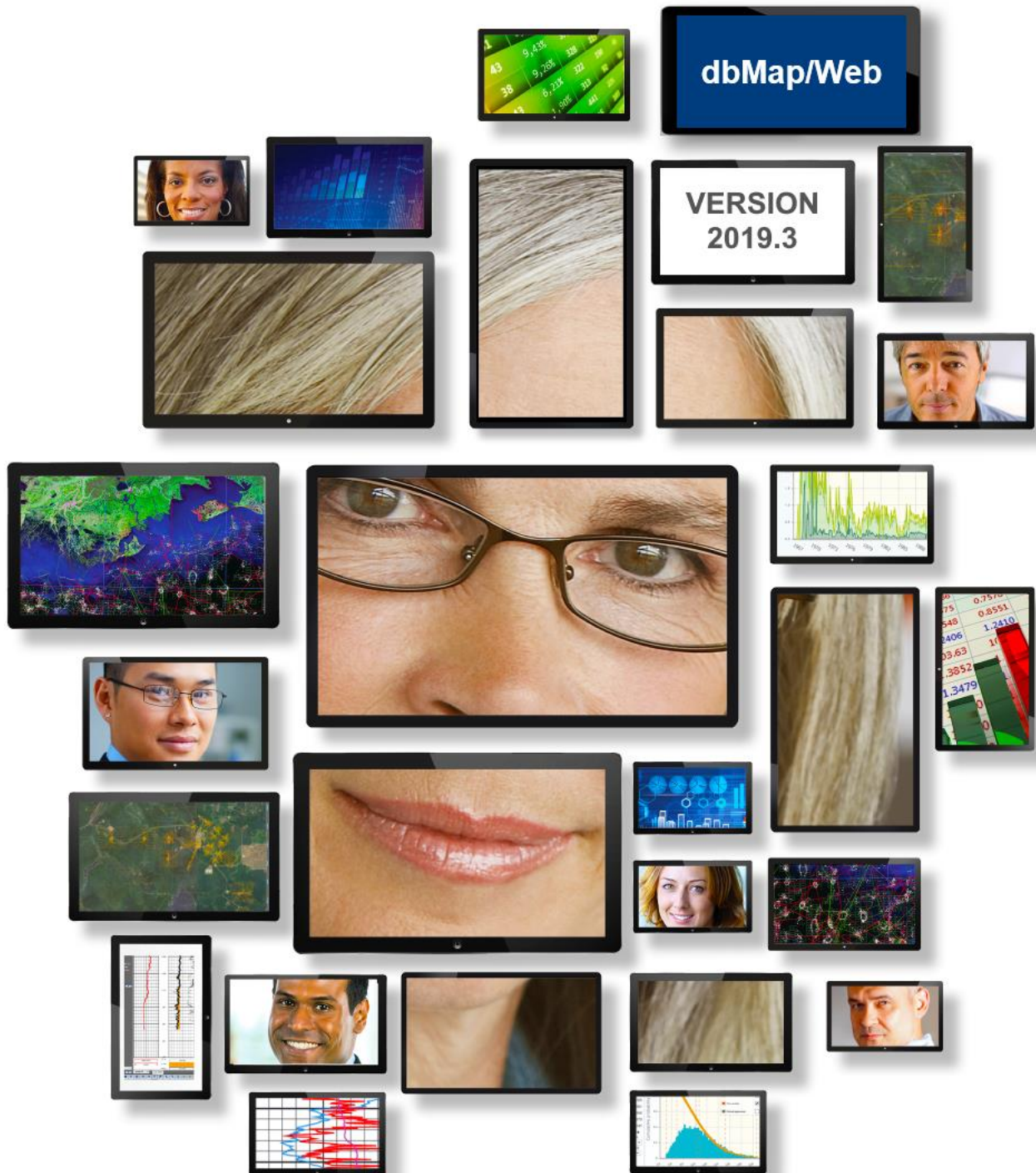


SOFTWARE RELEASE NOTES

dbMap/Web Version 2019.3.2



Overview

dbMap/Web 2019.3 introduces two significant enhancements to PLDB as well as enhancements and bug fixes to the wider product.

PLDB Discovered Resources

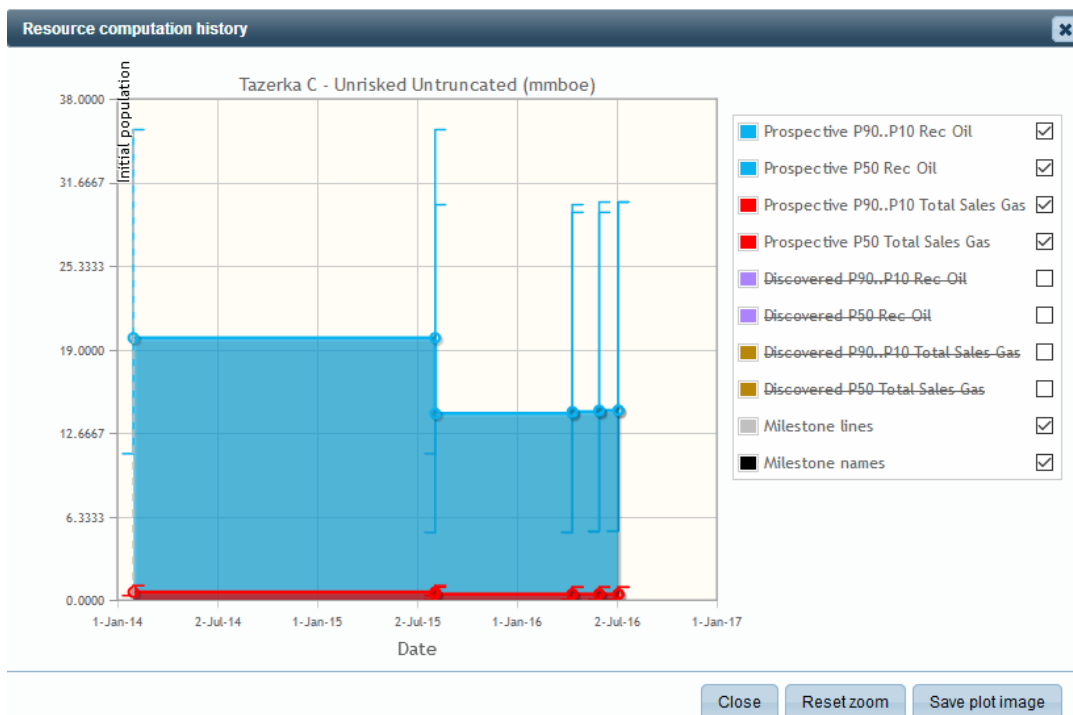
PLDB had existing support for Prospective, Contingent and Reserves resource computations. This release adds support for Discovered resources which are part of the Society of Petroleum Engineers PRMS standard. Key functionality includes:

