PETROSYS

SOFTWARE RELEASE NOTES

Version 2019.1

PETROSYS PRO

Petrosys valued-added agile development continues with the release of Petrosys PRO 2019.1 – a major update to Petrosys PRO – which offers new features for users.

Petrosys PRO 2019 solidifies the software's position in the production world by focusing on well data improvements. Often considered as more of an explorationist's tool kit, Petrosys PRO is widely used in production teams globally. After discussing their needs with regards to well data, we have concentrated our development on exchanging well log data and have made some major improvements to the display of well data.

The addition of Well Log Curves to our continuously expanding 'Exchange' capability will be a popular addition for many PRO users. PRO has long been able to exchange well header, tops, directional surveys and checkshot surveys between a variety of 3rd party sources and the addition of 'Well Logs' to this option makes PRO an even more proficient data management tool.

Improvements in the direct access to other data from connected G&G applications continue to be a feature of Petrosys PRO releases. PRO 2019.1 gives Petrel users improvements in the selection of seismic and horizon data and drag and drop of Petrel contours; DecisionSpace and Petrel users get a more straightforward ribbon map when they drag and drop a seismic line layer onto Mapping.

To improve the quality of Production Mapping in PRO, our users have asked us to focus on how deviated well paths are displayed. With advancements in geosteering, modern wells may penetrate the top or base of a key reservoir zone repeatedly. In PRO 2019.1 the user can display the multiple intersections as well as display multiple zones in the same display layer. This ability, combined with PRO's direct connections to key data sources, will give production teams easily updateable maps showing the spatial distribution of key producing zones.

Anyone using the PostGIS opensource database will be glad to see the ability to display data directly from the database, exchange data from the database to other sources and the ability to use data from the database as input to grid creation.

Maps drawn outside of the Anglosphere will benefit from improvements in the support for international character sets, ranging from the elusive German ß to the intricacies of Chinese and Japanese text.

Growing user sophistication in the use of Petrosys PRO Surface Modeling has led to several improvements not immediately obvious to the casual user. Lowest closing contour calculations can have sealing faults that don't have to be closed. Prospect outlines based on lowest closing contours may contain 'holes' based on local surface depressions or other structures: Shapefiles with this topology can now be successfully used in Petrosys PRO volumetrics. Point data from Excel and GIS sources can now be optionally regarded as representing lines to allow inclusion of the implied gradient in surface computations. The inclusion of all input data for gridding, and not just that within the current AOI, can now be enabled, as can elliptical search radii.

Read on for more details on these options and more, or for more information please contact your nearest support office or email support@petrosys.com.au.

Exchange of Well Log Curves

The Wells Exchange has added support for exchanging 'Log Curve' data between supported data sources. Users will now be able to read Log Curve data from third-party data sources like OpenWorks, Petrel, Paradigm, IHS Kingdom, DUG Insight, ODM and DLIS or LAS files and then be able to write that Log Curve data to OpenWorks and Petrel. In addition to third-party data sources, the Petrosys dbMap PPDM38 data model is supported, where DLIS or LAS files previously catalogued through the Records Management (RM) system can be read during an exchange.
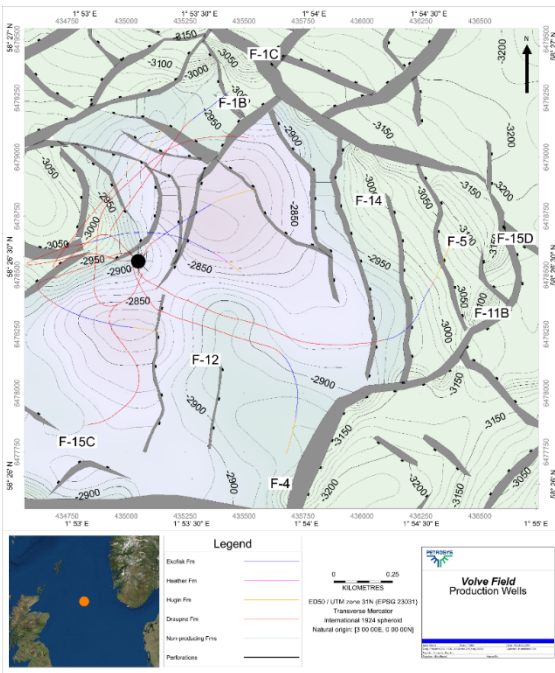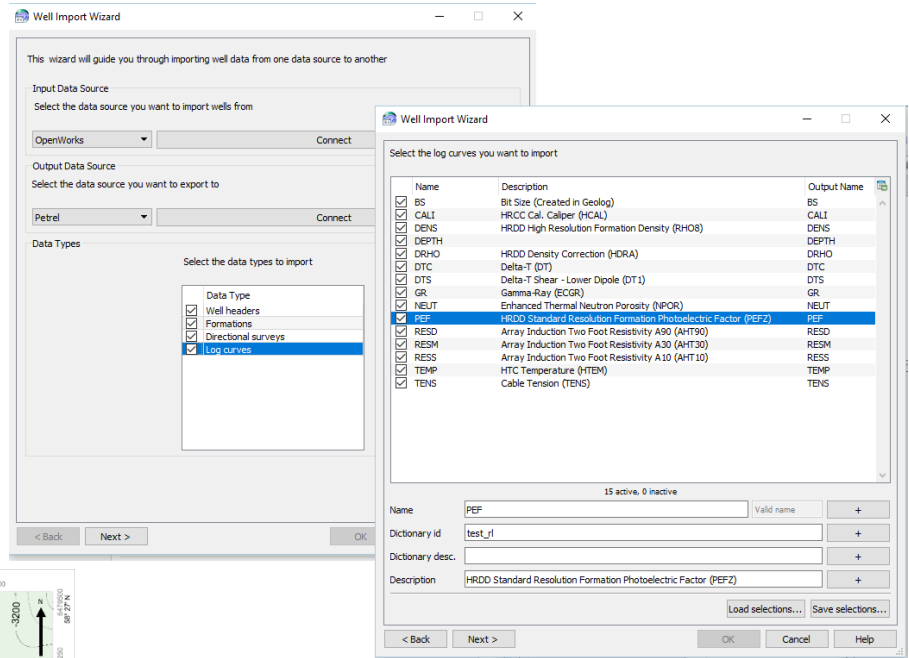
Production Mapping

