches.

Hardware

The hardware requirements for the plug-in are the same as the Petrel hardware requirements.

Licenses

The following licenses are required to run the plug-in:

- GeoGraphix license version 2023.1
- Petrel 2020.x through 2023.x
- GVERSE Connect 2023.2 license

The following product/feature licenses are required to import/export the IsoMap surfaces, and horizons and faults:

- IsoMap license for surfaces
- GVERSE Geophysics license for horizons and faults

Note: Refer to the GVERSE GeoGraphix Customer Support Portal (https://gverse.com/support/) for up-to-date information on the requirements.