- A new Discovered resource computation dialog for targets, which supports copying from Prospective resources.
- Separate Prospect level roll-up of Discovered resources for primary targets, which is visible in the Prospect chronology list and new Prospect Milestone list or via the Prospect summary report.
- As they are stored separately, Discovered resources are not included in aggregation/enrolment of Exploration resources performed during automated roll-up, reporting, dashboarding, or on-demand roll-up.
- Discovered resources are only able to be created once a target status has been classified as proven successful.

PLDB Chronology enhancements

The existing Prospect Chronology screen has been enhanced and the introduction of Milestones gives a clearer picture of the key changes to a Prospect's resources over time. Some of the key functionality include:

- Milestones can be defined as special types of events, and the list is customisable by clients.
- Prospect Chronology only shows key milestones by default, but full details of incremental changes and other prospect, portfolio, target and drilling opportunity events can be shown on request.
- The Prospect and dashboard tree filters have been expanded to support seamless search & find based on milestone, and the Prospect header dialog displays the current milestone.
- The Prospect Header dialog lists all key milestones to allow easy viewing without having to drill-down through the Prospect Chronology dialog.
- A Prospect level resource summary chart has been added to show how the Prospective resource estimates have changed over time, along with the milestones and Discovered resources.



Highlight features introduced in 2019.2

Overview

dbMap/Web 2019.2 sees the introduction of new Well Core Analysis functionality as well as further enhancements to the Petrosys Well Log Viewer with the addition of templates, display of formation tops and cross-plots.

Well Core Coal Analysis

Support for storing detailed information has been added for Samples and several analysis types: Adsorption isotherm, Desorption, Gas composition, Isotope, Petrology, Proximate, Rock evaluation, Rock mechanics and Ultimate.

In addition to Data management functionality such as import, creation of new records, editing existing records and deleting, there are also many calculations automatically performed on screens including ratios and summing of values.

The functionality has been developed on top of the PPDM 3.9 Sample Analysis module and the attributes for each analysis type can be tailored by clients.

A subset of the analysis screens is shown below.

Adsorption Isotherm Analysis

Isotherm Pressure Region	Isotherm BHT temp	1.000 degC
Isotherm Reservoir Pressure Eqn:M	Isotherm BHT depth (KB MD)	1300.000 m
Isotherm Reservoir Pressure Eqn:C	Time since circulation stopped	2.000 hr

Methane (CH₄) Isotherm

Sample mass	1104.000 g	Isotherm moisture & ash type	Air Dried
Isotherm helium grain density	1.000 g/cm ³	Isotherm Langmuir volume raw	6.000 cm ³ /g
Isotherm moisture	2.000 %	Isotherm Langmuir volume DAF	7.000 cm ³ /g
Isotherm ash	3.000 %	Isotherm Langmuir pressure	8.000 MPa
Isotherm volatiles	4.000 %	Isotherm experimental temperature	9.000 degC
Isotherm fixed carbon	5.000 %	Isotherm remarks	Methane results

Ethane (C₂H₆) Isotherm

Desorption Analysis

Desorption problem?	Y
Problem description	Test problem

Express lab issues	Yes	Lost gas	40.000 %
Sorption time	1.000 hr	Diffusivity	7.000 1e6/s
Q1 raw	2.000 m ³ t	Q1 DAF	8.000 m ³ t
Q2 raw	3.000 m ³ t	Q2 DAF	9.000 m ³ t
Q3 raw	4.000 m ³ t	Qt DAF	10.000 m ³ t
Qt raw	5.000 m ³ t	Q3 DAF	11.000 m ³ t
Reservoir test temperature	6.000 degC		

Remark: Place holder additional information

Gas Composition Air Free Analysis

Sample A Analysis			Sample B Analysis		
Sample ID	First sample		Sample ID		
Time sample taken		0.250 day	Time sample taken		day
Desorbed gas (Q1+Q2, Raw) at time		1.000 m3/t	Desorbed gas (Q1+Q2, Raw) at time		m3/t
C1		2.000 mol %	C1		mol %
C2		3.000 mol %	C2		mol %
C3		4.000 mol %	C3		mol %
iso C4		5.000 mol %	iso C4		mol %
n C4		6.000 mol %	n C4		mol %
neo C5		7.000 mol %	neo C5		mol %
iso C5		8.000 mol %	iso C5		mol %
n C5		9.000 mol %	n C5		mol %
C6		10.000 mol %	C6		mol %
CO2		11.000 mol %	CO2		mol %
N2		12.000 mol %	N2		mol %
Air		13.000 mol %	Air		mol %

