PALEOSCAN™ 2020

Release Notes

Global Seismic Interpretation Software

Eliis

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PaleoScan™ 2020

PaleoScan™ is a new generation of 3D seismic interpretation software, where geoscientists build a geological model while interpreting seismic volumes. With this new release, Eliis continues to innovate in seismic interpretation and brings more tools to interpret larger seismic datasets, with added speed and precision.

The 2020 version includes all updates counted in the last version and features, new and improved tools, for a better support of data constraints.

- A new **Multi-Z Model** is available.
- A new **Seismic Ghost** tool is available.
- The **Automatic Fault Extraction** attributes are enhanced. They are more accurate and adjustable.
- The **2D Interpretation Workflow** is enhanced.
- The **Horizon Management** is enhanced.
- A new **Reservoir Toolbar** is available, for advanced workflows.

This document lists all the new features and upgrades implemented in PaleoScan™ 2020. A detailed description of each tool can be found in the "User Guide" or on the web site (www.eliis.fr).
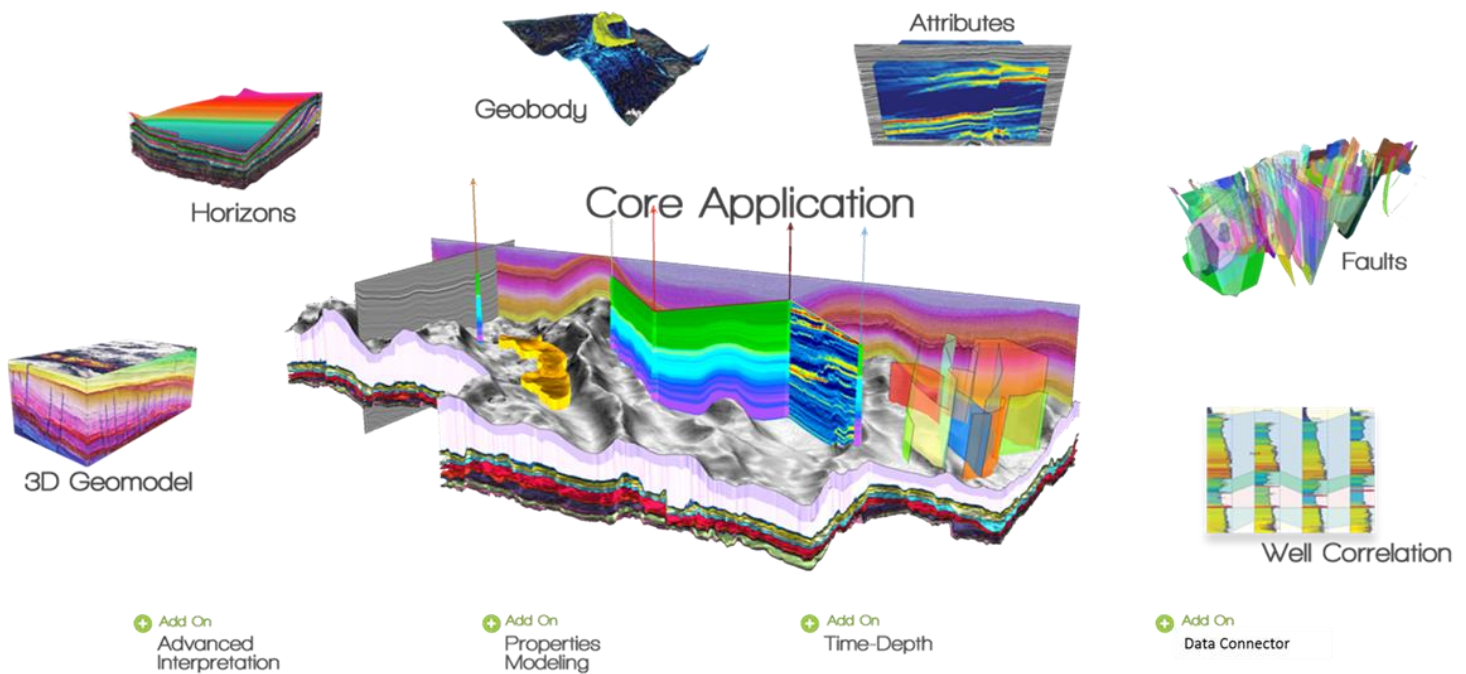
License

Feature	Description
License Timeout	Release license when the application is in idle state.