Display/Wells introduces the ability to display multiple path segments in the same display layer. The 'Path' panel has been split into the well full path and path segments display. Users can select multiple path segments, with rich control over the segment start and end point. As in previous versions, when selecting formations for multi-connect data sources, it is also possible to specify rules to use formations and/or sources/interpreters in preference to others. Users can select different line styles and colors for each displayed path segment, while certain data sources offer extra color options; for example, Petrel data source will offer Petrel well, Petrel well folder, Petrel formation options.

The value in being able to segment the display styles of well paths is to more effectively map, visually identify and highlight the spatial distribution of key producing zone, sand or reservoir properties; and to more effectively map unconventional and directional drilling programs.

PostGIS Spatial Data Support Added

PostGIS, the spatial database extender for the PostgreSQL object-relational database, is becoming more popular at some sites, particularly in Norway. We have now added the ability to read PostGIS spatial data. This means users can now find a PostGIS connection available Display/GIS in Mapping, and as an input data source in the Spatial Data Translator and as an input data source when creating a grid.

## Paradigm 18p1 Support Pack and Petrel 2019.1 Supported

Support for the latest Paradigm 18p1 Support Pack and Petrel 2019.1 has been added for Windows and Linux (Paradigm only). All versions of Paradigm and Petrel supported by Petrosys PRO 2018 remain supported.

Improved Support for non-ASCII Text

PRO 2019.1 adds better support for non-ASCII text being used throughout the application. For example, using Arabic characters in a legend or displaying emoji-text as a callout to a map feature. Furthermore, maps containing non-ASCII text can now be shared with other PRO users on any platform with any language preference, confident in the knowledge that the text will display as intended.

Surface Modeling Enhancements

Several improvements to Surface Modeling have landed in PRO 2019.1. Support for unclosed sealing faults in lowest closing contour calculations and support for polygons with holes in volumetrics makes volumetric workflows simpler. Allowing GIP, Excel and text point data to be interpreted as line data reduces the data manipulations that previously had to be done to support these workflows. Addition of a pause task type enables user intervention within a workflow while maintaining the benefits of the workflow's context and consistency.
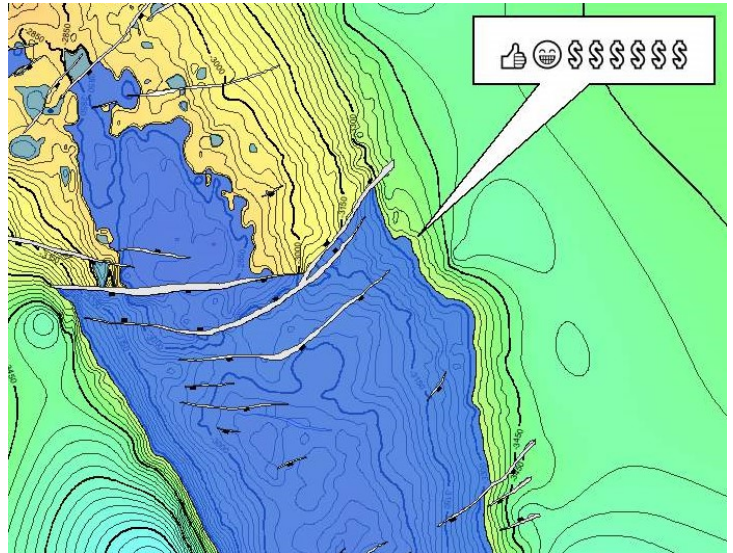
Two features are available as a technology preview to allow interested users to evaluate their usefulness:

- Allowing data outside the grid area to calculate the grid surface
- Enable a search ellipse to restrict the data used to calculate a grid node during surface calculation

Each technology preview feature is disabled by default but can be enabled via the Configuration Tool. Please contact Petrosys Support for assistance in enabling these features or for further details.