Gas Isotope Analysis

Isotope Sample A Analysis			Isotope Sample B Analysis		
Sample ID	First sample		Sample ID	Second sample	
Date sample taken	31-May-2019		Date sample taken	31-May-2019	
Time sample taken		0.250 day	Time sample taken		0.500 day
Fluid type	Gas		Fluid type	Gas	
Fluid source	Desorption		Fluid source	Desorption	
delta13C CH4		1.000 ppt VPDB	delta13C CH4		1.000 ppt VPDB
delta13C C2H6		2.000 ppt VPDB	delta13C C2H6		2.000 ppt VPDB
delta13C C3H8		3.000 ppt VPDB	delta13C C3H8		3.000 ppt VPDB
delta13C i-C4H10		4.000 ppt VPDB	delta13C i-C4H10		4.000 ppt VPDB
delta13C n-C4H10		5.000 ppt VPDB	delta13C n-C4H10		5.000 ppt VPDB
delta13C neo-C5H12		6.000 ppt VPDB	delta13C neo-C5H12		6.000 ppt VPDB
delta13C i-C5H12		7.000 ppt VPDB	delta13C i-C5H12		7.000 ppt VPDB
delta13C n-C5H12		8.000 ppt VPDB	delta13C n-C5H12		8.000 ppt VPDB
delta13C C6H14		9.000 ppt VPDB	delta13C C6H14		9.000 ppt VPDB
delta13C CO2		10.000 ppt VPDB	delta13C CO2		10.000 ppt VPDB
delta DCH4		11.000 ppt VPDB	delta DCH4		11.000 ppt VPDB

Petrographic Analysis

Vro Max	1.000 %	Vro Random	5.000 %
Alginite Reflectance	2.000 %	VRE Alginite	6.000 %
Bitumen Reflectance	3.000 %	VRE Bitumen	7.000 %
Bituminite Reflectance	4.000 %	VRE Bituminite	8.000 %

Group	%	%mmf	Sub group	%	%mmf	Macerial	%	%mmf	Sub macerial	%	%mmf			
Vitrinite	1.000	2.000	Telovitrinite	10.000	12.000	Textinite	1.000	5.000						
						Texto-ulminite	2.000							
						Eu-ulminite	3.000	7.000						
						Telocollinite	4.000							
			Detrovitrinite	18.000	9.000	Attrinite	5.000							
						Densinite	6.000	9.000						
						Desmocollinite	7.000							
			Gelovitrinite	27.000	0.000	Corpogelinite	8.000							
						Porigelinite	9.000							
						Eugelinite	10.000							
Liptinite	3.000	4.000				Sporinite	11.000							
						Cutinite	12.000	20.000						
						Resinite	13.000							
						Liptodetrinite	14.000							
						Alginite	15.000					Telalginite	16.000	
						Suberinite	19.000					Lamalginite	17.000	8.000
												Fluorinite	20.000	
												Exsudatinitite	21.000	
						Bituminite	22.000					Non-fluorescing Alginite	18.000	
Inertinite	5.000	6.000	Telo-inertinite	72.000	0.000	Fusinite	23.000							
						Semifusinite	24.000							
						Funginite	25.000							
Detro-inertinite	53.000	0.000				Inertodetrinite	26.000							
						Micrinite	27.000							
						Gelo-inertinite	28.000							
Other / Non Plant Organic Matter						Macrinite	28.000							
						Zooclasts	29.000							
						Bitumen	30.000							
						Pyrobitumen	31.000							
Minerals						Organoclasts	32.000							
Mineral description														

Proximate Analysis

Relative density	1.000 g/cm ³	Volatle matter	4.000 %
Moisture	2.000 %	Fixed carbon	5.000 %
Ash	3.000 %	Proximate moisture & ash type	Equilibrium
Remark	Placeholder Proximate Analysis remark		

Rock Evaluation Analysis

Preparation method	Solvent Extracted	Sample lithology	Coal
Analysis method	Rock Eval 6 (Pyrolysis) / Leco (TOC)	Weight after acid wash	1104.000 g
TOC	1.000 wt %	HI [Hydrogen index]	300.000 mg/g/wt %
S1-volatile hydrocarbon content	2.000 mg/g	OI [Oxygen index]	400.000 mg/g/wt %
S2-HC generating Potential	3.000 mg/g	P1-production index	0.400
S3-organic CO2	4.000 mg/g	S1+S2 potential yield	5.000 mg/g
PC [Pyrolyzied carbon]	5.000 mg/g	S2 / S3	0.750
T max	6.000 degC	S1 *100 / TOC	200.000
Carbonate as CaCO3 equivalent	7.000 wt %	Interpreted kerogen type	Type IV
Drilling fluid	Mud		

Remark	Placeholder remark
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Rock Mechanics Analysis

Analysis type	As Received	Cohesion	8.000
Test condition	TBA	Plug orientation	Horizontal
Bulk density	1.000 g/cm3	Dynamic shear modulus	9.000 psi
Confining pressure	2.000 psi	Dynamic bulk modulus	10.000 psi
Compressive strength	3.000 psi	Dynamic Youngs modulus	11.000 psi
Static Youngs modulus	4.000 psi	Dynamic Poissons ratio	12.000
Static Poissons ratio	5.000	Ultrasonic wave velocity shear	13.000 ft/sec
Ultrasonic wave velocity compressional	6.000 ft/sec	Tensile strength	14.000 psi
Unconfined compressive strength (UCS)	7.000 psi	Effective mean stress (confining)	15.000 psi

Remark	Placeholder remark
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Ultimate Analysis

Sample preparation	Kerosene	Total sulfur	7.000 %
Carbon	1.000 %	Organic sulfur	8.000 %
Hydrogen	2.000 %	Inorganic sulfur	9.000 %
Nitrogen	3.000 %	Atomic H/C	23.833
Sulfur	4.000 %	Atomic O/C	3.753
Oxygen	5.000 %	Atomic S/C	1.498
Iron	6.000 %	Atomic N/C	2.572
		Atomic S(organic)/C	2.997

Remark	Placeholder remark
--------	--------------------

Well Log Viewer Enhancements

The new integrated well log viewer introduced in dbMap/Web 2019.1 has been further-improved, adding several new features:

Templates

Support for user-defined well log templates which incorporate track and curve layouts and styles. Once a well log view is configured, it can be saved as a template. Templates can be applied to any well log and provide a quick-and-easy method of displaying log curves with a consistent layout and style. Quickly switch between different views of your log data using templates.

