

Software Release Notes

dbMap/Web Version 2023.1.2

dbMap

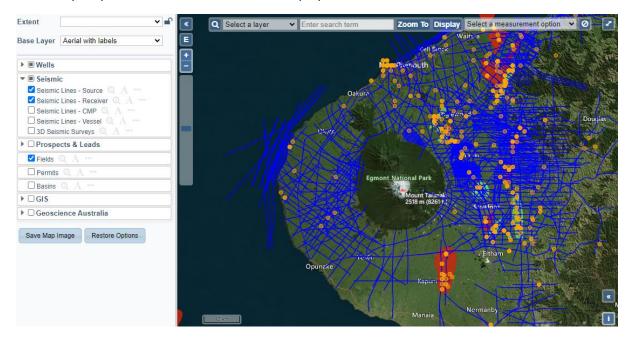
PLDB"

1 2023.1.2 Overview

dbMap/Web 2023.1.2 introduces additional Seismic Line map layers and support for map overlay data provided by other web mapping services.

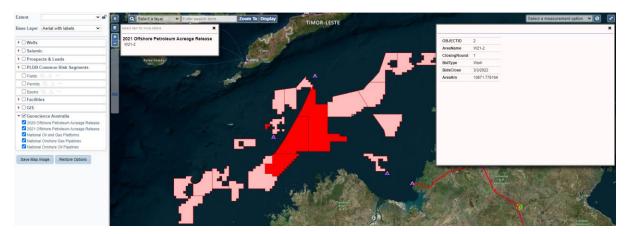
2 Mapping – CMP, Receiver and Vessel Seismic Lines

2D seismic line coordinates can now be displayed on the map for CMP, Receiver and Vessel. Previously only Source coordinates could be displayed.



3 Mapping – WMS Overlays

Overlay data provided by other web mapping services (WMS) can now be configured on the dbMap/Web map. Contact support@petrosys.com.au for assistance with configuration.



Map data attributions:

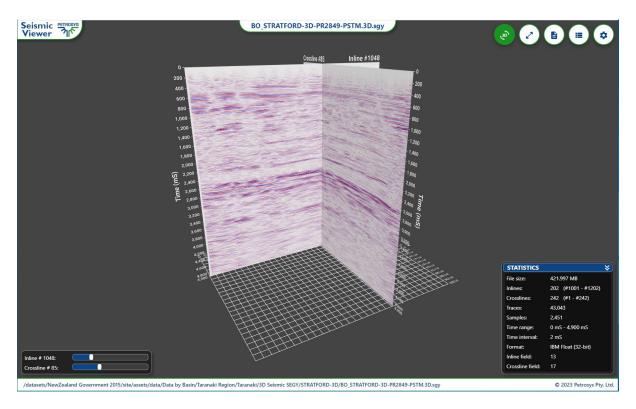
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4 2023.1 Overview

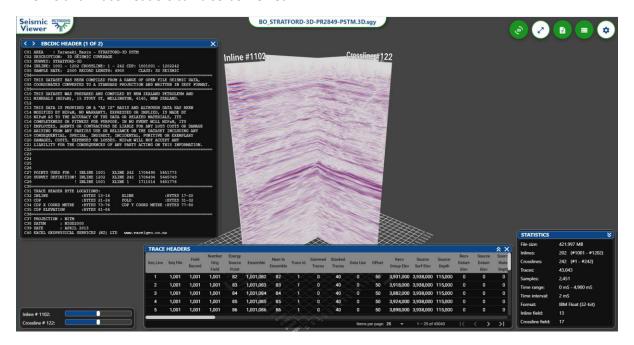
dbMap/Web 2023.1 includes a new Seismic Viewer, the addition of Well Paths and Bottom hole locations on the web map, new file type icons shown next to digital assets in Records Management and a collection of minor enhancements and bug fixes. Under the hood, there have also been several infrastructure and security upgrades.