Platform

Feature	Description
Toolbar Rework	PaleoScan™'s toolbars have been reworked to be more user-friendly: - New Reservoir toolbar containing Property Modeling & GeoCellular Grid tools. - Attribute computation available in Volume toolbar. - 2D Attribute computation available in 2D Line toolbar. - 2 and 3 channels blending viewers available from the main toolbar and integrated in Volume, 2D Line, Horizon, Horizon Stack toolbars. - Automatic Geobody extraction is part of Sequence Stratigraphy toolbar.
Labels	Label UTM associated to the coordinates replaced by World in interfaces, tools, and properties.

Project

Feature	Description
Project Opening	Project opening directly from Windows Explorer with specific icon related to the PS directory.

Data Import

Feature	Description
SEG-Y Import	Each input has its own parameters in the 2D and 3D SEG-Y Import.
	Apply Survey option in the 3D SEG-Y Import.
	Speed-up 3D SEG-Y import.
	Display offset detection result.
Horizon Import	Open in 3D after import, as an option.

Data Export

Feature	Description
Horizon Export	Horizon decimation when exporting.
	Negative Z option.
Well Head	Well heads can be exported into CSV files.

Viewers

Feature	Description
2D Viewer	Copy in Clipboard option in the context menu.
	New properties to filter object names to display.
	The Brush Size parameter is available in the Settings.
3D Viewer	The camera is no more reset when an object is removed from the 3D Viewer.

General Tools

Feature	Description
Polyline	New Polyline editing mode: edit any existing polyline.
Seismic Ghost	New Seismic Ghost tool to correlate two seismic patterns.
Distance Measure Tool	New tool to measure a path's distance on a Time-Slice or on a Map View.
Blue Color Selection	New option to select a color interval between two thresholds.
Workspace Windows	New options to Edit, Synchronize and Lock windows' size. Available from the Windows List.
Calculator	2D Lines are available in the Calculator.
CRS	CRS in feet are managed.

GeoTIFF

Feature	Description
GeoTIFF	New GeoTIFF object managed in PaleoScan™: - Import, - Export, - Display in 2D Viewer, - Drag & drop in Time-Slice and Map View, - Saving from Time-Slice and Map View.

Volumes

Feature	Description
Volume Despiking	New tool to despike a volume (Attribute or Model).
Properties	Min and Max values of the volume available from the Properties panel.

2D Lines

Feature	Description
2D Line Set	New option to adjust the survey of a 2D Line Set.
	New option to restore the initial survey of a 2D Line Set.

Attributes

Feature	Description
Structure Oriented Smoothing	Speed-up the attribute.
Attribute Mapping on Horizon & Horizon Stack	New vertical window up/center/down option.

Model–Grid

Feature	Description
3D Model-Grid	Creation: Spatial decimation substituted by IL and XL undersampling.
	Creation: Combine Top/Bottom Horizon with Z top/Z Bottom in advanced options.
	Increase maximum number of patches.
New 3D Multi-Z Model	This new RGT Model can manage discontinuities. This feature comes with a new "Fault Zero Thickness" option at the Model-Grid creation, a new Preview mode "Marked Only with Faults" and a new kind of output model "3D Multi-Z Model".
2D Model-Grid	Automatic Propagation extended to all lines.
	Display edited Horizon Intersection in the 2D Line viewers, while interpreting 2D horizons.

Horizon

Feature	Description
Horizon Extraction	Fault polygons integration.
Horizon Contouring	Enhanced contouring: Add a parameter to define the contouring value step.
Horizon Viewer	Add a parameter to set a title to the map view.
Properties	New properties: X min – X max / Y min – Y max / Z min - Z max - Z Delta.
Domain Conversion	New tool to convert the Z values of horizons from a function of the calculator. Allow to apply a domain conversion or a vertical shift.
Gross Rock Volume	Improve area selection and color threshold management.

