SOFTWARE RELEASE NOTES

Version 2020.1.1

The Petrosys PRO 2020.1 release offers a range of new features for all our valued users across Connectivity, Mapping and Surface Modeling. This initial collection of new and enhanced features marks the start of a stream of exciting new functionality to come in the 2020 series - the key highlights of Petrosys PRO 2020.1 are:

Superior Connectivity - Significant enhancements to Petrosys PRO's already large footprint of 3rd Party Direct Connectivity:

- Connection enhancement to Eliis PaleoScan™ for reading fault sticks and well data building on the recent release of surface and horizon integration support
- Ability to write fault sticks and checkshots to Schlumberger Petrel™ through the Exchange tools
- Multi-trace FMI logs can now be moved via Well Data Exchange from DLIS to Petrel
- Enjoy the convenience and ease of use with Drag'n'Drop added to the Well Data Exchange wizard
- The workflow enabled Spatial Data Translator has scripting improvements wherever polygons are used
- A new image/grid direct connect import option makes it simpler to work directly with DEM, BIL, ERDAS, ECW, GeoTIFF, Arc Binary Grid formats in Petrosys PRO

More than mapping - The industry leading Petrosys PRO Mapping simply keeps getting better:

- Directly display PDFs on the map canvas. Great for including archived map content from key project milestones
- Use a new collection of perceptually equal gradients to better visualize surface features and attributes in maps
- Take advantage of your FMI logs in the popular log signature map displays
- New controls added to provide display style control for individual contours to highlight contacts and map features
- The Spatial Editor now supports extraction of map image components directly into grids, surfaces and attributes
- Automated Map Text Scaling v2.0 provides a wider range of choice and control for users – enjoy improved text sizing and scaling in response to map size changes
- Overpost Correction provides improved selection of multiple labels using a new 'freehand' option

Effective and reliable surface modeling - Continuing to improve the high-quality trusted module our users expect:

- Use a range of image grid formats, such as DEM, BIL, ERDAS, ECW, GeoTIFF and Arc Binary formats as direct data inputs into gridding processes or directly displayed on the map canvas
- Take advantage of Paleoscan Fault sticks and Well Data in your surface modelling workflows.
- Produce more accurate grid surfaces around fault zones, with the new Clipping Distance feature. This removes erroneous input data within a specified distance of each fault, thereby reducing the likelihood of noise
- Control the Minimum Heave modelled at each fault polygon when using fault sticks to constrain gridding

Supported Environment updates of note:

- RHEL7 and RHEL8 platforms supported
- RHEL6 support is deprecated with reduced functionality.

Read on for more details on these options with more to follow in the 2020 stream. For more information on how to put these features into practice please contact support at support@petrosys.com.au and learn more from our webinars, video and portal resources.

## Eliis PaleoScan™ now supports fault stick and well data

Petrosys PRO connectivity supporting direct interaction with Eliis PaleoScan 2019.1 has been extended based on direct user input to drive increased workflow efficiency between these two popular applications. In PRO 2020.1 the ability to make direct use of Fault Sticks and Well Data from PaleoScan has been extended to all areas of the Petrosys PRO application. This includes the ability to directly display wells and fault sticks in the PRO Mapping & 3D Viewer applications. The well data types supported include well header, locations, directional surveys, check shots, well marker data and well logs.

Users can now also take advantage of fault sticks and well data in the trusted Petrosys Surface Modeling workflows, blending this data with PaleoScan horizons or data from other supported sources. This further unites the strength of Petrosys PRO surface modelling and high-quality mapping and presentation capabilities working in a complimentary way with PaleoScan.

In addition, users and data managers alike, will also appreciate the ability to move data via the Petrosys PRO Data Exchange options for fault sticks and well data from Paleoscan to other third-party software.

This compliments the previously released support for PaleoScan horizon, attribute and surface data types in Petrosys Mapping, 3D Viewer and Surface Modeling.

Support has also been added to allow for the assignment of a Projected CRS to a PaleoScan project. The connection CRS will be used when any data read from the project does not have an associated CRS already set.
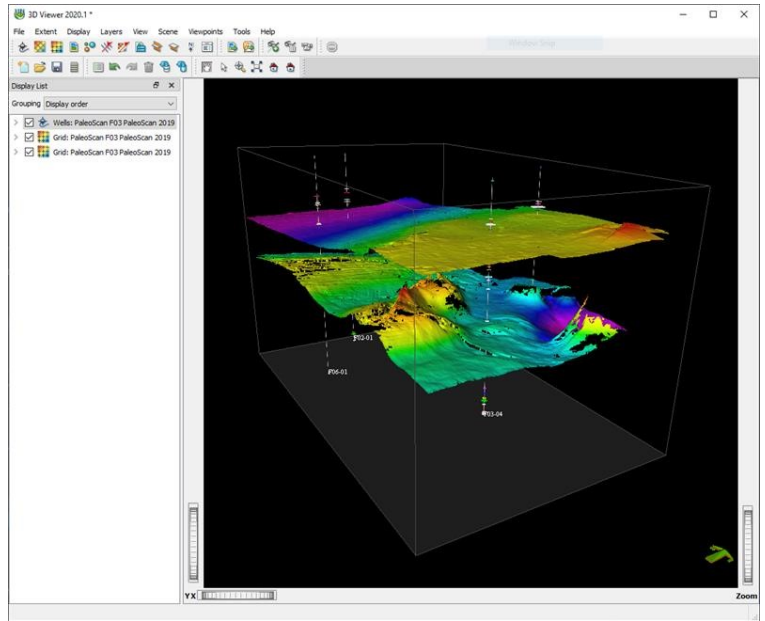
Extract grids from raster images

The Spatial Editor includes a new option for helping users to extract surfaces, attributes and grids from raster images. This helps users to convert images of historical maps – perhaps from archives or past technical reports into working surface models. This feature allows geoscientists to extract value from past work, where images of the structures, surface or attributes would be valuable to furthering the asset and project aims.
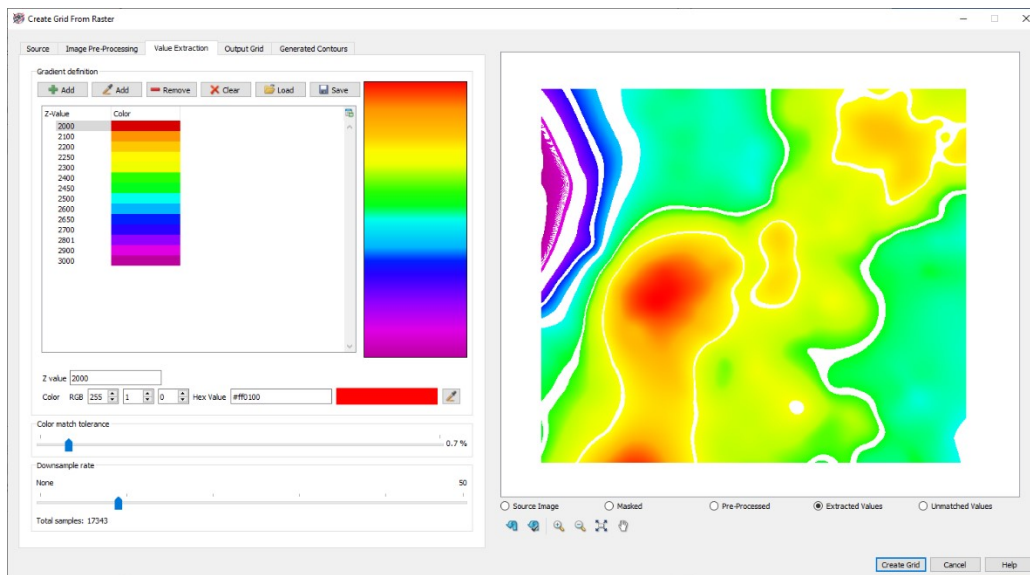
The option can be run from the Operations/Create Grid From Raster or from the RMB menu option of the same name. The user can include fault polygons, clip regions, manually edit the image and assign the Z-value range, providing a high degree of control over the produced grid.

Direct display of PDF documents

The direct display of PDF documents within Mapping has been added in Petrosys PRO 2020.1.