5 Records Management - Seismic Viewer

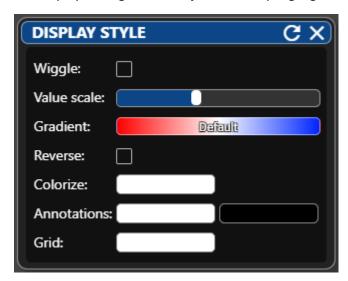
A new seismic viewer has been developed to allow viewing of 2D & 3D Seismic directly in the browser with real time rotation, zooming and stepping through the in-lines and x-lines.



EBCDIC and Trace headers can also be viewed.



The display settings can be adjusted to help highlight sections of data.



The seismic viewer is available when you select a SEGY file that has been catalogued in Records Management and is a powerful tool for QC-ing data and confirming you are selecting the correct SEGY file.

The SEGY data remains on the server and only the information needed to generate the current display in the browser is sent across the network. This avoids delays and large data transfers.

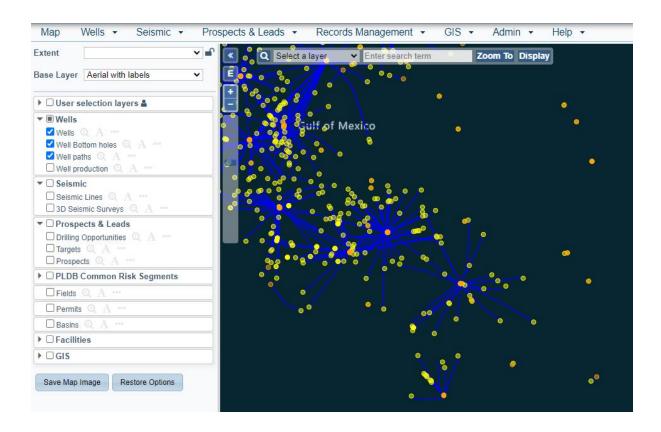
6 Records Management - File Type Icons

Records Management lists now include icons so it is easier to identify the different types of file formats to make it easier to spot files you may be interested in.

		Title / filename	Category	Sub category
92	j.	Core description_Pages_from_PR968.pdf	Well	Core
93	j.	Deviation_Pages_from_PR968.pdf	Unknown	
94	j.	Petrophysics_Pages_from_PR968.pdf	Unknown	
95	Sa.	Stratford-1 core.jpg	Well	Core Photo
96	j.	Stratford-1.pdf	Well	Well Completion Repo
97	ŧ	stratford-1_audit_trail.las	Well	Well Log
98	ŧ	stratford-1_deviation_survey.las	Well	Well Log
99	ŧ	stratford-1_ec_curves.las	Well	Well Log
100	ŧ	stratford-1_final.las	Well	Well Log
101	ŧ	stratford-1_raw.las	Well	Well Log
102	х	Stratford-1_Well_QC_Summary.xlsx	Well	
103	j.	Stratford-1.pdf	Well	Well Completion Repo
104	ia.	CBL-VDL-GR-CCLPR968L27.tif	Well	
105	ia.	CPI Geogram synthetic seisPR968L31.tif	Well	
106	ia.	CPI Geogram synthetic seisPR968L32.tif	Well	
107	ia.	DLT-MSFLPR968L24.tif	Well	
108	ia.	DLT-MSFLPR968L25.tif	Well	
109	ia.	Drill DataPR968L3.tif	Well	
110	Sa.	FDC-CNT PR968L18.tif	Well	

7 Mapping - Well Paths and Bottom Holes

Display of well bottom holes and well paths are now available through the web map interface.



For well paths to be displayed, a process needs to be run in Petrosys PRO. Please contact Petrosys support if you would like details.

8 Infrastructure and Security

In addition to the new functionality in this release, there have been significant changes to help keep dbMap/Web using the latest version of libraries with the latest security enhancements and bug fixes.

Changes in dbMap/Web 2023.1 include:

- dbMap/Web now requires Java version 17.
- We have dropped support for Internet Explorer 11. It is no longer supported by Microsoft.
- We have updated the third-party libraries we are using to have the latest security updates.
- The backend of dbMap/Web is now packaged as a standalone Java application that is run on a server and no longer requires Apache Tomcat to be installed on a server.

