

# Using the Geoteric Link for Petrel

#### Prerequisites

- Geoteric installed
- Petrel installed (Current supported versions are 2021, 2022 and 2023)
- Valid Geoteric license

The Link for Petrel connects automatically when it detects Petrel is running.

ADo not have more than one instance of Geoteric open at one time during the transfer of objects between projects, since this may result in objects transferring to the wrong project.

To begin transferring data, click on the Links button and select "Connect to Petrel".



Open the Link for Petrel

This will open the data transfer window:

| 윌 Petrel Data Transfer |  | -    |       | ×      |
|------------------------|--|------|-------|--------|
| Import                 | Source Volumes   |      |       |        |
| Volume                 | SEOV /R<br>SEOY [Realized] 1   |      |       | ^      |
| Colour Map             | SECY<br>SECY Petrol<br>Structop, DipArint_Dip  |      |       |        |
| Horizon                | Structupp, DipArk#1, Joimuth<br>56CY-3D, JD Birch<br>56CY-3D, JD, Adv  |      |       |        |
| Fault Stick            | Dip.35<br>505,59<br>Fault Detect,505,173   |      |       |        |
| Fault Surface          | detect_SOS_1713_target[2]<br>detect_SOS_1713_target[2]<br>detect_SOS_1713_target[3]  |      |       |        |
| Polygon                | detect_SOS_173_target(4)<br>detect_SOS_173_target(5)<br>FoulD Detect_SOS_173_target  |      |       |        |
| Well Data              | Fault Defect_SOS_173_target[2]<br>SGC_tunget<br>SGCV_tunget[2]   |      |       |        |
| Export                 | SEGY, F. X. ONEAI Network, new AlFaultConfidence<br>SEGY, Ft. Y. ONEAI Network, new AlFaultConfidence  |      |       |        |
| Volume                 | actoryNexter in economy.jeee_jon aaaacommentee<br>Fault Detect_SOS_173_X_ONEAI Network, new_AlFaultConfidence  |      |       | ~      |
| Colour Map             | Potrel Volume  |      |       |        |
| Horizon                | Selenic Collection :   |      |       | •      |
| Fault Stick            | Data range will be preserved on export.<br>An offset of -128 is applied to 8-Bit unsigned data.  |      |       |        |
| Fault Surface          | Note: transfering un-cached volumes to Petitin may result in the Petitis Seismic Cabe<br>being mapped over the incorrect range, in these cases, effect acube volumes before<br>transfer or scan and remap the cabe in Petitic, (See Help for more information) |      |       |        |
| Polygon                | User Defined Scaling   |      |       |        |
| Colour Blend           | Multiply: 1 Divide: 1 Offset: 0.0000   |      |       |        |
|                        |  |      |       |        |
|                        |  | Help | Apply | Cancel |

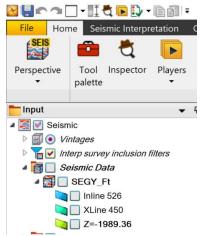


Transfer Window

#### Geoteric to Petrel volume transfer

To export a seismic volume to Petrel, in the "Export" section select the "Volume" button. Select the volume to be transferred to Petrel by highlighting it from the list of volumes. Select a relevant folder from the drop-down menu for the Seismic Collection and click on the "Apply" button to begin the transfer. Select multiple volumes by holding the Control (Ctrl) key or a block of volumes using the Shift key.

Whilst the transfer is in progress; you will see the Geoteric task window showing the transfer. Once the task is complete, the transferred volumes will appear within the Petrel project tree under the Seismic Collection you have specified in the Link for Petrel.



Transferred volumes in the Petrel Project Input Tree

#### Petrel to Geoteric volume transfer

To import a volume from Petrel, in the "Import" section select the "Volume" button. In the appropriate Seismic Collection, expand the Petrel project tree and highlight the Petrel volume(s) to be imported to Geoteric. If an imported volume name already exists in Geoteric, the application will automatically add, or increment, a number after the name (e.g. volume[n+1] where n is the volume number already in Geoteric).



| _ |                      |
|---|----------------------|
| g | Petrel Data Transfer |
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| Import        | Petrel Volume   |
|---------------|---|
| Volume        | ✓   |
| Colour Map    |   |
| Horizon       |   |
| Fault Stick   |   |
| Fault Surface |   |
| Polygon       |   |
| Well Data     |   |
| Export        |   |
| Volume        |   |
| Colour Map    | ffA Volume  |
| Horizon       | Import As: Floating Point IEEE  |
| Fault Stick   | Scale Options Scale Type  |
| Fault Surface | None User Defined Auto Scale  |
| Polygon       | User Defined Scaling  |
| Colour Blend  | Multiply :         1         Divide :         1         Offset :         0.0000 |

Volume selector for transfer from Petrel to Geoteric

### Data type and scaling available

Choose from:

- 8 bit unsigned
- 16 bit signed 32 bit signed (DEFAULT)



There is a choice to either automatically cache, or to not automatically cache the volume once it has transferred to Geoteric.

