PETROSYS

SOFTWARE RELEASE NOTES

Version 2018.3

PETROSYS PRO

Petrosys valued-added agile development continues with the release of Petrosys PRO 2018.3 – an update to Petrosys PRO 2018 - which offers further feature upgrades for users.

Petrosys PRO 2018 builds on the map templates released in 2017 and the ongoing initiative to make the software easier to use reducing training overheads. Increased automation helps users focus on interpretation and produces better mapping results with less time invested. On the technical side, volumetrics is now included as standard with the Petrosys PRO bundle and the first phase of new development is now complete.

Petrosys PRO now includes the Probabilistic Resource Calculator in Volumetrics allowing users to run Monte-Carlo simulation on volumes without needing to use another application. Algorithms and variables are available for conventional and unconventional resources to support many situations. Clients with a large portfolio of prospects may be interested in learning more about the underlying Prospects and Leads Database which the calculator is based upon.

Users in many disciplines will appreciate direct display of Excel spreadsheet tables on maps with clearly rendered text and live updates from the source data.

PRO 2018 is a big release for those who work with Petrel. Petrel 2018.1 is supported, including the new structural framework. Color bars are automatically imported and there are significant performance gains with displaying seismic data.

Automatic map generation is enhanced with the ability to loop over extents to create similar maps over multiple areas of interest such as fields or concessions.

Map templates have been enhanced further with custom location maps, including color bars in the template and adjusting the legend to fit in the box defined by the template.

Surface Modeling can now generate well penetration reports in Excel or CSV format from source grids, surfaces and well information from all supported data sources.

The power of bubble maps has been extended to cover all GIS data sources. Furthermore, the control of bubbles has been improved with data filtering and elliptical modes available.

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.

Features introduced in 2018.3

Well penetration report

Accurately calculating the XYZ location where a borehole/arbitrary point intersects a surface is very useful for reservoir appraisal and development.

The new well penetration report option will:

- Accept point data from all supported well data sources and point data sources such as GIS or Excel. Data selection

filters are available if required.

- Accept grids from Petrosys' own format and from supported interpretation systems. Individual or multiple grids from the data source are available.

Data is output to Excel or CSV formats. Input metadata, TVDSS and XY coordinates in the preferred coordinate system are written to the output.

The option is available from Surface Modeling/Grid/Well Penetration Report.

Bubble maps extended and improved

Display of bubble maps has been significantly re-engineered, to bring the display of bubble maps to a wider variety of data sources, and to make working with bubble maps easier. Bubble maps and pie charts can now be created from point feature GIS data including shapefiles, geodatabases, ArcSDE, WFS and more.

The Variable Selection tab now allows the user to set the order in which variables are displayed, making it easier to tailor the bubble map as required for the map to tell its story.
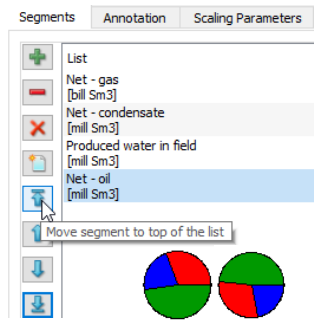
DUG Insight grids and fault polygons available in the Spatial Editor

DUG Insight grids and faults can be edited directly in the Spatial Editor making it easy for Insight users to edit and improve these data types without any need for data transfer and duplication.
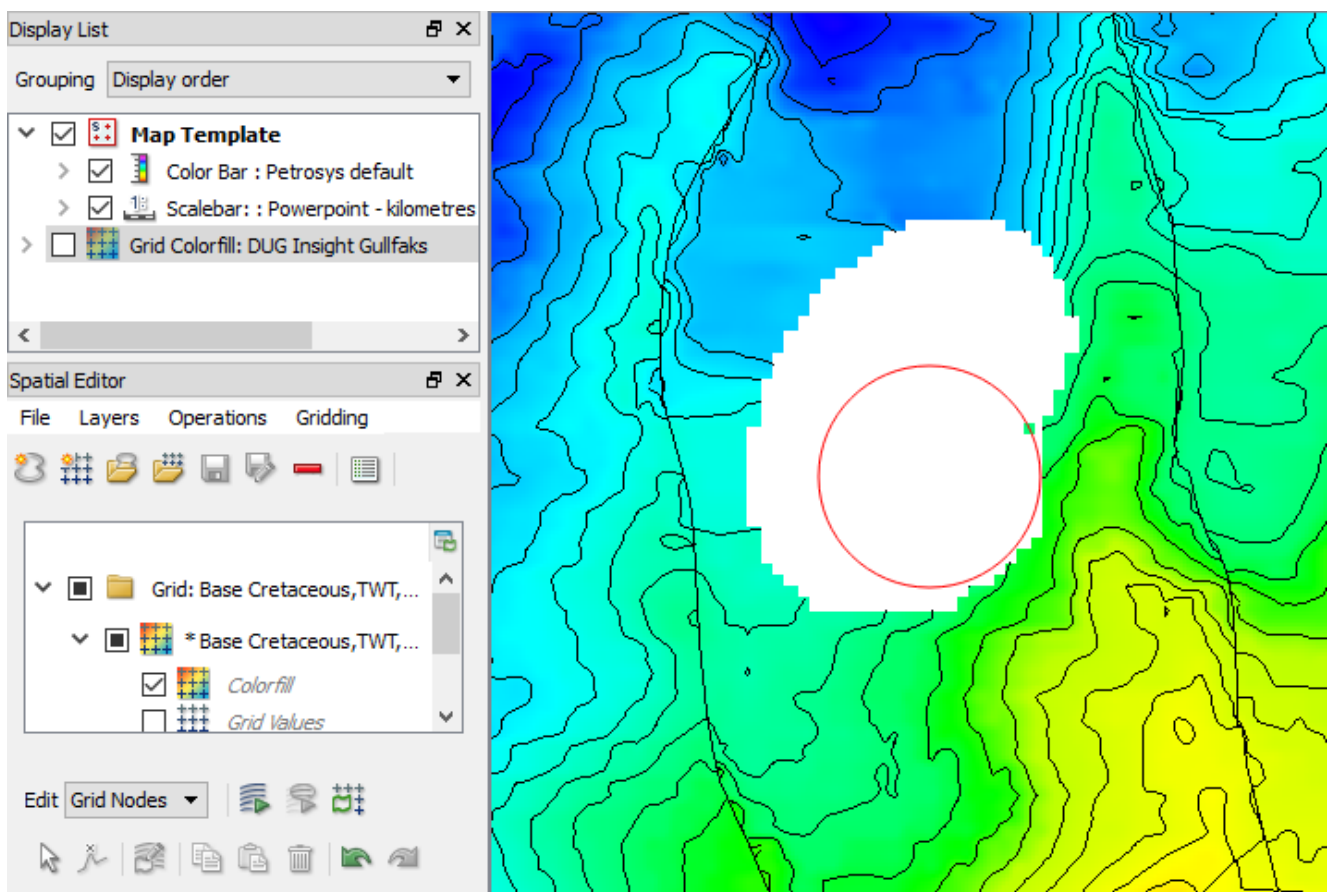
__Features introduced in 2018.2__

Probabilistic Resource Calculator

Petrosys has added a new option to compute a range of
outcomes for Oil and Gas volumes using Monte-Carlo simulation
via the dbMap/Web Prospects & Leads Resource Calculator with
input from two or three Volumetrics runs.

The option is available from Surface
Modeling/Volumetrics/Probabilistic Resource Calculator.

In addition to most of the standard Volumetrics/Grid Based
Slices options, you can:

- Choose one of the supported PRC compute methods -
  Depth-Volume Method, Depth-Area Top (Constant
  Thickness) and GRV Method
- Choose the desired distribution type - Normal,
  Lognormal, Triangular or Stretched Beta
- Choose the hydrocarbon type - Oil, Gas or Oil & Gas
- Enter details for the Low & High Percentile, and Mode, depending on the distribution type selected
- Select either separate grids defining your low & high estimates, or select the same grid in both cases, and vary the
  contacts
- Contact level names are fixed and values mandatory, based on the PRC Compute method and Hydrocarbon type
  selected

When the task is run, it will run the standard Grid Based Slices volumetrics for each of the grids input in the Low/High
Percentiles & Mode tabs.

Once complete, the data is securely sent to a read-only Petrosys-managed cloud dbMap/Web instance, which is restricted to
only support PLDB Resource Calculator for the PRC. Some mandatory and other optional input distribution values can be set
on the Geology, Oil, Gas and other tabs, such as Porosity, Net/Gross, Oil/Gas Bg and recovery factors, then pressing Compute
will run a Monte-Carlo simulation for the set number of iterations. Resulting volumes are displayed in the Results tabs and can
be exported to Excel for permanent storage.
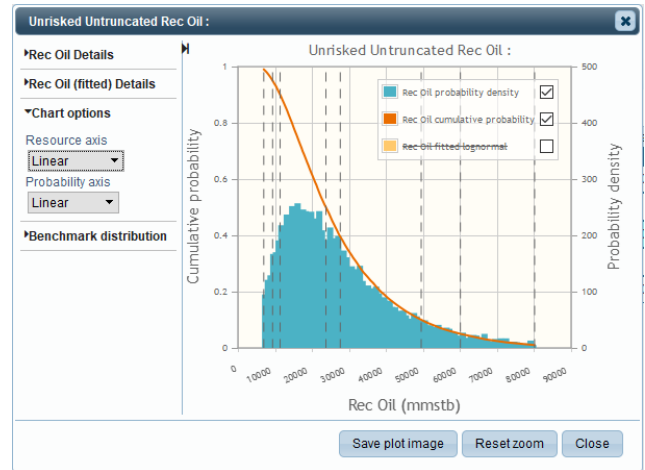
Note: no data is stored or logged in the cloud beyond the current computation run. A Petrosys Connectivity license is needed.
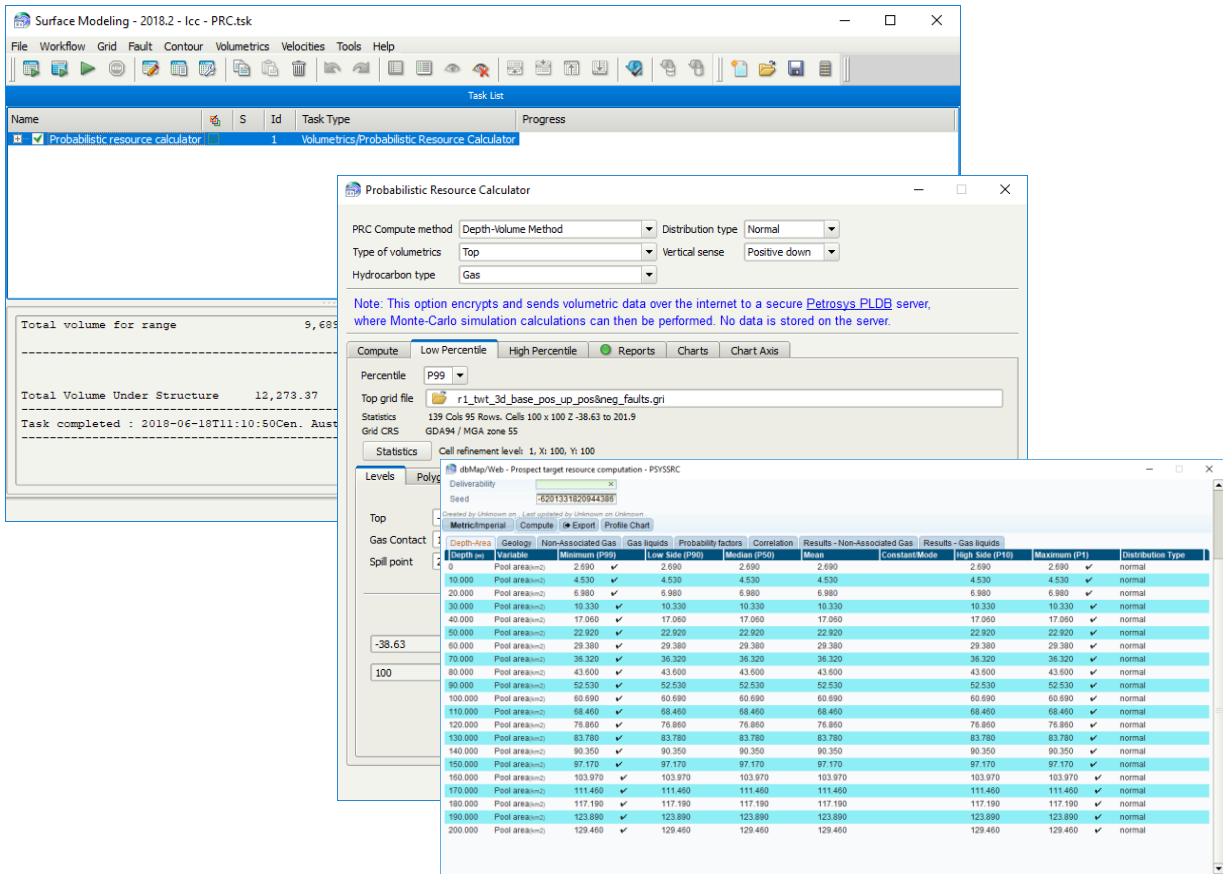
Title Blocks Created in Excel

Title blocks can now be created and edited in Excel. Previously, title blocks could only be defined using a CGM file, however it is much easier to create and edit them in an Excel file. The Excel title block supports:

- Raster logos,
- Different line thicknesses to sub-divide the title block,
- Fonts, text sizing and alignment, cell fill

Title block contents are edited in the same way as existing title blocks. A panel to specify the contents will be generated automatically, with the option to override this and use a custom panel if required.
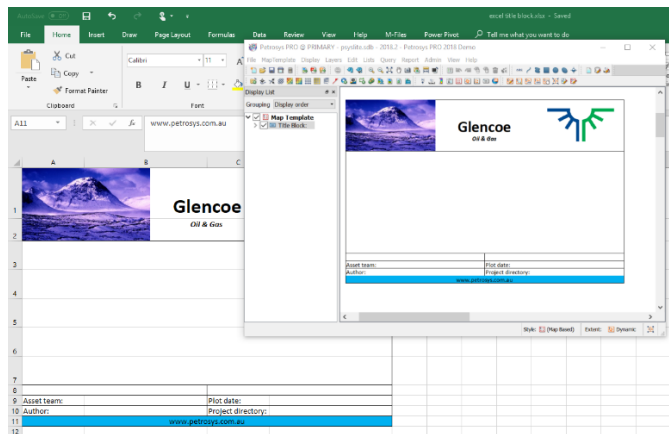
Direct Display of Excel Spreadsheets on Maps

Excel spreadsheet store all sorts of useful information such as engineering data, production figures, volumetrics results, etc. They are also an easy way to view data in delimited text formats. Previously Excel spreadsheets were saved as a raster image and displayed in Petrosys PRO as a picture. The image was static and did not update with the spreadsheet and text could be pixelated when zoomed in.

Excel spreadsheets can now be displayed directly using the Display/Excel Table option. This option allows users to select which worksheet they want to display, and they can also restrict the display to a specific data range.

The display is live, so if the spreadsheet is updated, the data displayed on the map will update when it is refreshed. Text is properly rendered and will always be clear regardless of the zoom scale.

Dynamic Location Map Improvements – Custom Background

Dynamic location maps have been very popular since their introduction, however many users have requested a customizable background.

Base map types now include:

- Country outlines
- State/Province outlines
- Location map templates
- .dbm files
- Shapefiles

A shapefile can be selected and displayed directly.

For dbm files, only shapefiles and WMS layers are supported so use this option if you want to use a WMS in the background.

Location map templates are dbms or shapefiles placed in standard locations to allow sharing between users.
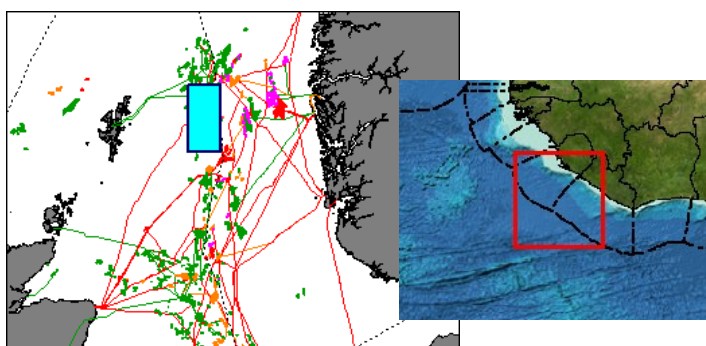
Histogram Color Bar Display and Editing

Displaying a data histogram shows spikes or extreme data variations which may not be obvious with a linear color bar. This is very useful when working with attribute data with an extreme Z-range, or with data where subtle color variations are hidden by a data spike. It can also help to identify where the spike is.

Once a grid or surface is displayed with a color bar, the data histogram can be displayed in the color bar editor and used to choose a knee point to highlight a value or range of data.

The user can choose to display the histogram over the current color bar, or as a separate color bar.