Select a Template

Name	Description	Created By	Created Date
<input type="text"/>	<input type="text"/>	Default	<input type="text"/>
Quickview Induction	Quickview Induction Logs	Default	31/05/2019, 11:06:00
Quickview Sonic	Quickview Sonic Logs	Default	31/05/2019, 10:57:00
Quickview	Quickview	Default	31/05/2019, 11:11:00
Styles demonstration	Default template to demonstrate the various	Default	31/05/2019, 11:19:00

Template Details

Name: Styles demonstration

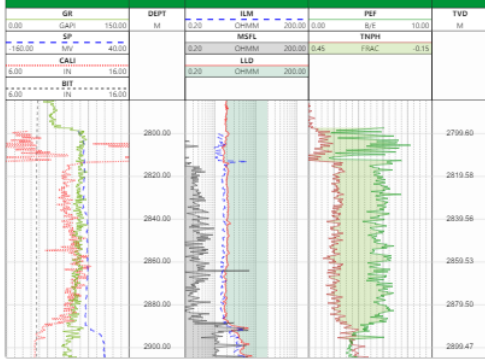
Description: Default template to demonstrate the various line and fill styles

Created by: Default

Created date: 31/05/2019, 11:19:00

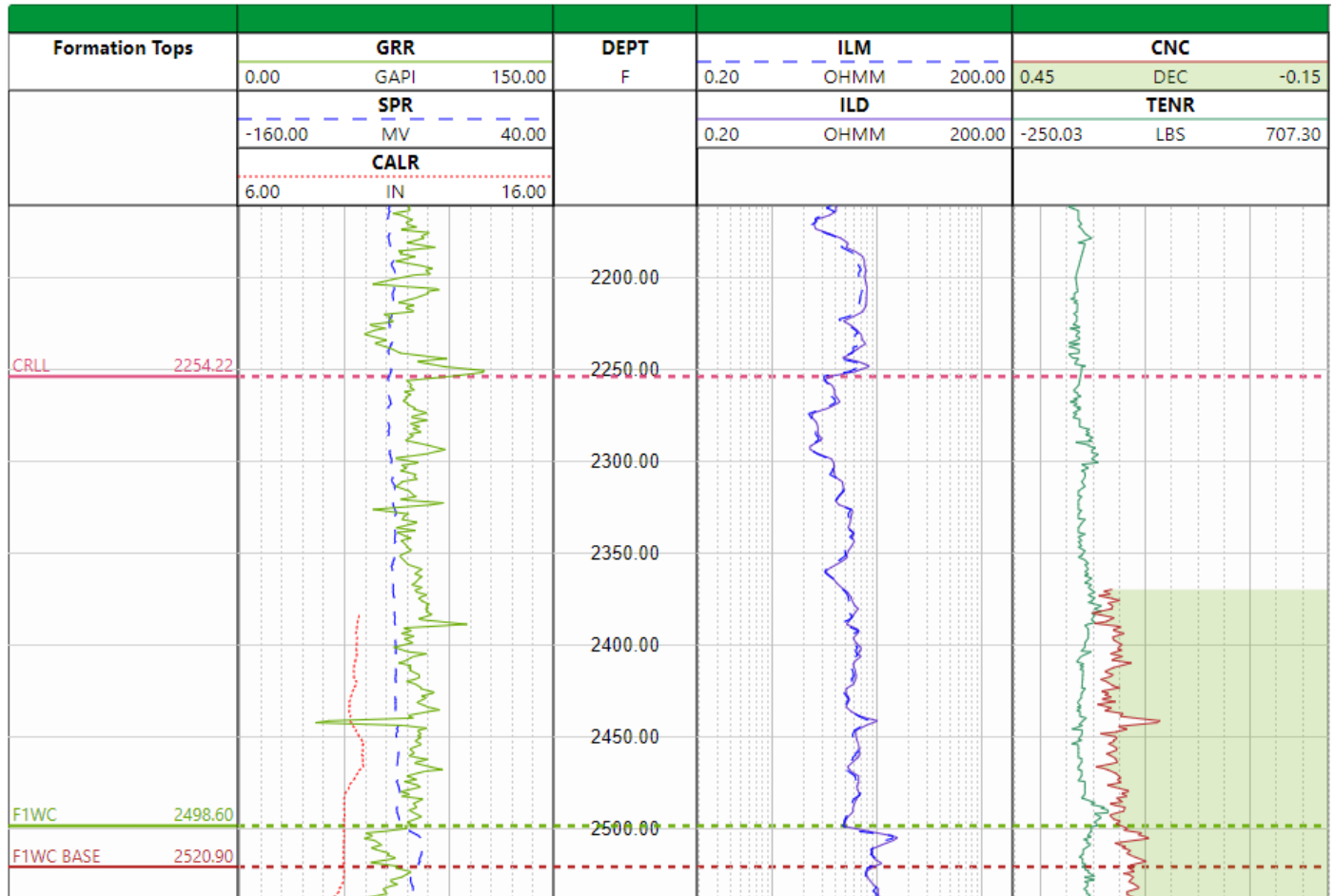
Log file: KupeSth5Log.las

Matches: BIT, CALI, SP, GR, DEPT, LLD, MSFL, ILM, TNPH, PEF, TVD



