

SOFTWARE RELEASE NOTES

Version 2018.3.1

A green banner with a white border and a slight 3D effect, containing the text "PETROSYS PRO" in white, bold, sans-serif font.

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

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


Well Penetration Report

Input Well Selection

Type Wells

Well Data Source
IHS Kingdom

CRS WGS84 / UTM zone 31N BM

☐ Data Selection
Selection file

| Well Name | UWI | Penetration Sequence Number | Horizon | Units | TVDSS | Easting | Northing |
|-------------|---------|-----------------------------|-----------------|-------|----------|-----------|------------|
| 34/10-55ST1 | PSA0010 | 1 | Base Cretaceous | m | -1900.93 | 453639.13 | 6783660.86 |
| 34/10-55ST1 | PSA0010 | 2 | Top Tarbert | m | -1957.75 | 453643.39 | 6783701.73 |
| 34/10-55ST1 | PSA0010 | 3 | Tarbert2 | m | -1984.23 | 453645.28 | 6783720.1 |
| 34/10-55ST1 | PSA0010 | 4 | Tarbert1 | m | -2027.05 | 453648.26 | 6783748.43 |
| 34/10-55ST1 | PSA0010 | 5 | Top Ness | m | -2044.22 | 453649.49 | 6783759.36 |
| 34/10-55ST1 | PSA0010 | 6 | Ness1 | m | -2110.41 | 453654.8 | 6783801.01 |
| 34/10-55ST1 | PSA0010 | 7 | Top Etive | m | -2171.37 | 453661.13 | 6783841.24 |
| A5 | PSA0015 | 1 | Base Cretaceous | m | -1971.53 | 451978.56 | 6780768.41 |
| A5 | PSA0015 | 2 | Top Tarbert | m | -1972.64 | 451979.06 | 6780768.29 |
| A5 | PSA0015 | 3 | Tarbert2 | m | -1989.48 | 451986.62 | 6780766.54 |
| A5 | PSA0015 | 4 | Tarbert1 | m | -2015.29 | 451998.06 | 6780763.67 |
| A5 | PSA0015 | 5 | Top Ness | m | -2023.42 | 452001.62 | 6780762.72 |
| A5 | PSA0015 | 6 | Ness1 | m | -2086.1 | 452028.13 | 6780755.09 |
| A5 | PSA0015 | 7 | Top Etive | m | -2129.93 | 452046.45 | 6780750.18 |

Input Surfaces (Subsea depth grids)

Petrel
Gulfaks 2016v2

Data source CRS ED50 / UTM zone 31N

Data Type ELEVATION_DEPTH

7 grid(s) selected

| Type | Model/Folder | Surface/Grid Name | Horizon | Units |
|--|--------------|--------------------|-------------|-------|
| <input checked="" type="checkbox"/> Model grid | Gulfaks_Geo | Gulfaks Final (DC) | Top Etive | m |
| <input type="checkbox"/> Model grid | Gulfaks_Sim | Sim Grid | Top Tarbert | m |

Z Value Scaling None

Output Report

Excel Lease well penetration report.xlsx

CRS ED50 / UTM zone 31N

☐ Open associated program on save

OK

Cancel

Help

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.

Display Bubble Map or Pie Charts

Description:

Data source: GIS

File Geodatabase: Gulfaks.gdb

Feature class:

CRS: ED50 / UTM zone 31N

Statistics: Shape type : Point, Z value (

Segments:

Net - gas [bill Sm3]

Net - condensate [mill Sm3]

Produced water in field [mill Sm3]

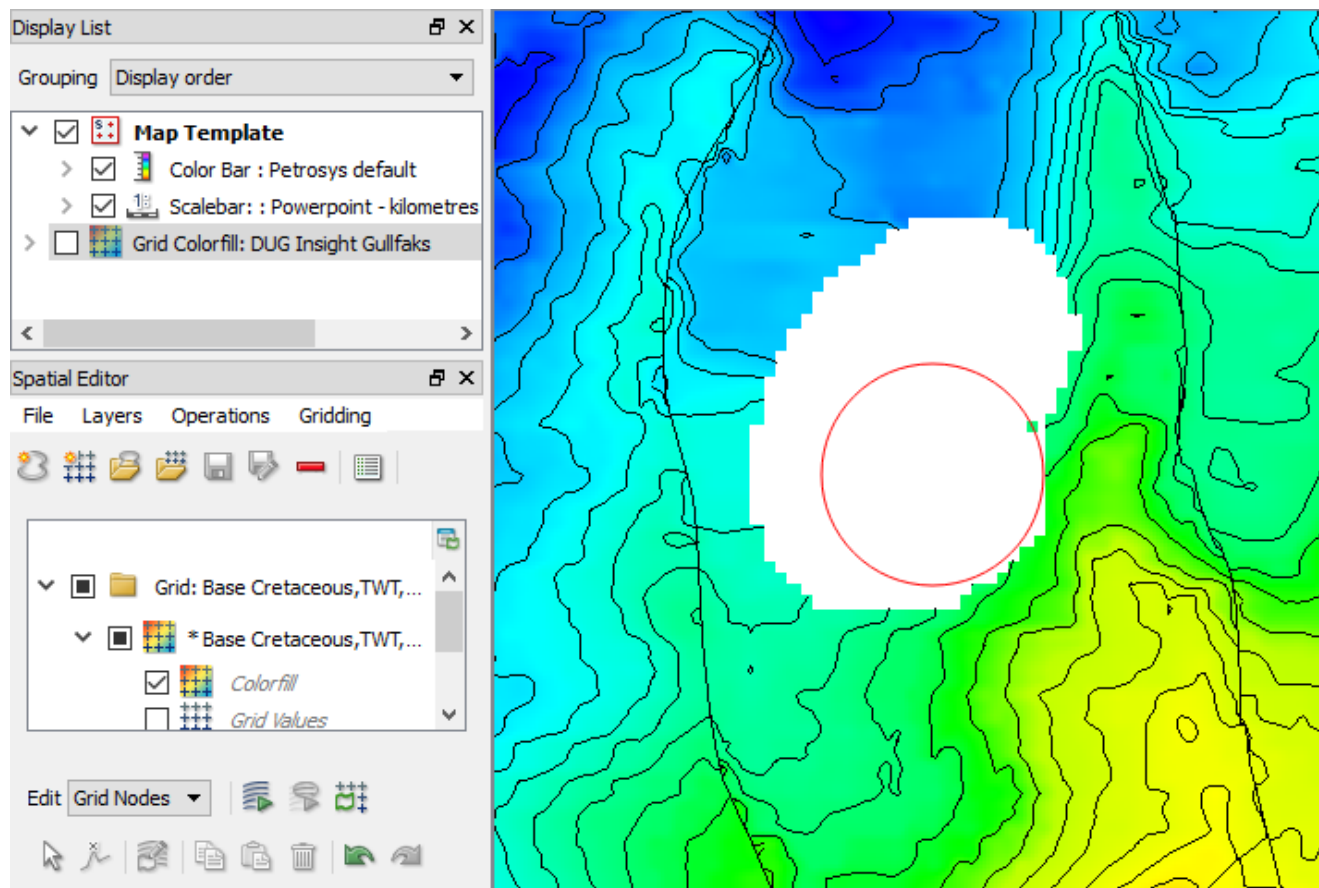
Net - oil [mill Sm3]

Net - oil [mill Sm3]

Move segment to top of the list

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

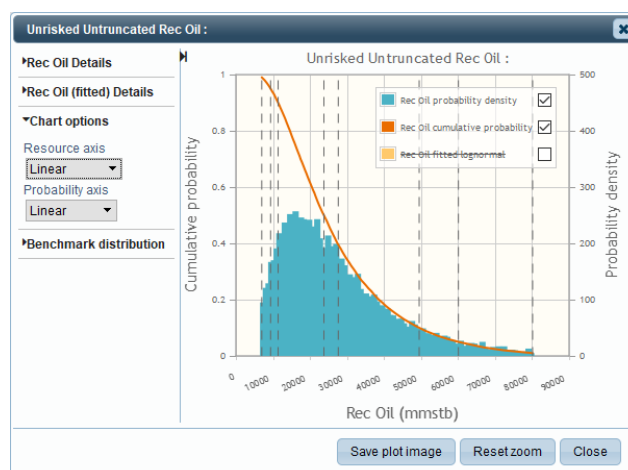
Probabilistic Resource Calculator

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.