Click on "Apply" to perform the transfer.

Once the transfer is complete, the volume will appear in the Geoteric project within the volumes folder. To visualise it, double click on the volume name.

#### Geoteric to Petrel colour blend transfer

Choose the Geoteric Colour Blend(s) to be exported to Petrel and choose an appropriate Seismic Collection. Both RGB and CMY Colour Blends are supported. The Geoteric taskbar will appear, and the blend will be available in Petrel where it was specified.

Colour Blends can be exported to Petrel, but not imported from Petrel to Geoteric.



Export to Petrel options available in the Link, including the Colour Blend

#### Geoteric to Petrel surface transfer

After selecting the "Horizon" button, highlight the appropriate surface(s) in the list and select the interpretation folder you wish the surface to be exported into and click "Apply".



| port  | Source Surfaces   |
|---|---|
| Anport   Volume   Volume   Colour Map   Horizon   Horizon   Fault Stick   Polygon   Volume   Volume   Volume   Volume   Fault Stick | Source Surfaces<br>Contact -1980<br>Surface at -1800<br>Surface_Om<br>Contact at 2000 m<br>Geobody[3]_Top<br>Geobody[2]_Top<br>Geobody[2]_Top<br>Geobody[2]_Bottom<br>Surface at xx<br>Surface at 1840_30m<br>Contact at 1890 m<br>Top Reservoir<br>Base Reservoir<br>Top Reservoir<br>Base Reservoir<br>Top Reservoir<br>Geobody_Top<br>Geobody_Top<br>Geobody_Top<br>Geobody[2]_Top[2]<br>Geobody[2]_Bottom[2]<br>Geobody[3]_Bottom[2]<br>Top Reservoir_surface_interpretation[2]_surface_interpret<br>Contact at 2000 m[2]<br>Contact at 2010 m<br>Contact at 3000 m<br>Contact at 2020 m<br>Contact at 1800 m |
| Fault Surface   |   |
| Polygon   | Petrel Interpretation   |
| Colour Blend  | Petrel Interpretation Interpretation Collections: Seismic/Restoration   |

## Petrel Data Transfer

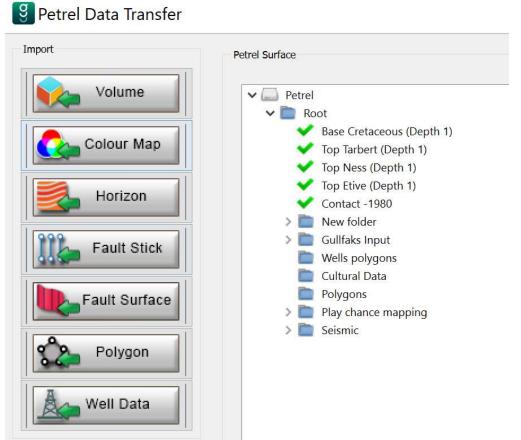
Surfaces selection for transfer from Geoteric to Petrel

# geoteric

#### Petrel to Geoteric surface transfer

After selecting the "Horizon" button, select the surface(s) you wish to import into Geoteric from the list and click on the "Apply" button. The Geoteric task window will be displayed while the surface is transferred into the Horizons section of the project manager.

Note: Only Petrel gridded surfaces can be imported into Geoteric. If an imported Surface name already exists in Geoteric, the application will automatically add, or increment, a number after the name. (e.g. surface[n+1] where n is the surface number already in Geoteric).



Surfaces selection for transfer from Petrel to Geoteric

#### Petrel to Geoteric well transfer

In the Import tab, select the Well(s) you wish to import into Geoteric from the list and click the "Apply" button. They will now appear in the Wells folder in the Geoteric project tree. Geoteric will automatically apply the checkshot to the well/s if they have one and will do the same with any logs.

It is not possible to transfer wells from Geoteric to Petrel



### Geoteric to Petrel colour map transfer

Select the Colour Map you wish to export from the drop-down menu. You can rename this before the transfer if you would like it to appear in Petrel as another name and click "Apply".

| 9 Petrel Data Transfer |                             | - | × |
|------------------------|-----------------------------|---|---|
| Import                 | Colourmap                   |   |   |
| Volume                 | BueWhiteRed                 |   | • |
| Colour Map             |                             |   |   |
| Horizon                | Petrel ColourMap            |   |   |
| Fault Stick            | Output Name : BluckWhiteRed |   |   |
| Fault Surface          |                             |   |   |
| Polygon                |                             |   |   |
| Well Data              |                             |   |   |
| Export                 |                             |   |   |
| Volume                 |                             |   |   |
| Colour Map             |                             |   |   |

Colour Map selection for transfer from Geoteric to Petrel

#### Petrel to Geoteric colour map transfer

This tab will populate with all the available colour maps in Petrel that you can import into Geoteric. You can block select by selecting one and holding down Shift and selecting another, or you can choose individual colour maps using the control button and left-click.