Users can now choose to display a full page from a PDF document as an image on the Map Canvas in Mapping. The new Display/PDF, menu in Mapping brings up a dialog to choose the PDF document as well as providing Rendering and Placement options, along with document properties and a Preview.

The user has full control over the rotation, background and foreground transparency of the page displayed on the Map Canvas as part of the Rendering options. Placement options are the standard selections available for most Map based elements. The rich Preview of the document's page allows the user to see how the result will be displayed on the Map.
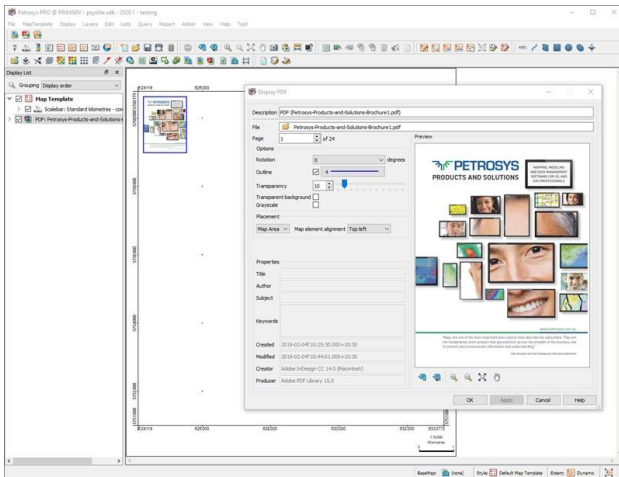
Information such as the PDF Title, Author, Subject, etc. of the document is also displayed in the Properties section of the dialog. Password protected PDF documents are supported and users have the option to utilise the Petrosys PRO Password Manager for saving document passwords.

With this new feature, Petrosys PRO does not currently support multi-layer PDFs, individual images or geospatial information from a PDF document - but rest assured these features are coming very soon in the 2020 release stream as we aim to help users restore from the very rich Petrosys layered and georeferenced PDF map archive outputs.

Please note - the display of PDF documents is currently supported on Windows only. Linux support may be available in a future version.

Easily use XYZ rasters with the new Grid Data Connection

Raster files with XYZ data can now be used and imported in Petrosys PRO. They can be directly displayed in Mapping and the 3D Viewer as a colorfill or sun-shaded grid, and even used as an input data source for gridding in Surface Modeling. The Surface Modeling application can also now import raster files with non-square cells.

The new options are available in a wide range of places that grids are used. File types supported include DEM, GeoTiff, ECW, Arc BinaryGrid, ERDAS Imagine and BIL files.

Raster image file displayed directly in Mapping as a colorfill layer overlaid on a sun shaded layer.

Support for Petrel checkshots and drag'n'drop in the versatile Well Exchange Wizard
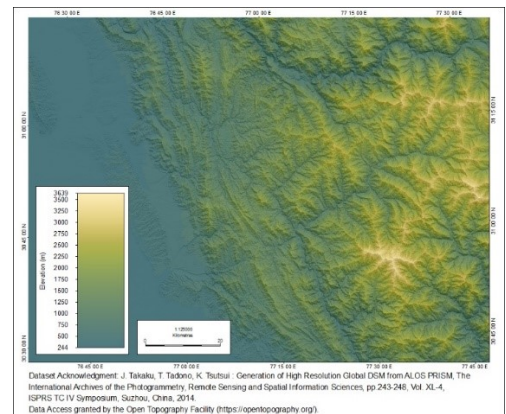
Writing checkshots to Petrel is now available through the popular Wells import wizard from the Exchange/Wells menu. This will help user to move checkshots into Petrel from a wide range of Petrosys and 3rd party datasources.

Several steps of Wells Exchange have had drag'n'drop functionality added, for data types from applications like Petrel and DecisionSpace Geosciences. The supported data types include, wells and well lists, formations, zones and log curves in the various selection lists of the Exchange tool. This makes it much easier to use selections between your favourite applications.

Scripting of polygon selection enabled in Exchange workflows

Added the ability to use scripting of the polygon selection in the Spatial Data Translator so it can be used within a loop, for example to more effectively batch data exchange a collection of Petrosys polygon files into ESRI shapefiles. This also enables interactive scripting of the data AOI filter where polygons selections are used.

# Display individual contours with a custom style

In addition to setting styles for particular contour levels, it is now possible to set a custom style for individual contours, for both contours shown from file or on the fly from a grid or 3D seismic surface. This might typically be used to highlight fluid contacts in the structure - where there might be multiple contours at a specific level but not all represent the fluid contacts. The custom style can be set for a specific contour by selecting it on the map and using the RMB/Apply Contour Style menu option. This may also be useful when contour reflect prospect boundaries. The user has full control over the style used to display the selected contour.
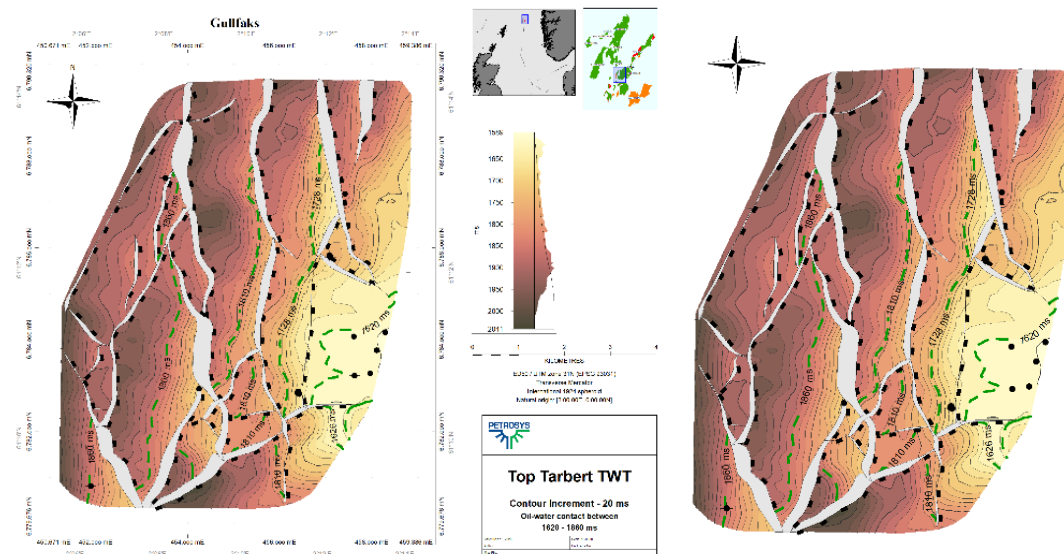
Additional perceptually equal gradients included in standard Petrosys PRO set

The standard set of gradients included with Petrosys PRO has been expanded with the addition of several "perceptually equal" colour gradients. A "perceptually equal" gradient is where color intensity is balanced across the gradient, avoiding incorrect highlighting of certain colors. The gradients added are based on the work by Fabio Crameri, a researcher in scientific visualization from the University of Oslo.