The gradient selector has a new "Equalization" checkbox. When this is enabled the gradient colors are distorted to spread the visible colors evenly on the map. This spreads out the most frequent intensity values making local areas of low contrast gain a higher contrast. This option is available in both Mapping and the 3D Viewer.
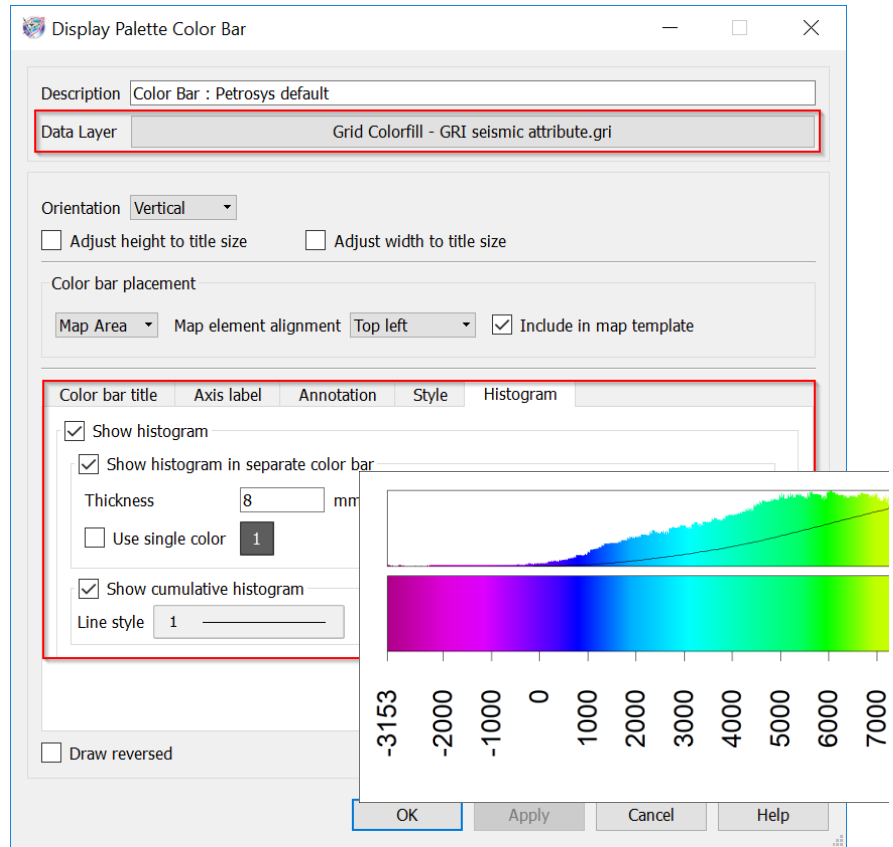
Seismic attribute grid
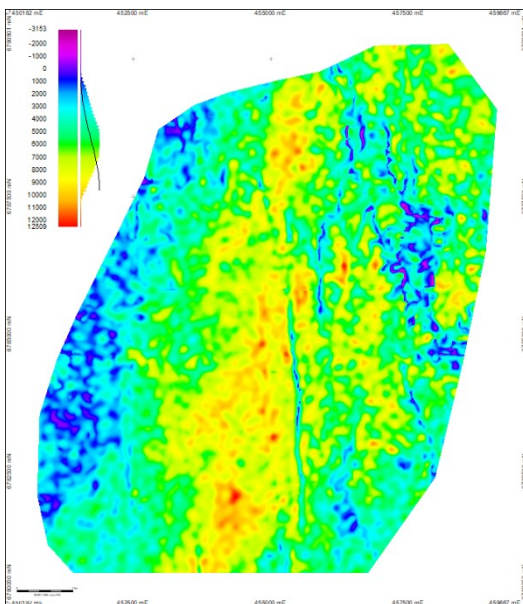
Seismic attribute grid - **Equalized**
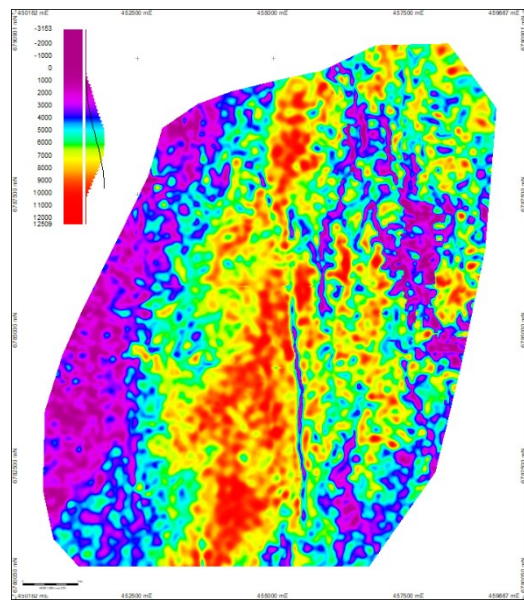
Edit Third-Party Grids, Faults and Clipping Polygons

Petrosys PRO now allows the editing of grids and faults from both Petrel and OpenWorks and clipping polygons from Petrel only, from within the Grid Editor tool. The full suite of Grid Editor features is available, allowing Petrosys PRO's intuitive editor to modify Petrel and OpenWorks grid data without the need for importing and exporting to and from Petrosys file formats.

Color Bar Added to Map Templates

Map Template Styles now include the option to include one, or more, color bars. This enforces consistent color bar placement in company approved map styles.

The positioning options are the same as for the other map elements. When the template is selected with no grid displayed, a skeleton color bar with no fill will be displayed. This can be turned off in the display list if required. The next stage is to display a grid or surface. To populate the map style color bar, go to the display list and drag and drop the grid or surface item with the desired color bar to the color bar item in the Map Template group.
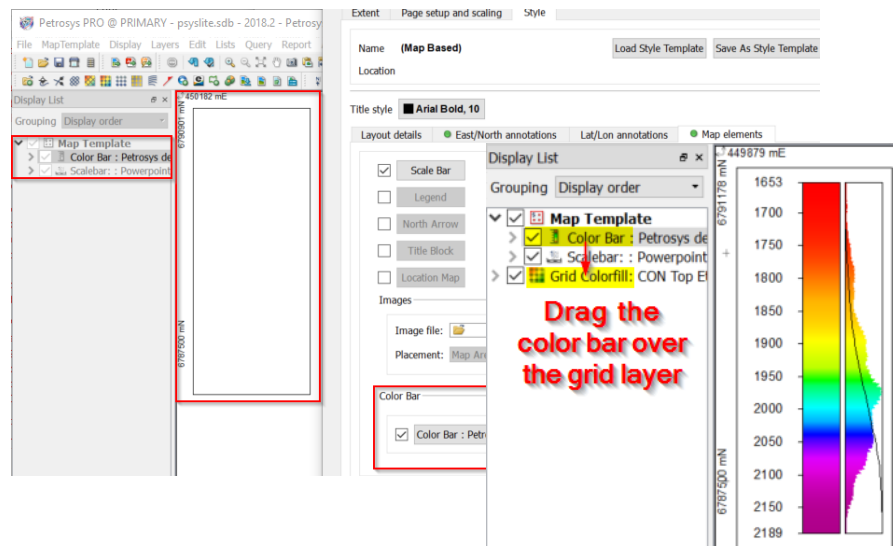
Easy Import of Petrel Color Bars

By default, when dragging grids and surfaces from Petrel, they will now be colored using their Petrel gradient. Furthermore, a Petrel grid, surface or color table can be dragged to any gradient picker in Mapping. For grids and surfaces, the range is also populated automatically to match the Petrel settings. Petrel color tables can also be dragged directly from the Petrel Templates/Color tables folder to the Petrosys PRO map canvas. For each Petrel gradient used, a Petrosys .pal file is created in the current Petrosys project.
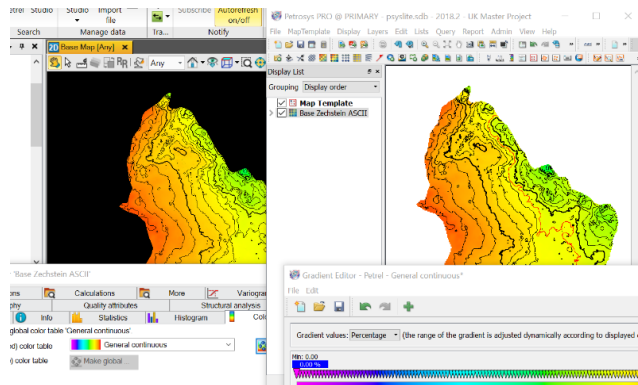
Support for Petrel 2018.1's New Structural Framework

Petrel 2018.1 will include a new Structural Framework system (Structural Geology). Petrosys PRO 2018.2 will support these new horizons and faults in Mapping - including selection by drag and drop, Surface Modeling and 3D Viewer. They can also be imported to Petrosys grid format or selected as an input data source for Exchange.

Petrosys 2018.3 Release Notes
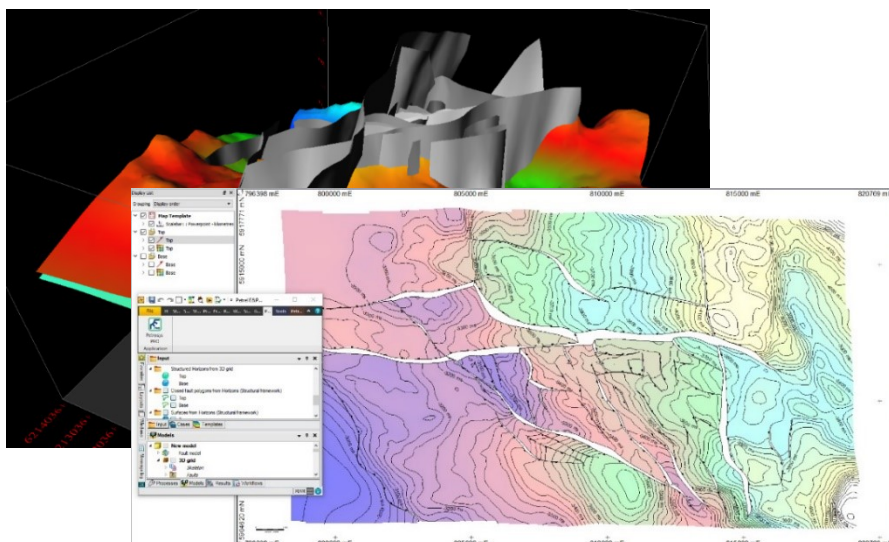
Quicker Display of Petrel Sub-Surveys

Petrosys PRO now supports Petrel sub-surveys wherever a survey can be selected. Including working with 3D seismic interpretation. We can now limit the horizon data to a sub-survey which can greatly improve performance when dealing with very large surveys. Other improvements have been made when working with sparse 3D seismic data.

Faster Petrel 2D Display

Several changes have been made to our Petrel plugin for PRO and to our generic seismic data handling which have resulted in vastly improved performance when working with Petrel seismic data:

- Petrel 2D navigation data – up to 6 times faster than previous versions
- Petrel 2D interpretation data – up to 25 times faster than previous versions

Batch Mapping of Data Over Multiple Extents

It is often necessary to map the same data types over multiple areas of interest. For example, periodic updates of maps showing a gold standard surface, available wells or seismic, or production pie charts may be required for areas defined by license blocks or field extents.

In Surface Modeling, the Workflow/Loop Over Highlighted Tasks option has a new option to loop over Map extents. In combination with

the Tools/Draw Map option, this makes it very easy to create consistent maps over multiple areas and periodically update them, outputting results to PDF, raster images or Petrosys dbm files.
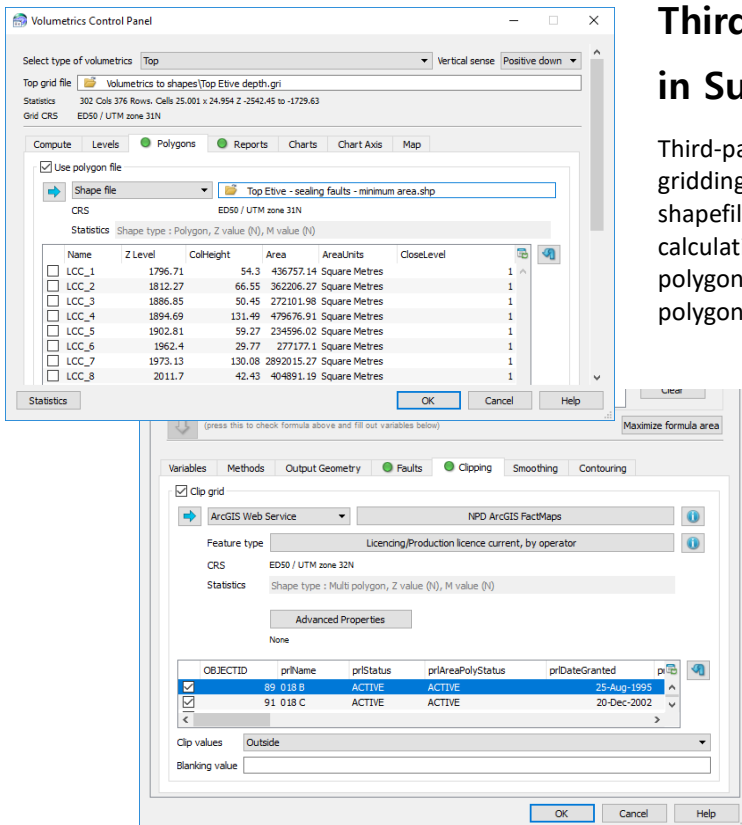
Third-Party Polygon Sources Available in Surface Modeling

Third-party polygons are now available for use throughout gridding and volumetrics where polygons are used. For example, shapefiles can be used constraint the area for volume calculations, or as a source for clipping of grids. Supported polygon sources, include ArcSDE, WFS, shapefiles, OpenWorks polygons, Petrel and more.

OpenWorks Districts Now Supported

OpenWorks Districts are now support for OpenWorks direct connections and through the new Remote Connections feature. When selecting a data connection, each district for each database will be listed separately, allowing users to reduce the list of projects retrieved. Project selection screens show the district details for the project connection, allowing easy filtering and sorting.

Better Formatted Legends

Map legends can now be set to a fixed size which is particularly useful with map templates. The option to size the legend based on the content remains, but now it is also possible to scale the contents to the legend box.

The number of columns is set in the new Layout tab and there are additional controls in the Style tab, including how any blank space is filled – this is most obvious when legend blocks have different background fills.
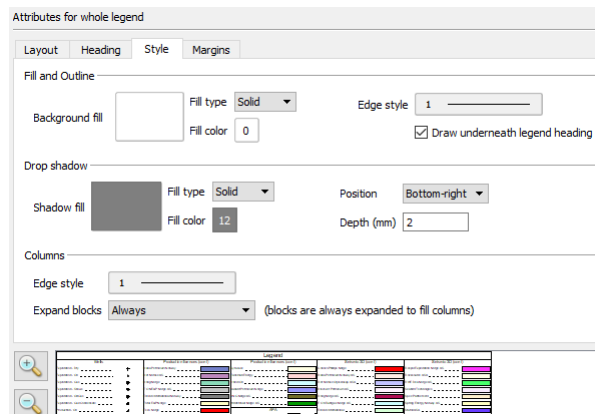
Batch Create Map Extents by Scanning GIS Data

Map templates support fixed extents which are particularly useful when mapping specific fields or lease boundaries. Petrosys PRO has a script that batch creates extents from an input shapefile using a specified attribute as the name of the extents. The default restricts the extent to the minimum/maximum X and Y coordinate of the input data, but there is an option to add a buffer distance. Contact Support for help running this option.

This option complements extent looping also available in this release. For example, map extents created based on fields with a 1 km buffer.

Petrel 2018 Supported

Due to Petrosys' and Schlumberger's close working relationship, Petrosys is pleased to support the soon to be released Schlumberger Petrel 2018 in Petrosys PRO 2018.2. Petrel 2018 is supported in all the places you've come to expect, including grids, seismic and wells, along with the new structural framework.
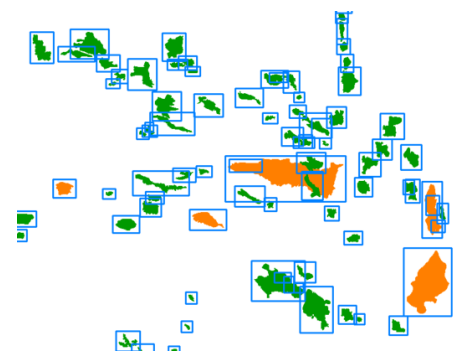
Paradigm 2018 Supported

Support for Emerson's Paradigm 2018 release is available in Petrosys PRO on Linux and Windows.

Connect to Remote Data Sources Without a Dispatch Server Daemon

Petrosys PRO has long supported cross platform connections to remote data sources through the Dispatch Server daemon. For example, accessing GeoFrame data hosted on a Linux system from a Windows PC. However, configuring and maintaining the Dispatch Server daemon can be a difficult task in some client environments. Petrosys PRO 2018.2 now supports a new remote data source connection method using SSH. Remote connections are initiated directly between the user's Windows desktop and the remote Linux data source host without the need for a service or daemon running on the remote computer. Once the connection type is specified in the connections.xml file, configuration is simple, with all required settings available on the user's desktop. Normal username/password prompts, along with RSA/DSA keyfiles, with and without passphrases, are supported, ensuring simple operation in a variety of environments. To learn how to setup these simplified cross-platform connections read the help topic "MULTIPLE CONNECTIVITY - CONFIGURATION – VIA SSH"

The Remote Connections feature will replace the Dispatch Server feature, which is now considered deprecated and may be removed in a future release.

__Features introduced in 2018.1__

Petrosys Plug-in for DecisionSpace Geosciences

Petrosys PRO 2018.1 includes the first release of the Petrosys PRO plug-in for DecisionSpace Geosciences.

Petrosys PRO can be launched directly from within DecisionSpace Geosciences (DSG) using a menu item or toolbar icon, with support for automatic Petrosys project creation and adding seamless connectivity to user's DSG session data for immediate access with Petrosys PRO. Improving on the ease of use of the "drag-and-drop" functionality that was first introduced in Petrosys PRO 2017.1.