Dispatch Server Connections Removed

Support for Dispatch Server connections, initially deprecated in Petrosys PRO 2018.2, has been removed. All Dispatch Server connections can be replaced with equivalent remote connections if required.

Notes for Upgraders

Upgraders from Petrosys PRO 2018 should be aware of the following changes:

- The Petrosys Dispatch Server, which allowed access to third-party data sources on remote hosts has been removed. Similar functionality is available through the remote connections feature, which was released in Petrosys PRO 2018.2. Please consult the help documentation or contact Petrosys Support for more information on this feature.
- Petrosys PRO 2019 requires a new license file. Please obtain your license file by logging on to the Petrosys Client Portal or contacting Petrosys Support.
- Petrosys PRO 2019 now saves map files and panels.pnd in the UTF-8 codec. This means earlier versions of Petrosys PRO may not open these files correctly, or the text within them may not display correctly.
- Petrosys PRO 2019 is backwards compatible with Petrosys PRO 2018, except for:
  - Dispatch server connections will not be connected. Petrosys PRO will prompt for a replacement connection.

Upgraders from versions of Petrosys PRO earlier than 2018 should consult the Petrosys PRO 2018 and earlier release notes for any relevant upgrade information.

No environment, third-party data source or operating system updates are required for Petrosys PRO 2019. For a full list of supported environments, please see the Petrosys PRO Supported Environments page.

Detailed Release Notes Summary PRO 2019.1
Enhancements

3D Viewer - General

62761   OpenInventor upgraded to 9.7.2

Application - General

73383   During file resolution check any relative files against current project directory
73416   Check path mappings against all applicable path mapping

Application - User Interface

71389   Infinite number of decimal places for decimal value entry

Configuration - General

73348   Allow From path mapping to be a blank path
73882   LIMS - Spotfire links updated (Santos)

Configuration - Licensing

73764   Tools/License Manager (Windows) - Leading and trailing spaces are stripped from hostname when using "Edit/License Server Connection Configuration"
73012   Petrosys PRO 2019.1 requires a new license file

Connections, Import and Export

71518   Removed Dispatch Server and support for Dispatch Server typed connections in the Connection Manager
36485   Support added for reading PostGIS spatial data
72606   Flash wells option added to Well list for DevKit data sources
72525   Drag and drop of 2D seismic horizons now creates a layer with just ribbon map displayed
72520   Petrel Drag-and Drop into grid input data only prompts when required
72278   Petrel DnD - Dragging 2D Seismic horizons now filters lines by the Petrel survey folder

Connections, Import and Export - Paradigm-Epos

73705   Added support for Paradigm 18p1 Support Pack on Linux and Windows

Connections, Import and Export - Petrel

70813   Petrel 2019.1 supported
72635   Petrel 2D seismic - Filtering by Seismic folder is now available in Mapping and Surface Modeling
72270   Petrel DnD - Default item/layer names are now more descriptive for 2D and 3D horizons

Mapping - Editors

73977   Well Symbol Generator - Added in 72 and 60 degree arc primitives

Mapping - General

31024   /Display/Text has improved support for international character sets
63253   Improved layer selection in the Display/Web Service Image/WMS layer selector
52961   The selected layer in the Mapping display list is more obviously highlighted
63443   Display of contours from Petrel added

Mapping - GIS, Spatial and Culture

20227   Display/GIS thematic mapping allows polygon outline lines to be turned off

Mapping - Grids, Surfaces and Sampled Data Files

73436   Contour on-the-fly performance improved

Mapping - Wells

30474   Display/Wells - Path Segments - Allow multiple segments in a single display layer
24190   Add support for reading zones from Petrel
53013   Display/Wells/Path Segments - fixed logic when well intersects formation multiple times

Surface Modeling - Exchange

| 43990 | Wells Exchanges now supports Log Curve data |
| 46621 | Exchange/Wells Import Wizard menu has been renamed to Exchange/Wells |

Surface Modeling - General

| 15476 | Mean and median grid filter added |
| 72080 | Lowest closing contour now supports sealing faults that are not closed |

Surface Modeling - Gridding

73544	Grid outlining performance improved
73488	Boundary gridding displays error message when not valid data
72382	Grid/Create grid allows users to select input point data type (point or line) for GIP, text and Excel data