For many mapping situations, a perceptually uniform colormap is a good choice - one in which equal steps in data are perceived as equal steps in the color space. Why? This prevents the viewer of the map perceiving false anomalies, attributes or structure in the data where there is none. This provides opportunity for the map to ensure that features and attributes are not either missed or lost in areas of low perceptual colour contrast. Researchers have found that humans perceive changes in the lightness parameter as changes in the data much better than, for example, changes in hue of the colours.
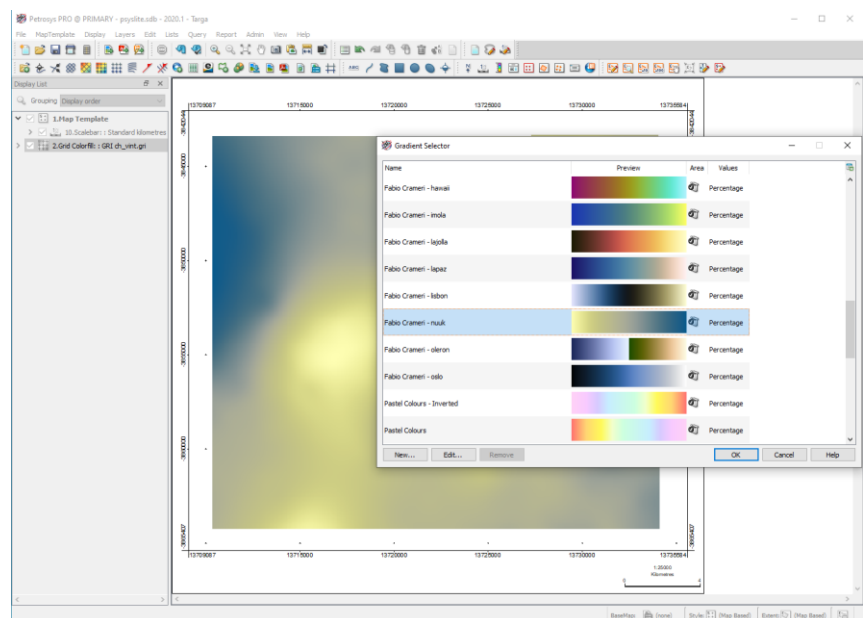
Mapping Overpost Correction Editor now provides a 'freehand' selection option

In addition to the option to select labels via rectangular selection, the Overpost Correction tool allows selection of labels via an arbitrary polygon. This can be useful for selecting labels that are not aligned along vertical or horizontal lines.

Improvements to modelling faults

The ability to effectively use fault sticks throughout the Petrosys PRO application has rapidly become a central feature of many users mapping and surface modelling workflows. In this release there are many improvements that users will value:

Directly work with Paleoscan fault stick in Petrosys PRO through the popular new direct connect option

The ability to make direct use of Fault Sticks from the popular PaleoScan connection recently added to Petrosys PRO, has been extended to all areas of the Petrosys PRO application which support the use of Fault Stick data. This includes but not limited to direct display in the 3D Viewer, use of the fault stick in Petrosys PRO Surface Modeling and the ability to Data Exchange fault sticks from Paleoscan with other third-party software.

Fault stick exchange now supports Petrel as an output source

In this release, the Fault Stick Exchange tool has been extended to include Schlumberger Petrel™ as an output data source, enabling the writing of fault sticks directly to Petrel from any of the available input third-party applications.

Even better fault polygons generated from fault sticks

The Petrosys PRO methods that automatically generate fault polygons from faults sticks have been improved to reduce "waviness" to provide a more accurate fault surface from a variety of fault stick interpretations and all third-party supported fault stick data sources. Access this valued and easy to use feature from the Fault Tab in the Surface Modeling/Grid/Create grid option:

Use the new Clipping Distance and Heave Control options to get better output grid surfaces where fault sticks are used

Gridding input data located within a specified distance to the input fault sticks can be removed before gridding starts. This is used to remove noise around fault sticks which might cause unexpected results in generated grids.
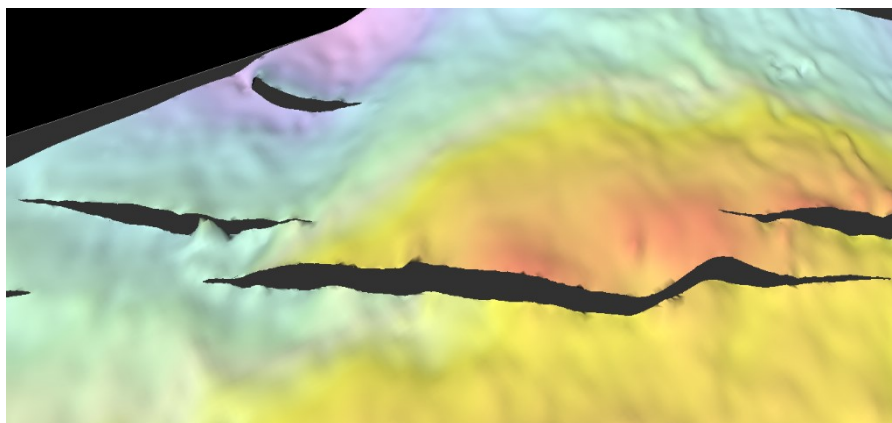
Example with no clipping
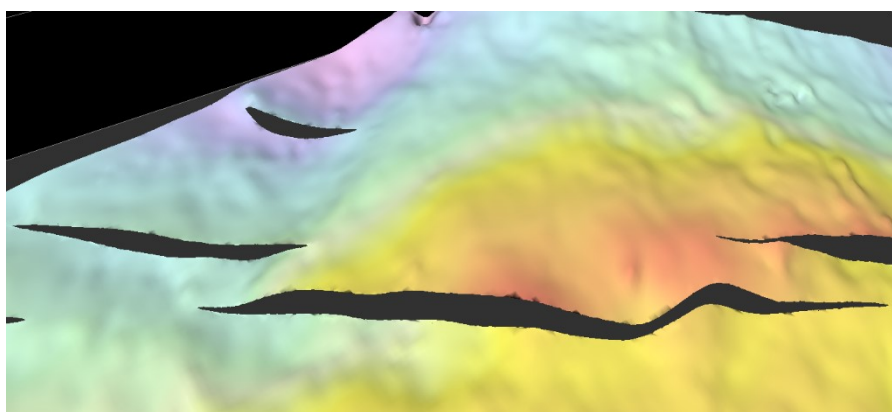
Clipping input data within distance 300

The new 'Minimum Heave' option can be used to widen very narrow fault polygons, which tend to form around vertical fault sticks. Narrow fault polygons are often deemed unreliable due to uncertainty surrounding the seismic resolution and the nature of many fault stick auto-tracking algorithms. The 'Minimum Heave' option can be used to generate polygons that accurately reflect a fault zone, as opposed to a discrete sliver of deformation. This feature can also be applied if users require

fault polygons with a minimum heave for basin modelling applications.

Left: No minimum heave
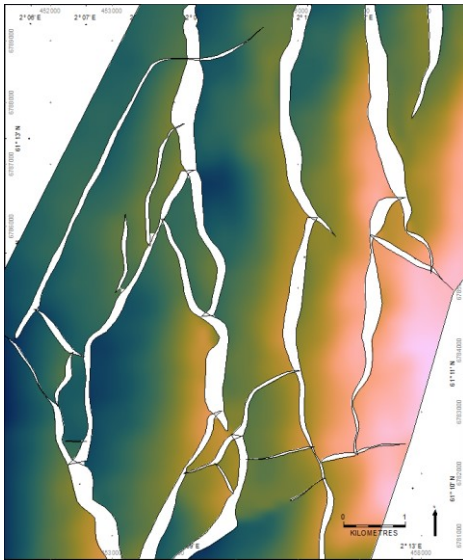
Right: Minimum heave applied. The thinnest parts of several faults are thickened, and the overall geometry is honoured as close as possible.
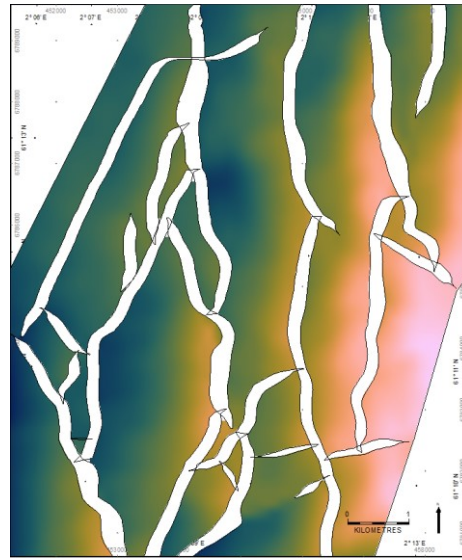
Searchable Map Display Lists

The mapping display list now allows layers to be easily searched for text keywords.

A search can be made by clicking the icon at the top of the display list or using the Ctrl-F shortcut key. Note that the search will match text properties of layers (filename and data types) in addition to the displayed text.

With the addition of map layer groups to maps which allow users to bring together logical collections of map layers, the number of layers in individual maps has grown. This handy new search feature makes it easier to find a desired map layer among a larger collection of layers and map folder groups.