Information is available in the installation guide to help with upgrading.

Detailed Release Notes Summary dbMap/Web 2023.1.2

Enhancements

dbMap/Web - Client

31502	Fixed mutating trigger error when deleting a Permit (Santos only)
<u>32170</u>	dbMap GIS spatialisation fixed (Santos only)
<u> 32772</u>	Seismic Survey - Added Government ID to screen (Inpex only)
<u>31385</u>	Reviewed Installation and Pulled dates for Casing/Liners and Production Strings (Santos only
<u>33094</u>	Updated Santos branding (Santos only)
<u>33099</u>	Configuration of map extents (Parex only)
<u>33090</u>	Configuration of map extents (SKK Migas only)
<u>33064</u>	Well Tests - Added support for Formation Integrity Tests (Origin only)
dbMa	ap/Web - General
<u>31425</u>	Well Tests - LET - Added support for CO2 and H2S values

армар/web - General		
<u>81425</u>	Well Tests - LET - Added support for CO2 and H2S values	
<u>72218</u>	Mapping - Can now display CMP, Vessel and Receiver seismic line coordinates	
<u>83080</u>	Well Tests - Fixed wrong test date being shown in Well RFT view	
<u>82934</u>	Audit history turned off for dbMap GIS tables to improve performance	
<u>82935</u>	Gas compositional analysis label updated	
<u>83071</u>	Mapping - Added support for WMS overlays	
<u>82933</u>	Performance improved when deleting dbMap GIS data	
<u>83059</u>	Upgraded third party libraries	
<u>81826</u>	Well Fracture stimulation data acquisition flag added	
<u>83025</u>	Well log browser performance improved	
<u>80660</u>	Well Sample Loader - Extended to support additional columns	

2 entries

Detailed Release Notes Summary dbMap/Web 2023.1.2

Bug Fixes

dbMap/Web - Client

83111 Checkshot survey spreadsheet loader - Now populates PPDM_GUID column used by CQ

Well Tests - MPLT records with hidden station data can be deleted (Santos only)

Petrosys Release dbMap/Web 2023.1.2

Detailed Release Notes

dbMap/Web - Client

Enhancements

Fixed mutating trigger error when deleting a Permit (Santos only) 81502

For Santos only, attempting to delete a Permit would give a mutating trigger error. This has been fixed.

dbMap GIS spatialisation fixed (Santos only) 82170

For Santos only, if a dbMap GIS (culture) polygon had points edited manually or created on a map using PRO, the polygon would not appear in dbMap/Web. This has been fixed so that the spatial geometry is now automatically generated for such polygons.

Seismic Survey - Added Government ID to screen (Inpex only) 82772

Added a read only 'Government ID' field to the Seismic Survey header to show the Survey Alias with type 'GOVT_ID'.

Reviewed Installation and Pulled dates for Casing/Liners and Production Strings (Santos only)

The way conduit and production string dates are stores and reported in dbMap/Web has been changed to reflect feedback from Santos.

- > Casing/Liners Pulled date has been added to the list and screen. This is a new column that has been added to the database
- > Production String Installation date and pulled date have been added to the list and panel. These dates come from the linked conduit
- > Production String The existing 'Pulled date' field on this screen has been relabelled 'Pulled date (obsolete)'
- > Data migration The original migration populated the production string 'On production date' or 'On Injection date' and the 'Pulled date'. This data has now been migrated to the Casing/Liners Installation date and Pulled date.

Updated Santos branding (Santos only)

83094

Updated Santos branding to reflect recent corporate branding changes.

Configuration of map extents (Parex only)

83099

Configured map extents for Columbia and Arauca and removed irrelevant map extents.

83090 Configuration of map extents (SKK Migas only)

Configured map extent for Indonesia and removed irrelevant map extents.

Well Tests - Added support for Formation Integrity Tests (Origin only)

Added a screen and data loader for Formation Integrity Tests, including Leak-Off Test results.

dbMap/Web - Client

Bug Fixes

Checkshot survey spreadsheet loader - Now populates PPDM_GUID column used by CQ 83111

The checkshot data loader now populates a column (PPDM_GUID) when creating new checkshot surveys. This CQ data quality scoring expects the column to be populated and can show an error message if it is not.