The Petrosys PRO plug-in helps integrate a user's DSG session data with other 3rd party geoscience and GIS data stores, in a presentation quality mapping framework and sub-surface modelling capabilities, without the overhead of importing into OpenWorks.

Additional functionality added in Petrosys PRO 2018.1 includes filtering by native Well and Seismic Line selection lists making it easy to work with the right data.

The plug-in is available for DecisionSpace Geosciences 10ep.2 and above, on Linux and Windows, and will be installed with Petrosys PRO.
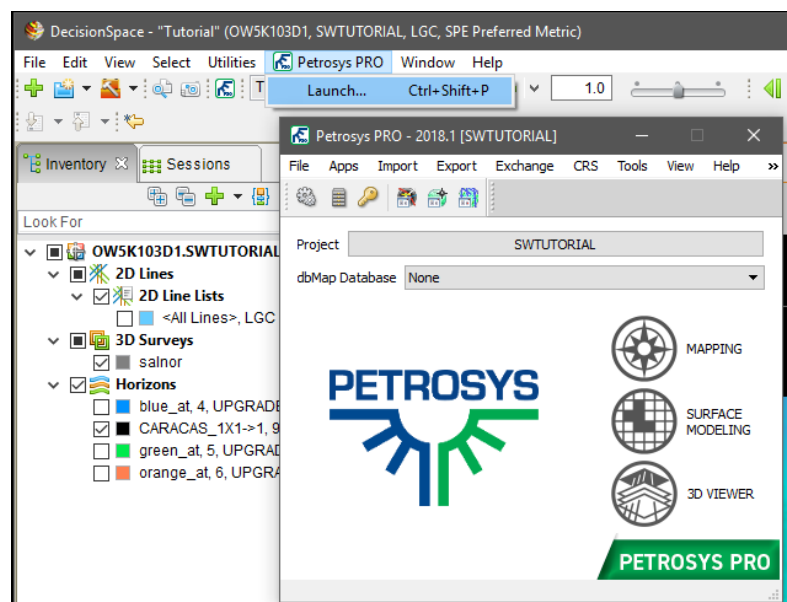
Automatic Picking of Lowest Closing Contours

The new Lowest Closing Contour (LCC) option help users quickly and easily identify prospects within their grids. Changing the input parameters allows the user to identify economic prospects and remove smaller, uneconomic closures.

Inputs are:

- Grid (mandatory) – all standard Petrosys sources including direct connections
- Well and point data (optional) – sourced from the WDF, directly connected well data stores, and Excel spreadsheets or text files. Input attributes are Hydrocarbon Contacts, Lowest Known Hydrocarbons and Dry Holes. Multiple data sources can be selected
- Faults can be used when embedded in a grid or from a Petrosys fault file where leaking and sealing faults can be subdivided into separate groups

For economic purposes outputs can be filtered by a minimum area to remove uneconomic closures and remove noise. To create a range of distributions for subsequent modelling, multiple levels of closure can be generated for one structure.

Outputs are written to a shapefile including the polygon and the following attributes:

- Z-value of lowest contour
- Column height
- Area
- Closure number (if levels of closure are used)

The output can be mapped using the **Display/GIS** option including posting, filtering and thematically mapping by attribute.

Accessing Fault Sticks from Paradigm 2D Seismic Surveys

Paradigm fault sticks and surfaces can now be displayed in 3D Viewer. Paradigm fault sticks are also available as an input and output for Fault Sticks Exchange, and as input to Surface Modeling.

The new Study column shows the Project, 2D or 3D seismic survey the fault stick or surface is associated with.

This new functionality removes the restriction where fault sticks and surfaces could only be read from 3D seismic surveys.
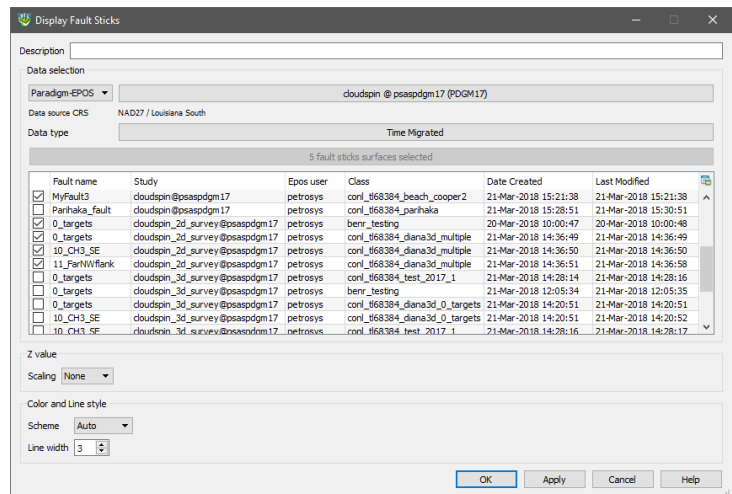
3D Viewer Icon Returns to the Launcher

The popular 3D visualization module has a new icon and returns to the main Petrosys PRO launcher. QC your Petrosys outputs in 3D, drape attribute grids on structures, and combine well and surface data from interpretation systems with point data from GIS or Excel.

Enable Parallel Processing in Selected Workflow Task Groups

Surface Modeling has added capability for parallel processing of user workflows. Parallel processing enables the use of the multi-tasking facilities of modern CPUs by diverting selected tasks into separate processes that can run at the same time.

In the Surface Modeling task list, clicking the right mouse button when a loop task is highlighted will allow parallel processing for the tasks in that loop to be enabled, provided that Petrosys PRO determines that the operations in the group pass the criteria for safe parallel operation. Actual results will vary with hardware configuration, input data and workflows, but

significant gains can be made. For example, on an 8-core laptop the extraction and mapping of a series of 41 time-slices from a SEGY velocity cube ran in 107 seconds with parallel processing, down from a coffee-break inducing 595 seconds without.

Parallel processing is suited to a range of tasks, particularly those that do not have to write to the same output file, or which do not depend on the output of one pass through a loop to be the input to the next one. Examples of existing workflows that may benefit from parallel processing include:

- Mapping of depths or times for a selection of zones from an interpretation project or a well data file
- Creation of grids from families of modelled data files, such as time steps from reservoir simulation or geohistory models
- Import or data exchange of collections of files
- Extraction of velocity slices from SEGY files for depth conversion

Our development team are now working on harnessing parallel processing power to other aspects of Petrosys PRO. Let your local support team know if you there's a processing bottleneck that you think might benefit.

Publish Volumetrics Output to Polygon Shapefiles

Publishing reserves maps that show the spatial distribution of expected hydrocarbons across a region has become increasingly important, both in Petrosys maps and as a component of GIS portals. It is particularly valuable in the planning of the horizontal development of unconventional plays.

To make it easier to map the spatial distribution of reserves and to get Petrosys PRO volumetrics data into the GIS world, Petrosys PRO volumetrics output can now be automatically added into shapefiles representing the polygons into which the volumetrics had been split.

The option is available by specifying polygon and centroid shapefile names in the 'Reports' tab of the volumetrics task.

The shapefiles can then be displayed with annotation and thematic coloring in the Display/GIS option, or be passed on to other applications. Attributes include labels for fluid type and area and volume units, so that a comprehensive range of annotations is possible.

Petrosys PRO packaging means that all Petrosys users can now access the volumetrics tool. In conjunction with the shapefile volumetrics output, reserves mapping workflows can be significantly faster allowing more up to date information to be used with much less map generation effort.
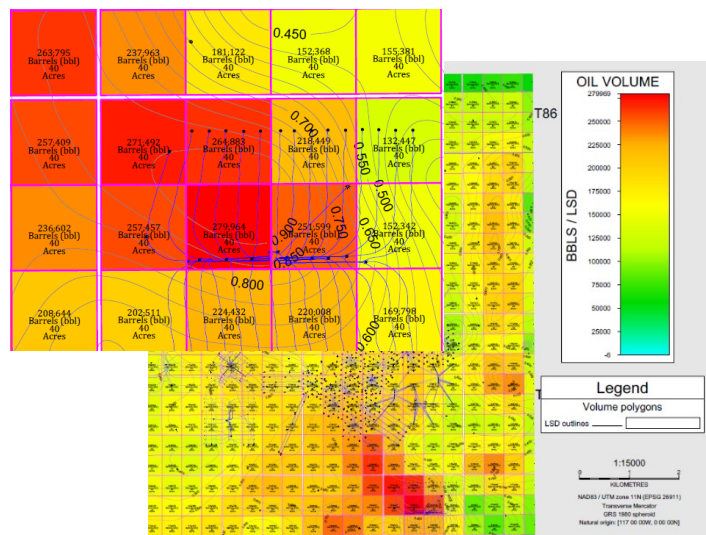
Spatial Data from Web Feature Services and ArcGIS Server

Web Feature Service (WFS) allow access to spatial data over the internet, which keeps data current and reduces data duplication and version errors.

Petrosys PRO supports access to spatial data from the following web services:

- OGC Web Feature Services (WFS)
- ArcGIS (MapServer and FeatureServer enabled services)

Spatial data from web services can be utilized in Petrosys PRO in the following contexts:

- Mapping – Display/GIS
- 3D Viewer – Display/Point Data
- Surface Modeling - Grid/Create Grid
- Exchange - Spatial Data Translator

Popular WFS/ArcGIS Server sources can be stored in a Catalog at site, project or user level.

Data displayed is available in the legend builder.
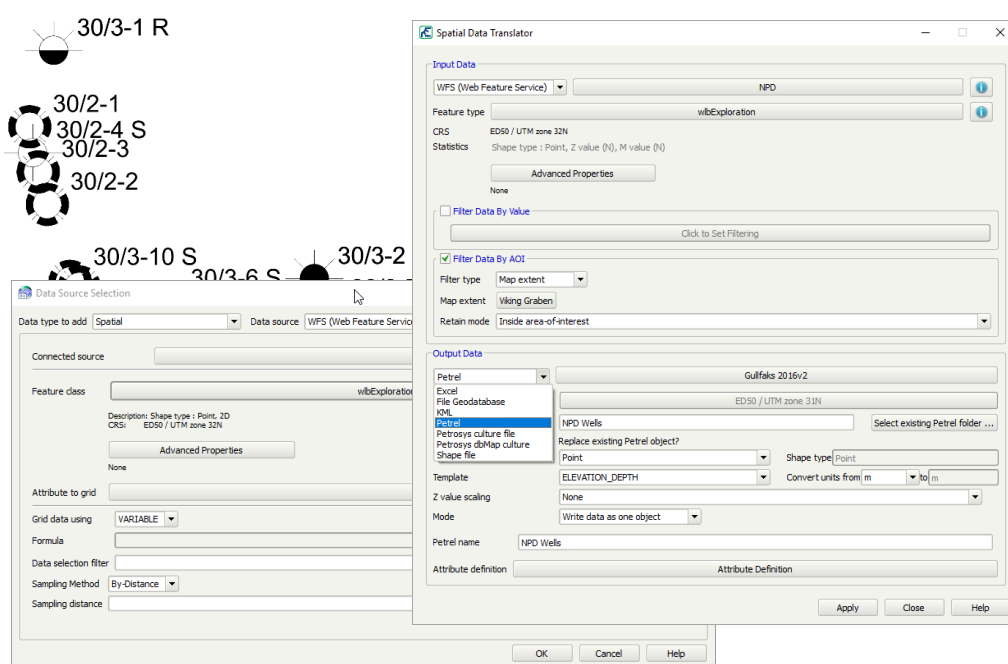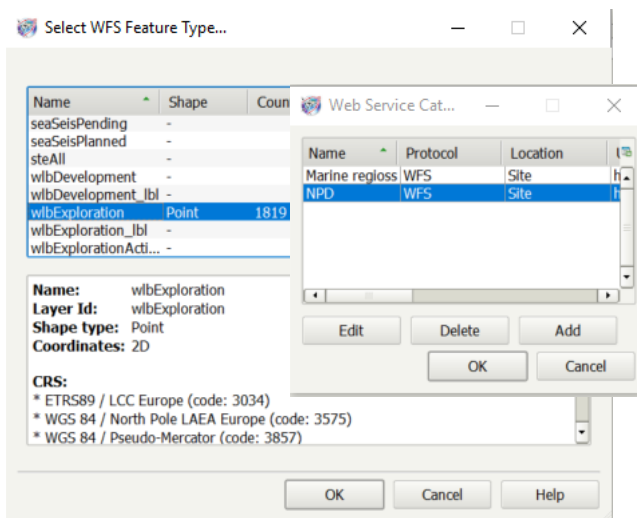
Automatic Project Creation from Petrel and DecisionSpace Geosciences

Project creation is much easier when launching Petrosys PRO from within Petrel and DecisionSpace Geosciences (DSG). This helps new users get started with Petrosys PRO applications immediately and shortens project start up for all plug-in users.

One click can take users from selecting the Petrosys PRO icon to the main launcher with a new Petrosys project, matching the Petrel/DSG project name and CRS, created silently in the background.

The first time Petrosys PRO is started from a plug-in, the user can choose to create a new Petrosys project with default settings from the 3rd-party source project or select an existing Petrosys project.

Automatic project creation behavior and default project location can be changed from Configuration and Settings to suit your needs.
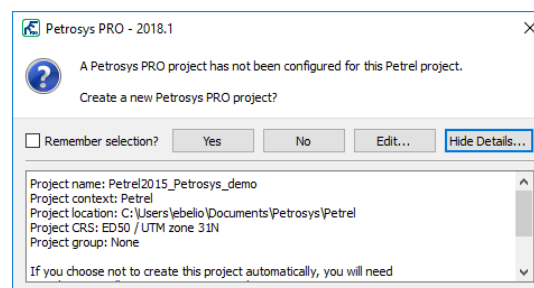
Domain Units Automatically Set for 3rd Party Grids and Surfaces

Grids and surfaces from 3rd party data sources now automatically set the units for contour label and color bar display. As the Z-value domain of the map is now clear and no manual intervention is required, map production is both more accurate and faster.
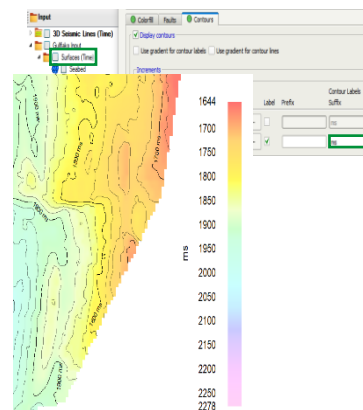
Better Map Element Positioning

The layout of north arrows and scale bars has been substantially improved, allowing richer map templates to be created and used across a broader range of maps, particularly maps that are rotated or have non-vertical meridians. By reducing white space surrounding both north arrows and scale bars, and with improved control over scale bar text, elegant maps are created directly from the template, with no or little need for adjustment by the user.
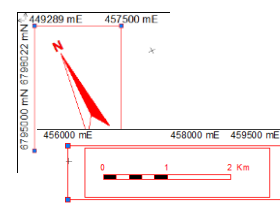
Filter by OpenWorks Seismic Line Selection Lists
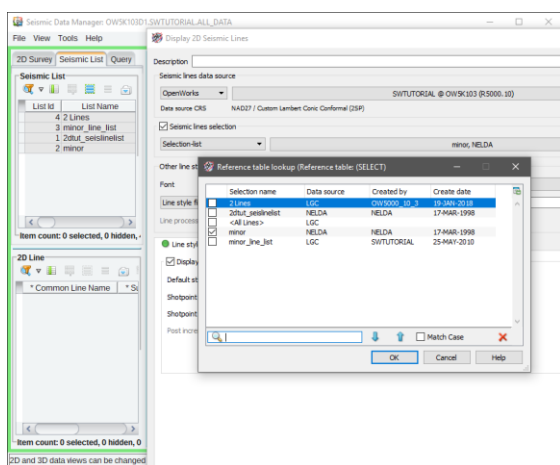
Support has been added to select one or more Well or Seismic Line selection lists from OpenWorks to filter the use of Well and Seismic Lines data. The new Selection-list option is available when Data selection is used to filter OpenWorks Wells and Seismic Lines in Petrosys PRO

Notes for Upgraders

Upgraders from Petrosys PRO 2017 should be aware of the following changes:

- Petrosys PRO 2018 requires a new license file. Please obtain your license file by logging on to the Petrosys Client Portal or contacting Petrosys support.
- Petrosys PRO 2018 is backward compatible with Petrosys PRO 2017 except for:
  - Surface Modeling grid import from GeoFrame, OpenWorks, Petrel and Paradigm now use the Grid Exchange framework. Task files created, or modified using Petrosys PRO 2018 will not be usable in Petrosys PRO 2017 and earlier.
  - Identification of Petrel seismic surfaces and grids and OpenWorks grids has been changed to use unique identifiers. This may cause layers and tasks using these data sources to not be found if a Petrosys PRO 2018 map or task file is used by earlier versions of Petrosys PRO.

Upgraders from Petrosys PRO 2018.1 note that Petrosys PRO 2018.3 includes an upgrade for the CRS database to EPSG 9.4. Client sites that use Petrosys PRO on an Oracle database will need to run the supplied database upgrade scripts. There are no version incompatibilities between Petrosys PRO 2018.3 and earlier Petrosys PRO 2018 releases.

Upgraders from versions of Petrosys PRO earlier than 2017 should consult the Petrosys PRO 2017 and earlier release notes for any relevant upgrade information.

No environment, third-party data source or operating system updates are required for Petrosys PRO 2018. For a full list of supported environments, please see the Petrosys PRO supported environments page.

