![PETROSYS logo]

SOFTWARE RELEASE NOTES

Version 2024.1

PETROSYS PRO

Connectivity   Mapping & Visualisation   Surface Modeling

Petrosys PRO 2024.1 pushes connectivity further with the debut of Geoactive IP connectivity in PRO Exchange and further support for seismic volumes.

Highlights

Geoactive IP users will benefit from Petrosys PRO's industry leading connectivity to enable transfer of well data between Geoactive IP and OSDU. Available within the Geoactive IP interface, Petrosys PRO Exchange is leveraged to perform data transfers. For access to this feature please contact Geoactive sales and support at https://www.geoactive.com/chat-with-us.

Seismic volume support has been improved to allow the display of a volume within the X-section canvas. Furthermore, direct connectivity with seismic volume data in Petrel has been added. And anyone who needs to change a SEGY file CRS will appreciate the new "CRS Conversion" task within Surface Modeling.

While not directly providing benefit to users, Petrosys PRO 2024.1 includes a large number of internal improvements to allow us to maintain security while developing the next set of features faster.

Licensing updates:

- PRO 2024.1 requires a new license file to be installed for all clients.
- PRO 2024.1 include an upgraded RepriseLM version, which includes security updates. Users with an on-premises license server are recommended to upgrade. Please note that the upgraded version now requires login credentials for the associated web server. A default login is created during installation, please login immediately after installation to change the login credentials.
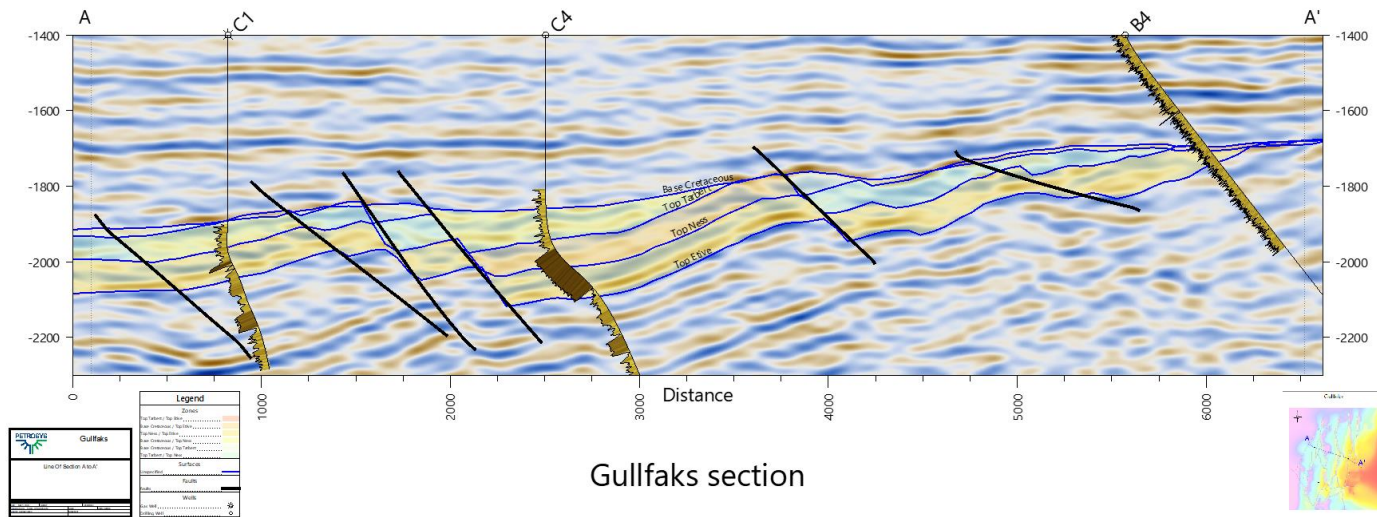
Supported Environment updates of note:

- Linux platforms RHEL8 and RHEL9 are supported. RHEL7 is now deprecated and available by request only.
- Windows 10 is the minimum supported version for Windows.

For more information on how to put these features into practice please contact support at support@petrosys.com.au and learn more from our webinars, video and portal resources.

Seismic volume display in X-Section

Seismic volumes can now be displayed within the X-Section canvas, released in Petrosys PRO 2023. Support volume sources include SEGY, VDS, ZGY with direct connectivity to Petrel added.