Well Tests - MPLT records with hidden station data can be deleted (Santos only) 83032

Extended the "Wells / Well Test - MPLT" screen to include the deletion of flowing and shut-in station data when the MPLT test is deleted.

dbMap/Web - General

Enhancements

Well Tests - LET - Added support for CO2 and H2S values 81425

Support for storing CO2(%) and H2S(ppm) values has been added to the Well Tests/LET panel.

Mapping - Can now display CMP, Vessel and Receiver seismic line coordinates

2D seismic line coordinates can now be displayed on the map for CMP, Receiver and Vessel. Previously only Source coordinates could be displayed.

Well Tests - Fixed wrong test date being shown in Well RFT view 83080

The well test RFT database view PS_WT_WIRELINE_FMTN_TEST has been fixed to show the correct test date.

Audit history turned off for dbMap GIS tables to improve performance 82934

Audit history has been turned off for dbMap GIS tables to help with performance issues when loading data.

Gas compositional analysis label updated 82935

The Coal core analysis/Gas composition analysis label has been changed to "Measured gas (Q1+Q2, Raw) at time"

Mapping - Added support for WMS overlays 83071

Added support to display overlays on the map from an other WMS sources.

Performance improved when deleting dbMap GIS data 82933

Performance has been improved when deleting dbMap GIS data, by the addition of indexes on database tables with foreign key references to the SPATIAL_DESCRIPTION table. The amount of improvement depends on how much data is in the referencing tables. e.g. it can be significant for clients that have a lot of RM data.

Upgraded third party libraries 83059

A number of third party libraries have been upgraded to include the latest security updates to resolve potential vulnerabilities.

Well Fracture stimulation data acquisition flag added81826

A new data acquisition flag for Fracture stimulation is now available on the Well header Acquisition tab.

Well log browser performance improved 83025

The performance of the Well log browser option has been improved. Previously it could take more a few minutes or even timeout when loading the lists, where it now takes a few seconds.

Well Sample Loader - Extended to support additional columns 80660
The Well Sample data loader has been extended to support the Remark, Formation, Seam, Date sample collected, Drillers depths, Lithology percent and Lithology remark columns.

Detailed Release Notes Summary dbMap/Web 2023.1.1

Enhancements

dbMap/Web - Client

Wells / Samples - Seam lookup changed to show coal reservoirs (Santos only)

dbMap/Web - General

82780 New CRS related dbMap SQL functions added

82962 Records Management dashboard - Charts added showing breakdown of disk space by Category, Digital format and

Source

Detailed Release Notes Summary dbMap/Web 2023.1.1

Bug Fixes

dbMap/Web - Administration

<u>82671</u> List of database users can be exported

dbMap/Web - General

82788 Well Directional Survey Points panel displayed correctly when directional survey header is changed

82782 Added survey projected CRS units to the directional survey points screen

Petrosys Release dbMap/Web 2023.1.1

Detailed Release Notes

dbMap/Web - Administration

Bug Fixes

List of database users can be exported

82671

Fixed a bug preventing the list of database users from being exported to Excel.

<u>dbMap/Web - Client</u>

Enhancements

Wells / Samples - Seam lookup changed to show coal reservoirs (Santos only)

The Seam lookup on the "Wells / Sample" screen has been changed to show coal reservoirs.

dbMap/Web - General

Enhancements

New CRS related dbMap SQL functions added

82780

The following four new Coordinate Reference System (CRS) related functions have been made available in dbMap/Web:

- > ps_well_closest_tm_proj_crs (UWI) Returns the closest Transverse Mercator projected CRS for a well based on the it's surface location and geographic CRS
- ps_well_path_proj_crs (UWI) Returns well path projected CRS (if assigned)
- > ps crs name (CRS ID) Returns a CRS name
- > ps_proj_crs_uom (CRS_ID) Returns a projected CRS unit of measure

Records Management dashboard - Charts added showing breakdown of disk space by Category, Digital format and Source⁸²⁹⁶²

The Records Management dashboard has been extended to include charts to show a breakdown of disk space used by different categories and formats of data.

dbMap/Web - General

Bug Fixes

Well Directional Survey Points panel displayed correctly when directional survey header is changed 82788

Fixed a bug causing cached information to be displayed if the Directional Survey header was changed while the Directional Survey Points screen was open.