Detailed Release Notes Summary PRO 2018.3

Enhancements

Connections, Import and Export - DUG Insight

48900   Added support for reading DUG Insight fault polygons

52967   Added support for writing DUG Insight fault polygons

Connections, Import and Export - Petrel

63050   3D surveys are now selected when dragging seismic horizons from Petrel into Mapping and Surface Modeling

dbMap - Administration

72263   SQL Reports - support added for selecting columns to report using run-time parameters

dbMap - Client

69677   Well Path spatialization implemented for dbMap PPDM3.8

dbMap/Web - Administration

72279   Default query set upgraded for OpenWorks wells

dbMap/Web - PLDB

69911   Added option to display and edit Prospects and Leads target polygons

Mapping - Editors

71859   Grid and faults from DUG Insight can now be edited

Mapping - General

71870   Bubble Map Improvements

72064   Display/Excel Table - Ability to have Excel table displayed in opaque background

Mapping - GIS, Spatial and Culture

34475   Allow polygon centroid to be used

72113   Display/GIS reduced the default number of decimal places for annotations from 6 to 2

Mapping - Grids, Surfaces and Sampled Data Files

28621   Display/Grid/Colorfill now supports richer styling of Petrosys grid file embedded faults

Mapping - Seismic

70372   Display/Bin Grid - Added option to sync Inline and Xline annotation settings

Spatial Data Translator

72209   Spatial Data Translator - Feature Class Browser performance improved

Surface Modeling - Contouring

72364   Added GUID into LCC output shapefile and XML report, add midpoint into XML report

72377   Sealing and leaking faults may now intersect in LCC

Surface Modeling - Exchange

72205   Seismic Import - Added a right moust button menu option for displaying 3D Seismic Survey details

43310   Added SDE as an input data source to Grid Exchange

71959   Added Faults Exchange tool

Surface Modeling - General

26989   Well-Surface penetration/Intersection/Back interpolation tool added

Surface Modeling - Gridding

72399   Grid/Create Grid allows faults to be to treated as boundary polygons

Surface Modeling - Workflows/Scripting

72213   Added option to populate looping strings from various sources

72003   Grid/Statistics task adds grid geometry scripting fields

Detailed Release Notes Summary PRO 2018.3

Bug Fixes

Configuration - General

63618   Fixed crash in Spatial Editor when configuration changed

Connections, Import and Export - DUG Insight

72292   Data now read from session

Connections, Import and Export - Esri

72581   ArcGIS plugin fixed

Mapping - General

67649   Crash when opening a dbm from recently used list with the Display List hidden
72565   Gradients with certain specific data ranges will no longer crash
72028   Fixed crash when opening Petrosys Fault file with no description
72081   ColorBar Title now scaled when drawing outline
72554   Gradients with no interpolated colors will now work correctly

Mapping - GIS, Spatial and Culture

71882   Fixed potential crash on 'RMB/Query attributes...' for GIS layers from Petrel and Paradigm
72221   Display/GIS updates correctly after changing data source

Mapping - Grids, Surfaces and Sampled Data Files

72168   Fixed crash when refreshing the display of a Petrosys grid updated by Surface Modeling

Mapping - Wells

72483   List/Wells - Fixed bug causing wells to not be listed when added within Map Area (Santos only)
72251   Annotation queries returning multiple rows are now posted correctly
71721   Fixed a bug causing formation symbols to not be highlighted when selecting a Well on the Map

Surface Modeling - Contouring

72307   LCC contouring no longer crashes with large number of embedded faults or polygons

Surface Modeling - Exchange

72482   Fixed crash in Well Exchange when using Wildcard data selection

Surface Modeling - Gridding

72122   Grid/Create Grid outlines output grid when clipping is used with either min or max only values

Petrosys Release PRO 2018.3
Detailed Release Notes

Configuration - General   Bug Fixes

Fixed crash in Spatial Editor when configuration changed 63618

Mapping no longer crashes on changing configuration setting. In previous version, Mapping might crash if Spatial Editor was opened.

Connections, Import and Export - DUG InsightEnhancements

Added support for reading DUG Insight fault polygons   48900

Reading of fault polygons from DUG Insight is now supported.

Added support for writing DUG Insight fault polygons 52967

Writing of fault polygons to DUG Insight is now supported in the Exchange tool.

Connections, Import and Export - DUG InsightBug Fixes

Data now read from session   72292

In previous versions sometimes Petrosys could not read data from DUG 4.x if a session is specified. Now it has been fixed.

Connections, Import and Export - Esri   Bug Fixes

ArcGIS plugin fixed   72581

The ArcGIS plugin was broken in version 2018.2.1 , it is now fixed.

Connections, Import and Export - Petrel Enhancements

3D surveys are now selected when dragging seismic horizons from Petrel into Mapping and Surface Modeling   63050

If you drag a top level seismic horizon from the Petrel input tree and drop it into Petrosys PRO Mapping, it now automatically creates a layer for each 3D survey that has data for the selected horizon, along with a 2D seismic line layer if applicable.

Similarly, when you drag the same horizon into Surface Modeling/Grid/Create grid, it now also creates an Input data item with the relevant 3D surveys selected.

dbMap - Administration   Enhancements

SQL Reports - support added for selecting columns to report using run-time parameters   72263

It is now possible to create SQL queries that prompt for the columns to show in a report, using run-time parameters and Lookup queries that return SQL statements. An example query is the new OpenWorks Wells Default query "Zones: Report Specific Attribute(s) by Interpreter ..." Please contact Petrosys support for more details if needed, as this type of query is complex to create.

dbMap - Client   Enhancements

Well Path spatialization implemented for dbMap PPDM3.8   69677

dbMap PPDM3.8 clients now have the ability to compute well paths from the preferred directional survey and store them as 3D lines in an Oracle spatial layer. This layer is named PPDM38.WELL_DIR_SRVY_GEOMS.WELL_DIR_SRVY_GEOM, and is available where ever dbMap GIS is supported, e.g. Mapping/Display/GIS, Exchange/Spatial Data Translator. In addition to this, Oracle spatial queries can also be created to do such things as proximity checks for well paths.

The Mapping/Lists/Wells/dbMap/Edit/Selected wells/Compute Offsets for Directionals option can be used to compute the spatial layer on an ad hoc basis.

A cron job is required to keep the spatialized well paths in sync with changes to the directional survey or well location. Please contact Petrosys support for more details on how to do this.

dbMap/Web - Administration   Enhancements

Default query set upgraded for OpenWorks wells   72279

Direct Connects Query Suite has been enhanced for OpenWorks:

- ➢ Report selected well zone attributes with each attribute as a separate column
- ➢ Log Curve queries are now consistently named

dbMap/Web - PLDB   Enhancements

Added option to display and edit Prospects and Leads target polygons   69911

It is now possible to edit, import, create and display Prospects & Leads Target polygons within Petrosys PRO.

Edit, Import and Create on map buttons have been added to the Lists/Prospects & Leads/Prospects/Prospect Targets dbMap/Web dialog.

Targets are available as a data type on the Display/GIS option for data source "dbMap GIS". A new option, Display/Prospects & Leads/Targets has also been added which brings up the Display/GIS dialog with the data source "dbMap GIS" and data type "Targets" preselected.

Mapping - Editors   Enhancements

Grid and faults from DUG Insight can now be edited 71859

DUG Insight grids can now be edited together with DUG Insight faults in Grid Editor.

Additionally, faults can be exchanged using the Spatial Data Translator.

Mapping - General   Enhancements

Bubble Map Improvements   71870

Display/Bubble Map has been improved. New functionalities include:

- ➢ New data sources; GIS and Wells
- ➢ Filtering by expression and value for all data sources
- ➢ Elliptical mode for all data sources

Display/Excel Table - Ability to have Excel table displayed in opaque background   72064

Display/Excel table can now be displayed with an opaque background

Mapping - General   Bug Fixes

Crash when opening a dbm from recently used list with the Display List hidden   67649

A crash has been fixed when the Display List window was hidden, items were selected on the map and then a new DBM was opened by using the /File/Recent/... menu option.

Gradients with certain specific data ranges will no longer crash   72565

Gradients that had undefined range values could crash. This has now been fixed.

Fixed crash when opening Petrosys Fault file with no description   72028

In previous versions Mapping may crash when opening Petrosys Fault file which does not have description line. This has now been fixed.

ColorBar Title now scaled when drawing outline   72081

ColorBar title is now scaled correctly when drawing outline only.

Gradients with no interpolated colors will now work correctly   72554

Gradients with no interpolated colors will now work correctly. Previously if a gradient was defined with no or only one knee point color then the application could have crashed.

Mapping - GIS, Spatial and Culture   Enhancements

Allow polygon centroid to be used   34475

Polygon centroid can now be annotated as annotation in Display/GIS.

Polygon area and centroid can also be queried via RMB/Report Centroid & Area.

Display/GIS reduced the default number of decimal places for annotations from 6 to 2   72113

The default number of decimal places for numeric attribute when annotating on the Map has been reduced from 6 to 2 as this is a more appropriate default value for more cases.

Mapping - GIS, Spatial and Culture   Bug Fixes

Fixed potential crash on 'RMB/Query attributes...' for GIS layers from Petrel and Paradigm   **71882**

The option to query GIS layer attributes could crash Mapping when selected for Petrel and Paradigm datasources. This has now been fixed.

Display/GIS updates correctly after changing data source **72221**

Display/GIS now updates the display and shows correct data after changing the data source. Previously, you could get an error connecting to the data source.

Mapping - Grids, Surfaces and Sampled Data FilesEnhancements

Display/Grid/Colorfill now supports richer styling of Petrosys grid file embedded faults   **28621**

Embedded faults in Petrosys grid file now can be displayed using richer fault styles in Mapping Display Grid colorfill.

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Fixed crash when refreshing the display of a Petrosys grid updated by Surface Modeling   **72168**

In previous versions, Mapping could crash when refreshing the display of a Petrosys grid file when the file is modified by Surface Modeling. This has now been fixed.

Mapping - Seismic   Enhancements

Display/Bin Grid - Added option to sync Inline and Xline annotation settings   **70372**

Several check boxes have been added to the Display 3D Seismic Surveys dialog to allow for linking Inline and Xline settings across the different areas of 'Post frequency', 'Lines' and 'Symbols'.

Mapping - Wells   Bug Fixes

List/Wells - Fixed bug causing wells to not be listed when added within Map Area (Santos only)   **72483**

A bug has been fixed in List/Wells which caused no wells to be listed when adding wells within a Map Area and not using the 'Detailed well path checking' option.

Annotation queries returning multiple rows are now posted correctly   **72251**

When displaying wells from data sources that support SQL, and an annotation query returns multiple rows, it now displays all rows returned. Previously only the first row returned from the query was posted on the map.

Fixed a bug causing formation symbols to not be highlighted when selecting a Well on the Map   71721

A bug has been fixed which caused Well Formation symbols, if displayed, to not be highlighted in red when selecting a Well on the Map canvas.

Spatial Data Translator   Enhancements

Spatial Data Translator - Feature Class Browser performance improved   72209

The performance of Spatial Data Translator feature class selector has been improved. Depending on the number of layers, the selector can be up to 10X faster than previous version.

Surface Modeling - Contouring   Enhancements

Added GUID into LCC output shapefile and XML report, add midpoint into XML report   72364

Attribute 'GUID' is added to LCC XML report and output shapefile. The GUID can be used to uniquely identify the LCC, which may be useful when post-processing the generated data.

Sealing and leaking faults may now intersect in LCC 72377

Lowest Closing Contours has been improved by allowing leaking and sealing faults to intersect.

Surface Modeling - Contouring   Bug Fixes

LCC contouring no longer crashes with large number of embedded faults or polygons   72307

Some performance and crash issues in contouring have been fixed which previously could have led to the Lowest Closing Contour (LCC) option or Contouring option failing.

Surface Modeling - Exchange   Enhancements

Seismic Import - Added a right moust button menu option for displaying 3D Seismic Survey details   72205

In the Seismic Import tool, a right mouse button menu option has been added to the 3D Seismic Survey list to pop up a dialog showing the corner point and CRS details of the currently selected survey.

Added SDE as an input data source to Grid Exchange 43310

The Grid Exchange tool now supports reading grids from SDE.

Added Faults Exchange tool   71959

A new exchange option 'Faults Exchange' was introduced.

Surface Modeling - Exchange   Bug Fixes

Fixed crash in Well Exchange when using Wildcard data selection   72482

A potential crash has been fixed when using Wildcard data selection during the selection of wells in the Well Exchange tool.

Surface Modeling - General   Enhancements

Well-Surface penetration/Intersection/Back interpolation tool added
26989

A new tool has been added in Surface Modeling to generate the intersection points of wells and surfaces, which are then saved in Excel or CSV files.

Surface Modeling - Gridding   Enhancements

Grid/Create Grid allows faults to be to treated as boundary polygons
72399

Grid/Create Grid allows faults to be treated as boundary polygons to create filled polygon maps.

Surface Modeling - Gridding   Bug Fixes

Grid/Create Grid outlines output grid when clipping is used with either min or max only values   72122

Output grid from Grid/Create Grid task is outlined for both zmin and zmax levels when clipping is used with either only clipping min or only clipping max value.

Surface Modeling - Workflows/Scripting   Enhancements

Added option to populate looping strings from various sources   72213

In looping strings it is now easier to select strings from various sources, for example columns from an Excel file.

Grid/Statistics task adds grid geometry scripting fields   72003

Grid statistics task makes grid geometry fields (origin, extent, cell sizes, rotation angle) available for scripting.

Detailed Release Notes Summary PRO 2018.2.1

Enhancements

Connections, Import and Export - Paradigm-Epos

71664   Added support for Paradigm 18 on Linux and Windows

71754   Added support for using Paradigm on Windows via Remote Connections

dbMap - Client

43504   Well RFT option now brings up the dbMap/Web screen (Santos only)

71673   Well links added to Santos WIS and Web GIS (Santos only)

Mapping - General

71876   Added support to drag and drop Petrel, DecisionSpace and file-based data to the display list

Spatial Editor

71787   Grid Editor Save As.. Petrel automatically sets Petrel project

71786   Grid Editor: Save As... Petrel. Select existing now sets Petrel folder

71791   Grid Editor: Third-party grid style restored and fixed recent menu

Surface Modeling - Volumetrics

72022   Probabilistic Resource Calculator now supports multiple polygons for the GRV method

Detailed Release Notes Summary PRO 2018.2.1
Bug Fixes

Connections, Import and Export

72164	Petrel Plugin - Fixed an issue on certain configurations of dual-stack IPv4/IPv6 networks
71986	Fixed Petra connections getting mangled Names after initial use between applications
71792	Reduced the number of times SSH credentials are required within a session

Connections, Import and Export - OpenWorks

72165	Fixed an issue where the DecisionSpace Geosciences Plugin would fail to launch

Connections, Import and Export - Petrel

72019	Wells Import Wizard: Fixed issues when writing missing dates to Petrel well completions
72059	Fixed crash when gridding sparse Petrel seismic surface

Mapping - General

71858	Map Template are now loaded from pre 2017.1 dbm file
71597	Display/Excel: Colors are read correctly from .xlsx files that use the default theme

Mapping - GIS, Spatial and Culture

71911	Handle invalid polyline set in Petrel
71845	Display/GIS does not show dbMap specific data type filtering for Santos

Mapping - Grids, Surfaces and Sampled Data Files

71762	Fixed minor user interface issues when exporting a grid from mapping (RMB/Export Grid)

Spatial Editor

71941	Grid editor no longer causes Mapping to crash during exit
71777	Grid Editor: Petrel no longer overwrite existing faults with polygon data if name and folder name are the same

Surface Modeling - Exchange

72033	Fixed crash when converting units between data sources during Seismic Surface Exchange
71886	Grid Exchange: Fixed output grid attributes not being updated in the user interface

Surface Modeling - Gridding

71881	Fixed some Surface Modeling tasks not upgrading Petrel seismic input selections

Surface Modeling - Volumetrics

71923	No longer crash when reading polygon data in legacy volumetrics options
72020	Probabilistic Resource Calculator now uses the correct inputs levels for GRV method

Petrosys Release PRO 2018.2.1
Detailed Release Notes

Connections, Import and Export   Bug Fixes

Petrel Plugin - Fixed an issue on certain configurations of dual-stack IPv4/IPv6 networks   72164

An issue has been fixed where the Petrel Plugin would not connect on certain network configurations involving dual-stack IPv4/IPv6.

Fixed Petra connections getting mangled Names after initial use between applications   71986

A bug has been fixed whereby Petra connections added in one application and then used in another during the same Launcher session were getting mangled Names or duplicate entries in the Connection Manager.

Reduced the number of times SSH credentials are required within a session   71792

If you have chosen not to save your SSH username and password, you will no longer be prompted for it multiple times within a single session. Additionally, the password manager will now store the location to your RSA/DSA key if you are using key authentication and choose to save your password.

Connections, Import and Export - OpenWorksBug Fixes

Fixed an issue where the DecisionSpace Geosciences Plugin would fail to launch   72165

An issue has been fixed which was stopping the Petrosys PRO DSG Plugin from successfully launching if a user does not have at least Browse privilege on the Master OpenWorks project of the Interpretation project being used in DSG.

Connections, Import and Export - Paradigm-EposEnhancements

Added support for Paradigm 18 on Linux and Windows   71664

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

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

Added support for using Paradigm on Windows via Remote Connections   71754

On Windows, Paradigm is now a supported data source for the Remote Connections feature that was released in Petrosys PRO 2018.2. This allows Windows users to display data from a Linux installation of Paradigm, without requiring Paradigm to be installed on the Windows PC.