Surface Modeling - 2018.2 - lcc - PRC.tsx

File Workflow Grid Fault Contour Volumetrics Velocities Tools Help

Task List

| Name | S | Id | Task Type | Progress |
|-----------------------------------|---|----|---|----------|
| Probabilistic resource calculator | 1 | | Volumetrics/Probabilistic Resource Calculator | |

Probabilistic Resource Calculator

PRC Compute method: Depth-Volume Method | Distribution type: Normal

Type of volumetrics: Top | Vertical sense: Positive down

Hydrocarbon type: Gas

Note: This option encrypts and sends volumetric data over the internet to a secure Petrosys PLDB server, where Monte-Carlo simulation calculations can then be performed. No data is stored on the server.

Compute: Low Percentile | High Percentile | Reports | Charts | Chart Axis

Percentile: P99

Top grid file: r1_twt_3d_base_pos_up_pos@neg_faults.gri

Statistics: 139 Cols 95 Rows. Cells 100 x 100 2 -38.63 to 201.9
Grid CRS: GDA94 / MGA zone 55

Call refinement levels: 1, X: 100, Y: 100

dbMap/Web - Prospect target resource computation - PSYSRC

Deliverability: 51

Seed: 4201331820944384

Created by Unknown on: Last updated by Unknown on: Unknown

Metrics/Imperial | Compute | Export | Profile Chart

| Depth-Area | Geology | Non-Associated Gas | Gas liquids | Probability factors | Correlation | Results - Non-Associated Gas | Results - Gas liquids | | |
|------------|---------------|--------------------|----------------|---------------------|-------------|------------------------------|-----------------------|--------------|-------------------|
| Depth (m) | Variable | Minimum (P99) | Low Side (P90) | Median (P50) | Mean | Constant Mode | High Side (P10) | Maximum (P1) | Distribution Type |
| 0 | Pool area(m²) | 2.690 | 2.690 | 2.690 | 2.690 | 2.690 | 2.690 | 2.690 | normal |
| 10 000 | Pool area(m²) | 4.530 | 4.530 | 4.530 | 4.530 | 4.530 | 4.530 | 4.530 | normal |
| 20 000 | Pool area(m²) | 6.980 | 6.980 | 6.980 | 6.980 | 6.980 | 6.980 | 6.980 | normal |
| 30 000 | Pool area(m²) | 10.330 | 10.330 | 10.330 | 10.330 | 10.330 | 10.330 | 10.330 | normal |
| 40 000 | Pool area(m²) | 17.060 | 17.060 | 17.060 | 17.060 | 17.060 | 17.060 | 17.060 | normal |
| 50 000 | Pool area(m²) | 22.920 | 22.920 | 22.920 | 22.920 | 22.920 | 22.920 | 22.920 | normal |
| 60 000 | Pool area(m²) | 29.380 | 29.380 | 29.380 | 29.380 | 29.380 | 29.380 | 29.380 | normal |
| 70 000 | Pool area(m²) | 36.320 | 36.320 | 36.320 | 36.320 | 36.320 | 36.320 | 36.320 | normal |
| 80 000 | Pool area(m²) | 43.600 | 43.600 | 43.600 | 43.600 | 43.600 | 43.600 | 43.600 | normal |
| 90 000 | Pool area(m²) | 52.530 | 52.530 | 52.530 | 52.530 | 52.530 | 52.530 | 52.530 | normal |
| 100 000 | Pool area(m²) | 60.690 | 60.690 | 60.690 | 60.690 | 60.690 | 60.690 | 60.690 | normal |
| 110 000 | Pool area(m²) | 68.460 | 68.460 | 68.460 | 68.460 | 68.460 | 68.460 | 68.460 | normal |
| 120 000 | Pool area(m²) | 76.860 | 76.860 | 76.860 | 76.860 | 76.860 | 76.860 | 76.860 | normal |
| 130 000 | Pool area(m²) | 83.780 | 83.780 | 83.780 | 83.780 | 83.780 | 83.780 | 83.780 | normal |
| 140 000 | Pool area(m²) | 90.350 | 90.350 | 90.350 | 90.350 | 90.350 | 90.350 | 90.350 | normal |
| 150 000 | Pool area(m²) | 97.170 | 97.170 | 97.170 | 97.170 | 97.170 | 97.170 | 97.170 | normal |
| 160 000 | Pool area(m²) | 103.970 | 103.970 | 103.970 | 103.970 | 103.970 | 103.970 | 103.970 | normal |
| 170 000 | Pool area(m²) | 111.460 | 111.460 | 111.460 | 111.460 | 111.460 | 111.460 | 111.460 | normal |
| 180 000 | Pool area(m²) | 117.190 | 117.190 | 117.190 | 117.190 | 117.190 | 117.190 | 117.190 | normal |
| 190 000 | Pool area(m²) | 123.890 | 123.890 | 123.890 | 123.890 | 123.890 | 123.890 | 123.890 | normal |
| 200 000 | Pool area(m²) | 129.460 | 129.460 | 129.460 | 129.460 | 129.460 | 129.460 | 129.460 | normal |

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.

File Home Insert Draw Page Layout Formulas Data Review View Help M-Tools Power Pivot Tell me what you want to do

Clipboard: Cut Copy Paste | Font: Arial 11 | www.petrosys.com.au

Glencoe Oil & Gas

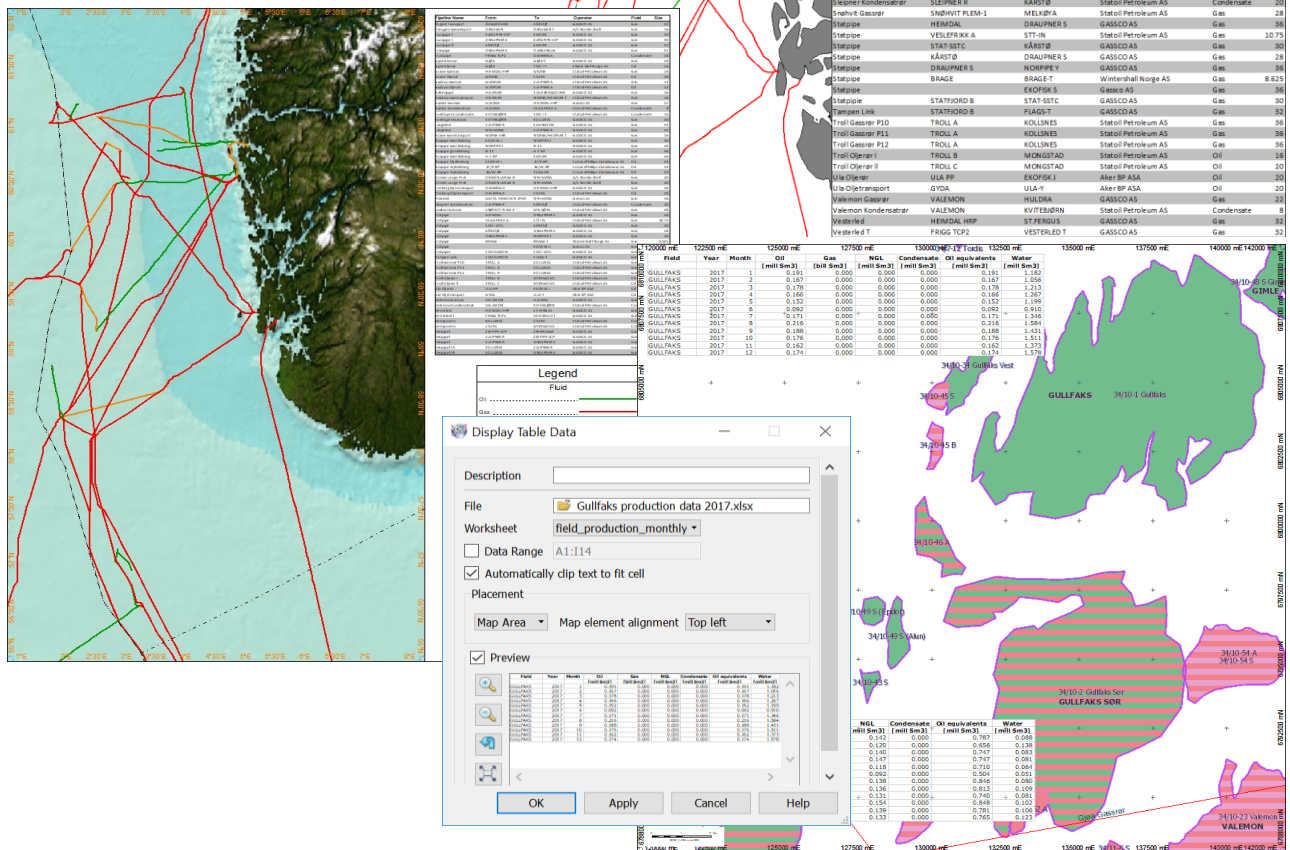
| Asset Teams | Plot date | Author | Project directory |
|---------------------|-----------|---------------------|-------------------|
| www.petrosys.com.au | | www.petrosys.com.au | |