Automated Map Text Scaling v2.0 provides a wider range of choice and control for users

The behaviour of text scaling and symbol sizes within Mapping has been enhanced in PRO 2020.1. In previous versions of PRO, these sizes (and other properties with mm units) would be scaled in proportion to changes to the map scale. This has been changed to provide an enhanced user experience in the following ways:


- Scaling is now disabled by default. This can be changed via a configuration setting under the Mapping tab
- Scaling can be enabled or disabled for each dbm, using the File/Size Scaling Properties dialog
- Scaling can be enabled or disabled for individual layers using the RMB/Scale Text Sizes Proportional To Map Scale option
- Text and symbol heights for a layer can be manually scaled using the RMB/Scale Sizes option
- Size properties in dialogs can be optionally shown in a specific scale, rather than the current map scale, using the File/Size Scaling Properties dialog
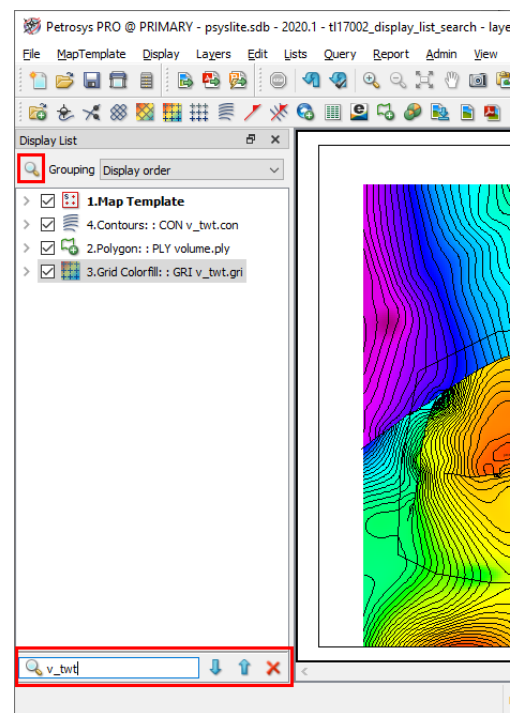
Log Signature Maps and Exchange now support FMI multi-value logs from Petrel

The Well Log Signature display option in Petrosys PRO now supports multi-value FMI logs and data sourced directly from Petrel. In addition, Multi-value FMI logs can now be exchanged from DLIS to Petrel.

In log signature map displayed using a gradient fill style – a handy option has been added to easily reverse the gradient to

streamline achieving the desired fill.
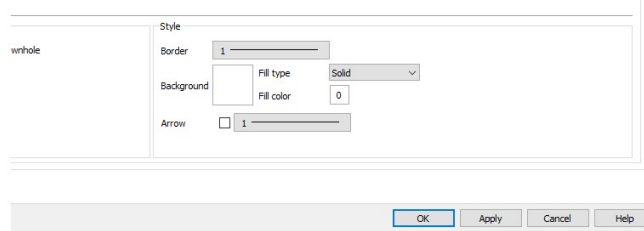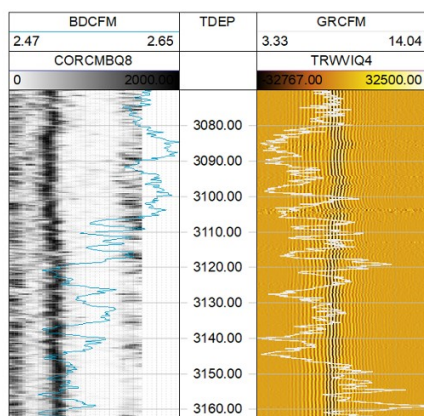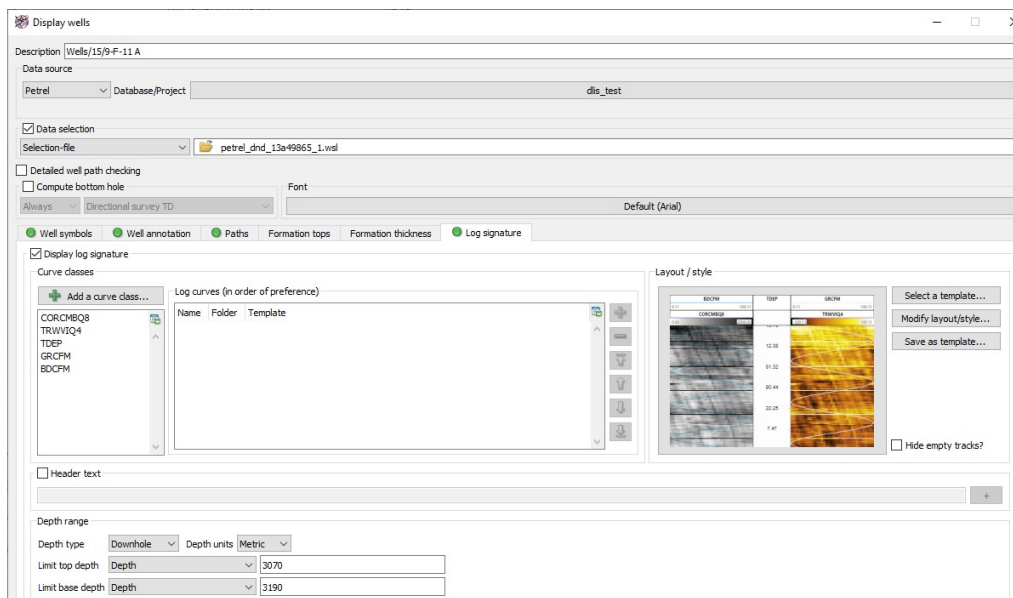
Take advantage of new directional arrow line styles in Mapping

Four new line styles that include arrows to indicate direction have been added to Mapping.

Notes for Upgraders and Installers of Applications

Upgraders from Petrosys PRO 2019 should be aware of the following changes:

- Support for Red Hat Enterprise Linux 6 (RHEL6) has been deprecated. RHEL6 can be supplied on special request. Some features may be unavailable on the RHEL6 platform.
- Petrosys supports Red Hat Enterprise Linux 7 and 8 (RHEL7 and RHEL8) and equivalents (CentOS, Oracle Linux). RHEL7 is shipped by default.
- Petrosys PRO 2020 requires a new license file. Please obtain your license file by logging on to the Petrosys Client Portal or contacting Petrosys Support.

For a full list of supported environments, please see the Petrosys PRO Supported Environments webpage.
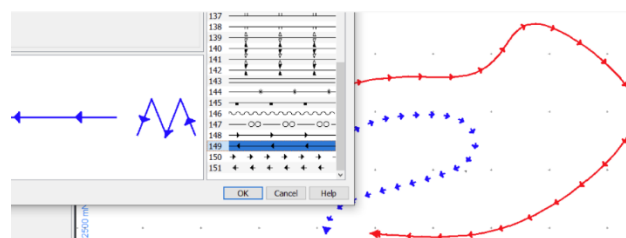
Detailed Release Notes Summary PRO 2020.1.1

Enhancements

Application - User Interface

77462   Filter list widget now highlight searched text

77461   Search highlighting in lists now clears when search term no longer matches

Connections, Import and Export

77135   Web Map Service URLs can optionally be read from catalog entries

Connections, Import and Export - OpenWorks

77125   Display of OpenWorks polygons now reads the correct Polygon Type

Connections, Import and Export - PaleoScan

77407   Connecting to Eliis PaleoScan no longer holds onto the PsDataIO license

77406   Improved error message when connecting to Eliis PaleoScan fails due to no PsDataIO license

77383   Added support for reading well logs

Coordinate Reference Systems

77636   Support added for the OpenWorks "Hotine Oblique Mercator Center Origin" CRS projection

Mapping - General

77470   Text highlighting now supported in display list search

Mapping - GIS, Spatial and Culture

77351   WMTS image compatibility improvements

76993   Support added for SDE 10.5 on SQL Server

77106   Web service catalog includes a 'Category' field to allow grouping

Mapping - Wells

45097   List/Wells/Finder - Support added for selecting wells from from a text file or Excel file

Detailed Release Notes Summary PRO 2020.1.1
Bug Fixes

Application - Printing and Publication

77588   Export Raster - PNG compression correctly used

Application - User Interface

76017   Search highlighting re-enabled for lists
77575   Clearing file selector now returns to project directory
31061   Search in scrolled list now handles text alignment