Added survey projected CRS units to the directional survey points screen

82782

The directional survey projected CRS units are now displayed on the directional survey points panel. These units apply to the read-only Adjusted X/Y offset values.

Detailed Release Notes Summary dbMap/Web 2023.1

Enhancements

Config	uration - Licensing
<u>32402</u>	dbMap/Web 2023.1 licensing - New license file required
dbMap	p/Web - Administration
30912 31009	dbMap/Web infrastructure changes for 2023.1 Geoserver upgraded in dbMap/Web 2023.1
dbMap	p/Web - Client
32171 31491 32589 32662	Conduits linked to production are now visible on Casing/Liners screen (Santos) Isolation pull date added to completions / isolations screen (Santos) Data loaders - Custom template added for the Well Tests (Origin) Well log cron process - Now populates the well log curve mnemonic description (Origin)
dbMap	p/Web - General
77892 31870 79375 31426	Mapping - Can now display bottom hole locations and well paths Performance improvement for CQ data Mapping - Well name annotation excludes the well number column Installation date on Casing screen has been renamed
32274 32447 30593 32643	Adsorption Isotherm - "Isotherm reservoir pressure eqn:M" is now shown to 4 decimal places Data loader - Well Directional Survey - Support added for Survey Projected CRS Directional surveys - Added support for using Projected CRS as an alternative for Correction to True north New dbMap SQL functions have been added - ps_well_path_crs_x & ps_well_path_crs_y
32173 31252 32262	Reference table editing now available for R_STRAT_NAME_SET_TYPE Seismic viewer available in dbMap/Web Well Activities data screen now available for all PPDM 3.8 clients
32182 32445	Well Alias Loader - Now supports matching by UWI, Source and Well Alias ID Well directional survey screen changes

Detailed Release Notes Summary dbMap/Web 2023.1

Bug Fixes

dbMap/\	Web -	- Client
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- 82730 Capricorn well header importer - Error referencing 'ONLINE_STATUS' <u>81575</u> Obligations - Screen changes (Origin) <u>81565</u> Well Header - Incorrect operating status displayed (Santos) <u>82554</u> Well list no longer shows duplicate rows if the country or state is UNKNOWN (SKKMigas only) dbMap/Web - General 82379 Production Charts - Null Pointer Exception if a Well Test record has a null Test Date 81701 Correct gas rates are now displayed on multi-well production chart 81936 Records Management - A Null Pointer Exception could occur when reading Microsoft document metadata 82551 Charting now works for the GIS Feature list attributes screen 82704 Data loader - MPLT template units for Gas rate has been fixed
- Records Management Office document preview performance has been improved Well log viewer: Improved LAS 2.0 support
- Well Tests Fixed wrong test date being shown in Well Gradient survey views
 Wells / Obligations screen now works on all supported versions of Oracle
- Wells / Wells Logs Panel sometimes displays incorrect data if there are multiple source records for the same WELL_LOG_ID

Petrosys Release dbMap/Web 2023.1

Detailed Release Notes

Configuration - Licensing Enhancements

dbMap/Web 2023.1 licensing - New license file required

To use dbMap/Web 2023.1, a new license file is required. Acquire your license file by logging in to the Petrosys Client Portal or reaching out to Petrosys Support.

dbMap/Web - Administration Enhancements

dbMap/Web infrastructure changes for 2023.1 80912

There are some changes to how dbMap/Web is deployed on the server. Key changes are:

- > Java version 17 now required on the server machine (not needed on end-user machines)
- > Deployment on the server as a Java application; Apache Tomcat installation no longer required.
- > Discontinuation of support for Internet Explorer 11.
- > Updated libraries for the latest security enhancements and fixes.