Gullfaks section

Notes for Upgraders and Installers of Applications

Upgraders from Petrosys PRO 2023 or earlier should be aware of the following changes:

- Petrosys PRO supports Red Hat Enterprise Linux 8 and 9 (RHEL8, RHEL9) and equivalents (CentOS, AlmaLinux, RockyLinux, Oracle Linux). Red Hat Enterprise Linux 7 is now deprecated and only available by request.
- Petrosys PRO 2024.1 requires a new license file for every client. Please obtain your license file by logging on to the Petrosys Client Portal or contacting Petrosys Support.

For a full list of supported environments, please see the Petrosys PRO Supported Environments webpage.

Detailed Release Notes Summary PRO 2024.1

Enhancements

Application - General

84395	Red Hat Enterprise Linux 7 support deprecated
81303	Red Hat Enterprise Linux 9 supported
83362	Removed IHS Info Hub support
82752	Updated Curl library to version 8.6.0

Configuration - Licensing

81798	RepriseLM license manager upgraded to version 16.0BL1
84045	New license file required to run Petrosys PRO 2024.1

Connections, Import and Export

83949	PRO Exchange integration with Geoactive IP (GAX)
81273	Added support for writing well data (ingestion) to OSDU

Connections, Import and Export - Oracle

84104	Oracle Client - Updated to latest version of 21c [21.13]

Connections, Import and Export - Petrel

83944	Allow duplicate output curve names for exchange to Petrel
84057	Petrel 2024.1 supported
84275	Added "Water depth" well header attribute for exchange from PPDM38 to Petrel (Santos only)

Coordinate Reference Systems

82733	GDAL upgraded to version 3.6.3

Cross Section - General

82362	Display 3D seismic volume
84154	Section from 2D seismic line
82805	Cross section allows section to be reversed when displaying a well path section
83088	Added RMB menu to Section Plan
82525	Cross Section supports text substitution for section specific properties

Mapping - GIS, Spatial and Culture

84177	Oracle spatial - Show the layer owner in the description

Surface Modeling - Exchange

84189	SEGY file CRS transformation tool added

Surface Modeling - General

84229	Grid/Statistics/Inside Polygon can now output to shapefile

Surface Modeling - Gridding

83867	Export/Petrosys/Grid to XYZ allows setting coordinate field width and decimal places

Surface Modeling - Workflows/Scripting

84291	Added interactive scripting for looping over files
84186	Added interactive scripting query parameters selector for gridding from well query
84242	Grid/Statistics/Inside Polygon allows scripting of polygon selection

Detailed Release Notes Summary PRO 2024.1

Bug Fixes

Application - General

83803   Autosave file now has complete file content

83848   String to number performance improvement

Application - User Interface

83749   List filters with extremely large number of terms now handled

Connections, Import and Export - OpenWorks

84318   Added support for connecting to OpenWorks 10.7.6

Connections, Import and Export - Petrel

77626   Display/GIS correctly restores data for renamed Petrel projects

84299   Additional Petrosys project permissions checks before launching PRO from Petrel

84293   Reading well headers from Petrel now allows a user attribute named "Depth"

84183   Well bottom hole offset used when writing well headers to Petrel

84401   Fixed Petrel borehole trajectory not being saved when master trajectory is updated

Cross Section - General

83400   Mapping Display/Line of Section handles blank hinge point labels correctly

dbMap - Client

84241   Bubble map from dbMap database template query now works with data selection options (PPDM3.8 clients only)

Spatial Editor

77885   Spatial Editor correctly handles editing hidden raster image layers

Surface Modeling - Contouring

84123   Fixed buffer overrun error

Surface Modeling - Workflows/Scripting

84106   Improvements for GIS layers when all items selected

Petrosys Release PRO 2024.1
Detailed Release Notes

Application - General   Enhancements

Red Hat Enterprise Linux 7 support deprecated   84395

Red Hat will end maintenance support for the Red Hat Enterprise Linux 7 operating system on 30th June 2024. In line with this schedule, Petrosys PRO 2024.1 now deprecates support for the EL7 platform, and the installer will not be generally available. For clients who are yet to update to EL8 or newer, please contact Petrosys support for assistance.

Red Hat Enterprise Linux 9 supported   81303

Petrosys PRO is now supported on Red Hat Enterprise Linux 9 or equivalent.