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.

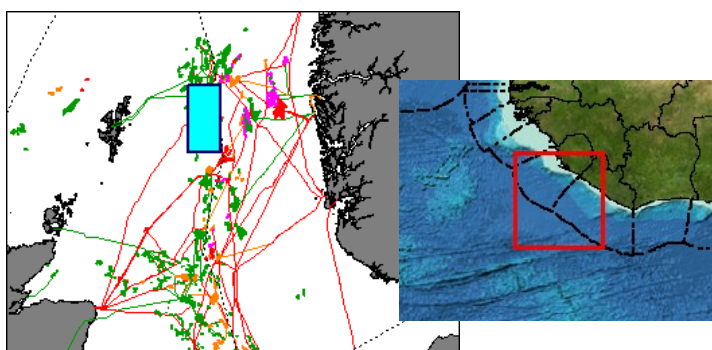
Base map types now include:

- 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.



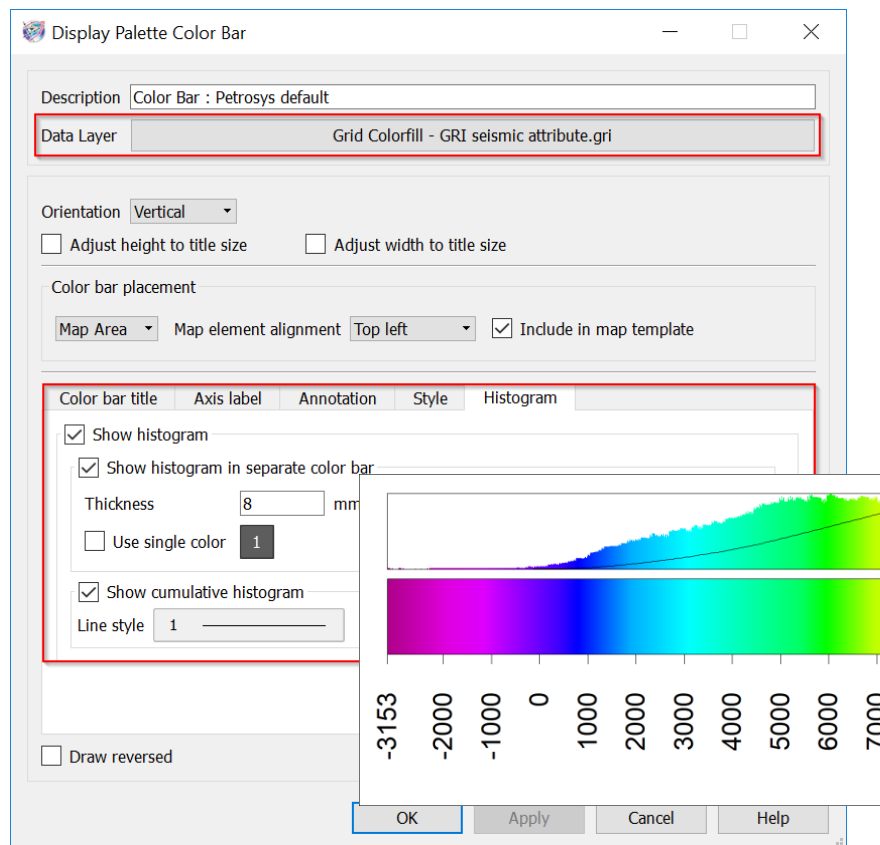
Histogram Color Bar Display and Editing

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.

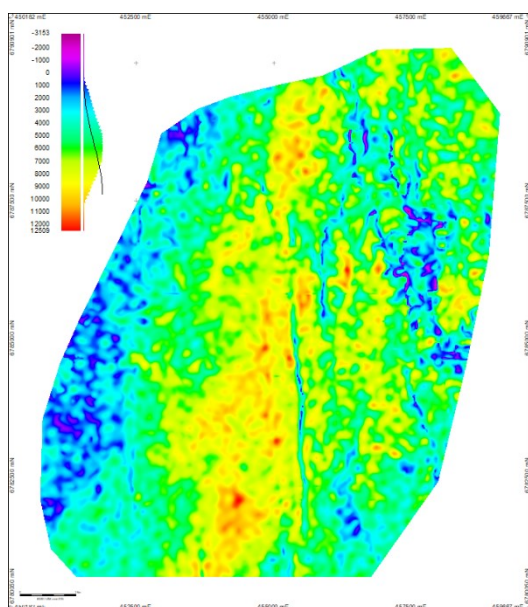
Once a grid or surface is displayed with a color bar, the data histogram can be displayed in the color bar editor and used to choose a knee point to highlight a value or range of data.

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

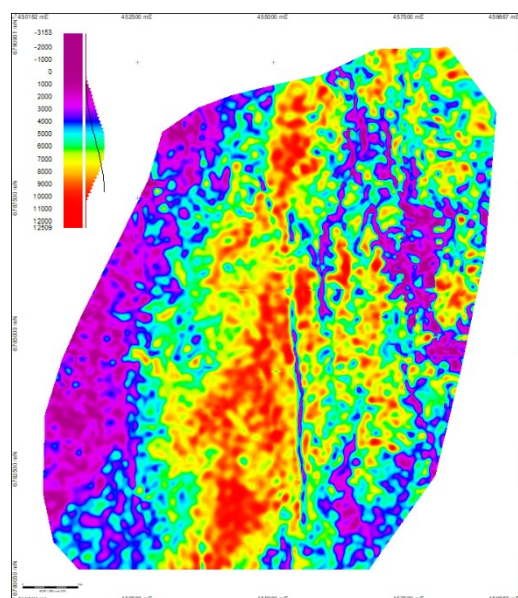
The gradient selector has a new "Equalization" checkbox. When this is enabled the gradient colors are distorted to spread the visible colors evenly on the map. This spreads out the most frequent intensity values making local areas of low contrast gain a higher contrast. This option is available in both Mapping and the 3D Viewer.