Wells Import Wizard: Fixed issues when writing missing dates to Petrel well completions   72019

When writing completions (Casing, tubing, perforations, fractures) to Petrel, missing dates were recorded as 01/01/001 which caused Petrel to raise warning messages. This has now been fixed.

Fixed crash when gridding sparse Petrel seismic surface   72059

When gridding 3D Seismic data from Petrel, Surface Modeling could crash if the data from Petrel was classified as being sparse. Additionally, writing sparse 3D seismic surfaces from Petrel would fail. These issues have now been fixed.

dbMap - Client   Enhancements

Well RFT option now brings up the dbMap/Web screen (Santos only)   43504

For Santos the RFT Runs option on the well menu now brings up the dbMap/Web screen for the current well.

Well links added to Santos WIS and Web GIS (Santos only)   71673

For Santos, the dbMap Well menu now has options to launch the Santos WIS and Web GIS web pages for the current well, matching what is already available from the dbMap/Web well header dialog.

Mapping - General   Enhancements

Added support to drag and drop Petrel, DecisionSpace and file-based data to the display list   71876

Previously, data dragged from Petrel, DecisionSpace or external file needed to be dropped on to the mapping canvas. The drop zone has now been extended to include the display list.

Map Template are now loaded from pre 2017.1 dbm file   71858

All map template's elements (under the special Map Template group) in pre 2017.1 dbm file will now be loaded.

Display/Excel: Colors are read correctly from .xlsx files that use the default theme   71597

Displaying an Excel .xlsx file using the Display/Excel Table option shows correct colours from the default theme.

Handle invalid polyline set in Petrel   71911

Display/GIS now shows list of Petrel objects robustly. In previous version, Display/GIS may not show any Petrel items if Petrel Project has an invalid polygon set.

Display/GIS does not show dbMap specific data type filtering for Santos
71845

Petrosys dbMap databases support a range of spatialized data types. These have previously been available for display under the "dbMap GIS" option in Display/GIS, but were shown in a combined list, along with more generic Oracle data. Display/GIS now allows the dbMap data type to be selected to filter the list to only show layers for the relevant data type

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Fixed minor user interface issues when exporting a grid from mapping (RMB/Export Grid)
71762

Minor changes to the RMB/Export Grid user interface to improve compatibility with high DPI devices.

Spatial Editor   Enhancements

Grid Editor Save As.. Petrel automatically sets Petrel project   **71787**

Grid Editor Save As dialog has been improved so the Petrel connection is connected automatically.

Grid Editor: Save As... Petrel. Select existing now sets Petrel folder **71786**

Grid Editor Save As dialog has been improved so when selecting existing grid all relevant fields are populated.

Grid Editor: Third-party grid style restored and fixed recent menu   **71791**

Recent menu works for third-party grids now and previously used styles are now remembered for third-party grids.

Spatial Editor   Bug Fixes

Grid editor no longer causes Mapping to crash during exit   **71941**

In previous version there was a bug where if the Grid Editor had been used then Mapping could crash when the application was closed. This has now been fixed.

Grid Editor: Petrel no longer overwrite existing faults with polygon data if name and folder name are the same   **71777**

Grid Editor now saves fault and polygon data to Petrel correctly. In previous version, Grid Editor might overwrite existing fault data with polygon data if they have the same name.

Surface Modeling - Exchange   Bug Fixes

Fixed crash when converting units between data sources during Seismic Surface Exchange   **72033**

A potential crash condition has been fixed when translating unit information between the input and output data sources during a Seismic Surface Exchange run.

Grid Exchange: Fixed output grid attributes not being updated in the user interface   **71886**

In Grid Exchange, changes made to a grid's output attributes weren't reflected in the grid list. This has now been fixed.

Surface Modeling - Gridding   Bug Fixes

Fixed some Surface Modeling tasks not upgrading Petrel seismic input selections   71881

In some cases, Petrel seismic inputs to a Surface Modeling task were lost during the task upgrade from PRO 2018.1 to PRO 2018.2. This has now been fixed.

Surface Modeling - Volumetrics   Enhancements

Probabilistic Resource Calculator now supports multiple polygons for the GRV method   72022

The Surface Modeling/Volumetrics/Probabilistic Resource Calculator option now supports selection of more than one polygon when using the GRV method.

Surface Modeling - Volumetrics   Bug Fixes

No longer crash when reading polygon data in legacy volumetrics options   71923

In previous version Surface Modeling may crash when running the legacy volumetrics options e.g. Volumetrics/Grid Based/Top and Base Grids. This has now been fixed.

Probabilistic Resource Calculator now uses the correct inputs levels for GRV method   72020

The Surface Modeling/Volumetrics/Probabilistic Resource Calculator option now uses the input Top and Oil Water or Gas Contact values to compute the volumes for input into the PLDB calculator. Previously it would often compute the volumes from a top depth of zero to the Oil Water or Gas Contact.

Detailed Release Notes Summary PRO 2018.2
Enhancements

3D Viewer - General

71357   3DViewer scaling/offset fields allow up to 8 decimal places

Application - General

63153   FaultRisk 4.4 now supported

Connections, Import and Export

71235   Connect from Windows to Linux data sources without a Dispatch Server daemon
71610   Text file format definition UI - Tooltip added to make it more obvious that the button can be clicked
65761   Support IC (ODM) connections that use 'SQL Server LocalDB'

Connections, Import and Export - Excel

69611   Display/GIS - Data preview for Excel now shows data at higher precision

Connections, Import and Export - OpenWorks

20857   Added support for OpenWorks Districts

Connections, Import and Export - Petrel

71077   Performance improved when working with Petrel seismic
48958   Added support for reading sub-surveys from Petrel
67581   Added support for reading Petrel 3D seismic cropped to a sub-survey
23894   Added support for drag and drop of Petrel well saved searches
69920   Added support for Petrel gradients
66830   Petrel 2018.1 supported
70054   Added support for the new Structural Framework made available in Petrel 2018.1

Coordinate Reference Systems

65453   EPSG data base upgraded to version 9.4

Mapping - General

68464   Display/Location Map allows customisation of the base map
69190   Map templates include support for color bars
17916   Display Excel tables directly on a map
67095   Map legends allows display within a fixed size and multiple columns
63639   Support added for ArcGIS token authentication method
69248   A new option for filtering text and Excel data when displaying bubble maps
71063   Display/Title Block allows display of title blocks defined in Excel files
58115   Display/Web Map Service allows management of the URL catalog
70609   Display/Other Map Extent allows selection of extents from a wider variety of sources

Mapping - GIS, Spatial and Culture

70085   Display/GIS allows display of spatialized dbMap basins, facilities, fields, permits and prospects
70089   Display/GIS includes dbMap specific data type filtering
70799   Performance of display of shapefiles over network drives has been greatly improved

Mapping - Grids, Surfaces and Sampled Data Files

11907   Grid layers allow optional equalisation of gradient colors
55561   Automatically display faults when a fault selection is made
71160   Added option to export a displayed grid into another grid format

Mapping - Seismic

71048   Added Seismic 3D Bin Grid corner point tolerance options to the Configuration and Settings tool

Mapping - Wells

68472   Formation selector now shows the Basin, Interpreter and Type names instead of the Id (PPDM38 only)

27731   Detailed well path checking can now be used to identify wells crossing an extent

Spatial Data Translator

71186   Added warning when no feature classes are read when clicking the Select button

Spatial Editor

58704   Editing of grids, faults and clipping polygons from Petrel and OpenWorks

46239   Spatial editor "Unite" operation allows overlapping polygons to be merged into a single polygon

71516   Spatial Editor shows the data table by default

Surface Modeling - General

27010   Deprecated Grid and Contour based volumetrics options are now hidden by default

21754   Grid processing and arithmetic support selection of data using polygons from any vector data type

Surface Modeling - Gridding

70876   Gridding input data item names can be edited

Surface Modeling - Volumetrics

69250   Probabilistic Resource Calculator (PRC)

21753   Volumetrics calculations to allow selection of data using polygons from any vector data type

Surface Modeling - Workflows/Scripting

71707   Increased interactive scripting 'text' field to 256 characters

70647   Allow Surface Modeling workflow task description to be scriptable

70918   Support for looping Map Extents added

Detailed Release Notes Summary PRO 2018.2

Bug Fixes

Configuration - Licensing

71510   Tools/Flex Tools now uses correct platform version

Connections, Import and Export - DUG Insight

71546   Wells read from DUG Insight always have a UWI

Connections, Import and Export - Excel

63522   Minutes are shown correctly for Excel data using a date/time format

Connections, Import and Export - GeoFrame

71695   CPS-3 Grid import now works if the CPS-3 grid file has comment header lines that start with a double dash

Connections, Import and Export - Petrel

70735   Added support to drag and drop 2D seismic horizon attributes from Petrel

Mapping - General

71229   File resolution dialog is no longer incorrectly shown for title blocks with two included images
70768   Mapping allows all "map template" layers to be hidden, without hiding border annotation
70732   Canadian NTS landgrid map extents allow lower case letters when specifying subdivision
70359   CRS errors are no longer shown during scanning of map extents or templates
71378   Display/Raster correctly restores 'Map' coordinate types from dbm files
69315   Landgrid based map extents use the global landgrid by default
70923   Map layers can no longer be positioned above the "Map Template" group

Mapping - GIS, Spatial and Culture

38992   Display/GIS draws polygons that completely enclose the map extent
71248   MapInfo polygons now appear in legend
70477   Display/GIS no longer shows "linear range" twice under the Thematic/Symbol Style scaling options
69519   Display/GIS using a thematic series gradient containing spike colous draws correctly

Mapping - Grids, Surfaces and Sampled Data Files

70831   Faults now remain selected when changing input grid for display

Spatial Editor

71434   When editing grids, the "Compute grid within faults" setting is read from the corresponding Petrosys gri
69742   Grid editing correctly handles multiple "clip outside" polygons
71514   Grid editor automatically regenerates contours after localised or full regridding
71515   Grid editor generates contours correctly when contour increment is left blank
71794   Spatial Editor no longer crashes when selecting read only layers with the "Move" tool active

Surface Modeling - General

71447   Looping over SDF horizons no longer loop over horizon that was not selected

Surface Modeling - Gridding

71404   Grid/Process/Arithmetic: AOI of output grid generated using GPA based on a map extent does match grid create grid
70746   Stacking velocity gridding now responds to cancel

Surface Modeling - Volumetrics

71446   Volumetrics report have colored gradient charts rendered
71386   Volumetrics reports correct 'volume above' when no polygons are used

Surface Modeling - Workflows/Scripting

71702   Looping over files no longer crashes when files are created dynamically
71032   Volumetrics/Grid Based Slices task retains its scripting fields when task modified

Petrosys Release PRO 2018.2
Detailed Release Notes

3D Viewer - General   Enhancements

3DViewer scaling/offset fields allow up to 8 decimal places   71357

Scaling and offset fields in some display options allow up to 8 decimal digits (previously only two).

Application - General   Enhancements

FaultRisk 4.4 now supported   63153

FaultRisk v 4.4 is now supported in Petrosys PRO. It can be started from Petrosys PRO Launcher, located under the Apps menu option.

Configuration - Licensing   Bug Fixes

Tools/Flex Tools now uses correct platform version 71510

On Windows the launcher option Tools/Flex Tools now uses the correct platform version of the FLEXlm tools program. This means that if this options is run on a server configured with the Petrosys license server then you will see the configured license service correctly. Previously it would not show up.

Connections, Import and Export   Enhancements

Connect from Windows to Linux data sources without a Dispatch Server daemon   71235

Petrosys PRO has long supported connection to remote data source through the dispatch server daemon. For example, accessing GeoFrame data hosted on a Linux system from a Windows PC. However, configuring and maintaining the dispatch server daemon can be a difficult task in some client environments. Petrosys PRO 2018.2 now supports a new remote data source connection method using SSH. Remote connections are initiated directly between the user's desktop and the remote data source computer without the need for a service or daemon running on the remote computer. Once the connection type is specified in the connections.xml file, configuration is simple, with all required settings available on the user's desktop. Normal username/password prompts, along with RSA/DSA keyfiles, with and without passphrases, are supported, ensuring simple operation in a variety of environments.

In Petrosys PRO 2018.2, SSH connections are supported for GeoFrame and OpenWorks data sources.

The Remote Connections feature will replace the Dispatch Server feature, which is now considered deprecated and may be removed in a future release.

Text file format definition UI - Tooltip added to make it more obvious that the button can be clicked   71610

A tooltip has been added to the button that defines the format for Text files when they are used for display or gridding.

Support IC (ODM) connections that use 'SQL Server LocalDB'   65761

Petrosys now supports connecting to IC (ODM) projects that are stored using 'SQL Server LocalDB'. Petrosys continues to also support projects stored in MS Access and SQL Server databases.

Connections, Import and Export - DUG Insight Bug Fixes

Wells read from DUG Insight always have a UWI   71546

A bug has been fixed where wells read from DUG Insight may end up with no UWI information. Now when reading from wells from DUG Insight, the UWI for a well in Petrosys PRO will either be the UWI as seen in the DUG Insight application and if that does not exist the Id of the well.

Connections, Import and Export - Excel   Enhancements

Display/GIS - Data preview for Excel now shows data at higher precision
69611

For Excel, the data preview list now shows numerical values at a higher precision than before. Previously it would round to 4 decimal places, now it rounds to 8. Note that the data is always used at its full precision, the rounding is only for the preview display.

Connections, Import and Export - Excel   Bug Fixes

Minutes are shown correctly for Excel data using a date/time format
63522

The date/time format defined by Excel is ambiguous when it distinguishes between months and minutes. In previous versions of Petrosys PRO, the numerical month value was shown instead of minutes.

Connections, Import and Export - GeoFrame Bug Fixes

CPS-3 Grid import now works if the CPS-3 grid file has comment header lines that start with a double dash   71695

CPS-3 ASCII grid files will now import correctly if they have header comment lines that start with a double dash "--". Files exported from tNavigator have these types of header comment lines and will now work correctly.

Connections, Import and Export - OpenWorks Enhancements

Added support for OpenWorks Districts   20857

OpenWorks Districts are now support for OpenWorks direct connections and through the new Remote Connections feature. When selecting a data connection, each district for each database will be listed separately, allowing users to reduce the list of projects retrieved. Project selection screens show the district details for the project connection, allowing easy filtering and sorting.

Connections, Import and Export - Petrel   Enhancements

Performance improved when working with Petrel seismic   71077

The performance of reading seismic data from Petrel has been improved across both 2D and 3D seismic. Memory use has also been reduced when working with 3D seismic surfaces.

Added support for reading sub-surveys from Petrel 48958

In addition to Petrel's top-level seismic surveys, sub-surveys are now available throughout Petrosys PRO.

Added support for reading Petrel 3D seismic cropped to a sub-survey 67581

When working with 3D seismic surfaces from Petrel, you can now select a sub-survey to crop the surface to your area of interest.

Added support for drag and drop of Petrel well saved searches 23894

Saved Searches can now be dragged from Petrel to Petrosys PRO Mapping and Surface Modeling in the same way as a Petrel well or well folder.

Added support for Petrel gradients 69920

Petrel gradients can now be used directly within Petrosys PRO. The easiest way to use them is to drag and drop a Petrel grid, surface or horizon in to Mapping, and its associated gradient will automatically be imported and selected. You can also drag a Petrel color table directly to a Petrosys PRO color picker or the Mapping canvas. Imported Petrel color tables are stored within the Petrosys PRO project.

Petrel 2018.1 supported 66830

Petrosys connectivity to Schlumberger's Petrel now supports direct interaction with Petrel 2018.1.

Support for Petrel 2018.1 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 Model grid horizons, Input surface grids and 3D seismic interpretation horizons in Mapping
- ➢ Directly contour 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

The new Structural Framework Horizons and Faults added to Petrel 2018.1 are also supported.

Petrosys PRO continues to maintain support for connections to Petrel 2014.x, 2015.x, 2016.x and 2017.x.

Added support for the new Structural Framework made available in Petrel 2018.1 70054

A new set of structural framework objects have been introduced with Petrel 2018.1. Support to read and display these new structural framework horizons and faults has been added.

Connections, Import and Export - Petrel   Bug Fixes

Added support to drag and drop 2D seismic horizon attributes from Petrel 70735

Petrel 2D seismic attributes can now be dragged and dropped where 2D seismic interpretation in accepted.

Coordinate Reference Systems   Enhancements

EPSG data base upgraded to version 9.4   65453

The standard EPSG coordinate reference system data included with Petrosys PRO has been upgraded to version 9.4. Please refer to www.epsg.org for specific details on the data changes included in this version.

Mapping - General   Enhancements

Display/Location Map allows customisation of the base map   68464

The Display/Location Map option allows the "base map" for the location map to be customised. In previous versions of Petrosys PRO, this was fixed to country or state outlines, but the base map can now be based on shapefiles or dbm files, with a restriction on the layer types allowed in the dbm file. This can be useful for displaying on-shore location maps (e.g. based on license blocks or permits), location maps using satellite imagery (using web map services), customising styles or for adding filtering to base map polygons.

Map templates include support for color bars   69190

Petrosys PRO map templates allow color bars to be included as part of the map template. When a map template with a color bar is applied, the color bar will not be drawn until linked to a grid, or other gradient source. In addition, the layer linked to any color bar can now be modified after the color bar has been created, which previously was not possible.

Display Excel tables directly on a map   17916

The Mapping/Display/Excel Table allows Excel tables to be displayed directly on a map, using the style (fonts, colors, line styles) defined in the Excel table.