Please install the RHEL8 install package on the EL9 platform.

Removed IHS Info Hub support   83362

Removed IHS Info Hub data source and relevant options.

Updated Curl library to version 8.6.0   82752

Upgraded an internal library, Curl, from version 7.76 to 8.60 to address several CVE's in the older version. CVE's addressed: CVE-2022-43552, CVE-2023-23916, CVE-2023-23915, CVE-2023-23914, CVE-2022-43551.

Application - General   Bug Fixes

Autosave file now has complete file content   83803

In previous versions .autosave files may have truncated XML content. This has now been fixed.

String to number performance improvement   83848

Improved performance converting string numbers to numbers. This will mainly benefit the File-Text functionality across the application where ASCII column representing numbers are scanned and/or imported.

Application - User Interface   Bug Fixes

List filters with extremely large number of terms now handled   83749

List filters with large numbers of filter terms now perform much better. For example, filters containing tens of thousands of search terms are handled in seconds, while previously, large filters could take minutes to process, or may crash.

Configuration - Licensing   Enhancements

RepriseLM license manager upgraded to version 16.0BL1   81798

The RepriseLM license manager has been upgraded to version 16.0BL1.

The web interface now uses HTTPS and requires user logins for access. If this is the first time using version 16.0 or greater, a default login with the username admin with password admin is created. Please login immediately to the web interface where you will be prompted to change the admin password.

See: https://reprisesoftware.com/docs/admin/rlm-web-server.html for more details.

New license file required to run Petrosys PRO 2024.1 ⁸⁴⁰⁴⁵

To use Petrosys PRO 2024.1, a new license file is required. Acquire your license file by logging in to the Petrosys Client Portal or reaching out to Petrosys Support.

Connections, Import and Export   Enhancements

PRO Exchange integration with Geoactive IP (GAX) ⁸³⁹⁴⁹

Added well exchange functionality between Geoactive IP and OSDU. For further details please contact Geoactive sales and support at https://www.geoactive.com/chat-with-us.

Added support for writing well data (ingestion) to OSDU   ⁸¹²⁷³

OSDU connectivity has been extended to support ingestion of well data. Well headers, directional surveys, formation tops and well log curves can now be written to OSDU via the Wells Exchange Wizard.

Connections, Import and Export - OpenWorksBug Fixes

Added support for connecting to OpenWorks 10.7.6 ⁸⁴³¹⁸

Added Petrosys plugin support for OpenWorks 10.7.6

Connections, Import and Export - Oracle Enhancements

Oracle Client - Updated to latest version of 21c [21.13]   ⁸⁴¹⁰⁴

The internal client library Petrosys PRO uses to communicate to Oracle servers had been updated to the latest version 21.13.

Connections, Import and Export - Petrel Enhancements

Allow duplicate output curve names for exchange to Petrel   ⁸³⁹⁴⁴

Allowing duplicate output curve names in order to reconcile multiple similar curve mnemonics to a single mnemonic.

Petrel 2024.1 supported   ⁸⁴⁰⁵⁷

Petrosys connectivity to Schlumberger's Petrel now supports direct interaction with Petrel 2024.1.

Support for Petrel 2024.1 includes the ability to:

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

- ➢ Directly display 3D seismic bin grids in Mapping
- ➢ Directly display Structural Model fault surfaces in 3DViewer
- ➢ Directly display fault sticks in 3DViewer
- ➢ Export Petrosys and other third party grids to Petrel

Petrosys PRO continues to maintain support for connections to Petrel 2017.1 through 2023.x.

Added "Water depth" well header attribute for exchange from PPDM38 to Petrel (Santos only) 84275

A custom "Water depth" well header attribute is now written to Petrel for wells exchanged from PPDM38. (Santos only)

Connections, Import and Export - Petrel   Bug Fixes

Display/GIS correctly restores data for renamed Petrel projects 77626

Display/GIS reopens Petrel data layers saved in .dbm files using the current Petrel project, even if the Petrel project has been renamed from when it was originally created.

Additional Petrosys project permissions checks before launching PRO from Petrel 84299

When launching PRO from Petrel, user file permissions are re-checked before automatically selecting the last linked PRO project.

Reading well headers from Petrel now allows a user attribute named "Depth" 84293

In previous versions of PRO, reading well headers from Petrel would fail if the Petrel wells included a user attribute named "Depth" as this conflicted with the default Petrel attribute of the same name. This issue has now been fixed and the user-defined attribute will be loaded as Depth (2).