Seismic attribute grid



Seismic attribute grid - Equalized



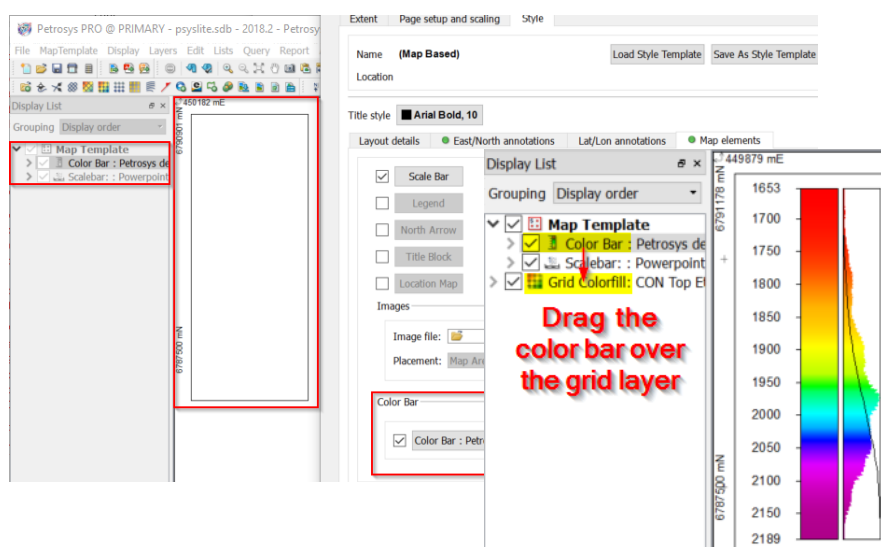
Edit Third-Party Grids, Faults and Clipping Polygons

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

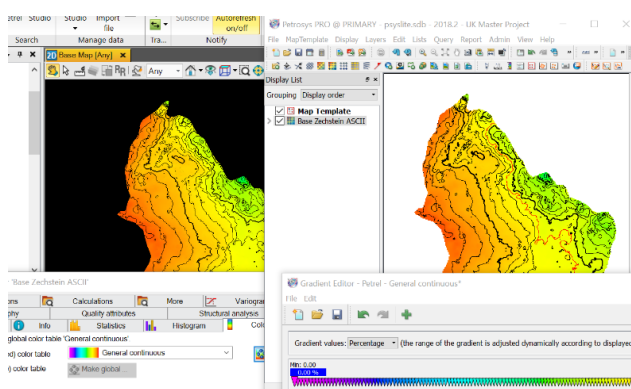
Map Template Styles now include the option to include one, or more, color bars. This enforces consistent color bar placement in company approved map styles.

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.



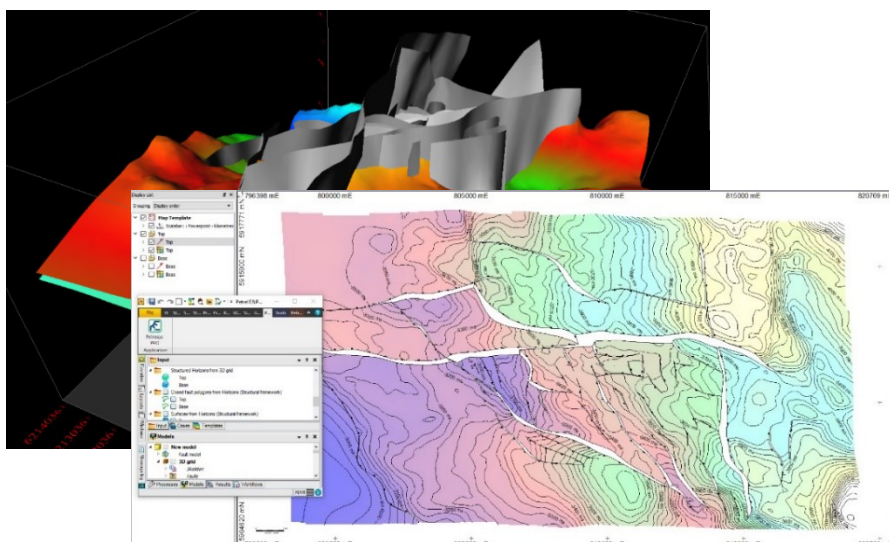
Easy Import of Petrel Color Bars

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.



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

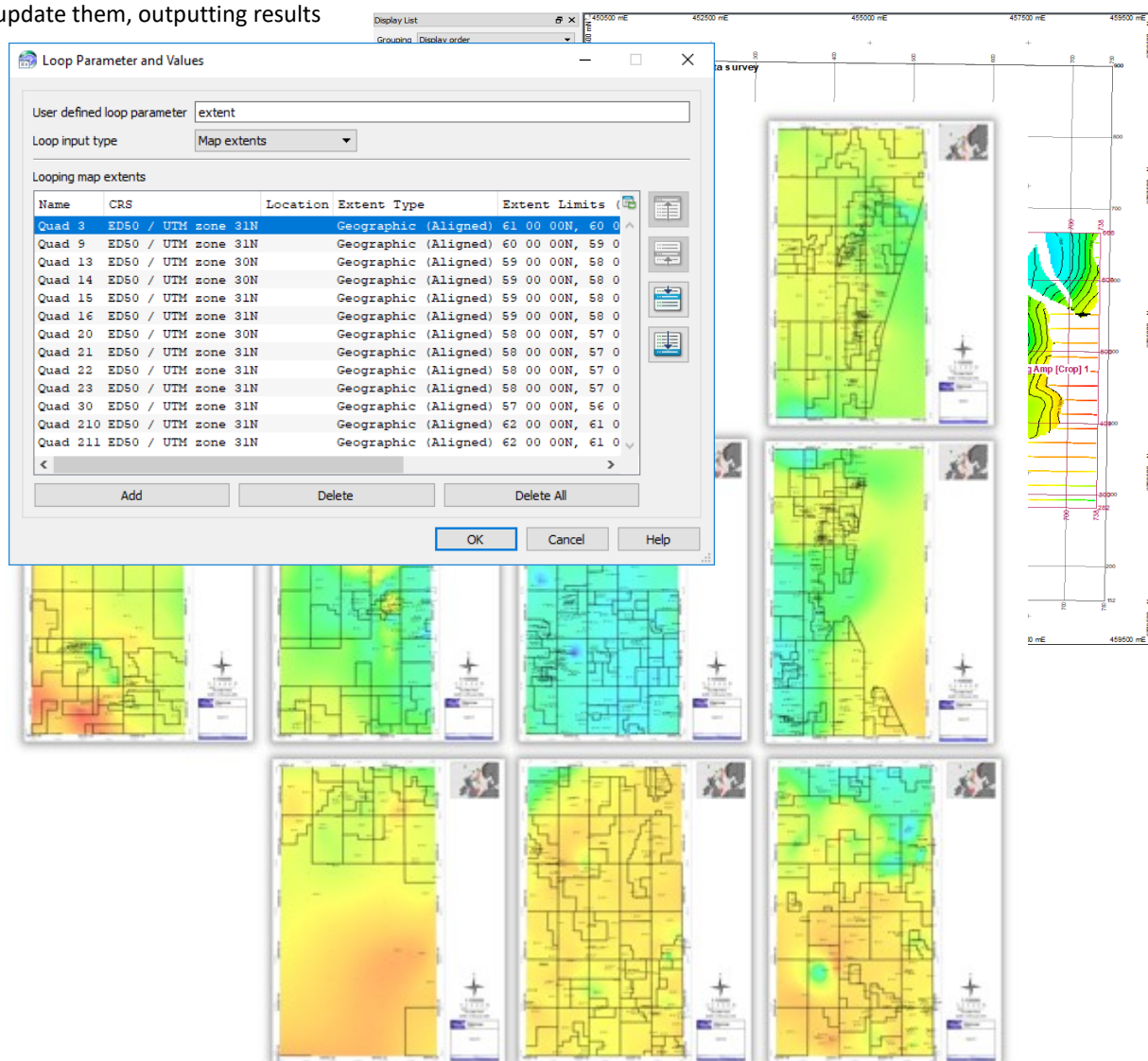
Several changes have been made to our Petrel plugin for PRO and to our generic seismic data handling which have resulted in vastly improved performance when working with Petrel seismic data:

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

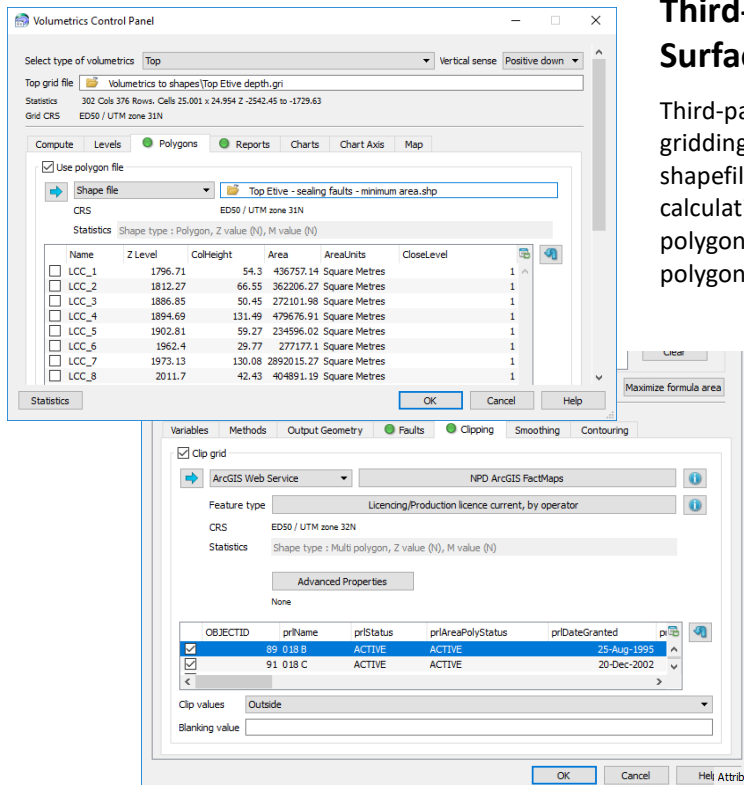
Batch Mapping of Data Over Multiple Extents

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.

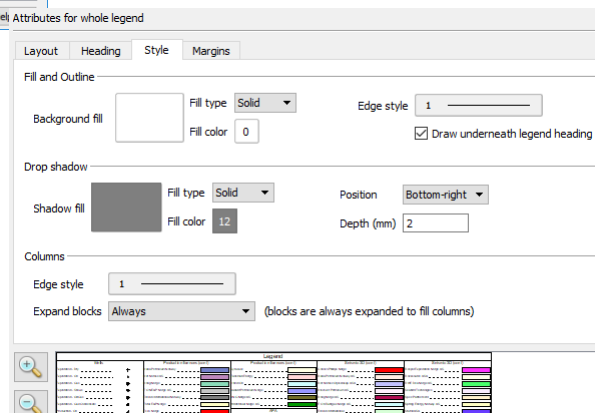
OpenWorks Districts Now Supported

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.

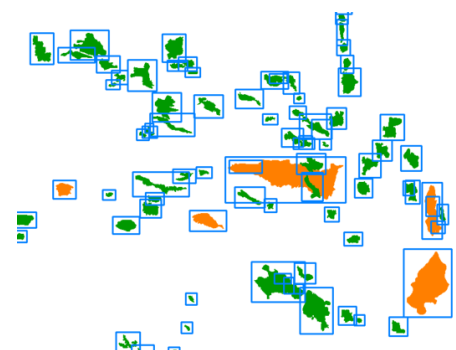
The number of columns is set in the new Layout tab and there are additional controls in the Style tab, including how any blank space is filled – this is most obvious when legend blocks have different background fills.



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

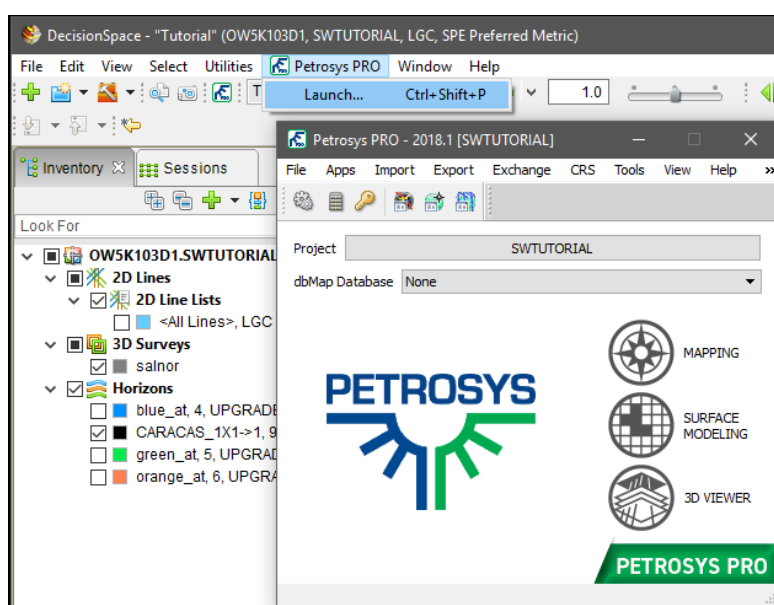
Petrosys PRO 2018.1 includes the first release of the Petrosys PRO plug-in for DecisionSpace Geosciences.

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.

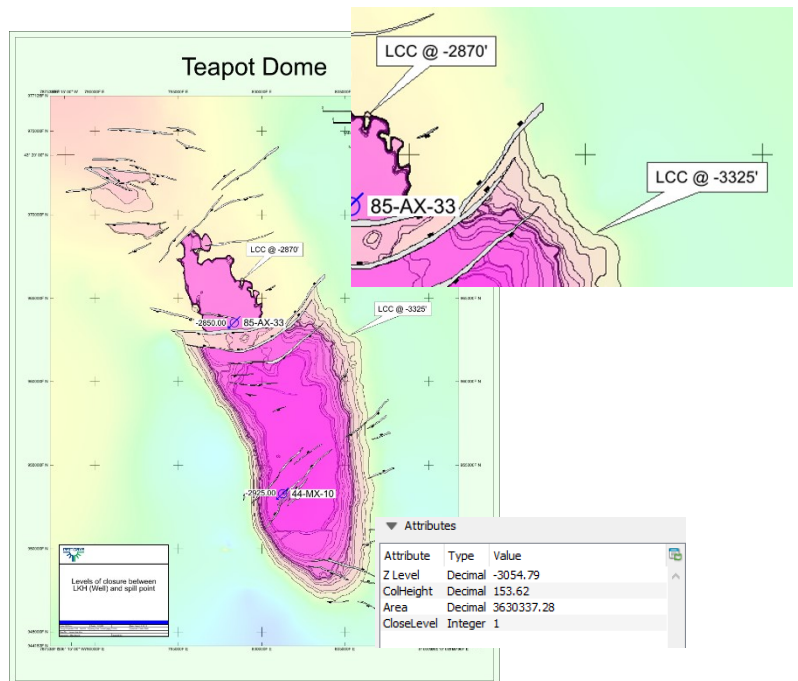
Inputs are:

- 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)



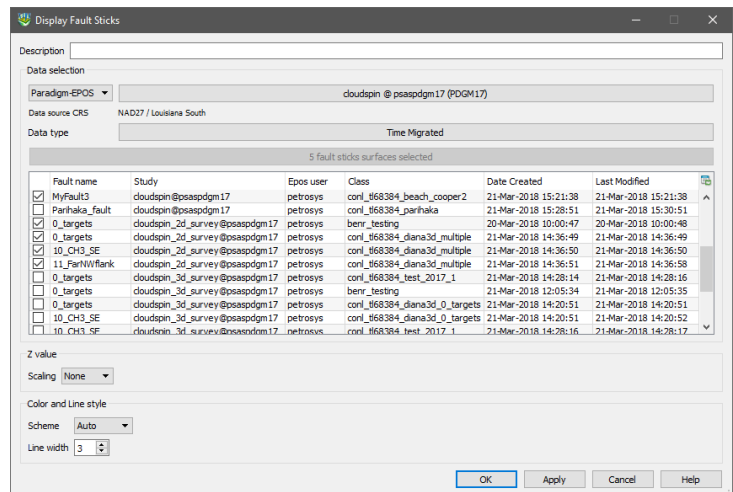
The output can be mapped using the **Display/GIS** option including posting, filtering and thematically mapping by attribute.