Surface Modeling - Volumetrics

| 72397 | Use polygons with holes in volumetrics |

Surface Modeling - Workflows/Scripting

| 30618 | Pause functionality added to Surface Modeling workflows |
| 68862 | Tools/DrawMap scripting now insensitive to template dbm layer order |

Detailed Release Notes Summary PRO 2019.1
Bug Fixes

3D Viewer - General

69912   Visual Studio 2015 OpenMP library now installed

Application - General

73860   Centreline faults are supported in the Esri ArcMap plugin

Application - User Interface

54249   Fixed warning message for Oracle password due to expire
73075   List filter dialogs now follow parent dialog moves

Connections, Import and Export

74029   Performance improved when filtering by Paradigm-Epos well DB
73889   Exchange 3D Seismic Surfaces no longer crashes if it cannot connect to the OpenWorks DevKit
73002   Exchange 3D seismic surface more tolerant of geometry differences

Connections, Import and Export - Excel

73914   Excel integer values with more than 10 digits are correctly saved

Connections, Import and Export - Petrel

72669   Petrel 2D seismic - Import to SDF and dbMap filtering by Seismic folder now works

dbMap - Client

72973   PPDM3.8 Well Checkshot Survey ID, Survey type and Source are now editable

Documentation - Online Help

73198   Print dialog launches correct help topic

Mapping - Editors

74088   Spatial Editor reports correct polygon area when projected CRS for data does not have units of metres
69379   Grid Editor requires confirmation when editing contours with ungridded changes

Mapping - General

72558   Map Templates - Handle Unicode chars correctly when serialised to dbm
74051   Drawing Tools/Closed Shape and Curve - Button double click is more reliable on linux
73557   Display/Location Map does not crash when enabled for a map with a LocalXY CRS

Mapping - GIS, Spatial and Culture

71420   Display/GIS correctly draws long lines that are close to the central meridian +180 degrees
74002   Display/GIS shows the correct number of decimal places for maps created prior to 2018.3
72389   Display/GIS/Thematic Mapping Series Range allows entries of bound between -1.0 and 0.0

Mapping - Grids, Surfaces and Sampled Data Files

64318   Display/Grid contour label size fields are updated correctly when the map scale changes

Mapping - Map Sheets

70453   Initial map grid line and annotation increments are set correctly for dynamic map extents
69527   Map template scale field is editable for dynamic extent in "Fixed Scale" mode

Mapping - Wells

57793   Viewing WES plots and then panning, now re-enables the main menus on the mapping window correctly (Santos Only)

Surface Modeling - Contouring

47182   Replacement connection dialog is displayed when running Contour/Grid (by cell) task

Surface Modeling - Exchange

72771   Wells Exchange - Fixed an issue with not being able to set formation system values for selected items

Surface Modeling - Gridding

72870   Grid/Create Grid from shapefile using formula no longer requests attribute to grid

55555   Improved sizing of fault polygons list in gridding

73368   Grid input data summary dialog now links to appropriate help topic

73136   Grid smoothing now runs when selected after Kriging

Surface Modeling - Volumetrics

72102   Volumetrics thickness reports no longer shows negative thickness

Petrosys Release PRO 2019.1

Detailed Release Notes

3D Viewer - General   Enhancements

OpenInventor upgraded to 9.7.2   62761

The OpenInventor toolkit used for rendering content in the 3D Viewer has been upgraded to version 9.7.2. This update provides improved performance and stability, and better support for some graphics cards..

3D Viewer - General   Bug Fixes

Visual Studio 2015 OpenMP library now installed   69912

Petrosys PRO now installs the Visual Studio 2015 OpenMP library, which allows 3D Viewer to run on a PC that does not have this library already installed.

Application - General   Enhancements

During file resolution check any relative files against current project directory   73383

Unresolved data files (e.g. file-based layers in a map) that are stored as relative paths are now prefixed with the current map directory and tested against available path mappings. This helps applications find data files when data files have been moved to a sub-directory, simply add a path mapping from the project directory to the new sub-directory, for example from c:\ PetrosysProjects\MyProject => c:\PetrosysProjects\MyProject\dataFiles.

Check path mappings against all applicable path mapping   73416

Unresolved data files (e.g. file-based layers in a map) now compare against a wider range of path mappings that may be applicable. For example, on Windows mapped network drives are compared to any UNC paths and paths are compared case-insensitively.

Application - General   Bug Fixes

Centreline faults are supported in the Esri ArcMap plugin 73860

The Petrosys PRO plugin for Esri ArcMap now supports drawing of all faults, including centre-line faults.

Application - User Interface   Enhancements

Infinite number of decimal places for decimal value entry 71389

Removed the limit of only two decimal places for floating point numbers in the user interface.