Connections, Import and Export

77646   Exchange Wells - Logs - All selected well log curves now get loaded

Connections, Import and Export - Excel

77568   The number of rows of data to scan to determine Excel column type is configurable

Connections, Import and Export - IHS

77432   3D horizon data can be read from a file bigger than 2GB

Connections, Import and Export - OpenWorks

77536   Duplicate 2D seismic line coordinates are no longer generated when reading from OpenWorks
77556   OpenWorks Fault sticks Z-values are now read correctly

Connections, Import and Export - Paradigm-Epos

77580   Paradigm culture polygon sets are correctly read as closed polygons

Connections, Import and Export - Petrel

77458   Fixed point logs written to Petrel depth converting all numeric attributes (Santos only)

dbMap/Web - Client

77656   Fixed crash in dbMap/Web embedded browser
77395   Linux embedded browser now stays on top of parent window
77396   Previous embedded browser size and position restored

Mapping - Editors

77594   Raster to grid conversion supports centerline faults
77631   Spatial Editor allows raster images to be opened with a defined CRS
77519   Spatial editor correctly reprojects raster images

Mapping - General

73541   Legends saved into map templates support text over multiple lines

Mapping - GIS, Spatial and Culture

77387   Display/WMS handles services with duplicate layer identifiers
77625   Display/GIS display of FileGDB using the Series Gradient method works as expected
77342   Improvements to reading geographic data for certain GIS data sources

Mapping - Wells

77641   Log signatures no longer require a continuous curve class type to be displayed
77572   Potential crash in well log viewer fixed

Surface Modeling - Gridding

77655   Kriging variogram parameters now update task when runtime prompt is on

Surface Modeling - Workflows/Scripting

77522   Looping over polygons from shapefile now works

Petrosys Release PRO 2020.1.1
Detailed Release Notes

Application - Printing and Publication   Bug Fixes

Export Raster - PNG compression correctly used   77588

The File/Export/Raster Image option now compresses PNG files fully. Previously the compression value (0-9) was being used incorrectly leading to uncompressed PNG files.

Application - User Interface   Enhancements

Filter list widget now highlight searched text   77462

Search highlighting has been added to filtered lists. Previously these lists were searchable, but matched content was not highlighted.

Search highlighting in lists now clears when search term no longer matches   77461

When the search term used in a list search matches an item in the list, the text in the list is highlighted. If the search term is changed so there are no matches within the list, the text highlighting is now cleared.

Application - User Interface   Bug Fixes

Search highlighting re-enabled for lists   76017

Due to a bug in PRO 2019.1, searched for text was not highlighted in various lists. This bug is now fixed.

Clearing file selector now returns to project directory 77575

In PRO 2020.1, clearing a file selector that had a path outside the current project using the right mouse button and then opening the file browser would start the file browser in the previously displayed path. This has been fixed so clearing the selector will return the path to the current project.

Search in scrolled list now handles text alignment 31061

Previously, in some lists. searched text would be highlighted in a different position than the actual text due to differences in the text alignment. This has now been fixed.

Connections, Import and Export   Enhancements

Web Map Service URLs can optionally be read from catalog entries   77135

An option has been added that allows saved raster or vector web map services to be reloaded from the catalog entry instead of the saved URL. This can be useful when the URL for services are likely to change, as just the catalog entry needs to be updated.

Connections, Import and Export   Bug Fixes

Exchange Wells - Logs - All selected well log curves now get loaded 77646

When using Exchange/Wells to load well logs from one data source to another, it now correctly loads all selected well logs. Previously it may not have loaded some log curves, particularly when the input data source wells had a significant number of logs.

Connections, Import and Export - Excel   Bug Fixes

The number of rows of data to scan to determine Excel column type is configurable   77568

Previous versions of PRO contained a configuration variable that was supposed to allow this to be set, but which did not work correctly in practice.

Connections, Import and Export - IHS   Bug Fixes

3D horizon data can be read from a file bigger than 2GB 77432

In previous versions IHS Kingdom 3D horizon data may not be read successfully if file size is bigger than 2GB. This has now been fixed.

Connections, Import and Export - OpenWorksEnhancements

Display of OpenWorks polygons now reads the correct Polygon Type   77125

Display/GIS/OpenWorks Polygon now picks up the correct PolygonType for each polygon from the Mapping Polygon Set in OpenWorks. Previously, if you tried to annotate or used the Filter/Scan option for the PolygonType, it would only show the value EXCLUSIVE, even though there were INCLUSIVE polygons in the set.

Connections, Import and Export - OpenWorksBug Fixes

Duplicate 2D seismic line coordinates are no longer generated when reading from OpenWorks   77536

2D seismic navigation from OpenWorks is now read correctly. Previously each shotpoint location was being duplicated in memory, so it had twice as many points as it should have. The duplicate points could be seen from Mapping/Lists/Seismic/Lines/OpenWorks/Edit/Coordinates and it you tried to import into dbMap, you would see warnings about duplicate shot points being ignored for every line.

OpenWorks Fault sticks Z-values are now read correctly 77556

In previous versions, faults sticks in the time domain read from OpenWorks projects may have had invalid Z-values. This has now been fixed.

Connections, Import and Export - PaleoScanEnhancements

Connecting to Eliis PaleoScan no longer holds onto the PsDataIO license
77407

Connecting to PaleoScan no longer keeps the PsDataIO license checked out. Previously each connection to PaleoScan in each app would checkout and keep a PsDataIO license. e.g. If you connected to PaleoScan in Mapping and Surface Modeling it would check out two PsDataIO licenses. It now only checks out the license initially when connecting and then each time data is requested using the PaleoScan DevKit, keeping it free for other applications and users.

There is potential that this may slow down PaleoScan data access, so there is now also the Tools/Configuration/Advanced/Third Party/PaleoScan/Connect to PaleoScan DevKit on demand option to turn this behaviour off, and revert to checking out and holding the PaleoScan PsDataIO license as long as Petrosys is connected to the project..

Improved error message when connecting to Eliis PaleoScan fails due to no PsDataIO license
77406

Connecting to PaleoScan now gives a more informative error if it is unable obtain a PaleoScan PsDataIO license. Previously it just reported there was a fatal error with no mention of the license not being available.

Added support for reading well logs
77383

Support for reading Well logs from PaleoScan has been added to allow for display of log signature maps and exchange of well logs directly from PaleoScan.

Connections, Import and Export - Paradigm-EposBug Fixes

Paradigm culture polygon sets are correctly read as closed polygons
77580

In previous versions of PRO (from 17.2.4 onward), Paradigm polygon sets were incorrectly read as open lines rather than closed polygons. This meant that fill style was not applied and the polygons could not be exported to other GIS polygons.

Connections, Import and Export - Petrel   Bug Fixes

Fixed point logs written to Petrel depth converting all numeric attributes (Santos only)
77458

When writing point logs to Petrel, all numeric attributes were treated as depths resulting in incorrect values for wells stored with imperial depth units. This has now been fixed.

Coordinate Reference Systems   Enhancements

Support added for the OpenWorks "Hotine Oblique Mercator Center Origin" CRS projection
77636

Petrosys PRO now supports this OpenWorks projection method.

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dbMap/Web - Client   Bug Fixes

Fixed crash in dbMap/Web embedded browser
77656

PRO no longer crashes when data was displayed via the embedded browser and the browser then closed.

Linux embedded browser now stays on top of parent window   77395

On Linux, the embedded browser now stays on top of parent window, becoming consistent with behaviour on Windows.

Previous embedded browser size and position restored   77396

The position and size of the embedded browser window is now restored from the last used position and size.

Mapping - Editors   Bug Fixes

Raster to grid conversion supports centerline faults 77594

In PRO version 2020.1, if centre line faults were included when creating a grid from a raster image, the faults did not get included in the output grid.

Spatial Editor allows raster images to be opened with a defined CRS
77631

Petrosys PRO 2020.1 introduced a bug whereby the CRS Override setting that allows manual selection of a CRS in the Spatial Editor for rasters without one, did not work as expected.