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

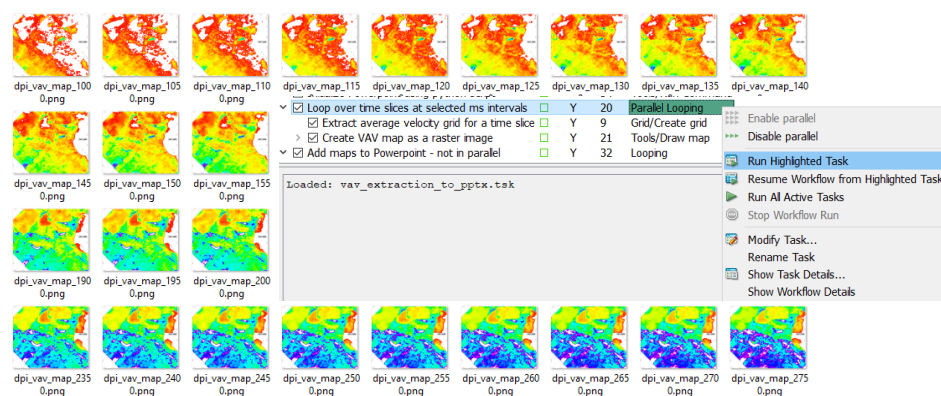
Surface Modeling has added capability for parallel processing of user workflows. Parallel processing enables the use of the multi-tasking facilities of modern CPUs by diverting selected tasks into separate processes that can run at the same time.

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.

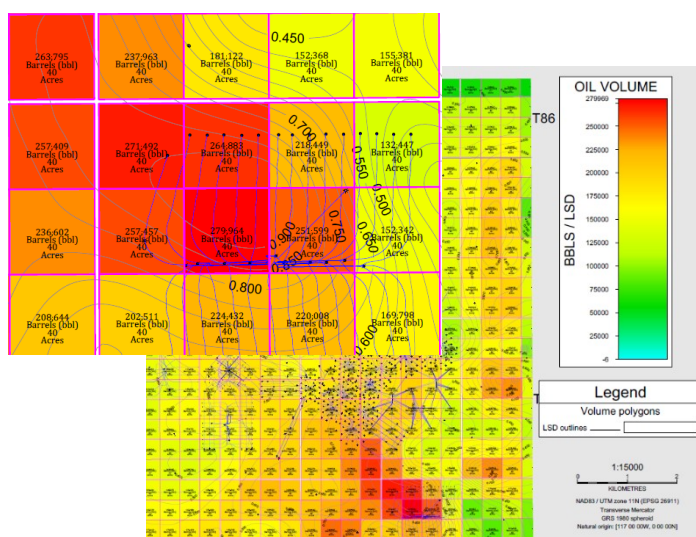
Publish Volumetrics Output to Polygon Shapefiles

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:

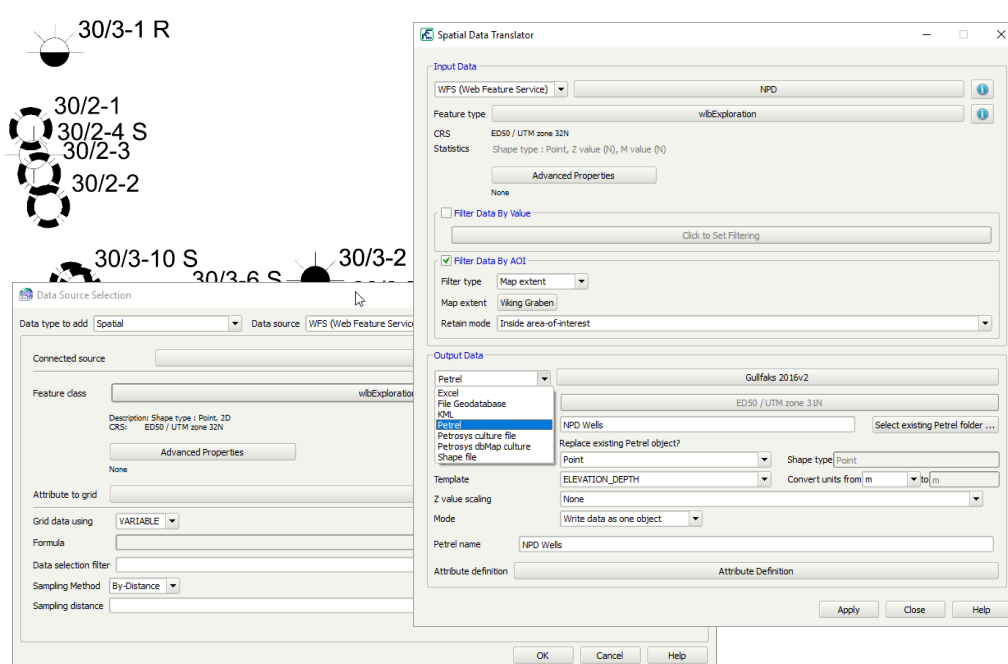
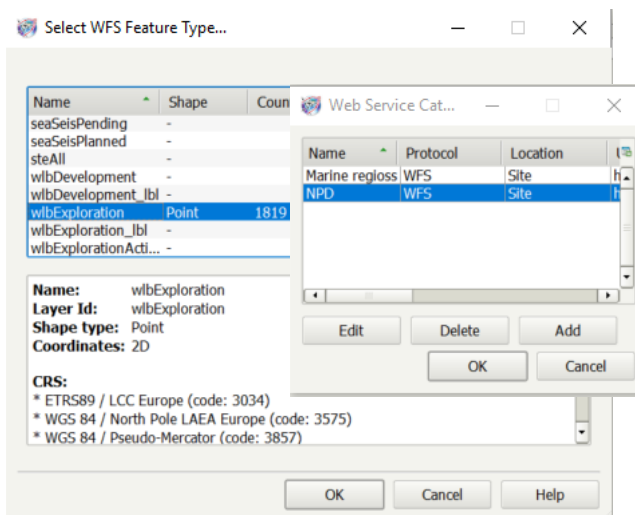
- OGC Web Feature Services (WFS)
- ArcGIS (MapServer and FeatureServer enabled services)

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.

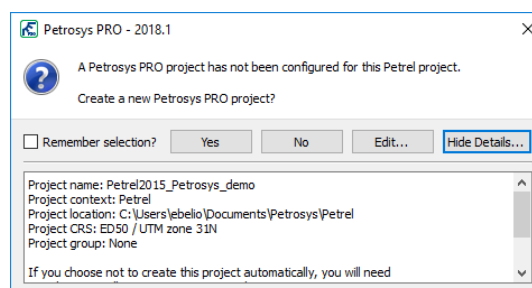


Automatic Project Creation from Petrel and DecisionSpace Geosciences

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.

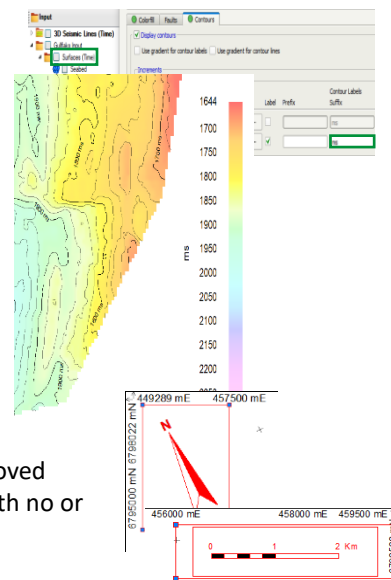


Domain Units Automatically Set for 3rd Party Grids and Surfaces

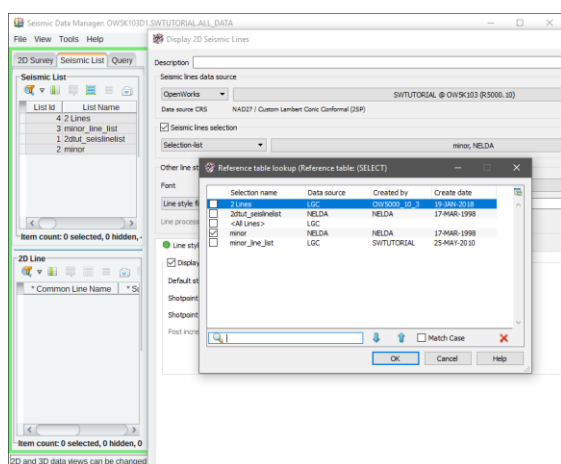
Grids and surfaces from 3rd party data sources now automatically set the units for contour label and color bar display. As the Z-value domain of the map is now clear and no manual intervention is required, map production is both more accurate and faster.