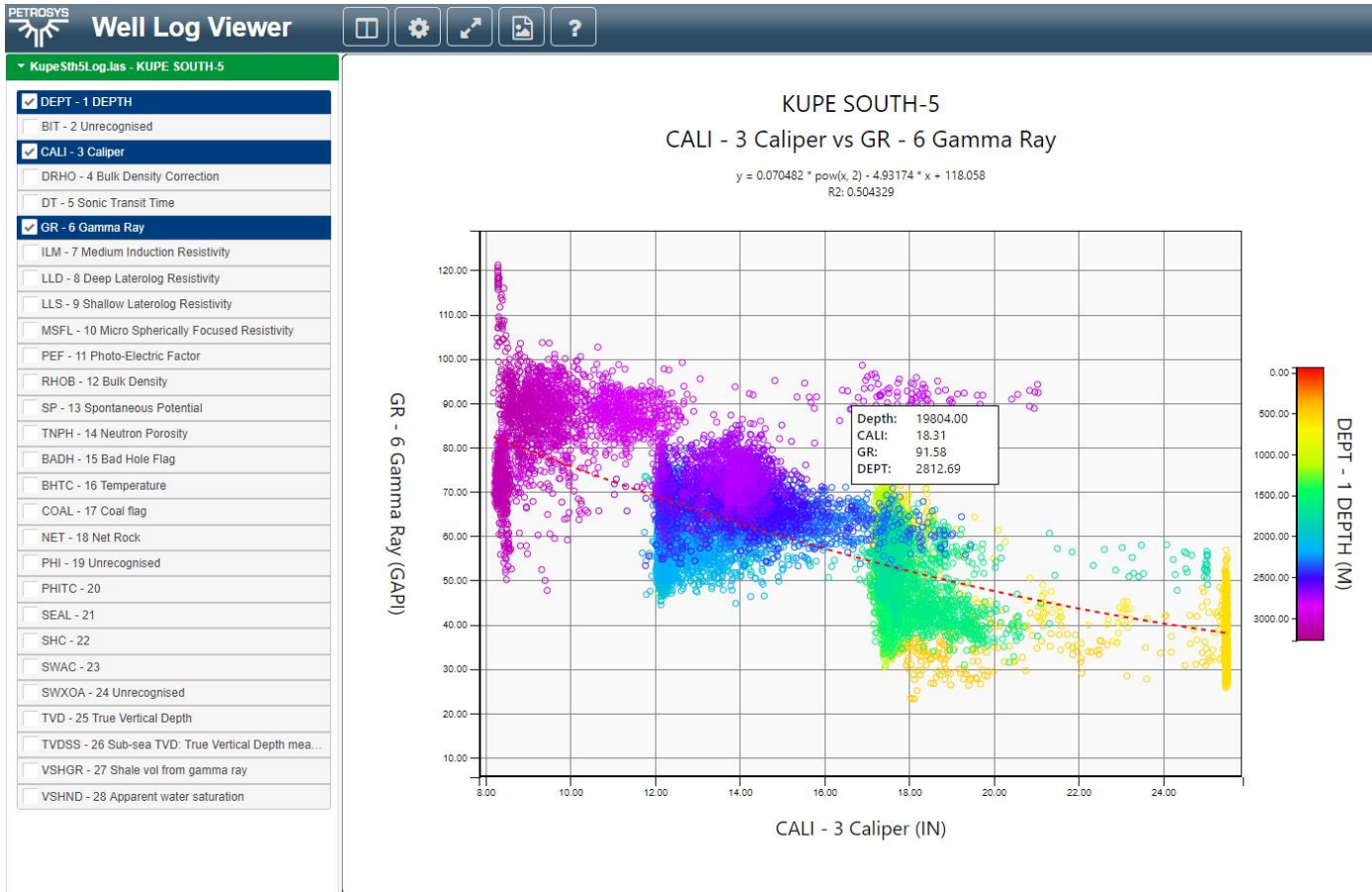
Formation Tops

Added support for displaying formation tops from the database in a separate track and optionally across all tracks.



Cross-plots

A new display mode has been added to show the well log data in a cross plot. The cross-plot mode supports customizable axes and line of best fit calculations.



Wrapping

Well log curve data can optionally be wrapped to show the extents of data spikes. Up to two levels of wrapped data can be displayed.

Other Enhancements

- Support for selecting from multiple frames of DLIS data.
- The Well Log Viewer composite and cross-plot displays can now be exported to a PNG image file with a single click.
- Reverse a curve's display range with a single click.