Fixed warning message for Oracle password due to expire   54249

In previous versions, Petrosys PRO would display an empty warning if the Oracle password was due to expire. This has now been fixed and the warning text is now shown.

List filter dialogs now follow parent dialog moves   73075

List filter popup dialog now follow the list dialog when the dialog is moved. In particular, when the list filter is shown, then hidden and then the dialog is moved, and then the list filter is shown again, the filter appears in the expected location. Previously, the list filter would restore the last location it was shown on the screen.

Configuration - General   Enhancements

Allow From path mapping to be a blank path   73348

Petrosys PRO now allows blank paths to be used for From fields for automated path mapping. This means a path mapping can be added to handle the case where a data file has been moved into a project sub-directory - enter a blank From field with the new location as the To field and automated path mapping will resolve the file location. If the file is then saved, the new path to the data file will be saved.

Path mapping with a blank From field could cause loading of files to be slow, particularly if there are many data files that use path mapping to resolve to their correct location. It is recommended that any blank From field path mappings to be placed at the end of the path mapping list.

Note: if a path mapping with a blank From field has been entered, and then the configuration is saved using an earlier version of Petrosys PRO, then the blank From field path mapping will be removed. This is due to the way earlier versions process paths and can not be changed.

LIMS - Spotfire links updated (Santos)   73882

The Spotfire links have been updated at the request of Santos.

Configuration - Licensing   Enhancements

Tools/License Manager (Windows) - Leading and trailing spaces are stripped from hostname when using "Edit/License Server Connection Configuration"   73764

In the Launcher option "Tools/License Manager" on Windows, leading and trailing spaces are stripped from hostname when using "Edit/License Server Connection Configuration".

Petrosys PRO 2019.1 requires a new license file   73012

Petrosys PRO 2019.1 requires a new license file. Petrosys support will make a new license file available for maintained clients. Please contact Petrosys support for any questions on licensing.

Connections, Import and Export   Enhancements

Removed Dispatch Server and support for Dispatch Server typed connections in the Connection Manager   71518

The Petrosys PRO Dispatch Server daemon is no longer a supported way to connect to remote data sources from Windows. With the introduction of SSH-based connections in PRO 2018.2, this is now the only method of connecting to remote data source. Existing Dispatch Server connections must be migrated over to use this. Please contact Petrosys Support if you require assistance with using remote connections.

Support added for reading PostGIS spatial data 36485

PostGIS is an extension module for the PostgreSQL database which adds support for GIS and spatial data.

Petrosys PRO now supports reading spatial data from PostGIS spatial databases in a number of contexts:

- ➢ Display/GIS
- ➢ Spatial Data Translator input
- ➢ Grid/Create/Grid input
- ➢ Grid/Create/Grid clipping polygons
- ➢ Spatial Editor/File/Merge
- ➢ Spatial Editor/Clip Polygons
- ➢ Mapping/Display/Bubble Maps
- ➢ 3D Viewer/Display Point Data
- ➢ Volumetrics/Polygons

Flash wells option added to Well list for DevKit data sources 72606

Well lists (Mapping/Lists/Wells) for third-party data sources that require a DevKit, such as DUG Insight, Paradigm, Petrel and SeisWare, now have the Display/Flash well option and associated icon, to flash the currently selected well if it has also been displayed on the map. This functionality is the same as already available for SQL based well data sources.

Drag and drop of 2D seismic horizons now creates a layer with just ribbon map displayed 72525

Drag and drop of 2D seismic horizons from Petrel and DecisionSpace Geosciences into Petrosys PRO Mapping has been changed to create a new 2D seismic line layer with only the ribbon map turned on to show the horizon interpretation. Previously the navigation and line names were also displayed.

Petrel Drag-and Drop into grid input data only prompts when required 72520

Drag-and-drop of items from Petrel into the Surface Modeling/Grid/Create grid/Input data list will now only prompt with the add item screen when required.

For example, previously, when a Seismic Horizon is dragged and dropped, the 3D survey or 2D seismic folder and horizon fields were populated appropriately, and it would prompt you to press OK for adding each 3D survey and horizon. Now it simply adds the items to the list, as it has enough information to make a valid input item. On the other hand, if a 3D Seismic survey is dragged and dropped, it will still prompt you to select the horizon to grid.

Petrel DnD - Dragging 2D Seismic horizons now filters lines by the Petrel survey folder 72278

When a 2D seismic horizon is dragged and dropped into Petrosys PRO Mapping or Surface Modeling, it now creates a layer with the lines filtered by the appropriate 2D seismic survey folder.

Connections, Import and Export   Bug Fixes

Performance improved when filtering by Paradigm-Epos well DB 74029

Performance has been significantly improved when filtering Wells by Paradigm-Epos Well_DBs for Mapping/Display/Wells, Gridding Input data source and Wells exchange. Previously it could take over 1.5 hours to read 2000 wells, where as now it takes about 40 seconds.