Spatial editor correctly reprojects raster images   77519

In previous versions of PRO, certain rasters would not be reprojected into the current map CRS correctly when opened in the spatial editor.

Mapping - General   Enhancements

Text highlighting now supported in display list search   77470

Now, when searching within the display list, the found text is highlighted in the list.

Mapping - General   Bug Fixes

Legends saved into map templates support text over multiple lines 73541

In previous versions of PRO, new line characters in map template legends would be lost when the map template was applied.

Mapping - GIS, Spatial and Culture   Enhancements

WMTS image compatibility improvements   77351

The robustness of WMTS image display has been improved:

- ➢ support for additional CRS formats
- ➢ handle services with no defined operations

Support added for SDE 10.5 on SQL Server   76993

Petrosys PRO can access GIS data from Esri SDE 10.5 (or later) databases running on SQL Server. Previous versions of PRO would show the list of feature classes, but would not display any shape data (due to changes in the SDE database schema from 10.4 to 10.5).

Web service catalog includes a 'Category' field to allow grouping 77106

The web service catalog can be used for raster image (e.g. WMS, WMTS) and vector (WFS, ArcGIS) web services. Web service catalog entries now include a 'Category' field, which allows for ad hoc grouping of different services.

Mapping - GIS, Spatial and Culture   Bug Fixes

Display/WMS handles services with duplicate layer identifiers 77387

In previous versions of PRO, trying to connect to a WMS service that included multiple layers with the same layer identifier would either crash (Linux) or not show any available layers (Windows)

Display/GIS display of FileGDB using the Series Gradient method works as expected 77625

In previous PRO versions, display of FileGDB data using Display/GIS would occasionally not display, or display with an incorrect style. In particular this would happen when using the "Series Gradient" thematic method.

Improvements to reading geographic data for certain GIS data sources 77342

In previous versions of PRO, for certain data sources (notably PostGIS), more data would be read than necessary.

Mapping - Wells   Enhancements

List/Wells/Finder - Support added for selecting wells from from a text file or Excel file 45097

In Mapping List/Wells/Finder adding and selecting wells using a 'well name list file' is now supported. The well name list file can be a column based text file or an Excel file.

Mapping - Wells   Bug Fixes

Log signatures no longer require a continuous curve class type to be displayed 77641

Previously, log signatures would not be displayed when displaying only FMI logs. This has now been fixed and FMI logs can be displayed without requiring a continuous log curve.

Potential crash in well log viewer fixed 77572

A possible crash in the well log style viewer has been fixed.

Surface Modeling - Gridding   Bug Fixes

Kriging variogram parameters now update task when runtime prompt is on 77655

In previous versions, when using gridding method 'Kriging' or 'Kriging with External Drift' user run-time modified variogram parameters were not saved into the task after the task was run. This has been fixed.

Looping over polygons from shapefile now works   77522

In previous versions, the workflow of looping through a polygon selection did not work for some shapefiles if some attributes had http URL values. This has now been fixed.

Detailed Release Notes Summary PRO 2020.1

Enhancements

Application - General

76649   Red Hat Enterprise Linux 7 now shipped as the default platform for Linux
75681   Updated to Qt 5.14

Application - User Interface

76790   Improved performance of adding data to lists

Configuration - Licensing

77249   PRO Licensing - Require a new license file to run PRO 2020.1

Connections, Import and Export - PaleoScan

71637   Added support for reading Wells, Directional surveys, Checkshots and Markers from PaleoScan
71641   Added support for reading Fault Sticks from PaleoScan
77019   Added support for assigning a CRS to a PaleoScan project connection

Connections, Import and Export - Petrel

44717   Added support for writing checkshot surveys to Petrel
73801   Petrel 2014 no longer supported
77050   Use configured well log folder when writing well zone comment logs to Petrel (Santos only)
76759   Wells exchange now supports multitrace well log curves from DLIS to Petrel

Connections, Import and Export - SEGY

77182   SEGY format - support unsigned integer for sample interval

dbMap - Client

76765   dbMap well directional survey restriction on zero azimuths removed (Santos only)

dbMap/Web - General

72953   Embedded web browser now uses system configured proxy

Mapping - Editors

30844   Extraction of grids from image by converting pixel colours into data values
76634   Overpost correction allows selection of multiple labels via polygon

Mapping - General

16051   Added support for direct display of PDF files in Mapping
17002   Display list search enabled
31524   Display individual contours with a custom style
72986   Improvements to map size scaling
76989   Linestyles - Added directional arrow styles
77211   Additional perceptually equal gradients included in standard Petrosys set

Mapping - GIS, Spatial and Culture

75658   Location Map can now display additional polygons

Mapping - Grids, Surfaces and Sampled Data Files

53007   Support added for "grid" data stored in raster formats

Mapping - Wells

75351   Added support for display of multitrace (FMI) log signature maps
76591   Log signature maps: added option to reverse gradient fills

Spatial Data Translator

37035   Polygon selections in Spatial Data Translator enabled for scripting
74427   AOI filter is now interactively scriptable

Surface Modeling - Contouring

76863   Improved contouring with snapping to faults

Surface Modeling - Exchange

35137   Added Petrel as an output data source to Fault Stick Exchange

76511   Added Drag-n-Drop capabilities to Wells Exchange

68689   Wells Exchange - Allow user selection of UWI to be written to output data source

44639   3D Seismic Surfaces Exchange - Added ability to scale Z values during transfer

44640   Fault Sticks Exchange - Added ability to scale Z values during transfer

Surface Modeling - Gridding

76588   Allow users to have control over the heave of the generated fault stick polygons

76839   Gridding/Fault sticks - added input data clipping distance

Wells (WDF) Editor

76983   WDF Import - Support added for dates with only year and month

Detailed Release Notes Summary PRO 2020.1
Bug Fixes

Application - General

67209   Fixed potential crashes when reading from the Data Cache
77410   custom_install.vbs no longer reboots during silent install
77408   Linux installation script now installs all client specific components
77409   Windows installer now installs client specific add-ons when system restart requested

Application - User Interface

29212   Mapping and 3D Viewer display dialogues Cancel does not undo last Apply
77152   Checkboxes contained within a collapsible group now displayed correctly

Connections, Import and Export

76775   Rescue wells now uses Z-value as inverted TVDSS

Connections, Import and Export - OpenWorks

66934   Fixed grid exchange duplicate name error when writing to OpenWorks

dbMap/Web - Client

77070   Exchange Wells - dbMap preferred checkshots are now exported (Santos only)
74545   Updated embedded browser to recent Chromium web engine

Mapping - Editors

77071   Eye dropper colour selector picks up the correct colour on second virtual desktop
77098   Spatial editor reads rasters with colour palettes correctly

Mapping - General

74147   Bubble Maps shown from database queries show data without an explicit refresh
77298   Display/Bubble Map data filter is disabled when unticked

Mapping - Wells

77425   Display/Wells: Using Form data selection now works

Surface Modeling - Exchange

75752   Improved non-Latin character support in the Wells Import Wizard

Surface Modeling - General

77029   Surface Grid/Process/Calculate Mean Inside Polygon now handles rotated grids
77109   Tools/Create directory now has a default task name

Surface Modeling - Gridding

63822   Added clipping distance functionality to help remove noisy input data around fault polygons
75388   Fixed wavy fault polygons generated from fault sticks
77055   Z min and max now used in welltie and phantom options

Surface Modeling - Workflows/Scripting

77110   Scripting fields now re-evaluated during loop
77209   Task workflows now run faster when overwrite prompt disabled
77108   Scripting function promptUser() and promptUserShared() have param dataType now

Petrosys Release PRO 2020.1
Detailed Release Notes

Application - General   Enhancements

Red Hat Enterprise Linux 7 now shipped as the default platform for Linux
76649

The Petrosys PRO default native Linux platform is now Red Hat Enterprise Linux 7 (RHEL7) and equivalents; CentOS 7, Oracle Linux 7.

Red Hat Enterprise Linux 6 is still supported, however it will need to be requested specially by contacting Petrosys support. In addition a number of functions are not available on RHEL6. These functions are the log signature map template editor and the PRC cloud computation function in Surface Modeling.