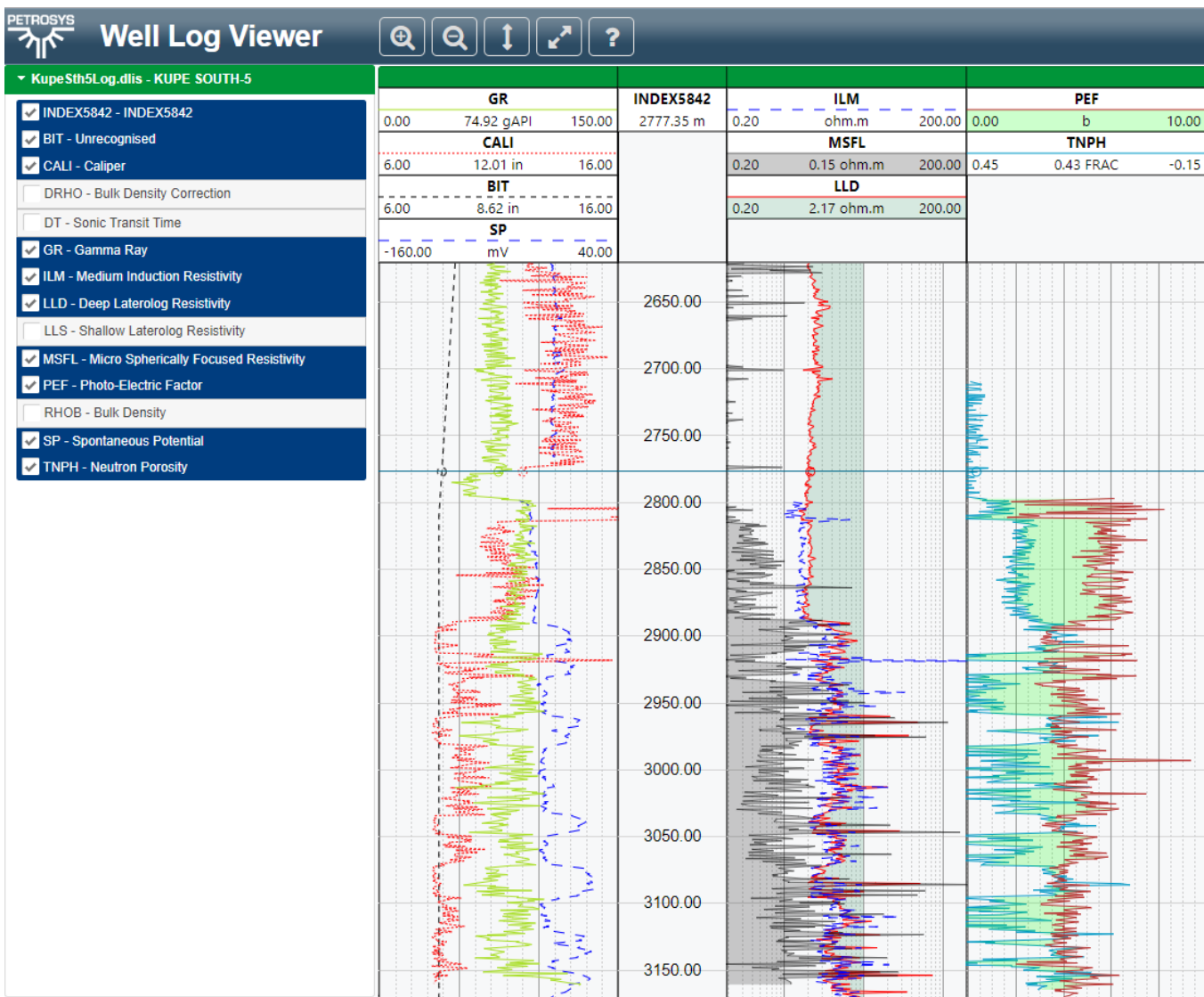
Highlight features introduced in 2019.1

Overview

dbMap/Web 2019.1 sees the introduction of the Petrosys Well Log Viewer as well as a Well Failure Analysis module and Common Risk Segments polygons support for PLDB.

Well Log Viewer

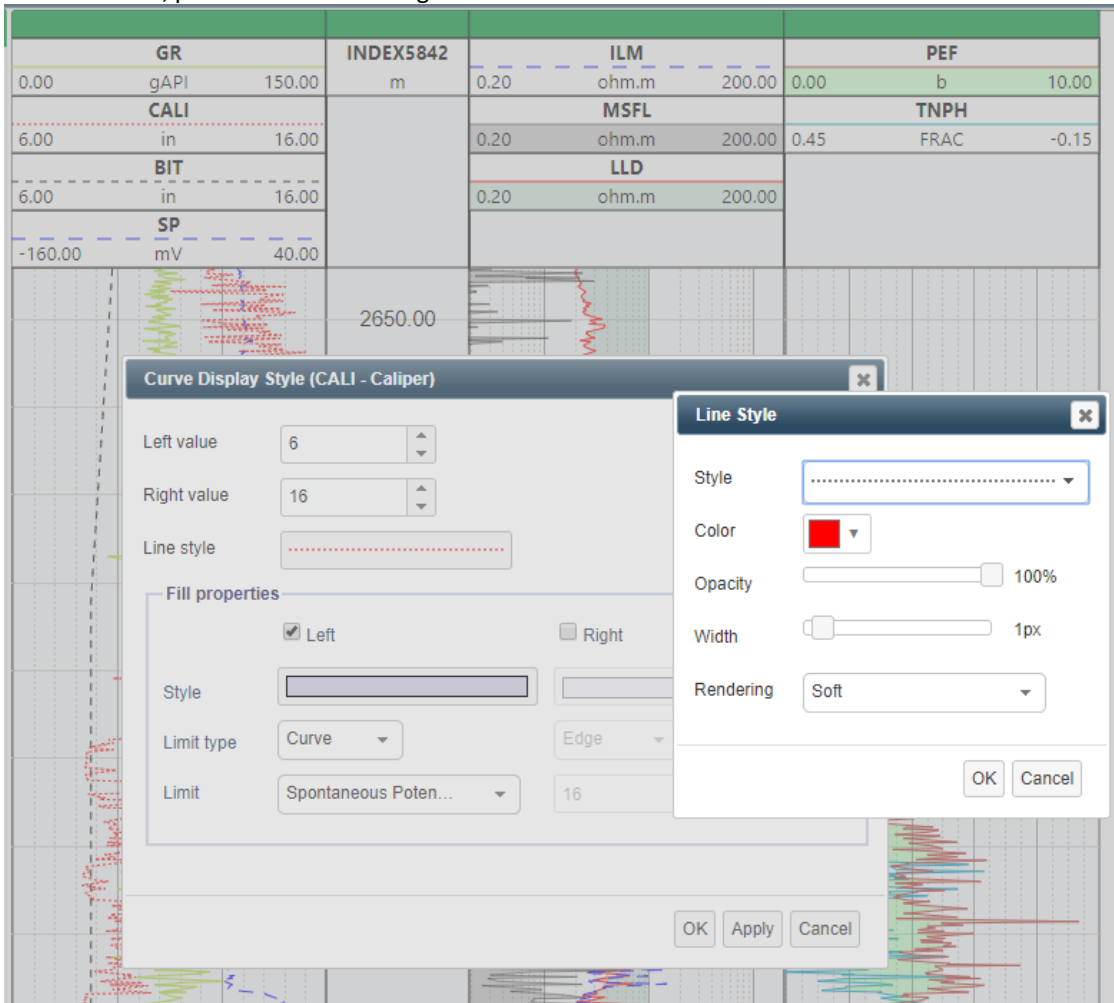
A new integrated well log viewer has been added to dbMap/Web which provides a quick and easy method to interactively view the well log curves within catalogued LAS and DLIS files.



The new well log viewer provides the following features:

- Support for catalogued LAS and DLIS files.
- Interactive display of multiple tracks.
- Interactive display of multiple curves per track.
- Linear and logarithmic track value scales.
- Modify curve line style (color, style, width, opacity).
- Modify curve left and right fill styles (color, opacity, fixed limit, fill between curves).
- Modify major and minor graticule display styles (color, style, width, opacity, frequency).
- Modify curve display range (left and right values).