  ➢ Excel tables displayed using this option are positioned relatively within the map border - not spatially (i.e. not a particular geographic or projected coordinate). Display/GIS can still be used to display Excel data with a spatial component

  ➢ The style defined in the Excel file will be honoured as closely as possible and generally the results will match quite well. Several 'advanced' Excel formatting options are not supported (refer to the online help for specific details)

Map legends allows display within a fixed size and multiple columns   67095

The legend in previous versions of Petrosys PRO would automatically size itself according to the contents of the legend. Petrosys PRO 2018.2 still supports this behaviour, but also allows a fixed rectangular size to be set for the legend, with the content sized to fit into the defined rectangle. This is useful when creating map templates to fit the legend in between other map elements.

In addition, the legend supports multiple top-level columns, which would typically be used to create a "horizontal" legend - to fit into a horizontal title bar for example. The legend content (blocks) will automatically wrap into the legend columns to maximise the space available.

Support added for ArcGIS token authentication method   63639

The ArcGIS token authentication method is supported when accessing image or vector data from ArcGIS server web services. If this authentication method is enabled in Petrosys PRO, a "token" - which is a short piece of encrypted text - must be obtained manually from the ArcGIS server and pasted into Petrosys PRO when prompted. The same token can be used for multiple services accessed from the same ArcGIS server, and Petrosys PRO will re-prompt if a new token is required, for example when a previous token has expired.

A new option for filtering text and Excel data when displaying bubble maps   69248

The Display/Bubble Maps option includes a new "Attribute" filtering option when the input source is a text or Excel file. The "Attribute" filtering method is equivalent to the table filtering available elsewhere in Petrosys PRO and allows filtering based on text values.

Display/Title Block allows display of title blocks defined in Excel files
71063

The Display/Title Block option now allows title blocks to be displayed from Excel files, in addition to previously supported CGM based title blocks. Excel files can be placed in the standard title block locations - a "title_blocks" directory under project directories or under the ps_local Petrosys site directory - to make them available as title blocks. Specifically the content from the first worksheet in the Excel file will be shown as the title block.

The advantage of using an Excel file as a title block is that the style, e.g. borders, fonts and colors, can be defined in the Excel file, which is easier than creating a CGM file. Excel title blocks support "hook text" and also pictures. Petrosys PRO will automatically generate a dialog to allow entry of the title block contents, but a custom dialog can also be used.

Please refer to the online help in the title block panel for more details.

Display/Web Map Service allows management of the URL catalog
58115

The Display/Web Map Service option has been enhanced to allow selected URLs to be added to the catalog, and to allow existing catalog entries to be modified or deleted. In previous versions this required manual edits to the catalog file.

Display/Other Map Extent allows selection of extents from a wider variety of sources
70609

Display/Other Map Extents supports the same methods for selection as the MapTemplate/Extent/Select, including selection of extents from other projects and dbm files.

Mapping - General   Bug Fixes

File resolution dialog is no longer incorrectly shown for title blocks with two included images
71229

If a title block was used with two images, previous versions of Petrosys PRO incorrectly displayed the file resolution dialog when this was not required.

Mapping allows all "map template" layers to be hidden, without hiding border annotation
70768

In previous versions, hiding all of the "Map Template" child layers would also set the "Map Template" layer as not visible, which turns off the border annotation and background style. This has been modified so that the visibility of the "Map Template" layer is independent of its child layers.

Canadian NTS landgrid map extents allow lower case letters when specifying subdivision
70732

In previous versions, lower-case letters for the sub-division were allowed to be entered, but the resulting extent did not work as expected.

CRS errors are no longer shown during scanning of map extents or templates
70359

If a map extent or map template has a CRS related problem, such as a custom geographic CRS, an error will only be shown when the extent or template is selected. Previous versions of Petrosys PRO would display errors while these were scanned.

Display/Raster correctly restores 'Map' coordinate types from dbm files
71378

The Mapping/Display/Picture/Raster option was upgraded in PRO 2017.1 to allow raster images to be displayed relative to the map border using the "Map" coordinate type. In previous versions, the "Map" coordinate setting was not correctly restored when these layers were loaded from a dbm file.

Landgrid based map extents use the global landgrid by default 69315

If a global landgrid has been defined (Launcher/File/Landgrid), then this will now be used by default when landgrid based map extents are used.

Map layers can no longer be positioned above the "Map Template" group
70923

The standard "Map Template" group is always the top most layer in Mapping layers. In previous versions it was incorrectly possible to add layers above this group using certain methods, for example, dragging and dropping layers from Petrel.

Mapping - GIS, Spatial and Culture   Enhancements

Display/GIS allows display of spatialized dbMap basins, facilities, fields, permits and prospects 70085

Petrosys dbMap databases support storage of spatialized versions of basin, facility, field, permit and prospect data. Display/GIS allows display of this data - including data specific annotation, filtering and querying.

Display/GIS includes dbMap specific data type filtering 70089

Petrosys dbMap databases support a range of spatialized data types. These have previously been available for display under the "dbMap GIS" option in Display/GIS, but were shown in a combined list, along with more generic Oracle data. Display/GIS now allows the dbMap data type to be selected to filter the list to only show layers for the relevant data type.

Performance of display of shapefiles over network drives has been greatly improved 70799

The time to display large shapefiles from network locations has been greatly improved. Petrosys has recorded improvements by a factor of 10 in some test cases.

Mapping - GIS, Spatial and Culture   Bug Fixes

Display/GIS draws polygons that completely enclose the map extent
38992

In previous versions of Petrosys, nothing would be drawn when the map extent fit completely within a polygon displayed using Display/GIS. From version 2018.2, this now works as expected with the polygon drawn and annotation displayed at the appropriate position within the map extent.

MapInfo polygons now appear in legend 71248

Display/Legend now shows the correct legend for Display/GIS MapInfo file. In previous version, it showed an extra empty legend

Display/GIS no longer shows "linear range" twice under the Thematic/Symbol Style scaling options 70477

A duplicate "linear range" option was incorrectly added in PRO 2017.1.

Display/GIS using a thematic series gradient containing spike colous draws correctly 69519

In previous versions of Petrosys PRO, this specific combination of layer and display could sometimes crash, depending on the number of spikes present in the color gradient.

Mapping - Grids, Surfaces and Sampled Data FilesEnhancements

Grid layers allow optional equalisation of gradient colors 11907

The gradient selection for grid display (colorfill, values, sun-shaded) includes a new "Equalisation" checkbox, which will dynamically spread the colors in the gradient across the distribution of data being shown for the grid. This option is generally useful in practice for data with "spikes" - small horizontal areas with a relatively large vertical (Z) value. Without equalisation, the colors in the gradient are used to color the spike and the rest of the surface will lack detail. Enabling automatic equalisation will reduce the colors used for spikes - improving visibility in flat areas.

In addition, when the gradient editor is used from a grid layer, the distribution of the grid data can be optionally displayed in the gradient editor. The data distribution can be useful when setting control points for a gradient to highlight particular features in the grid.

Automatically display faults when a fault selection is made 55561

When a fault selection is made in the Display/Grids panel, the check box to display faults is now automatically checked.

Added option to export a displayed grid into another grid format 71160

When a grid is displayed in Mapping, there is now an option to export the grid to another data source using the right mouse button menu of the grid. RMB/Export Grid...

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Faults now remain selected when changing input grid for display 70831

When changing the grid to be displayed, the previous faults selection is now maintained.

Mapping - Seismic   Enhancements

Added Seismic 3D Bin Grid corner point tolerance options to the Configuration and Settings tool 71048

Several tolerance settings, previously located in a configuration file, used when checking the corner points of Seismic 3D Bin Grids, have been moved into the Configuration and Settings Advanced section under the Data Type menu.

Mapping - Wells   Enhancements

Formation selector now shows the Basin, Interpreter and Type names instead of the Id (PPDM38 only) 68472

The well formation selector has been updated for the PPDM38 configuration, to show the names rather than Ids of a Formations Basin, Interpreter and Type.

Detailed well path checking can now be used to identify wells crossing an extent 27731

An optional check has been added when processing well data to allow for detailed well path checking to determine if a well should be considered when using an extent.

For a specified extent, if a wells surface and bottom hole locations do not lie with in the AOI and the 'Detailed well path checking' option is enabled, then for every well where the directional survey lies within a "buffer zone" surrounding the extent, the well will be queried to see if its path crosses the specified extent. If the path of a well crosses the extent, then it will be included for processing.

The "buffer zone" is controlled through the Configuration Tool, using the option "Advanced > Data Type > Well > Distance to expand AOI searching for intersecting paths." The value is specified in kilometres and will be converted as required based on the CRS units of the extent. The default value for the buffer zone is 6.0 kms.

This option has been added to all places where well data can be used throughout Petrosys PRO:

> ➢ Mapping
> ➢ 3D Viewer
> ➢ Surface Modeling

Spatial Data Translator Enhancements

Added warning when no feature classes are read when clicking the Select button 71186

A warning is now displayed when no data can be read from the input data source when a user has clicked the "Select Feature Class" button.

Spatial Editor Enhancements

Editing of grids, faults and clipping polygons from Petrel and OpenWorks 58704

Petrosys PRO now supports to editing of grids from OpenWorks and Petrel, together with faults and clipping polygons selected from the same data source.

Additionally, Petrel and OpenWorks faults can be directly edited in the Spatial Editor.

Spatial editor "Unite" operation allows overlapping polygons to be merged into a single polygon 46239

A new "Unite" operation has been added to the spatial editor, which merges overlapping or abutting polygons into a single polygon. This option is available when more than one polygon has been selected, using the RMB/Unite popup menu option.

Spatial Editor shows the data table by default 71516

The spatial editor will show the data table view on startup by default.

Spatial Editor Bug Fixes

When editing grids, the "Compute grid within faults" setting is read from the corresponding Petrosys gri 71434

In previous versions, this value had to be set manually to the desired value for each grid that was edited.

Grid editing correctly handles multiple "clip outside" polygons 69742

In previous versions, editing a grid with multiple "clip outside" clipping polygons would incorrectly blank grid values that were not inside both clipping polygons. This has been corrected to blank grid values that are outside all "clip outside" polygons.

Grid editor automatically regenerates contours after localised or full regridding 71514

When editing a grid in "Contours Mode", and changes to the input data are regridded (localised or full), the behavior has changed to always recreate the contours in the "Generated Contours" layer.

Grid editor generates contours correctly when contour increment is left blank
71515

The increment for generated contours can be left blank (to automatically determine an appropriate increment). In previous versions, using a blank contour increment did not work correctly when editing grids - the contour style could not be modified and contours would not be regenerated after changes correctly.

Spatial Editor no longer crashes when selecting read only layers with the "Move" tool active
71794

In previous versions, selecting a read only layer, such as the "Generated Contours" layer with the "Move" tool active would cause a crash.

Surface Modeling - General   Enhancements

Deprecated Grid and Contour based volumetrics options are now hidden by default
27010

The deprecated Volumetrics options (Grid Based, Contour Based) have been removed from the Volumetrics menu. Any existing tasks that use these methods will continue to function as per normal. These options can be returned to the Volumetrics menu via Tools/Config if needed.

Grid processing and arithmetic support selection of data using polygons from any vector data type
21754

Following Surface Modeling tasks now can use polygons from any vector data type.

- ➢ Grid / Merge / Blend
- ➢ Grid / Merge / Regrid
- ➢ Grid / Merge / Overlay
- ➢ Grid / Processes / Arithmetic
- ➢ Grid / Processes / Clip To Polygon

Surface Modeling - General   Bug Fixes

Looping over SDF horizons no longer loop over horizon that was not selected
71447

Looping over SDF horizons works correctly even if some horizon names start with the same prefix.

Surface Modeling - Gridding   Enhancements

Gridding input data item names can be edited
70876

In Surface Modeling Grid/Create Grid the descriptions of input data sources can be changed by users interactively.

Surface Modeling - Gridding   Bug Fixes

Grid/Process/Arithmetic: AOI of output grid generated using GPA based on a map extent does match grid create grid
71404

Grid/Process/Arithmetic output grid will have the same grid geometry as if the output grid was created by Grid/Create Grid with the same extent and cell sizes.

Stacking velocity gridding now responds to cancel[70746]

In previous versions, Surface Modeling gridding stacking velocities task could not be cancelled by clicking the cancel button once. This has now been fixed.

Surface Modeling - Volumetrics   Enhancements

Probabilistic Resource Calculator (PRC)   [69250]

Petrosys has added a new Probabilistic Resource Calculator (PRC) option to compute a range of outcomes for Oil and Gas volumes using Monte-Carlo simulation via the dbMap/Web Prospects & Leads (PLDB) Resource Calculator with input from two or three Volumetrics runs.
The option is available from Surface Modeling/Volumetrics/Probabilistic Resource Calculator.

In addition to most of the standard Volumetrics/Grid Based Slices options, you need to do the following:
• Choose one of the supported PRC compute methods - GRV Method, Depth-Volume Method and Depth-Area Top (Constant Thickness)
• Choose the desired distribution type - Lognormal, Normal, Stretched Beta or Triangular
• Choose the hydrocarbon type - Oil, Gas or Oil & Gas
• Enter details for the Low & High Percentile, and Mode, depending on the distribution type selected
• Select either separate grids defining your low & high estimates, or select the same grid in both cases, and vary the contacts
• The contact level names are fixed and values mandatory, based on the PRC Compute method and Hydrocarbon type selected

When the task is run, it will run the standard Grid Based Slices volumetrics for each of the grids input in the Low/High Percentiles & Mode tabs, depending on the PRC Compute method and Hydrocarbon type selected.

Once complete, the data is securely sent to a read-only Petrosys-managed cloud dbMap/Web instance, which is restricted to only support PLDB Resource Calculator for the PRC. Some mandatory and other optional input distribution values can be specified on the Geology, Oil, Gas and other tabs, such as Porosity, Net/Gross, Oil/Gas Bg and recovery factors, then pressing Compute will run a Monte-Carlo simulation for the set number of iterations. Resulting volumes are displayed in the Results tabs and can be exported to Excel for permanent storage

Note: no data is stored or logged in the cloud beyond the current computation run.

Volumetrics calculations to allow selection of data using polygons from any vector data type   [21753]

Now polygons can be selected from any supported data sources in Surface Modeling volumetrics task.

Surface Modeling - Volumetrics   Bug Fixes

Volumetrics report have colored gradient charts rendered   [71446]

Volumetrics report have color gradient charts every time the volumetrics task is run.

Volumetrics reports correct 'volume above' when no polygons are used   [71386]

The 'volume above' for each reference level reports the total volume to the 'Shallowest level' - the total volume of the structure.

Surface Modeling - Workflows/Scripting   Enhancements

Increased interactive scripting 'text' field to 256 characters   [71707]

Increased interactive scripting text field to 256 characters.

Allow Surface Modeling workflow task description to be scriptable 70647

Workflow task descriptions can use simple scripting fields. This is useful for looping workflows where task descriptions of looped tasks can be updated with looping values.

Support for looping Map Extents added 70918

Surface Modeling now supports looping over map extents.

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Surface Modeling - Workflows/Scripting   Bug Fixes

Looping over files no longer crashes when files are created dynamically
71702

In previous versions, when looping through files Surface Modeling could crash if the files were created on the fly. This has now been fixed.

Volumetrics/Grid Based Slices task retains its scripting fields when task modified 71032

Volumetrics/Grid Based Slices task retains its scripting fields after the task panel is re-opened and closed.

Detailed Release Notes Summary PRO 2018.1.2

Enhancements

Application - Launcher

71285   Project Selector - Caching of project metadata is saved more frequently

Configuration - General

71195   Additional configuration options added for automatic project creation

Connections, Import and Export - GeoFrame

71118   GeoFrame connection can now use the DevKit to get a list of projects

69537   GeoFrame connection can now uses Dispatch Server to honour security on Windows

Connections, Import and Export - OpenWorks

71290   DSG Plugin: Removed warning dialog about Petrosys still running when closing DSG application

Connections, Import and Export - Petrel

70560   Added initial CRS check when launching from Petrel

Detailed Release Notes Summary PRO 2018.1.2
Bug Fixes

Application - Printing and Publication

71304   Plotter Configuration Linux - List of system print queues now shows all system queues

Connections, Import and Export - OpenWorks

71289   DSG Plugin: Petrosys no longer tries to create panels.pnd in the DSG install directory

Connections, Import and Export - Petrel

71181   Fixed custom Petrel well symbol library configuration option

71399   Drawing Petrel well symbols now correctly uses the UNDEFINED symbol when failing to find the named symbol in the active Well Symbol group

Petrosys Release PRO 2018.1.2
Detailed Release Notes

Application - Launcher   Enhancements

Project Selector - Caching of project metadata is saved more frequently
71285

The Project Selector will now write out the cached list of projects and metadata even if the background process of metadata extraction and existence checking was not completed. This helps when there are projects that are on very slow or non-responding servers, the existing scanned project metadata is saved for the next invocation allowing the list of existing projects to be shown much more quickly.

In addition the time taken to scan for the existence of the project and its metadata is now able to be shown in the the list as extra columns. Use the right mouse button on the list and select /View/ and one of:

➢ Location Resolve Time (ms) : The time taken in milliseconds to check if the project exists and do any path substitution if relevant
➢ Metadata Read Time (ms) : The time take in milliseconds to read the project metadata (from the project_metadata.xml file in the project).
➢ Crs Read Tiime (ms) : The time taken in milliseconds to resolve the full CRS of the project from the CRS database.
➢ Total Read Time (ms): The sum of all of the above times.