Exchange 3D Seismic Surfaces no longer crashes if it cannot connect to the OpenWorks DevKit 73889

Exchange/3D Seismic Surfaces no longer crashes when OpenWorks is selected as the input data source and it fails to connect to the OpenWorks DevKit.

Exchange 3D seismic surface more tolerant of geometry differences [73002]

In 3D seismic exchange it is now supported for the case that input and output surveys do not match exactly, but the increment of inline/xline of one survey is multiple of the other survey's inline/xline increment and the two survey areas overlap.

Connections, Import and Export - Excel   Bug Fixes

Excel integer values with more than 10 digits are correctly saved   [73914]

Previously, in contexts where Excel files are written as spatial feature class data (for example Spatial Data Translator, Spatial Editor, Back Interpolate to GIS), Excel numeric values with a large number of digits could be written as blank.

Connections, Import and Export - Paradigm-EposEnhancements

Added support for Paradigm 18p1 Support Pack on Linux and Windows [73705]

The Paradigm 18p1 Support Pack is now supported as a data source in all features that previously supported a Paradigm connection on both Linux and Windows.

Paradigm 15.5, Paradigm 17 and Paradigm 18 continue to be supported as data sources.

Connections, Import and Export - Petrel Enhancements

Petrel 2019.1 supported   [70813]

Petrosys connectivity to Schlumberger's Petrel now supports direct interaction with Petrel 2019.1.

Support for Petrel 2019.1 includes the ability to:

➢ Drag and drop data from Petrel into Petrosys PRO
➢ Import Model grid horizons and 3D seismic interpretation horizons to a Petrosys grid file
➢ Import faults from Model grids to a Petrosys fault file
➢ Import 2D and 3D seismic navigation and horizon interpretation data to a Petrosys SDF
➢ Directly display Structural framework horizons, Model grid horizons, Input surface grids and 3D seismic interpretation horizons in Mapping
➢ Directly contour Structural framework horizons, Model grid horizon data and Input surface grids in Surface Modeling
➢ Directly grid 2D and 3D seismic horizon interpretation data in Surface Modeling
➢ Directly display, grid and import well data.
➢ Directly display 2D seismic navigation and horizon interpretation in Mapping
➢ Directly display 3D seismic bin grids in Mapping
➢ Directly display Structural Model fault surfaces in 3DViewer
➢ Directly display fault sticks in 3DViewer
➢ Export Petrosys and other third party grids to Petrel

Petrosys PRO continues to maintain support for connections to Petrel 2015.x, 2016.x, 2017.x and 2018.x.

Petrel 2D seismic - Filtering by Seismic folder is now available in Mapping and Surface Modeling   [72635]

It is now possible to filter 2D seismic lines from Petrel using a Petrel seismic folder when displaying in Mapping or gridding in Surface Modeling.

Petrel DnD - Default item/layer names are now more descriptive for 2D and 3D horizons
72270

Drag-and-drop of 2D and 3D seismic horizons from Petrel into Petrosys PRO Mapping and Surface Modeling now gives more descriptive and distinct names to each item created, including whether the item is for 2D or 3D seismic, along with the 3D survey name and horizon.

Connections, Import and Export - Petrel   Bug Fixes

Petrel 2D seismic - Import to SDF and dbMap filtering by Seismic folder now works
72669

The option to filter 2D seismic lines by Petrel folder now works when importing lines from Petrel into SDF (Import/Petrel/Seismic) or dbMap (Mapping/Admin/dbMap Data Transfer/Import/Seismic)

Previously the list of 2D seismic lines would remain empty when this option was used.

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dbMap - Client   Bug Fixes

PPDM3.8 Well Checkshot Survey ID, Survey type and Source are now editable
72973

For dbMap PPDM3.8 clients, the well checkshot survey header dialog now supports editing the Survey ID, Survey type and Source. Previously these fields were read-only.

Documentation - Online Help   Bug Fixes

Print dialog launches correct help topic
73198

The print dialog has been attached to the relevant help topic.

Mapping - Editors   Enhancements

Well Symbol Generator - Added in 72 and 60 degree arc primitives
73977

The /Tools/Well Symbol Generator program has been updated to have 72 and 60 degree arc segment primitives.

Mapping - Editors   Bug Fixes

Spatial Editor reports correct polygon area when projected CRS for data does not have units of metres
74088

Previous versions had an issue where projected coordinates were always assumed to be in metres when reporting lengths and areas for shapes in the spatial editor.

Grid Editor requires confirmation when editing contours with ungridded changes
69379

The grid editor allows a sequence of editing, where a grid can be generated from contours, and then the contours generated from the grid can be selected to be used as the input contours for future edits. The grid editor now requires confirmation prior to updating the input contours if there are changes that have not been gridded.