More details on installing and upgrading are available in the installation guide.

Geoserver upgraded in dbMap/Web 2023.1

A new version of GeoServer is being deployed alongside the 2023.1 release of dbMap/Web. See the installation guide for details on deploying.

dbMap/Web - Client

Enhancements

Conduits linked to production are now visible on Casing/Liners screen (Santos)

Previously, conduits that are linked to production were not displayed on the Casing/Liners screen for Santos. All conduits are now available.

Isolation pull date added to completions / isolations screen (Santos)

81009

Isolation pull date field is now available on the completions / isolations screen for Santos.

Data loaders - Custom template added for the Well Tests (Origin)

The well test data loader has been customized for Origin.

Well log cron process - Now populates the well log curve mnemonic description (Origin)

The well log cron process at Origin has been updated to populate the well log curve mnemonic description.

dbMap/Web - Client

Bug Fixes

Capricorn well header importer - Error referencing 'ONLINE_STATUS'

82730

The well header data loader previously could display an error message referencing 'ONLINE_STATUS' for client Capricorn. This has been fixed.

Obligations - Screen changes (Origin)

81575

There have been several changes made to the Wells/Obligations screen for Origin:

- > Some fields that are set programmatically have been made read only.
- ➤ Obligation ACTIVE_IND is now editable on the Obligations reference screen.

Well Header - Incorrect operating status displayed (Santos) 81565

The latest operating status is now displayed on the well header screen for Santos. Previously it was displaying the oldest status.

Well list no longer shows duplicate rows if the country or state is UNKNOWN (SKKMigas only) 82554

For SKKMigas only, the well list would show duplicate rows if a well had a country or state that was UNKNOWN. This has been fixed.

dbMap/Web - General

Enhancements

Mapping - Can now display bottom hole locations and well paths

77892

Well bottom hole locations and well paths can now be displayed on the map.

Performance improvement for CQ data

81870

The performance of CQ (Our data Confidence and Quality module) has been improved by addition of a new index to the database.

Mapping - Well name annotation excludes the well number column 79375

Annotation on the map Wells layer has been changed to only show the well name.

Installation date on Casing screen has been renamed 81426

The field that was previously called observation date has been renamed to installation date to make its purpose clearer.

Adsorption Isotherm - "Isotherm reservoir pressure eqn:M" is now shown to 4 decimal places

On the Adsorption Isotherm screen, "Isotherm reservoir pressure eqn:M" is now shown to 4 decimal places.

Data loader - Well Directional Survey - Support added for Survey Projected CRS 82447

When importing directional surveys using the spreadsheet loader we now support the Survey Projected CRS column.

Directional surveys - Added support for using Projected CRS as an alternative for Correction to True north 80593

Well Directional surveys now have support for storing a projected CRS. This will be used for surveys that have azimuths relative to Grid north to compute the Grid convergence angle on the fly, avoiding the need to store a Correction to True north angle with the survey. It can also be used to store the projected CRS for positional log surveys from data sources where the X/Y offsets have been computed for that CRS.

Note: This requires the database upgrade associated with the release to be run. From the database point of view the changes include the addition of AZIMUTH_COORD_SYS_ID column to the WELL_DIR_SRVY table from PPDM3.9 to store the projected CRS ID, along with some updates to the precision and scale of several columns in the WELL_DIR_SRVY and WELL_DIR_SRVY STATION tables to match PPDM3.9.

New dbMap SQL functions have been added - ps_well_path_crs_x & ps_well_path_crs_y 82643

Two new functions have been made available within dbMap/Web for calculating the Easting and Northing locations of a depth along a well path - ps_well_path_crs_x & ps_well_path_crs_y.

Both functions have 3 mandatory arguments: UWI, Measured depth & Target CRS.

There are also optional arguments for specifying the number of decimal places for the result, and to provide the Source and SurveyID if you want to perform the calculation using a non-preferred directional survey.