- Interactively re-order tracks and curves using drag and drop.
- Zoom, pan and cursor tracking.



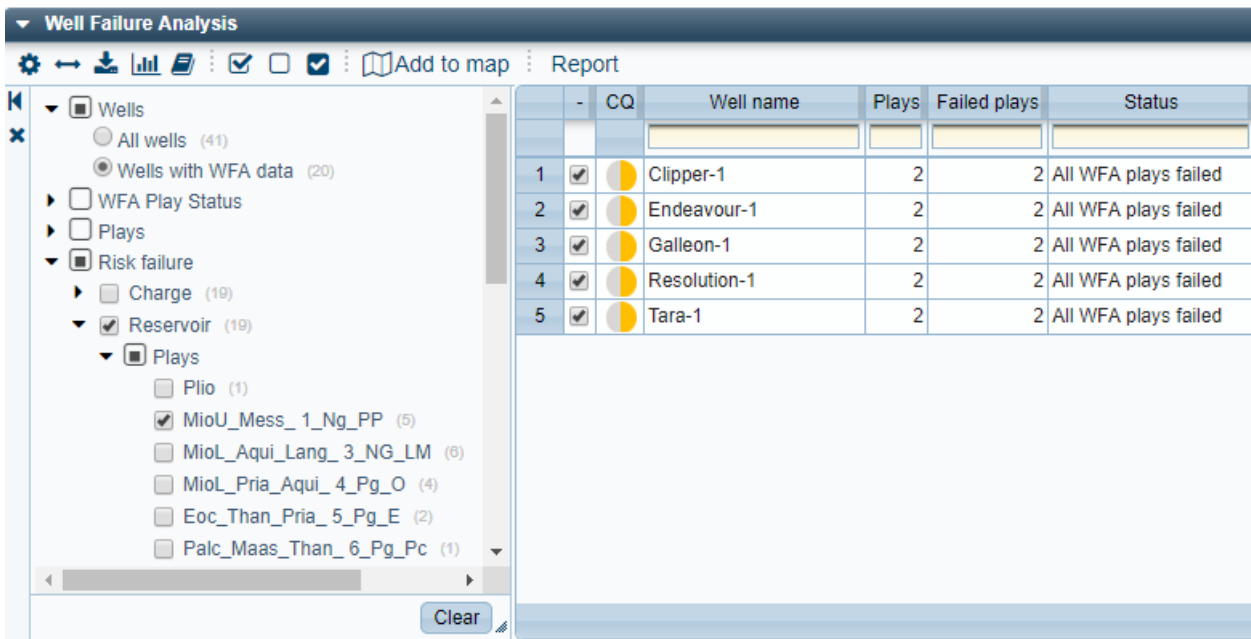
Note: A separate license is required to access the well log viewer. Please contact Petrosys support for more details.

Well Failure Analysis

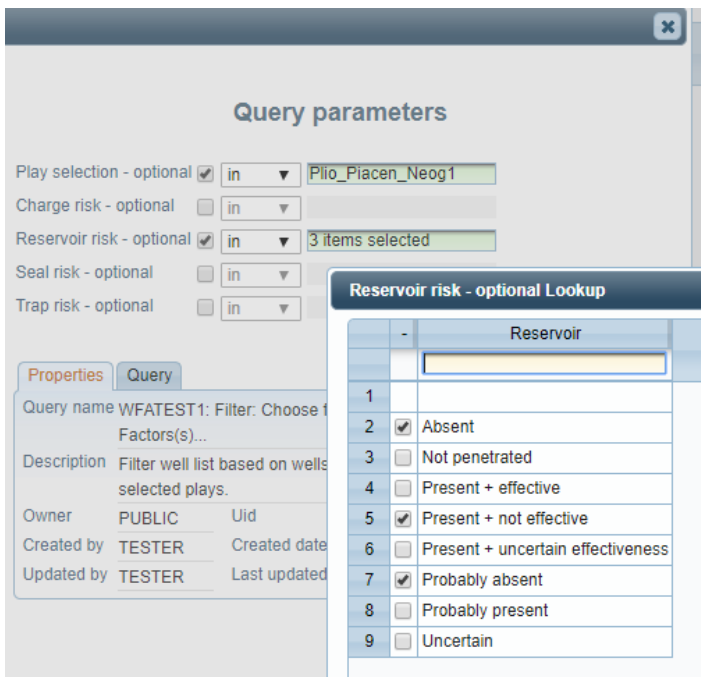
A new module to conduct ‘Well Failure Analysis’ is now available. This module allows companies to analyse data from existing wells to determine where plays have been successful and unsuccessful. The reasons for the failure in the unsuccessful plays can be queried and mapped, allowing better decisions or research to be conducted ahead of future wells.

Filters and Queries

Users can filter on specific play names and high level information about where success/failure exists and the reasons for this failure.



In addition, more detailed queries can be run, for example; to identify which wells within a given play(s) have failed due to a particular play element.



Source Analysis

If source data exist, this can be stored against the well to indicate maturity in a given area.

Well Summary **Source Analysis 1** Temperature 2 Pressure 1 Play Analysis 5

Source analysis : Kimmeridge, 152.1 Ma, Kimmeridgian, Kimmeridge Clay Fm, 200, 113, 5.6, 400, 0.6, Restricted Shallow Marine, API

⚙️ ↔️ 📄 📊 📈 + New Source analysis

	Source rock	Formation	Top age	Gross thickness	Net thickness	Average TOC	Hydrogen index	Maturity (VR)	Facies	Source
1	Kimmeridge	Kimmeridge C	152.1 Ma, Kimmeridgian	200	113	5.6	400	0.6	Restricted Shallow Marine	API

Temperature

Temperature measurements and calculated geothermal gradients can also be stored.