Horizon Stack

Feature	Description
Horizon Stack Creation	New tool to create a 3D Horizon Stack from single Horizons or Horizon Stacks.
	Increase max number of horizons in horizon stack from 1000 to 10.000.
	Add isochore filter for data mapping.
	Speed-up creation process.
Horizon Stack Extraction	Add Top-Bottom selection.
Gross Rock Volume	Improve area selection and color threshold management.

Structural Interpretation

Feature	Description
Meshed Fault	Meshed Faults are managed by PaleoScan™.
Fault Editing	New shortcuts: - Fault Merging: Shift+Q - Fault Splitting: Shift+W - Fault Editing: Shift+E

Automatic Fault Extraction （AFE）

Feature	Description
AFE Attributes	Fault Plane: A new widget is available to select the desired Dip and Azimuth ranges.
	Fault Plane: New scanning disk weighting parameter, can be Gaussian or Flat.
	Fault Plane: New normalization parameter, to remove the low frequency amplitude gradient in the background of the Fault Plane signal.
	Fault Thinning: New parameter, to select a computation method. Can be Direct or Hessian.

Well/Log Management

Feature	Description
Well Deviation	New method to compute trajectories from Incl/Azimuth: Min Curvature.
Well Marker	New Well Marker editing tool.
Well Log	Enhanced log opening using templates for each Log (log area + Color Scale).
	New option to convert Checkshots to Logs.

Geobody – Layer – Multi-Z

Feature	Description
Lithology	New lithologic patterns available for Geobody, Layer and Multi-Z objects.
Geobody Volumetrics	Enhanced interface.
Multi-Z	New property to hide Multi-Z picked points.

Advanced Interpretation

Feature	Description
Sequence Layering	New lithologic patterns.

Color Blending

Feature	Description
Horizon & Horizon Stack	Improved default display of saved indexed color Horizon & Horizon Stack.
2D Line	New option to save indexed color 2D Line.

Cross Plot

Feature	Description
Class Selection	Min and Max values of class selection manually editable thanks to a new selection mode.

Time–Depth Conversion

Feature	Description
Domain Conversion	Depth to Time domain conversion from a velocity model is available. Domain converted Volumes, Models, Horizons and Faults can be saved.
Inputs	Management of undersampled volumes and velocity models.
Faults	The saving of domain converted Faults is available.

OpenWorks® Connector

Feature	Description
Well	Depth type selection for trajectory: MD, TVD or TVDSS.

Python

Feature	Description
Python Editor	Add auto-completion feature.
Python API	New classes & functions: - Fill image 2D with list or nympy array. - Read, create, edit, save polyline as 3D polyline or Culture. - Access contouring properties of a 2D horizon viewer. - Add an attribute to access the internal buffer of a 2D image. - Create and manipulate blending viewers. - Add methods to read and write horizons. - Add utility methods to facilitate point conversion between spaces (block, survey and world). - Easily get blockspace resolution. - Add utility class to export block as SEG-Y file. - Add attribute to know if a volume is transposed. - Add methods to read and write volumes.

Licensing

PaleoScan™ 2020 can be downloaded from the Eliis web site. A personal user account is required. If you do not have a login and password to access the Eliis extranet, you can apply for one by completing this form.

Eliis provides you a free 30-day temporary license to evaluate PaleoScan™ 2020. The temporary license will give you full access to the software with all add-on modules.

Project Compatibility

The PaleoScan™ platform is compatible with all PaleoScan™ projects.

Forward compatibility:
Projects saved with previous versions of PaleoScan™ can be updated to PaleoScan™ 2020 when the projects are being loaded.

Backward compatibility:
Projects created with PaleoScan™ 2020 can also be opened with previous versions (2019 or 2018). However, some new object properties might not be readable by earlier versions.

Hardware Requirements

PaleoScan™ is a Microsoft Windows® stand-alone software, running on PC equipped with a 64-bit processor with the minimum requirements equivalent to the below mentioned items:

- CPU: 6-Core
- RAM: 16 GB
- Operating System: Windows® 7, 8 or 10 (64-bit)
- Graphic card: 512 MB NVIDIA® / ATI® graphic card
- IDE devices: Hard disk with fast rotational speed (> 7200 rpm)