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 2018.3.1

Enhancements

Application - User Interface

[72821](#) Show busy state during drag-and-drop from Petrel and DecisionSpace

Configuration - General

[72590](#) Linux installation script updates DecisionSpace Geosciences default preferences

Connections, Import and Export

[72734](#) Improved support for importing OGP P1/11 seismic data files

[72664](#) Added option to use input Petrosys grid geometry when exporting to Eclipse

[72645](#) Password Manager Utility now works when run from within the Windows Command Shell

Connections, Import and Export - OpenWorks

[71903](#) Updated Help documentation on how to set Preference settings that are Global rather than User level scoped

Connections, Import and Export - Petrel

[65748](#) Added support to drag-and-drop from the Petrel "Favorites" pane

dbMap - Client

[72412](#) Santos dbMap Well Formation Tops dialog renamed to Formations

[72416](#) Santos dbMap Well Palynology dialog enhancements

[72741](#) Perforations buttons to now launch dbMap/Web screen (Santos specific)

Mapping - Editors

[71873](#) Support for editing grids from Paradigm EPOS added

Mapping - General

[72247](#) Added support for a data layers in map template

[72233](#) File resolution dialog is no longer shown when all file references are automatically resolved

Surface Modeling - Exchange

[72706](#) Wells Import Wizard - Provided configuration for writing alternate UWI to Petrel wells from dbMap (DEDJTR only)

Surface Modeling - Volumetrics

[70817](#) Lowest Closing Contours performance improved for noisy grids

[44551](#) Polygon clipping and interpolation improved

[72395](#) Looping over polygons stored in shapefiles and polygon files added

Surface Modeling - Workflows/Scripting

[48853](#) Looping now possible over third-party grids

[72662](#) Enable Color Bar Title to be scriptable in Tools/DrawMap

Wells (WDF) Editor

[72817](#) Disabled 'New attribute' right mouse button menu item for Well Header spreadsheets

Detailed Release Notes Summary PRO 2018.3.1

Bug Fixes

Connections, Import and Export

[72856](#) Select/User defined now works in edit lists

Connections, Import and Export - OpenWorks

[72875](#) OpenWorks Fault sticks now use the correct CRS

Mapping - General

[72628](#) Bubble Map - Attribute Filter scan button now works

Mapping - GIS, Spatial and Culture

[72809](#) WMS server now sanitises request URL strings when reporting invalid requests

[72738](#) Display/GIS - dbMap GIS - no longer shows Oracle query error (PGS Norway & Talisman Vietnam only)

Mapping - Grids, Surfaces and Sampled Data Files

[72772](#) Fixed Petrel grid display layer losing attribute selection when loaded from a dbm file

[72546](#) Display/Grid Highs and Lows works for third-party grids

Mapping - Wells

[72679](#) Fixed incorrect annotation locations for Drilling Opportunities

[72712](#) Fixed potential crash when dragging a WDF file to Mapping

[72717](#) Display/Wells layer styling correctly applied to associated layer

[72759](#) Fixed minor UI issues with the Display/Wells annotations tab

[72703](#) Added back support for posting well header attributes at a formation top location

[72896](#) Fixed potential crash when posting well formation attributes if query results are empty

Surface Modeling - Contouring

[72882](#) Contour by cell no longer crashes with third-party grids

Surface Modeling - Exchange

[71878](#) Exchange now preserves Paradigm IDs when replacing an existing grid or seismic surface

[72807](#) Fault Polygon Exchange - Missing input and output data sources have been added back

Surface Modeling - General

[72835](#) Well penetration report and well tie report now show same well order

[72799](#) Feature class shape selection widget - by default all shapes are now selected

Surface Modeling - Volumetrics

[72607](#) Volumetrics report now shows charts when output to a sub-directory

[72650](#) Volumetric Map no longer displays blank prism cells

[72609](#) Volumetrics Map now handles rotated grids correctly

Surface Modeling - Workflows/Scripting

[72622](#) Responsiveness of application when starting workflow improved

[72878](#) Looping grids: loop counter is not reset when execution is stopped midway

[72627](#) Looping over strings with interactive prompt fixed

Petrosys Release PRO 2018.3.1

Detailed Release Notes

[Application - User Interface](#) [Enhancements](#)

Show busy state during drag-and-drop from Petrel and DecisionSpace

72821

When dragging data from Petrel or DecisionSpace Geosciences (DSG) to Mapping or Surface Modeling, the busy cursor is now shown while the imported data is being processed.

[Configuration - General](#) [Enhancements](#)

Linux installation script updates DecisionSpace Geosciences default preferences

72590

When installing the Petrosys DecisionSpace Plug-in, the Petrosys PRO Linux installer will now prompt for whether or not the DecisionSpace Geosciences default preferences should be updated to match the current install.

This allows the configuration of the Petrosys DecisionSpace Plug-in to be done at the DecisionSpace installation level, so will affect all users, rather than requiring each user to each update their user preferences in their workspaces.

[Connections, Import and Export](#) [Enhancements](#)

Improved support for importing OGP P1/11 seismic data files

72734

A number of improvements have been made to the OGP P1/11 seismic importer:

- Added support for importing additional data as seismic horizons.
- Added support for importing seismic navigation and horizon data from multiple positioning objects.
- Added support for reading multiple positioning objects from a single location record.
- Added support for reading seismic navigation and horizon data from user-defined positional object types.
- Fixed inability to set a CRS when it couldn't be determined from the file.

Added option to use input Petrosys grid geometry when exporting to Eclipse

72664

Exporting Petrosys grid to Eclipse grid can use the input grid geometry at run time.

Password Manager Utility now works when run from within the Windows Command Shell

72645

The Password Manager command line utility has been updated to work on Windows being run through the Windows Command Shell.

[Connections, Import and Export](#)

[Bug Fixes](#)

Select/User defined now works in edit lists

72856

The Select/User defined option in Lists/Wells/dbMap and other edit lists now correctly selects items in the list. Previously, it would not find any matches when they existed.

[Connections, Import and Export - OpenWorksEnhancements](#)

Updated Help documentation on how to set Preference settings that are Global rather than User level scoped 71903

The Multiple Connectivity topic for the DecisionSpace Geosciences (DSG) plugin for Petrosys PRO has been updated with additional information on how to configure the Linux installation of DSG with application wide preference setting for the installation of Petrosys PRO. This allows for the setting of the Petrosys PRO installation directory, used by the plugin to know where the Petrosys PRO application resides, for all users running the installation of DSG. This eliminates the need of having to set it for each user, through the Preferences Page, when running the DSG Petrosys PRO plugin for the first time.

[Connections, Import and Export - OpenWorksBug Fixes](#)

OpenWorks Fault sticks now use the correct CRS 72875

Reading fault sticks from OpenWorks now uses the correct CRS. Previously the application assumed fault sticks were stored in the CRS of the OpenWorks Master project. Depending on how fault sticks were imported or created in OpenWorks, this is not always the case. The CRS for each fault stick is now read correctly, so that they now appear in the correct location when displaying in 3D Viewer, or using them as part of a gridding or exchange task.

[Connections, Import and Export - Petrel Enhancements](#)

Added support to drag-and-drop from the Petrel "Favorites" pane 65748

All previously supported data types from Petrel can now be dragged-and-dropped from the Favorites pane in Petrel to any Petrel drop target within Mapping and Surface Modelling.

[dbMap - Client Enhancements](#)

Santos dbMap Well Formation Tops dialog renamed to Formations 72412

The Santos dbMap Well "Formation Tops" dialog has been renamed to "Formations", and labels referring to "Top depth" have been replaced with "Depth".

Santos dbMap Well Palynology dialog enhancements 72416

The Santos dbMap Well Palynology dialog now has the following functionality:

1. Ability to enter and store Top and Base depths for Cuttings (only).
2. Save As button has been added.
3. The New record dialog remains open after creating a record to enable easy entry of multiple records.
4. Both Lithostrat and Chronostrat formation and sand intersections are displayed, which now also includes Chronostrat markers.