Well bottom hole offset used when writing well headers to Petrel 84183

When writing well headers to Petrel, the bottom hole offset is now used when writing the two-point directional survey.

Fixed Petrel borehole trajectory not being saved when master trajectory is updated 84401

In previous versions, in some instances, despite the borehole trajectory data being updated in Petrel, the data is lost again when the Petrel project is saved. A workaround for this issue has now been implemented.

Coordinate Reference Systems   Enhancements

GDAL upgraded to version 3.6.3 82733

The third party library GDAL which is used for some raster and vector handling has been updated to version 3.6.3.

Cross Section - General   Enhancements

Display 3D seismic volume 82362

3D seismic volume data can now be displayed in Cross Section. Supported data source are Petrel, SEGY file, ZGY file or VDS file.

Section from 2D seismic line 84154

It is now supported to define a section using a 2D seismic line.

Cross section allows section to be reversed when displaying a well path section 82805

The direction of view for a cross section based on a well path is now able to be reversed using the "Reverse Line" button.

Added RMB menu to Section Plan 83088

A right mouse button (RMB) menu has been added to the Section Plan view. The RMB menu includes zoom in, zoom out, reset to full view and update the plan from the current section data options.

Cross Section supports text substitution for section specific properties 82525

Text property substitution is supported in the PRO Cross Section application in several contexts (text, title block, excel, layout properties). Each of these contexts supports displaying section dimensions (top, base, length and width).

Cross Section - General   Bug Fixes

Mapping Display/Line of Section handles blank hinge point labels correctly 83400

In previous versions, displaying a line of section in Mapping with hinge point labels set to "None" would result in background fill incorrectly displayed at each hinge point.

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dbMap - Client   Bug Fixes

Bubble map from dbMap database template query now works with data selection options (PPDM3.8 clients only) 84241

Mapping/Display/Bubble Map from Petrosys-dbMap now successfully applies the data selection filter when chosen. Previously no data appeared on the map when any of the Selection file, User-defined or Using-form option was used. This only affected dbMap PPDM3.8 clients.

Mapping - GIS, Spatial and Culture   Enhancements

Oracle spatial - Show the layer owner in the description 84177

Display/GIS from an Oracle spatial data source now shows the schema name in the feature description, to differentiate when there are multiple objects of same name belonging to different schemas.

Spatial Editor   Bug Fixes

Spatial Editor correctly handles editing hidden raster image layers 77885

In previous versions, trying to edit a raster layer that had never been made visible in the current session would cause a crash.

Surface Modeling - Contouring   Bug Fixes

Fixed buffer overrun error   84123

A buffer overrun error has been fixed in contouring.

Surface Modeling - Exchange   Enhancements

SEGY file CRS transformation tool added   84189

Coordinates in SEGY files can now be converted to a different projected CRS.

This option can be accessed via the menu 'Surface Modeling/File/Exchange/CRS Conversion/SEGY File CRS Conversion...;

Surface Modeling - General   Enhancements

Grid/Statistics/Inside Polygon can now output to shapefile   84229

The grid statistics inside polygons can now be reported to output shapefile with grid statistics values stored as attributes.

Surface Modeling - Gridding   Enhancements

Export/Petrosys/Grid to XYZ allows setting coordinate field width and decimal places   83867

The Export/Petrosys/Grid to XYZ allows the user to set the XY coordinate field width and the number of decimal places.

Surface Modeling - Workflows/Scripting   Enhancements

Added interactive scripting for looping over files   84291

Workflow looping over files can be set for interactive scripting. This allows the set of files to be looped over to be selected and modified each time the workflow is executed.

Added interactive scripting query parameters selector for gridding from well query   84186

Added interactive scripting for query parameters when gridding from well query.

Grid/Statistics/Inside Polygon allows scripting of polygon selection   84242

Polygon selection can now be scripted.

Surface Modeling - Workflows/Scripting   Bug Fixes

Improvements for GIS layers when all items selected84106

When GIS layers with polygons/faults are saved to .dbm file with all items selected, an all items indicator will be saved to the .dbm. This change will help with Surface Modeling workflows when a GIS layer is scripted and the item names are not known and may different from the original GIS layer.