Mapping - General   Enhancements

/Display/Text has improved support for international character sets 31024

The /Display/Text option has improved support for international character sets. In most situations any international characters that are entered are preserved and displayed correctly.

Improved layer selection in the Display/Web Service Image/WMS layer selector 63253

The layer selector for the Display/Web Map Service/WMS option has been improved to allow layers can be selected from a hierarchy in addition to the existing select and re-order behaviour, which now shows the hierarchical layer name.

The selected layer in the Mapping display list is more obviously highlighted 52961

The current layer is shown using a darker colour to make it more obvious that it has been selected.

Display of contours from Petrel added   63443

Petrel contours can now be displayed in Mapping.

Mapping - General   Bug Fixes

Map Templates - Handle Unicode chars correctly when serialised to dbm 72558

Map templates now better handle Unicode character sets for items in the legend and other elements. They are correctly saved and loaded via dbm files.

Drawing Tools/Closed Shape and Curve - Button double click is more reliable on linux 74051

In the 'Display/Drawing Tools/Closed Shape' and Curve options the double click required to end creation of the line is now more reliable on Linux.

Display/Location Map does not crash when enabled for a map with a LocalXY CRS 73557

It is not possible to show a location map for a map using a Local XY CRS as the extent cannot be shown in a wider context. In previous versions, enabling a location map for a map using a Local XY extent would cause a crash.

Mapping - GIS, Spatial and Culture   Enhancements

Display/GIS thematic mapping allows polygon outline lines to be turned off 20227

Display/GIS allows polygon outline to be turned of when setting a thematic polygon fill style. A limitation in previous versions caused the polygon outline to be displayed when just a fill style was desired.

Mapping - GIS, Spatial and Culture   Bug Fixes

Display/GIS correctly draws long lines that are close to the central meridian +180 degrees   71420

Petrosys PRO maps are drawn using a projected CRS, to flatten the spherical Earth to a rectangular. Several improvements have been made in Display/GIS to handle certain situations relating to the "wrapping" point of the projected CRS (the central meridian, plus or minus 180 degrees), including correctly handling cases where lines oscillate backwards and forwards across this boundary.

Display/GIS shows the correct number of decimal places for maps created prior to 2018.3   74002

In Petrosys PRO version 2018.3, the default number of decimal places for numeric attributes in Display/GIS was changed from 6 to 2. This change caused some maps created prior to this version to change to show 2 decimal places instead of 6. The correct number of decimal places will now be shown based on when the map was created.

Display/GIS/Thematic Mapping Series Range allows entries of bound between -1.0 and 0.0   72389

Previous versions would incorrectly disallow entry of a value for series range in Display/GIS thematic mapping that was less than 0.0 but greater than -1.0.

Mapping - Grids, Surfaces and Sampled Data FilesEnhancements

Contour on-the-fly performance improved   73436

Grid colorfill display contour on-the-fly performance is improved about 400% for the case there are many embedded faults or polygon in the Petrosys grid file or many faults are selected for the third-party grid.

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Display/Grid contour label size fields are updated correctly when the map scale changes   64318

In previous versions, editing the contours displayed directly from a grid could result in the labels changing relative size.

Mapping - Map Sheets   Bug Fixes

Initial map grid line and annotation increments are set correctly for dynamic map extents   70453

In previous versions, when Mapping was started with a dynamic extent selected, the map grid lines and border annotation would be set from the data previously displayed, which would more than likely no longer be appropriate.

Map template scale field is editable for dynamic extent in "Fixed Scale" mode   69527

If the 'Fixed Scale' map template mode is selected, the scale for the map should be able to be explicitly set. In previous versions, this field was incorrectly read-only when a dynamic extent was enabled.

Display/Wells - Path Segments - Allow multiple segments in a single display layer   30474

Display well path has ability to select multiple path segments for display. This simplifies the display list greatly as only one well layer can be used rather than multiple well layers each with the same well data and different path segment.

Add support for reading zones from Petrel   24190

Added support for reading zones from Petrel projects.

Display/Wells/Path Segments - fixed logic when well intersects formation multiple times   53013

Changed the logic for displaying path well segments.

➢ When displaying well path segment from a selected formation to bottom-hole, the deepest measured depth formation is selected (previous versions would use the shallowest measured depth formation) if multiple formations present

➢ When displaying well path segment between formations, then the segment is drawn from the shallowest measured depth formation to the other shallowest measured depth formation (previous versions would use the other deepest measured depth formation) if multiple formations present

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Mapping - Wells   Bug Fixes

Viewing WES plots and then panning, now re-enables the main menus on the mapping window correctly (Santos Only)   57793

When viewing WES plots in mapping, then panning around and exiting the WES plot viewer before exiting the panning action the main mapping window will now have its menu activity correctly restored.