Perforations buttons to now launch dbMap/Web screen (Santos specific) 72741

The perforations button on the well screen now launches the dbMap/Web perforations screen.

[Mapping - Editors Enhancements](#)

Support for editing grids from Paradigm EPOS added 71873

Paradigm grids can now be edited in Grid Editor.

Added support for a data layers in map template 72247

User can now save data layers as "map template". This base map template will make it much easier to create predefined base maps to share with other users.

File resolution dialog is no longer shown when all file references are automatically resolved 72233

File resolution dialog no longer shows resolved layers.

Mapping - General

Bug Fixes

Bubble Map - Attribute Filter scan button now works 72628

Display/Bubble Map Filter/Scan button now show attribute values.

Mapping - GIS, Spatial and Culture

Bug Fixes

WMS server now sanitises request URL strings when reporting invalid requests 72809

When the WMS server receives an invalid request it returns a WMS exception response that includes the request URL that was invalid. While the server ignores invalid requests, when we report invalid requests we now strip out any JavaScript code that might have been included in the request URL to avoid security scanning applications from flagging a false positive. The WMS server does not include a JavaScript engine and does not process any JavaScript code that is passed to it.

Display/GIS - dbMap GIS - no longer shows Oracle query error (PGS Norway & Talisman Vietnam only) 72738

Mapping/Display/GIS dialog no longer shows Oracle errors when the data source dbMap GIS is selected. This was only a problem for PGS Norway and Talisman-Vietnam, due to their client specific configuration for dbMap.

Mapping - Grids, Surfaces and Sampled Data FilesBug Fixes

Fixed Petrel grid display layer losing attribute selection when loaded from a dbm file 72772

When loading a Mapping dbm file which contains a Petrel grid layer with an attribute selection, the attribute selection was lost. This has now been fixed.

Display/Grid Highs and Lows works for third-party grids 72546

Display/Grid/Highs and Lows works for third-party grids.

Mapping - Wells

Bug Fixes

Fixed incorrect annotation locations for Drilling Opportunities 72679

New-style Drilling Opportunity annotations weren't honouring the chosen posting location. This has now been fixed. Additionally, support for specifying the posting location on a per-annotation basis has been added.

Fixed potential crash when dragging a WDF file to Mapping 72712

Mapping could crash when dragging in a WDF file if the last Display/Wells data selection filter type was set to "Using-form". This has now been fixed.

Display/Wells layer styling correctly applied to associated layer 72717

A bug has been fixed whereby layer style information from one Wells display layer was being applied to all Wells layers for the same data source.

Fixed minor UI issues with the Display/Wells annotations tab 72759

There were some inconsistencies in the well annotation user interface when adding a new annotation row for Oracle-based data sources. These issues have now been fixed.

Additionally, the minimum width of the annotation size and offset distance fields has been increased.

Added back support for posting well header attributes at a formation top location 72703

The ability to annotate a well at a given formation top location was lost in PRO 2018.1. This feature has now been restored, and like other well header posting locations, can be set on a per-annotation basis.

Fixed potential crash when posting well formation attributes if query results are empty 72896

In some cases, when picking a well from a wells layer with well posting queries, Mapping would crash. This has now been fixed.

Surface Modeling - Contouring

Bug Fixes

Contour by cell no longer crashes with third-party grids 72882

In previous version there is a bug that in Surface Modeling may crash in contouring by cell third party grids such as Petrel grids. This has now been fixed.

Surface Modeling - Exchange Enhancements

Wells Import Wizard - Provided configuration for writing alternate UWI to Petrel wells from dbMap (DEDJTR only) 72706

Configuration settings have been provided to write an alternate UWI for wells in Petrel when exchanged from the Petrosys-dbMap data source.

Surface Modeling - Exchange

Bug Fixes

Exchange now preserves Paradigm IDs when replacing an existing grid or seismic surface 71878

Both the Grid and Seismic 3D Surface exchange tools have been updated to preserve the IDs of existing grids or seismic surfaces when writing and replacing them in a Paradigm project.

Fault Polygon Exchange - Missing input and output data sources have been added back 72807

In previous version Faults Exchange has some data sources missing. This has now been fixed.

Well penetration report and well tie report now show same well order

72835

In previous version Well Penetration report and Well Tie report may have different well orders in the reports. This has now been fixed.

Feature class shape selection widget - by default all shapes are now selected

72799

In previous versions in Surface Modeling after selecting a polygon file the polygons are not always selected by default. This has now been fixed.

Surface Modeling - Volumetrics Enhancements

Lowest Closing Contours performance improved for noisy grids

70817

Lowest Closing Contours performance has been significantly improved by only generating closures as contour increment levels when it is turned on.

Polygon clipping and interpolation improved

44551

Improved the volume calculations when polygon(s) being used used for volume calculations. The users have extra control over cell refinements near polygon edges.

Looping over polygons stored in shapefiles and polygon files added

72395

Added support for looping over polygons stored in shapefiles or polygon files. The polygons' attributes are dynamically created as looping parameters. This should be especially helpful when using Lowest Closing Contours stored in shapefiles as polygons for volumetric calculations.

Volumetrics report now shows charts when output to a sub-directory

72607

Volumetrics reports show charts in the web browser when report outputs are saved to sub-directories. Previously the link to charts was broken.

Volumetric Map no longer displays blank prism cells

72650

Volumetrics Map now displays all prism cells that contribute to volume. Note that the blank cells was only an artefact on the visual display - all cells were correctly included in the volume calculation.

Volumetrics Map now handles rotated grids correctly

72609

Volumetrics Map calculates the view bounding box correctly for rotated grids.

Surface Modeling - Workflows/Scripting Enhancements

Looping now possible over third-party grids

48853

In Surface Modeling it is now supported to loop through third-party grids. Four grid XML related scripting functions have been added: `getGridId(gridXml)`, `getGridName(gridXml)`, `getGridDataType(gridXml)`, `getGridDataUnits(gridXml)`.

Enable Color Bar Title to be scriptable in Tools/DrawMap 72662

The mapping Color Bar Title can now be scripted in Tools/DrawMap.

[Surface Modeling - Workflows/Scripting](#)

[Bug Fixes](#)

Responsiveness of application when starting workflow improved 72622

Some performance improvements have been done to Surface Modeling when running a workflow so that the user will not see the application become unresponsive when a workflow is started.

Looping grids: loop counter is not reset when execution is stopped midway 72878

In previous versions when a looping task is stopped by the user and then is run again, the looping does not start from the beginning but resumes from last stopped point. This has now been fixed.

Looping over strings with interactive prompt fixed 72627

Looping over strings is working with scripting interactive prompt to enter string values.

[Wells \(WDF\) Editor](#)

[Enhancements](#)

Disabled 'New attribute' right mouse button menu item for Well Header spreadsheets 72817

The "New attribute..." right mouse button menu option has now been disabled on the Spreadsheet tab when viewing Well Header data.

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 mouse 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 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 Insight Enhancements](#)

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 Insight Bug 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.

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

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.

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.

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 Files Enhancements

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 Files Bug 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 mouse 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.

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 treated as boundary polygons 72399

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

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.

[Mapping - General](#)

[Bug Fixes](#)

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.

[Mapping - GIS, Spatial and Culture](#)

[Bug Fixes](#)

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.

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.

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 colours 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 FLEXIm 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 InsightBug 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 - OpenWorksEnhancements](#)

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 is accepted.

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 colours 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 Files](#)**Enhancements**

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 Files](#)**Bug 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 within 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 regriding

71514

When editing a grid in "Contours Mode", and changes to the input data are regrided (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 cancel⁷⁰⁷⁴⁶

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.

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 Imgrd and Imtools (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 Imgrd and Imtools (11.15.1.0) 70922

The latest version of the Flexera executables Imgrd, Imtools and Imutil 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 - OpenWorksBug 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.

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

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.

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/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

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- [37976](#) Allow connection to an OpenWorks project containing 3D surveys with an invalid or unmapped CRS
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Wells (WDF) Editor

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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.

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.

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.

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.

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 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

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

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 Files](#)[Enhancements](#)

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 Files](#)[Bug 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 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; }
```