Application - Printing and Publication   Bug Fixes

Plotter Configuration Linux - List of system print queues now shows all system queues
71304

On Linux, when adding a printer using the Configuration tool, the full list of system printer queues are shown in the selection list. Previously the first queue would be missing.

Configuration - General   Enhancements

Additional configuration options added for automatic project creation
71195

When automatic project creation is disabled, there are now two additional options available which can be used to control additional behaviors.

Remember last project for each context

When disabled, Petrosys PRO no longer maintains a separate recent projects list when launching stand-alone and for launching from Petrel or DSG.

Scan for matching projects

When starting Petrosys PRO for the first time from a given Petrel or DSG project, this option can be used to disable the initial scan for a matching projects.

Note: If either of these options are disabled, automatic project creation is also disabled.

Connections, Import and Export - GeoFrameEnhancements

GeoFrame connection can now use the DevKit to get a list of projects 71118

GeoFrame connections can now be configured to get a list of projects for a user using the GeoFrame development kit. This functionality is needed to support GeoFrame 2012 HF70. This feature is disabled by default, but can be enabled by setting the value of the CONNECT_USING_DEV_KIT tag in the geoframe_util.sqc file to Y.

GeoFrame connection can now uses Dispatch Server to honour security on Windows 69537

GeoFrame connections can now be configured to connect a user using the GeoFrame development kit through the use of the Dispatch Server on Windows. This approach will be more secure, as connecting to GeoFrame via the development kit allows the user to specify a password for the project that is different to the project name (the default at many GeoFrame sites). This functionality is disabled by default, but can be turned on by changing the value of the CONNECT_USING_DEV_KIT tag in geoframe_util.sqc to Y.

Connections, Import and Export - OpenWorksEnhancements

DSG Plugin: Removed warning dialog about Petrosys still running when closing DSG application 71290

A warning message that the Petrosys PRO application is still running when closing a DSG session or the application has now been removed.

Connections, Import and Export - OpenWorksBug Fixes

DSG Plugin: Petrosys no longer tries to create panels.pnd in the DSG install directory 71289

A bug has been fixed, which when launching Petrosys from DSG the application was attempting to create panels.pnd in the DSG application installation directory.

Connections, Import and Export - Petrel Enhancements

Added initial CRS check when launching from Petrel 70560

When launching Petrosys PRO from Petrel, an initial check is done of the Petrel CRS. Petrosys will no longer launch without a valid projected CRS set in the Petrel project.

Connections, Import and Export - Petrel   Bug Fixes

Fixed custom Petrel well symbol library configuration option 71181

When using a custom well symbol library not provided with Petrel, Petrosys PRO requires this library name to be set in Configuration/Advanced/Third Party/Petrel. This option is now working correctly and when set, Petrosys will use symbols from the custom library.

Drawing Petrel well symbols now correctly uses the UNDEFINED symbol when failing to find the named symbol in the active Well Symbol group

71399

A bug has been fixed which caused some Petrel wells to not display a Well Symbol on the map in Mapping or 3D Viewer. This was caused when the name of the symbol was not found in the active Well Symbol group and did not correctly fallback to use the UNDEFINED symbol from the Well Symbol library.

Detailed Release Notes Summary PRO 2018.1.1

Enhancements

Configuration - Licensing

70922 Install now includes latest version of Flexera License Manager lmgrd and lmtools (11.15.1.0)

Connections, Import and Export

17395 Added support for Trango v5 and above

Connections, Import and Export - OpenWorks

71089 Added support for importing Landmark CLX color bar file to gradient file

Mapping - General

63629 WMS layer selector shows hierarchical layer names

Surface Modeling - Exchange

70044 Wells Exchange - Allow user control over case sensitivity of Well matching rules

Surface Modeling - Workflows/Scripting

71079 Filter field enabled for scripting of data points gridding data source

Detailed Release Notes Summary PRO 2018.1.1
Bug Fixes

Application - Launcher

71067   Project selector dialog stays on top of Launcher window

Connections, Import and Export - DUG Insight

70834   Fixed accessing DUG wells and 3D surface with particular data

Connections, Import and Export - OpenWorks

71046   Improved obtaining Oracle SID from OpenWorks District when dropping objects from DecisionSpace

Mapping - Editors

67353   Spatial editor supports editing vertices of polygon holes

Mapping - General

64999   Accessing invalid gradients no longer causes a crash
71098   Titleblock searching will now search older linux_rhel directories in local directory
70767   Mapping no longer crashes when changing page size with the map template layers not visible

Mapping - GIS, Spatial and Culture

53522   Display GIS - Excel no longer shows error after using filter on feature class list

Mapping - Map Sheets

71101   Fixed crash when loading a legacy map sheet with restricted project file permissions

Mapping - Wells

70892   Display Wells crash when using database source and formation top posting is None with Fixed-Value Symbol type fixed

Surface Modeling - General

70917   Surface Modeling/Tools/Draw Map can be run multiple times without error

Petrosys Release PRO 2018.1.1
Detailed Release Notes

Application - Launcher   Bug Fixes

Project selector dialog stays on top of Launcher window   71067

In Petrosys PRO 2018.1 a bug was introduced which would allow the Project Selector dialog to go under the Launcher dialog. This has now been fixed so the Project Selector always stays on top of the Launcher window.

Configuration - Licensing   Enhancements

Install now includes latest version of Flexera License Manager lmgrd and lmtools (11.15.1.0)   70922

The latest version of the Flexera executables lmgrd, lmtools and lmutil are now included in the installer. These are version 11.15.1.0. The previous versions were 11.11.

There is no need to upgrade your Flexera server if it is already at version 11.11 or newer. Only use these newer versions if you are having issues with the license server starting.

Note that the version of Petrosys vendor daemon (PETROSYS) remains at version 11.11.

Connections, Import and Export   Enhancements

Added support for Trango v5 and above   17395

Support has been added to enable reading of 2D seismic data from the latest version of the Trango database.

Connections, Import and Export - DUG InsightBug Fixes

Fixed accessing DUG wells and 3D surface with particular data 70834

In previous versions, some wells data could not be read successfully from DUG project if the well data has been imported from a Petrel project. This has now been fixed.

Additionally, some 3D seismic surfaces read from DUG project used to be displayed as sparse data and therefore could not be displayed in 3D Viewer. This has now been fixed as well.

Connections, Import and Export - OpenWorksEnhancements

Added support for importing Landmark CLX color bar file to gradient file   71089

Landmark CLX (XML format) color bar file can now be imported to Petrosys gradient. Both discrete and interpolated modes are supported.

Connections, Import and Export - OpenWorks Bug Fixes

Improved obtaining Oracle SID from OpenWorks District when dropping objects from DecisionSpace 71046

Case-insensitive checking now occurs when attempting to obtain the Oracle SID for the OpenWorks District when using the Drag-n-Drop feature from DecisionSpace into Petrosys PRO.

Mapping - Editors Bug Fixes

Spatial editor supports editing vertices of polygon holes 67353

Previously attempting to edit a polygon hole in vertex mode in the spatial editor, for example adding, deleting or moving a vertex, would cause a crash.

Mapping - General Enhancements

WMS layer selector shows hierarchical layer names 63629

The Mapping/Display/Web Map Service option shows a full hierarchical name when selecting WMS layers. In previous versions, only the layer name was shown, which could be ambiguous for WMS services with duplicate layer names in different parts of the layer hierarchy.

Mapping - General Bug Fixes

Accessing invalid gradients no longer causes a crash 64999

In previous versions, attempting to select or use an invalid gradient would often cause Petrosys PRO to crash.

Titleblock searching will now search older linux_rhel directories in local directory 71098

On Linux only, custom site specific titleblocks that installed in the local directory in older operating system specific directories will now be found. e.g Titleblock files in the directory local/linux_rhel5_64 will now be found if there is no local/linux_rhel6_64 directory.

Mapping no longer crashes when changing page size with the map template layers not visible 70767

In previous versions, making changes to the map page size with all map template layers hidden could sometimes cause a crash.

Mapping - GIS, Spatial and Culture Bug Fixes

Display GIS - Excel no longer shows error after using filter on feature class list 53522

Display/GIS now works after filtering the list of feature classes. In previous versions, it may show Error [MX:32] and Error [spatial:55] for Excel after filtering the feature class list.

Mapping - Map Sheets   Bug Fixes

Fixed crash when loading a legacy map sheet with restricted project file permissions

When loading a legacy map sheet, mapping would crash if it couldn't write to the active user's panels.pnd file. This has now been fixed.

Mapping - Wells   Bug Fixes

Display Wells crash when using database source and formation top posting is None with Fixed-Value Symbol type fixed 70892

A crash has been fixed in /Display/Wells when a certain combination of parameters is used. The combination was using non-WDF data, "Formation tops" tab enabled.., "Standard Annotation" set to None, and "Symbol type" set to "Fixed-Value" or "Formation-symbol".

Surface Modeling - Exchange   Enhancements

Wells Exchange - Allow user control over case sensitivity of Well matching rules 70044

Wells Exchange now allows the user to control the case sensitivity of Well Matching rules (where available) for more flexibility with matching wells between input and output data sources.

Surface Modeling - General   Bug Fixes

Surface Modeling/Tools/Draw Map can be run multiple times without error 70917

In Petrosys PRO 2018.1, running the Surface Modeling/Tools/Draw Map multiple times when drawing a map containing a north arrow would result in multiple incorrect errors being displayed.

Surface Modeling - Workflows/Scripting   Enhancements

Filter field enabled for scripting of data points gridding data source 71079

Gridding data points data sources have Filter field enabled for scripting.

Detailed Release Notes Summary PRO 2018.1
Enhancements

Application - General

67845	Installers updated to remove previous versions when upgrading by default
69535	Added configuration option to control caching of CGM based Well Symbols
69438	Help/About now indicates the name of the client-specific installation
69964	Windows Installer UAC prompt now shows Petrosys PRO

Application - Launcher

68951	3D Viewer added as primary button
69437	Launcher now indicate whether the selected project has a local Connections XML file
68747	Launcher thumbnail image starts application used to capture thumbnail
69003	Removed clickable white space from around thumbnail image

Configuration - Licensing

69992	Petrosys PRO 2018.1 - New license file required

Connections, Import and Export - DUG Insight

69193	Read Well Number for Wells from DUG Insight database

Connections, Import and Export - GeoFrame

70366	GeoFrame grid import menu to use Grid Exchange

Connections, Import and Export - OpenWorks

67265	Petrosys PRO plug-in for DecisionSpace Geosciences 10ep
16664	Support added for filtering by native Well selection lists for OpenWorks and GeoFrame
69848	Dragging horizon now prompts for the 3D survey to display if required
70309	OpenWorks grid import menu to use Grid Exchange
67406	Gridding of OpenWorks Point Set data now uses the Connection Manager
64519	OpenWorks 3D surveys are now identified by Id rather than by name
64520	OpenWorks grids are now identified by Id rather than by name attributes
64548	Support added for filtering by native Seismic Line selection lists for OpenWorks

Connections, Import and Export - Paradigm-Epos

68384	Support added for reading and writing Fault sticks from Paradigm 2D seismic surveys
70365	Paradigm grid import menu to use Grid Exchange

Connections, Import and Export - Petrel

21036	Petrel grid import now uses Grid Exchange
63650	Automatic Petrosys Project Creation from Petrel

Mapping - General

69495	Display/Picture/Raster coordinate type is set automatically for selected images
68977	Landgrid based map extents support interactive panning and zooming
63279	Improved error message when using Display/Web Service Image for services requiring a password
70171	Display/Web Service Map allows ArcGIS URLs to be specified for the WMS protocol
69867	Improvements to scale bars

Mapping - GIS, Spatial and Culture

17867	Added support for display, import and gridding of OGC Web Feature Service and ArcGIS vector data
69249	BubbleMaps - More information displayed on filtering error

Mapping - Grids, Surfaces and Sampled Data Files

66499	Contour on the fly labels contours and color bar with correct units

Mapping - Wells

17334	Additional well annotation options including annotating well path and multiple locations

68663   Formation administration menu option redirected to use web screen (PPDM38 only)

Project Management - Administration

66497   Automatic Petrosys Project Creation from Petrel and DecisionSpace Geosciences

Spatial Data Translator

69895   Spatial data translator reports the total elapsed time

Surface Modeling - Contouring

69076   Performance of contouring on-the-fly improved

Surface Modeling - General

69132   Automatic selection of Lowest Closing Contours
68352   Support for reading old Solaris binary grid files directly on Linux and Windows

Surface Modeling - Volumetrics

53335   Publish volumetrics output to polygon shapefiles

Surface Modeling - Workflows/Scripting

67009   Enable parallel processing in selected workflow task groups

Wells (WDF) Editor

69859   Editing WDF computed attributes now gives more informative error messages

Detailed Release Notes Summary PRO 2018.1
Bug Fixes

3D Viewer - General

70181   Displayed grids have smooth edges when clipped outside

68774   Removed invalid drag and drop indicators (blue arrow buttons) from 3D Viewer

68784   Z-Value Attribute can be selected when opening the Display/Point data panel for the first time

Connections, Import and Export - OpenWorks

37976   Allow connection to an OpenWorks project containing 3D surveys with an invalid or unmapped CRS

70556   Grid Exchange: Updating existing OpenWorks grids now maintains the original Grid Id

70644   No longer get a connection error when dragging horizons for 2D seismic lines from DSG into Mapping

Connections, Import and Export - Petrel

68930   Petrel grids and seismic surfaces are now identified by GUID rather than by name attributes

70648   Fixed a bug which caused the drag-n-drop of 3D seismic surfaces from Petrel to not work

Coordinate Reference Systems

65199   Incorrect CRS error message on startup is no longer shown

dbMap/Web - Client

49381   dbMap Well subsea depths are now computed correctly for Chevron-Perth

Mapping - General

69866   Improvements to display of rotated north arrows

66348   Color Bar no longer displays "negative zero"

Mapping - GIS, Spatial and Culture

69321   Intermittent crash displaying GIS data in Mapping has been fixed

Mapping - Grids, Surfaces and Sampled Data Files

68983   Gradient Editor apply button redraws colorfill grids with changes to the gradient

Mapping - Wells

70688   Fixed formation top annotations not always honouring opaque property

67149   TH/BH well symbols displayed for vertical wells in mapping now follow rules

Project Management - Project Selector

70536   User group lock-down honoured when automatically selecting last project

Surface Modeling - Contouring

70243   Contour by cell works correctly for 3rd-party grids

Surface Modeling - General

70426   Grid Process Arithmetic task shows grid file paths with correct file separator

Wells (WDF) Editor

67431   WDF Computed attribute formula IF statement now works if there is space between IF and bracket

Petrosys Release PRO 2018.1
Detailed Release Notes

3D Viewer - General   Bug Fixes

Displayed grids have smooth edges when clipped outside 70181

Displayed grids have smooth edges when grid data clipped outside. Previously, the grid edge could appear with jagged edges.

Removed invalid drag and drop indicators (blue arrow buttons) from 3D Viewer 68774

Some drag and drop indicators were being shown in 3D Viewer even though drag and drop was not accepted in these locations. These buttons have now been removed.

Z-Value Attribute can be selected when opening the Display/Point data panel for the first time 68784

The Z-Value Attribute is accessible and can be selected in the Display/Point data panel when opened for the first time.

Application - General   Enhancements

Installers updated to remove previous versions when upgrading by default 67845

When installing, earlier versions of the same major (i.e. year-based) version will be detected and, by default, removed. To retain, please read the installer prompts and change the default value as appropriate.

This change has been made to make it easier to manage the versions of Petrosys PRO installed on a system.

Added configuration option to control caching of CGM based Well Symbols 69535

An advanced configuration option has been added (Advanced/Application Internals/Enable caching of CGM symbols) to control if CGM Well Symbols read from disk are to be cached in memory by the application (default: true). Enabling this option help to increase the performance of display options that heavily rely on the use file base CGM Well Symbols, like Display/Wells and Display/GIS.

Help/About now indicates the name of the client-specific installation 69438

Some clients of Petrosys have customisations over the behaviour of Petrosys PRO. This information can now be view in the Help/About dialog.

Windows Installer UAC prompt now shows Petrosys PRO 69964

The Petrosys PRO Windows Installer is now signed with a description, so the installer will show a name similar to "Petrosys PRO 2018.1 Installer" in the elevation prompt rather than a name randomly generated by Windows. This makes it clearer that it is the Petrosys PRO installer requesting elevation.

Application - Launcher Enhancements

3D Viewer added as primary button   68951

The 3D Viewer application has been added as a primary button on the Petrosys PRO Launcher, making it easier to start.

Launcher now indicate whether the selected project has a local Connections XML file   69437

The Launcher dialog now displays extra information about the selected project in the status bar at the bottom of the dialog. The status bar can now include information about the type of client installation of the software and/or if the selected project is using a local connections XML file, rather than a centralised file located in the Local directory.

Launcher thumbnail image starts application used to capture thumbnail   68747

The application that is started via the Launcher thumbnail image is now set to the application that captured the image - either 3D Viewer or Mapping. This is set on a per-project basis and will override default and site settings, but not the user specified setting.

The application to start can be modified in the Configuration and Settings tool.

Removed clickable white space from around thumbnail image   69003

White space that could have surrounded the thumbnail image has been removed. Previously, depending on the aspect ratio of the thumbnail image, there may have been white space surrounding the thumbnail image which responded to user click, which would then unexpectedly open the application configured to start on thumbnail clicks.

Configuration - Licensing Enhancements

Petrosys PRO 2018.1 - New license file required   69992

Petrosys PRO 2018.1 will require a new license file to be installed. Please contact your system administrator or Petrosys support if you receive an error message referring to a license key being too old.