The RHEL7 version will run on RHEL8.

Updated to Qt 5.14
75681

Petrosys PRO now uses version 5.14 of the third-party Qt library.

Application - General   Bug Fixes

Fixed potential crashes when reading from the Data Cache
67209

An attempt has been made to eliminate potential crash scenarios when reading Well, Grid, Culture and Fault information from the Data Cache.

custom_install.vbs no longer reboots during silent install
77410

The custom_install.vbs script used by some sites to roll out Petrosys PRO no longer requests for a reboot during installation.

Previously, depending on particular PC configuration and other applications that were running, the install could either spontaneously reboot or prompt for a reboot, depending on whether the script was running a silent install or not. In the case of a silent install, any client specific add-ons would not have been installed after the reboot.

There is a very small chance that after the install of Petrosys PRO, it may not function correctly in all cases until the system has been restarted.

Linux installation script now installs all client specific components
77408

Due to a bug introduced in the Petrosys PRO 2019.3 Linux installer, client specific panels may not have been installed. This has now been corrected.

Windows installer now installs client specific add-ons when system restart requested
77409

The Petrosys PRO installer (setup.exe) will now install the client specific add-ons, if required, in the case where a system restart was requested during installation. Previously the installer would not install the client specific add-ons if a system restart was requested during the install of Petrosys PRO.

A system restart is only requested if a system is has out-of-date shared components installed and an application that is running is accessing those shared components. Examples may include Microsoft Teams, Outlook and many other commonly used applications.

Application - User Interface   Enhancements

Improved performance of adding data to lists   76790

The performance of adding data to some types of lists has been improved.

Application - User Interface   Bug Fixes

Mapping and 3D Viewer display dialogues Cancel does not undo last Apply
29212

In Mapping and 3D Viewer the Cancel button on dialogues with OK, Apply, Cancel now works as expected. The cancel does not undo any changes applied by an earlier click of the Apply button.

Checkboxes contained within a collapsible group now displayed correctly
77152

In Petrosys PRO 2019, checkboxes that were displayed within a collapsible group may have displayed incorrectly. This has now been fixed.

Configuration - Licensing   Enhancements

PRO Licensing - Require a new license file to run PRO 2020.1   77249

Petrosys PRO 2020 requires a new license file. Please obtain your license file by logging on to the Petrosys Client Portal or contacting Petrosys Support.

Connections, Import and Export   Bug Fixes

Rescue wells now uses Z-value as inverted TVDSS 76775

Z-value read from Rescue file wells is now treated as inverted TVD subsea values

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Connections, Import and Export - OpenWorksBug Fixes

Fixed grid exchange duplicate name error when writing to OpenWorks
66934

Grid exchange would raise a duplicate name error when writing grids to OpenWorks with the same geologic name. This issue has now been fixed by incorporating geologic type, pointset name and grid name in the duplicate name check.

Connections, Import and Export - PaleoScanEnhancements

Added support for reading Wells, Directional surveys, Checkshots and Markers from PaleoScan   71637

The reading of Well locations, Directional surveys, Checkshots and Markers from PaleoScan has been added to all areas of the application which support the use of Well data. This includes Mapping, 3D Viewer, Surface Modeling and Exchange.

Added support for reading Fault Sticks from PaleoScan   71641

The reading of Fault Sticks from PaleoScan has been added to all areas of the application which support the use of Fault Stick data, this includes but not limited to, 3D Viewer, Surface Modeling and Exchange.

Added support for assigning a CRS to a PaleoScan project connection
77019

Support has been added to allow for the assignment of a Projected CRS to a PaleoScan project. The connection CRS will be used when any data read from the project does not have an associated CRS already set.

Connections, Import and Export - Petrel Enhancements

Added support for writing checkshot surveys to Petrel   44717

The wells exchange wizard can now be used to exchange checkshot surveys to Petrel.

Petrel 2014 no longer supported   73801

Petrel 2014 is no longer supported in Petrosys PRO 2020.1+.

Support for Petrel 2015 through Petrel 2020 remains.

Use configured well log folder when writing well zone comment logs to Petrel (Santos only)   77050

When writing well zones to Petrel, the client-specific well log folder is now used for zone comment logs.

Wells exchange now supports multitrace well log curves from DLIS to Petrel   76759

Complementing the display of multi-trace logs in Mapping, multi-trace well logs stored in DLIS files can now be exchanged to Petrel using the Wells Import Wizard.

Connections, Import and Export - SEGY Enhancements

SEGY format - support unsigned integer for sample interval   77182

SEGY format now supports unsigned integer for sample interval and sample length fields in SEGY binary file header.

dbMap - Client   Enhancements

dbMap well directional survey restriction on zero azimuths removed (Santos only)   76765

For Santos only, the restriction on dbMap well directional survey points with azimuth values of zero has been lifted, so they are now included in any well path calculations and you no longer get warning messages about surveys with null or zero azimuths being ignored.

dbMap/Web - Client   Bug Fixes

Exchange Wells - dbMap preferred checkshots are now exported (Santos only)   77070

Exchange/Wells from dbMap now only writes preferred checkshots to the output data source. Previously it would incorrectly read points from all checkshot surveys assigned to a well and merge them into one.

Updated embedded browser to recent Chromium web engine 74545

The embedded browser used to access dbMap/Web has been upgraded to a modern web engine based on a recent Chromium release. This provides a familiar experience when using the embedded browser, for example browser tabs and download progress, along with security improvements.

Note: dbMap/Web 2020.1 is required for full compatibility with the new embedded browser in PRO 2020.1.

dbMap/Web - General   Enhancements

Embedded web browser now uses system configured proxy 72953

The embedded browser, which is used to support features such as dbmap/Web and the Probabilistic Resource Calculator will now use the system configured proxy. Any proxy configured in within the Configuration Tool is now ignored for the embedded browser.

Mapping - Editors   Enhancements

Extraction of grids from image by converting pixel colours into data values
30844

The Spatial Editor includes a new option for raster images allowing grid data to be extracted.

The option can be run from the Operations/"Create Grid From Raster" or from the RMB menu option of the same name.

The process for creating a grid is as follows:

- ➢ The source image is loaded
- ➢ Faults and clipping polygons can be optionally applied
- ➢ Manual image editing is done if required - for example to blank out parts of the source image to avoid processing them
- ➢ A gradient is interactively constructed by picking colours from the grid and assigning z-values. The gradient is used as a reverse lookup to match pixels from the image to z-values from the gradient. The desired accuracy can be controlled, by specifying how closely colours should match.
- ➢ The parameters of the output grid are set (cell size and geometry)
- ➢ Finally, the grid is created by converting pixels into z-values to create an input sample set, which is then gridded to create the output

Overpost correction allows selection of multiple labels via polygon 76634

In addition to the option to select labels via rectangular selection, the Overpost Correction tool allows selection of labels via an arbitrary polygon. This can be useful for selecting labels that are aligned along not vertical or horizontal lines.

Mapping - Editors   Bug Fixes

Eye dropper colour selector picks up the correct colour on second virtual desktop 77071

The spatial editor "Extract Shapes From Raster" option supports an eye-dropper mode which allows colours to be picked from the screen using the mouse cursor. In previous versions of PRO, picking a colour on a second monitor did not return the correct colour.

Spatial editor reads rasters with colour palettes correctly 77098

Some raster image formats are based on a colour palette (typically with a small number of colours in the image). The Spatial Editor now opens colour palette rasters correctly. In previous versions of PRO, these were incorrectly read as a gray-scale image.

Added support for direct display of PDF files in Mapping   16051

The direct display of PDF documents within Mapping has been added in Petrosys PRO 2020.1.

Users can now choose to display a full page from a PDF document as an image on the Map Canvas in Mapping. The new Display/PDF, menu in Mapping brings up a dialog to choose the PDF document as well as providing Rendering and Placement options, along with document properties and a Preview.

The users has full control over the rotation, background and foreground transparency of the page displayed on the Map Canvas as part of the Rendering options. Placement options are the standard selections available for most Map based elements. And the rich Preview of the document's page allows the user to see what will be finally displayed on the Map for the options selected. Information such as the Title, Author, Subject, etc. of the document is also displayed in the Properties section of the dialog.