# **9** Petrel Data Transfer

| Import                  | Import ColourMaps                 |
|-------------------------|-----------------------------------|
|                         | Amplitude extraction (continuous) |
| Volume                  | Amplitude extraction (discrete)   |
|                         | Amplitude marker dark             |
|                         | Amplitude marker light            |
| Colour Map              | AVO                               |
|                         | Black grey white                  |
| Horizon                 | Black white yellow red            |
|                         | Blue white pink                   |
|                         | Blue white purple                 |
| Fault Stick             | Blue white red (strong)           |
|                         | Blue white red dark               |
|                         | Brown white blue                  |
| Fault Surface           | Coarse extraction                 |
|                         | Constant velocity stack           |
|                         | Dual velocity stack               |
| Polygon                 | Equator                           |
| •••                     | Equator plus                      |
|                         | Green blue brown red              |
| 🗟 👝 Well Data           | Green white yellow                |
|                         | Green yellow red                  |
| Export                  | Hot top                           |
|                         | Lightblue white red               |
|                         | Purple blue green yellow red      |
| Volume                  | Rainbow                           |
|                         | Red blue green                    |
|                         | Red lightblue                     |
| Colour Map              | Red white black                   |
|                         | Red white black light             |
|                         | Red white blue                    |
| Horizon                 | Red white blue (transparent)      |
|                         | Red white green                   |
| Fault Stick             | Red yellow green blue             |
| Fault Stick             | Residual                          |
|                         | Rotary                            |
| Fault Surface           | Seismic (default)                 |
| aut outlace             | Skin                              |
|                         | Spectrum                          |
| Polygon                 | Sunny side up                     |
| 6-0 · • • • • • • • • • | Tropic extremes                   |
|                         | Tropic medians                    |
| Colour Blend            | Velocity (default)                |
|                         |                                   |

Colour Map selection for transfer from Petrel to Geoteric



#### Geoteric to Petrel polygons transfer

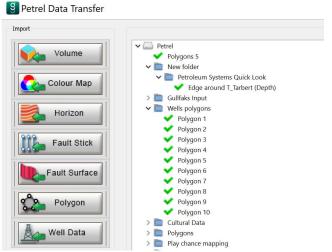
You can export polygons drawn in Geoteric into Petrel using the Link in this tab. Polygons in Geoteric will be listed here. You can block select or select individual polygons to transfer. They are transferred into a newly created folder in the root of the Petrel survey called "Geoteric Polygons."

Polygon selection for transfer from Geoteric to Petrel

| olygons | \$       |           |        |      |  |
|---------|----------|-----------|--------|------|--|
| AOI     |          |           |        | <br> |  |
| Zmapl   | Lines_AS | SCII_Bour | ndary1 |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |
|         |          |           |        |      |  |

#### Petrel to Geoteric polygons transfer

You can import polygons from Petrel to Geoteric on this tab. If you navigate to the location of the Polygon, you wish to import, select the Polygon and click "Apply". A progress bar will quickly appear and disappear on completion of the transfer, and the Polygon will be imported into the Polygons folder in the Geoteric project tree. If the name is the same as an existing polygon, then it will be automatically renamed so that it has a numerical value in square brackets, for example, Polygon[3][1].



Polygon selection for transfer from Petrel to Geoteric

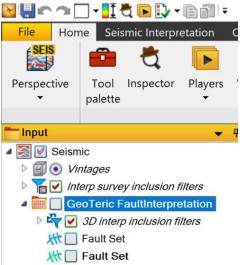
# geoteric

### Geoteric to Petrel faults transfer (fault surfaces and fault sticks)

You can export both fault surfaces and fault stick sets using the "Fault Stick" and the "Fault Surface" buttons. You can block-select or select individual faults to transfer through the Link.

Fault sticks are transferred into a folder called "Geoteric FaultInterpretation" which is created when the transfer begins.

Fault surfaces are transferred into a folder called "GeoTeric Fault Surface" located at the bottom of the Petrel input tree.



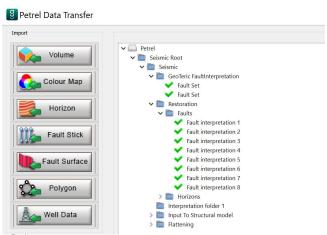
Transferred fault sticks in the Petrel Project Input Tree

#### Petrel to Geoteric faults transfer (fault surfaces and fault sticks)

You can import both fault surfaces and fault stick sets using the "Fault Stick" and the "Fault Surface" buttons. Navigate to the path of the fault you wish to import and then select it (you can multi-select) and click "Apply" to import it into Geoteric. When imported, they appear at the bottom of the Faults folder in the Geoteric project tree. If the name is the same as an existing fault set, then it will be automatically renamed so that it has a numerical value in square brackets, for example, Fault Set[3][1]







Fault stick selection for transfer from Petrel to Geoteric