Connections, Import and Export - DUG InsightEnhancements

Read Well Number for Wells from DUG Insight database   69193

Now the well number read by Petrosys PRO from a DUG Insight project is consistent with the well number in the DUG Insight project.

Connections, Import and Export - GeoFrameEnhancements

GeoFrame grid import menu to use Grid Exchange   70366

The importing of a single GeoFrame grid to Petrosys Grid file menu option (Surface Modeling/File/Import/GeoFrame/Grid (GeoFrame)...) now redirects to use the Grid Exchange framework.

Connections, Import and Export - OpenWorksEnhancements

Petrosys PRO plug-in for DecisionSpace Geosciences 10ep   67265

Petrosys PRO 2018.1 includes the first release of the Petrosys PRO plug-in for DecisionSpace Geosciences 10ep.

Petrosys PRO can now be launched directly from within the DecisionSpace Geosciences 10ep (DSG) application, using either a menu item or toolbar icon. This plugin includes support for automatic Petrosys project creation and adding seamless connectivity to user's DSG session data for immediate access with Petrosys PRO. This release improves on the ease of use of the "drag-and-drop" functionality that was first introduced for DSG in Petrosys PRO 2017.1.

Additional functionality added also includes filtering by OpenWorks native Well and Seismic Line selection lists making it easier to access relevant project data.

The plug-in is available for DecisionSpace Geosciences 10ep.2 and above, on Linux and Windows, and will be added to the DSG list of plug-ins as part of installing Petrosys PRO.

See *Project Management - Administration* for details on automatic project creation.

Support added for filtering by native Well selection lists for OpenWorks and GeoFrame   16664

Support has been added to select one or more well lists from OpenWorks and GeoFrame to filter wells. The new Selection-list option is now available when Data selection is used to filter wells in Mapping, Wells Import Wizard, Surface Modelling and 3D Viewer.

Dragging horizon now prompts for the 3D survey to display if required   69848

If you drag one or more horizons from DecisionSpace Geosciences into Petrosys, it now prompts you to select which 3D seismic survey you would like to display the horizon data for. Previously it would just display horizon data for the first 3D survey found.

OpenWorks grid import menu to use Grid Exchange 70309

The importing of a single OpenWorks grid to Petrosys Grid file menu option (Surface Modeling/File/Import/Landmark/OpenWorks/Grid...) now redirects to use the Grid Exchange framework.

Gridding of OpenWorks Point Set data now uses the Connection Manager   67406

The gridding input data dialog for OpenWorks Point Sets has been upgraded to use the Connection Manager.

OpenWorks 3D surveys are now identified by Id rather than by name   64519

The reading of OpenWorks 3D Seismic Surveys has been modified to identify objects by their Id rather than the name of the survey. This will allow for the use of the correct survey during gridding, display or through the use of the drag-n-drop functionality in Petrosys PRO.

OpenWorks grids are now identified by Id rather than by name attributes   64520

The reading of OpenWorks grids has been modified to identify objects by their Id rather than a set of string based attributes, like the name of the grid. This will allow for the use of the correct grid during gridding, display or through the use of the drag-n-drop functionality in the Petrosys applications.

Note: This change is not backward compatible with older versions of Petrosys.

Support added for filtering by native Seismic Line selection lists for OpenWorks   64548

Support has been added to select one or more seismic line lists from OpenWorks to filter seismic lines. The new Selection-list option is now available when Data selection is used to filter seismic lines in Mapping and Surface Modeling.

Connections, Import and Export - OpenWorksBug Fixes

Allow connection to an OpenWorks project containing 3D surveys with an invalid or unmapped CRS   37976

Previously, it would be impossible to add a connection to an OpenWorks project with one or more 3D Surveys which Petrosys failed to recognise or map the CRS of, without having to modify the survey in the OpenWorks projects first. The Connection Manager now allows such OpenWorks projects to be added and used, but any survey which does not have a CRS that Petrosys PRO can recognise will be skipped over for any Seismic 3D functionality. If the survey is modified in OpenWorks or a user modifies the CRS information Petrosys PRO uses, the survey will then become available in the software.

Grid Exchange: Updating existing OpenWorks grids now maintains the original Grid Id   70556

Previously, when writing to an existing OpenWorks grid using the Grid Exchange tool, the grid would get deleted and recreated in OpenWorks, losing the Grid Id of the original grid. This now no longer happens, rather when writing to an existing OpenWorks grid, the grid is updated with the new information, maintaining the Grid Id.

No longer get a connection error when dragging horizons for 2D seismic lines from DSG into Mapping   70644

When you drag and drop a horizon for 2D seismic lines from DecisionSpace into Petrosys PRO Mapping it no longer shows a connection error (dbgen:150).

Connections, Import and Export - Paradigm-EposEnhancements

Support added for reading and writing Fault sticks from Paradigm 2D seismic surveys   68384

It is now possible to use fault sticks and surfaces from Paradigm 2D seismic surveys for all options supported, e.g. Exchange/Fault sticks, Surface Modeling, 3D Viewer.

Previously you had to select a 3D seismic survey, which meant fault sticks and surfaces were restricted to being read from 3D seismic surveys only.

Paradigm grid import menu to use Grid Exchange   70365

The importing of a single Paradigm grid to Petrosys Grid file menu option (Surface Modeling/File/Import/Paradigm/Grid...) now redirects to use the Grid Exchange framework.

Connections, Import and Export - Petrel Enhancements

Petrel grid import now uses Grid Exchange   21036

The importing of a single Petrel grid to Petrosys Grid file menu option (Surface Modeling/File/Import/Petrel/Grid...) now redirects to use the Grid Exchange framework.

Automatic Petrosys Project Creation from Petrel   63650

Automatic project creation is now supported when launching Petrosys PRO from Petrel.

See *Project Management - Administration* for details.

Connections, Import and Export - Petrel   Bug Fixes

Petrel grids and seismic surfaces are now identified by GUID rather than by name attributes   68930

The reading of Petrel grids and seismic surfaces have been modified to identify objects by their GUID rather than a set of string based attributes, like the name of the grid or surface. This will allow for the use of the correct grid or seismic surface during gridding, display or through the use of the drag-n-drop functionality in the Petrosys applications.

Fixed a bug which caused the drag-n-drop of 3D seismic surfaces from Petrel to not work   70648

A bug, introduced in PRO 2017.1, has been fixed, whereby the drag-and-drop of 3D Seismic Surfaces to Petrosys applications had stopped working.

Coordinate Reference Systems   Bug Fixes

Incorrect CRS error message on startup is no longer shown   65199

In previous versions of Petrosys PRO, "CRS error 58" indicating that a CRS projection could not be read, would occasionally be shown on startup. In most circumstances this error was shown incorrectly and could be safely ignored. This has now been fixed to avoid showing this error incorrectly.

dbMap/Web - Client   Bug Fixes

dbMap Well subsea depths are now computed correctly for Chevron-Perth   49381

For Chevron-Perth only, wells from dbMap are now correctly computing subsea depths in options such as Mapping/Display/ Wells when posting and tracking along well paths. Previously the subsea values were always computed from sea level. Now it uses the correct reference elevation (KB, RT, etc.) to compute subsea values

Mapping - General   Enhancements

Display/Picture/Raster coordinate type is set automatically for selected images   69495

The Display/Picture/Raster option now sets the coordinate type (World or Map) automatically based on whether the source image is georeferenced or not.

Landgrid based map extents support interactive panning and zooming   68977

The Map Template/Extent/Pan mode option has been enabled for landgrid based extents.

Improved error message when using Display/Web Service Image for services requiring a password   63279

The error message when trying to access a web service map fails due to authentication, e.g. incorrect password or authentication not specified, has been improved to make the problem clearer.

Display/Web Service Map allows ArcGIS URLs to be specified for the WMS protocol
70171

When attempting to display images from a web service, it is not always clear what type the web service is. If the WMS protocol is selected and an ArcGIS service URL is specified, Petrosys PRO will attempt to automatically convert the URL into the equivalent WMS URL. This will work in practice if the ArcGIS service also has WMS support enabled.

Improvements to scale bars
69867

Several improvements have been made to scale bars:

➢ The initial placement of new scale bars on the map has been improved to reduce empty space.
➢ Scale bars support left or right justification within their specified box
➢ Scale lines are sized to ensure the scale line has a reasonable minimum width - previously the scale line could be shrunk completely in favour of the annotation
➢ Scale bars are always drawn inside their specified box - previously certain types of scale bars could sometimes be drawn incorrectly outside

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Mapping - General   Bug Fixes

Improvements to display of rotated north arrows
69866

North arrows can often be displayed as rotated from the vertical axis (usually due to a rotated extent or using a projection for a map where meridians are not vertical). Previous versions had a number of problems (most often occur for large angles of rotation and/or north arrows that are not square) displaying rotated north arrows, which have been fixed. As part of this change, some excessive margins were removed from several system north arrows.

Color Bar no longer displays "negative zero"
66348

In previous versions, the Display/Map Elements/Colorbar option could sometimes show an annotation value of negative zero (-0.0).

Mapping - GIS, Spatial and Culture   Enhancements

Added support for display, import and gridding of OGC Web Feature Service and ArcGIS vector data
17867

Petrosys supports access to spatial data from the following web services:

➢ OGC Web Feature Services (WFS)
➢ ArcGIS (MapServer and FeatureServer enabled services)

Spatial data from web services can be utilised in Petrosys in the following contexts:

➢ Display/GIS
➢ Spatial Data Translator
➢ Surface Modeling/Grid/Create Grid
➢ 3D Viewer/Display/Point Data

BubbleMaps - More information displayed on filtering error
69249

In the Bubble Maps option, more detailed information is now given in the message when a filtering error occurs.

Mapping - GIS, Spatial and Culture   Bug Fixes

Intermittent crash displaying GIS data in Mapping has been fixed
69321

In previous versions, a crash could sometimes occur when displaying data using Display/GIS on a dynamic map extent.

Mapping - Grids, Surfaces and Sampled Data FilesEnhancements

Contour on the fly labels contours and color bar with correct units   66499

On Grid/Surface colorfill display panel if the grid/surface has units information it is now automatically set to contour label suffix.

The color bar item's axis label is automatically populated with the units of the grid/surface in associated grid layer.

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Gradient Editor apply button redraws colorfill grids with changes to the gradient   68983

Petrosys PRO 2017.1 contained a bug where edits made to a gradient were not applied to colourfill grids when the Apply button in the gradient editor was used.

Mapping - Wells   Enhancements

Additional well annotation options including annotating well path and multiple locations   17334

Several enhancements have been made to the wells annotation options for data sources other than WDF. These include:

- ➢ The location for each annotation can be set to:
- ➢ Option to annotate the well path. Several orientation options for well path annotations:
- ➢ User interface changed to a dynamic list of annotations.

Formation administration menu option redirected to use web screen (PPDM38 only)   68663

The menu option Admin/Reference Tables/PPDM/Formation Codes... now redirects to use the associated dbMap/Web Reference Table screen.

Mapping - Wells   Bug Fixes

Fixed formation top annotations not always honouring opaque property   70688

When displaying well formation top annotations with an opaque background, some vertical wells were showing annotations with a transparent background. This has now been fixed.

TH/BH well symbols displayed for vertical wells in mapping now follow rules   67149

When displaying wells in Mapping, sometimes a vertical well would have both the surface and bottom hole symbols being posted. This has been fixed to follow the rule to only show the bottom hole symbol for vertical wells.

Project Management - Administration   Enhancements

Automatic Petrosys Project Creation from Petrel and DecisionSpace Geosciences   **66497**

Project creation is much easier when launching Petrosys PRO from within Petrel and DecisionSpace Geosciences. This helps new users get started with Petrosys PRO applications immediately and shortens project startup for all plugin users. One click can take users from selecting the Petrosys PRO icon to the main launcher with a new Petrosys project, matching the Petrel/DecisionSpace project name and CRS, created silently in the background.

The first time Petrosys PRO is started from a Petrel project or DSG session, you can choose to create a new project with with default settings from the source project or select an existing project.

Automatic project creation behaviour and default project location can be changed from Configuration and Settings to suit your needs (Configuration/Advanced/Automatic Project Creation).

Project Management - Project Selector   Bug Fixes

User group lock-down honoured when automatically selecting last project   **70536**

The user group permissions are now checked before automatically selecting the last project when launching Petrosys PRO.

Spatial Data Translator   Enhancements

Spatial data translator reports the total elapsed time **69895**

The message displayed by the Spatial Data Translator when a data transfer is complete now includes the time taken to perform the transfer.

Surface Modeling - Contouring   Enhancements

Performance of contouring on-the-fly improved   **69076**

Contouring by cell performance has been improved for the case there are many faults or polygons.

Surface Modeling - Contouring   Bug Fixes

Contour by cell works correctly for 3rd-party grids **70243**

In Petrosys PRO 2017.1, The Surface Modeling/Contour/Contour by Cell option incorrectly showed an error and did not run when the input grid was from a source other than a Petrosys gri file.

Surface Modeling - General   Enhancements

Automatic selection of Lowest Closing Contours   **69132**

The new Lowest Closing Contour (LCC) option help users quickly and easily identify prospects within their grids. Changing the input parameters allows the user to identify economic prospects and remove smaller, uneconomic closures.

Inputs are:

➢ Grid (mandatory) – all standard Petrosys sources including direct connections

- Well and point data (optional) – sourced from the WDF, directly connected well data stores, and Excel spreadsheets or text files. Input attributes are Hydrocarbon Contacts, Lowest Known Hydrocarbons and Dry Holes. Multiple data sources can be selected
- Faults can be used when embedded in a grid or from a Petrosys fault file where leaking and sealing faults can be subdivided into separate groups

For economic purposes outputs can be filtered by a minimum area to remove uneconomic closures and remove noise. To create a range of distributions for subsequent modelling, multiple levels of closure can be generated for one structure.

Outputs are written to a shapefile including the polygon and the following attributes:

- Z-value of lowest contour
- Column height
- Area
- Closure number (if levels of closure are used)

The output can be mapped using the *Display/GIS* option including posting, filtering and thematically mapping by attribute.

Further details can be seen in the help topic lowestcc.

Support for reading old Solaris binary grid files directly on Linux and Windows   68352

Support has been added for reading old Solaris binary Petrosys grid files (.gri) on either Linux or Windows.

The Solaris grid files can be displayed directly on the map or more usefully be converted to the latest platform independent binary format using the Linux shell script misc/shell_scripts/ps_upgrade_grid_to_bi.sh

Surface Modeling - General   Bug Fixes

Grid Process Arithmetic task shows grid file paths with correct file separator   70426

Grid Process Arithmetic task shows grid file paths with correct file separators.

Surface Modeling - Volumetrics   Enhancements

Publish volumetrics output to polygon shapefiles   53335

The publishing of reserves maps that show the spatial distribution of expected hydrocarbons across a region has become increasingly important, both in Petrosys PRO maps and as a component of GIS portals. It is particularly valuable in the planning of the horizontal development of unconventional plays.

To make it easier to map the spatial distribution of reserves and to get Petrosys PRO volumetrics data into the GIS world, Petrosys PRO volumetrics output can now be automatically added into shapefiles representing the polygons into which the volumetrics had been split.

The option is available by specifying polygon and centroid shapefile names in the 'Reports' tab of the volumetrics task.

The shapefiles can then be displayed with annotation and thematic coloring in the Display/GIS option, or be passed on to other applications. Attributes include labels for fluid type and area and volume units, so that a comprehensive range of annotations is possible.

Petrosys PRO packaging means that all Petrosys PRO users can now access the volumetrics tool. In conjunction with the shapefile volumetrics output, reserves mapping workflows can be significantly faster allowing more up to date information to be used with much less map generation effort.

Surface Modeling - Workflows/Scripting   Enhancements

Enable parallel processing in selected workflow task groups   67009

Surface Modeling has added capability for parallel processing of user workflows. Parallel processing enables the use of the multi-tasking facilities of modern CPUs by diverting selected tasks into separate processes that can run at the same time.

In the Surface Modeling task list, clicking the right mouse button when a loop task is highlighted will allow parallel processing for the tasks in that loop to be enabled, provided that Petrosys PRO determines that the operations in the group pass the criteria for safe parallel operation. Actual results will vary with hardware configuration, input data and workflows, but significant gains can be made. For example, on an 8-core laptop the extraction and mapping of a series of 41 time-slices from a SEGY velocity cube ran in 107 seconds with parallel processing, down from a coffee-break inducing 595 seconds without.

Parallel processing is suited to a range of tasks, particularly those that do not have to write to the same output file, or which do not depend on the output of one pass through a loop to be the input to the next one. Examples of existing workflows that may benefit from parallel processing include:

- Mapping of depths or times for a selection of zones from an interpretation project or a well data file
- Creation of grids from families of modelled data files, such as time steps from reservoir simulation or geohistory models
- Import or data exchange of collections of files
- Extraction of velocity slices from SEGY files for depth conversion

Wells (WDF) Editor   Enhancements

Editing WDF computed attributes now gives more informative error messages   69859

When editing WDF computed attributes, you now get more informative errors if there is a problem with the formula, including the line and type of error.

Wells (WDF) Editor   Bug Fixes

WDF Computed attribute formula IF statement now works if there is space between IF and bracket   67431

WDF computed attributes using a conditional IF statement where there was a space between the IF and the bracket in the formula now work. Previously, you could create a valid formula like the following, but the results shown in the WDF spreadsheet for the computed attribute would always be blank.

```
IF (a < b)
{ c = 0; }
```