Surface Modeling - Contouring   Bug Fixes

Replacement connection dialog is displayed when running Contour/Grid (by cell) task   47182

The connection panel pops up when running a contouring task with a third-party connection and the connection has not been established yet.

Surface Modeling - Exchange   Enhancements

Wells Exchanges now supports Log Curve data   43990

The new data type 'Log Curve' has been added to the Wells Exchange framework. As with all other data types, writing Log Curve data can only be done if both the input and output data sources support reading and writing of the data types, respectively.

Wells Exchange supports the reading of Log Curve data from the following data sources:

➢ OpenWorks
➢ Petrel
➢ IHS Kingdom
➢ Paradigm
➢ ODM
➢ DUG Insight

- ➢ Petrosys-dbMap (PPDM38 data model)
- ➢ LAS and DLIS files

And has the ability to write to:

- ➢ OpenWorks
- ➢ Petrel
- ➢ Petrosys-dbMap (PPDM38 data model)

The use of Log Curves from Petrosys-dbMap with third-party data sources, reads / writes metadata information about the Log Curves in the database, however the sample data is stored in external log files (LAS / DLIS), that are referenced through the Records Management system within the database.

In addition, Wells Exchange has a preview feature of cataloguing LAS and / or DLIS files into a Petrosys-dbMap (PPDM38 data model) database. Information about the files are entered into the Records Management system and files contents metadata is associated to appropriate Wells in the database. This feature will allow data managers to load their Log Curve files and content metadata into dbMap and utilise the power of dbMap/Web to view, and manage the Log Curve metadata through the Web. With the recent introduction of the new Well Log Viewer in dbMap/Web, users will also be able to visualise the Log Curve sample data in the same browser session.

To use this preview feature a user only needs to choose the File based input within Wells Exchange and select their Petrosys-dbMap (PPDM38 data model) database as the output data source and like above for third-party data source the 'Log Curve' data type will become available for selection.

Exchange/Wells Import Wizard menu has been renamed to Exchange/Wells

46621

For menu naming consistency, the existing Exchange/Wells Import Wizard menu items have been renamed to Exchange/Wells.

Surface Modeling - Exchange   Bug Fixes

Wells Exchange - Fixed an issue with not being able to set formation system values for selected items   72771

A bug has been fixed that was causing the use of the formation mapping list RMB menu option for setting the output formation group to not allow a user to specify a new name by typing in text to the field rather than selecting an existing system using the + button.

Surface Modeling - General   Enhancements

Mean and median grid filter added   15476

Mean and Median grid filtering functionality is now available in Surface Modeling through menu item Grid/Processes/Filtering.

Lowest closing contour now supports sealing faults that are not closed
72080

Unclosed sealing faults are now supported in LCC.

Surface Modeling - Gridding   Enhancements

Grid outlining performance improved   73544

Grid outlining performance is improved for extremely big grids.

Boundary gridding displays error message when not valid data 73488

An error message pops up when boundary gridding fails as a result of not having valid data.

Grid/Create grid allows users to select input point data type (point or line) for GIP, text and Excel data 72382

The gridding of point data from sampled data, text or Excel files offers control over how the input data should be treated for grid estimation process - either as point or line data. The user can set Automatic to have the data processed the same way as in previous versions.

Surface Modeling - Gridding   Bug Fixes

Grid/Create Grid from shapefile using formula no longer requests attribute to grid 72870

Gridding from shapefile and using FORMULA works correctly without setting up the attribute to grid.

Improved sizing of fault polygons list in gridding 55555

The fault polygons list is now sized dynamically when the dialog is resized.

Grid input data summary dialog now links to appropriate help topic 73368

The input data summary dialog now links to the help topic "Gridding - Create Grid" rather than the "Welcome to Petrosys PRO" page.

Grid smoothing now runs when selected after Kriging 73136

The selected smoothing is applied to output grid when Kriging is used.

Surface Modeling - Volumetrics   Enhancements

Use polygons with holes in volumetrics 72397

Volumetrics supports polygons with holes. This will benefit greatly to the lowest closing contour functionality where such polygons are often generated.

Surface Modeling - Volumetrics   Bug Fixes

Volumetrics thickness reports no longer shows negative thickness 72102

Volumetrics thickness report does not report negative thickness even though the grid z values are negative for better and more precise volume calculations.

Surface Modeling - Workflows/Scripting   Enhancements

Pause functionality added to Surface Modeling workflows 30618

Added support for pause workflow functionality. This allows the user to perform some operation outside of the workflow (e.g. to edit generated data, or execute some external operation) and then resume the workflow.

Tools/DrawMap scripting now insensitive to template dbm layer order

68862

Surface Modeling Tools/DrawMap tasks no longer rely on the layer order of the template dbm file. I.e. changing the layer order in the template dbm file does not affect the Tools/DrawMap task which still generates the correct result.