Reference table editing now available for R_STRAT_NAME_SET_TYPE 82173

It is now possible to edit values for the reference table R_STRAT_NAME_SET_TYPE.

Seismic viewer available in dbMap/Web

81252

dbMap/Web now contains a seismic viewer for previewing seismic data from SEGY files catalogued in Records Management. It provides a 3D view of inlines and xlines as well as EBCDIC header and Trace header information. More information and screenshots are available in the release notes highlights section.

Well Activities data screen now available for all PPDM 3.8 clients 82262

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The Well Activities data screen is now available for all PPDM 3.8 clients.

Well Alias Loader - Now supports matching by UWI, Source and Well Alias ID 82182

The well alias data loader now supports an additional way of matching records. It will now also look for a match on the combination of UWI, Source and Well Alias ID if provided.

Well directional survey screen changes

82445

Several changes have been made to the directional survey screens to display more information.

Survey header:

> A projected CRS field is now available that can be used for grid convergence angle calculations.

Survey points - Additional columns have been added to the list and panel:

- Adjusted X Offset computed on fly, taking the curvature of the earth into consideration, if a projected CRS is stored on the survey header
- Adjusted Y Offset computed on fly, taking the curvature of the earth into consideration, if a projected CRS is stored on the survey header
- > Easting computed on the fly if a projected CRS is stored on the survey header
- Northing computed on the fly if a projected CRS is stored on the survey header
- > Latitude Will only contain a value if the X/Y offsets have been computed using Petrosys PRO
- > Longitude Will only contain a value if the X/Y offsets have been computed using Petrosys PRO

Bug Fixes

Production Charts - Null Pointer Exception if a Well Test record has a null Test Date 82379

Well production charts can also include some information from well tests. If one for more of the well tests for the charted well had a null Test Date, it could result in a Null Pointer Exception error message being displayed. This has been fixed.

Correct gas rates are now displayed on multi-well production chart 81701

When displaying multiple wells on a production chart the gas rates shown could be incorrect if some months did not contain data. This has been fixed so the gas rates shown are correct.

Records Management - A Null Pointer Exception could occur when reading Microsoft document metadata 81936

In Records Management, we display some additional meta data on the panel that we extract from office documents (XLS, etc). Depending on the content of a file, this could result in a Null Pointer Exception error message being displayed. This has been fixed.

Charting now works for the GIS Feature list attributes screen 82551

The charting tool now functions correctly when launched from the GIS Features list attributes screen, resolving the previous Null Pointer Exception issue.

Data loader - MPLT template units for Gas rate has been fixed 82704

The data loading template for MPLT data had incorrect units for Gas rate. This has been fixed to use the Gas Flow units.

Records Management - Office document preview performance has been improved 82612

Performance of previewing office documents such as DOCX, XLSX, etc has been improved. The first preview after server startup remains the same in terms of duration, but previewing subsequent documents is faster. The performance of previewing when the server is hosted on windows is now similar to performance when hosted on Linux.

Well log viewer: Improved LAS 2.0 support 82676

Improvements have been made to the LAS 2.0 file parser used by the well log viewer to handle extra characters on parameter (~P) and curve (~C) header rows. Optionally, the well log viewer can be made more tolerant of comment lines being placed in the data (~A) section.

Well Tests - Fixed wrong test date being shown in Well Gradient survey views

The dbMap PPDM3.8 database views PS_WT_GRADIENT_SURVEY_HEADER and PS_WT_GRADIENT_SURVEY_DETAIL now return the correct values in the TEST_DATE column. Previously they would return null values for new data that was created on the well test Gradient survey screen or imported via the data loader.

Wells / Obligations screen now works on all supported versions of Oracle

The Wells/Obligations screen previously generated an error with certain Oracle versions due to an incompatible query. This has been fixed so queries used are valid for all supported versions of Oracle.

Wells / Wells Logs - Panel sometimes displays incorrect data if there are multiple source records for the same WELL LOG ID⁸¹⁹²⁸

On the well log panel, the correct data is now displayed for the relevant source if there are multiple records for the same well and WELL_LOG_ID from different sources.