Password protected PDF documents are supported and users have the option to utilise the Petrosys PRO Password Manager for saving document passwords.

With this new feature, Petrosys PRO does not currently support layer, individual images or geospatial information from a PDF document.

Note: The display of PDF documents is only supported on Windows.

Display list search enabled   17002

The mapping display list allows layers to be searched for text keywords. A search can be made using the icon at the top of the display list or using the Ctrl-F shortcut key. Note that the search will match text properties of layers (filename and data types) in addition to the displayed text.

Display individual contours with a custom style   31524

In addition to setting style for particular contour levels, it is now possible to set a custom style for individual contours, for both contours shown from file or on the fly from a grid or 3D seismic surface. This would typically be done to highlight fluid contacts - where there might be multiple contours at a specific level but not all represent fluid contacts. The custom style can be set for a specific contour by selecting it on the map and using the RMB/Apply Contour Style menu option. The style used to display can be set in the corresponding panel for the particular layer.

Improvements to map size scaling   72986

The behaviour of scaling of text and symbol sizes within Mapping has been modified. In previous versions of PRO, these sizes (and other properties with mm units) would be scaled in proportion to changes to the map scale. This has been changed in the following ways:

  ➢ Scaling is now disabled by default. This can be set via a configuration setting under the Mapping tab
  ➢ Scaling can be enabled or disabled for each dbm, using the File/Size Scaling Properties dialog
  ➢ Scaling can be enabled or disabled for individual layers using the RMB/Scale Text Sizes Proportional To Map Scale option
  ➢ Text and symbol heights for a layer can be manually scaled using the RMB/Scale Sizes option
  ➢ Size properties in dialogs can be optionally shown in a specific scale, rather than the current map scale, using the File/Size Scaling Properties dialog

Linestyles - Added directional arrow styles   76989

Four new graphical linestyles have been added with directional arrows.

Additional perceptually equal gradients included in standard Petrosys set
77211

The standard set of gradients included with PRO has been expanded with the addition of a number of "perceptually equal" colour gradients (where intensity is balanced across the gradient, avoiding incorrect highlighting of certain colours) based on work By Fabio Crameri.

Bubble Maps shown from database queries show data without an explicit refresh 74147

In previous versions of PRO, displaying bubble maps from a data base query would sometimes not display any of the bubbles.

Display/Bubble Map data filter is disabled when unticked 77298

In previous versions of PRO, disabling the data filter property by unchecking did not work as expected.

Mapping - GIS, Spatial and Culture   Enhancements

Location Map can now display additional polygons 75658

Location maps can now optionally include additional polygons from a single GIS source from a number of supported GIS sources.

Additionally, display of the map extent is now optional.

Mapping - Grids, Surfaces and Sampled Data Files Enhancements

Support added for "grid" data stored in raster formats 53007

Raster files with grid data can now be read or imported in Petrosys PRO, displayed in Mapping and 3D viewer, even used as gridding data in Surface Modeling.

Mapping - Wells   Enhancements

Added support for display of multitrace (FMI) log signature maps 75351

Multi-trace well logs from Petrel can now be displayed as raster images in a log signature map.

Log signature maps: added option to reverse gradient fills 76591

Gradient fills in log signature maps can now be reversed. In the curve fill style properties, an option to reverse the gradient has been added.

Display/Wells: Using Form data selection now works 77425

A bug has been fixed in Display/Wells using the Data Selection option 'Using Form' (for supported data sources) that was not honouring the users selections when setting up the data selection information.

Spatial Data Translator   Enhancements

Polygon selections in Spatial Data Translator enabled for scripting 37035

When used in Surface Modeling, shape selection in Spatial Data Translator tasks is now scriptable.

AOI filter is now interactively scriptable 74427

The AOI filter in Spatial Data Transfer is now scriptable when used in Surface Modeling workflows.

Surface Modeling - Contouring   Enhancements

Improved contouring with snapping to faults   76863

In previous version contours generated from grids might have some random artefacts when snapping to faults is enabled. This has now been fixed.

Surface Modeling - Exchange   Enhancements

Added Petrel as an output data source to Fault Stick Exchange   35137

The Fault Stick Exchange tool has been extended to include Petrel as an output data source, enabling the writing of fault sticks directly to Petrel from any of the available input third-party applications.

Added Drag-n-Drop capabilities to Wells Exchange 76511

Several steps of Wells Exchange have had drag-n-drop functionality added, for data types from applications like Petrel and DecisionSpace Geosciences. The supported data types include, wells and well lists, formations, zones and log curves in the various selection lists of the Exchange tool.

Wells Exchange - Allow user selection of UWI to be written to output data source   68689

Wells Exchange now has the ability for the user to assign an alternate Well Header field from input wells to be written as the UWI of the output wells. This option is available on the last step of Wells Exchange for supported combinations of input and output data sources.

3D Seismic Surfaces Exchange - Added ability to scale Z values during transfer   44639

Z values from input 3D Seismic Surfaces may now be re-scaled when writing to an output data source using the options from the Z value scaling drop-down, which has been added to the display dialog.

The drop-down contains three options:

➢ None - this option does not effect the input Z values.
➢ Invert - allows an inversion to be applied to all Z values from the selected surfaces.
➢ Custom - allows a scale factor and offset value to be specified, which will be applied to the Z values read from the surfaces when it is transferred.

Fault Sticks Exchange - Added ability to scale Z values during transfer   44640

Z values from input Fault Sticks may now be re-scaled when writing to an output data source using the options from the Z value scaling drop-down, which has been added to the display dialog.

The drop-down contains three options:

➢ None - this option does not effect the input Z values.
➢ Invert - allows an inversion to be applied to all Z values from the selected fault sticks.
➢ Custom - allows a scale factor and offset value to be specified, which will be applied to the Z values read from the fault sticks when it is transferred.

Surface Modeling - Exchange   Bug Fixes

Improved non-Latin character support in the Wells Import Wizard   75752

Improved handling of non-Latin characters in the Wells Import Wizard formations and zones.

Surface Modeling - General

Bug Fixes

Surface Grid/Process/Calculate Mean Inside Polygon now handles rotated grids 77029

In previous versions in Surface Modeling option Grid/Process/Calculate Mean Inside Polygon doesn't handle rotated grid case properly. This has now been fixed.

Tools/Create directory now has a default task name 77109

Tools/Create directory now has a default task description when it is created.

Surface Modeling - Gridding

Enhancements

Allow users to have control over the heave of the generated fault stick polygons 76588

Previously generated faults from fault sticks could be very narrow. Now we have option 'minimum heave' for the user to control the minimum heave of generated polygons.

Gridding/Fault sticks - added input data clipping distance 76839

Gridding Input data points which are close to fault sticks surfaces in a configured distance now can be removed before gridding starts. This is to remove noise around fault sticks which might cause unexpected results in generated grids.

Surface Modeling - Gridding

Bug Fixes

Added clipping distance functionality to help remove noisy input data around fault polygons 63822

The input data clipping distance field has been added to fault selection panel. This functionality helps remove noisy data around fault polygons. The clipping distance is used to create boundary polygons. The input data points falling within these boundary polygons are clipped away before the gridding process starts.

Fixed wavy fault polygons generated from fault sticks 75388

Fault polygons generated from faults sticks no longer show waviness artefacts.

Z min and max now used in welltie and phantom options 77055

Z-Min/Max is now honoured in welltie and phantom process for clipping the input data points.

Surface Modeling - Workflows/Scripting

Bug Fixes

Scripting fields now re-evaluated during loop 77110

In previous versions there was a bug that both interactive and non-interactive scripted fields were not re-evaluated during a looping workflow. This has now been fixed.

Task workflows now run faster when overwrite prompt disabled 77209

It has been made faster when running workflow when option 'Prompt for overwrite files before running workflow' in the Configuration Tool is turned off.

Scripting function promptUser() and promptUserShared() have param dataType now
77108

Scripting function promptUser() and promptUserShared() now have parameter DataType.

Wells (WDF) Editor   Enhancements

WDF Import - Support added for dates with only year and month   76983

Support has been added for date formats that contain only the year and the month for the WDF import options.