Well Summary Source Analysis **Temperature 2** Pressure 1 Play Analysis 5

Temperature : 3168, 93.1, , 42, GEOVIC

⚙️ ↔️ 📄 📊 📈 + New Temperature

	Depth	Temperature	Temperature (corrected)	Geothermal gradient	Source
1	3168	93.1		42	GEOVIC
2	4024	129.1		42	GEOVIC

Pressure

If pressure has been measured within encountered fluids, this too can be stored within the module

Well Summary Source Analysis Temperature 2 **Pressure 1** Play Analysis 5

Pressure : 3000, 3000.00045, Oil, GEOVIC

⚙️ ↔️ 📄 📊 📈 + New Pressure

	Depth	Pressure	Fluid type	Source
1	3000	3000.00045	Oil	GEOVIC

Play Analysis

One or more of the plays the well has penetrated can be analysed. The presence and effectiveness of charge, reservoir, seal and trap are stored. More detailed information about the play, such as lithology properties, are also captured.

Well Summary Source Analysis 1 Temperature 2 Pressure 1 **Play Analysis 5**

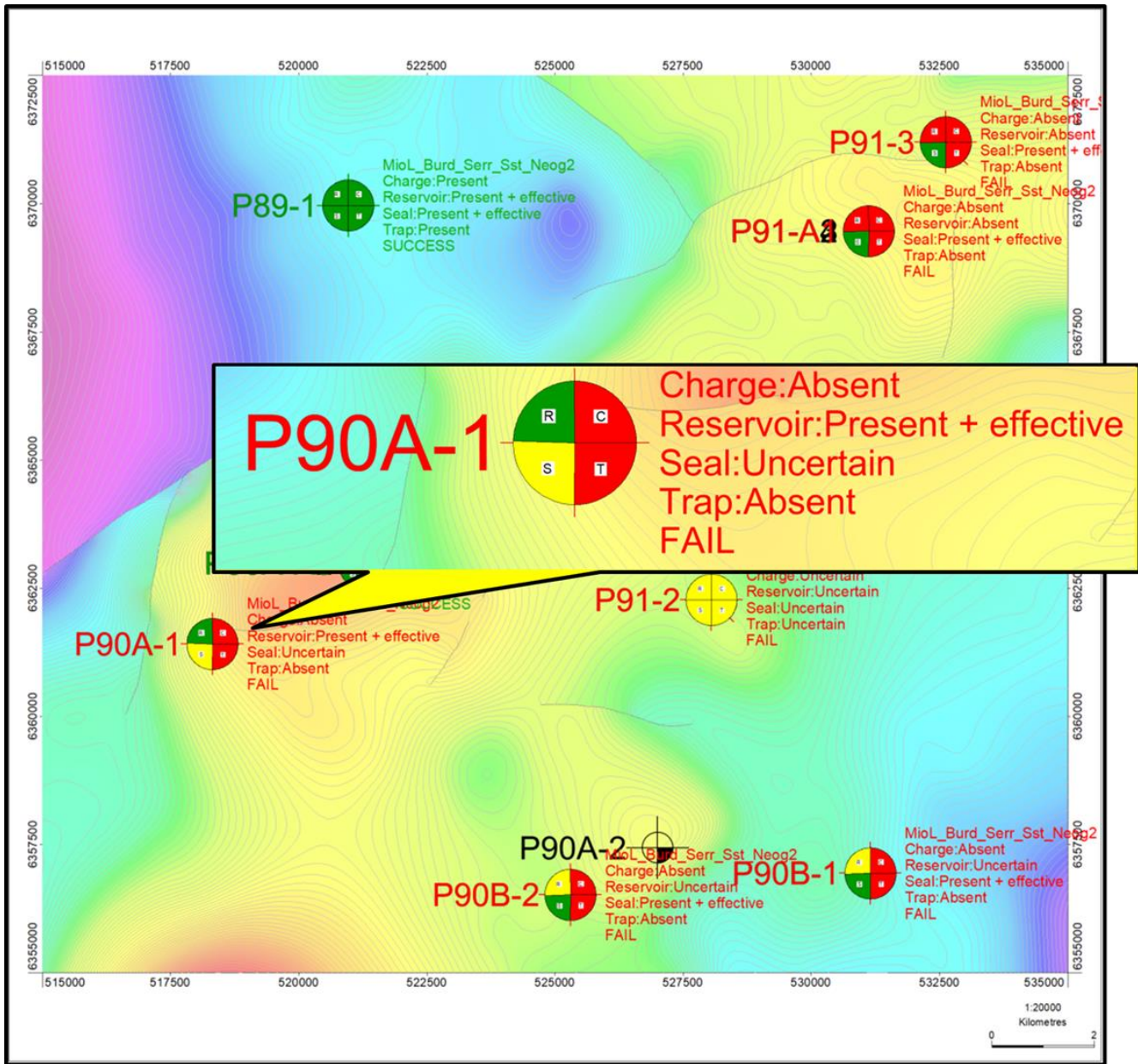
Play analysis : Plio_Piacen_Neog1 (Success)

⚙️ ↔️ 📄 📊 📈 + New Play analysis

	Play name	Series	Top age	Base age	Charge	Reservoir	Seal	Trap	F
1	Plio_Piacen_Neog1	Pliocene	2.6 Ma, Piacenzian		Present	Present + effective	Present + effective	Present	
2	MioL_Burd_Serr_Sst_Neog2	Lower Miocene	11.6 Ma, Serravallian	16 Ma, Burdigalian	Present	Present + effective	Present + effective	Present	
3	Eoc_Pria_Carb_Palg1	Eocene	33.9 Ma, Priabonian		Absent	Present + effective	Absent	Absent	
4	Eoc_Bart_Sst_Palg2	Eocene	37.8 Ma, Bartonian		Present	Uncertain	Present + effective	Absent	
5	Eoc_Lut_Sst_Palg3	Eocene	41.2 Ma, Lutetian		Present	Absent	Present + effective	Uncertain	

Well Failure Analysis in PRO

Stop-light style displays, incorporating success and failure analysis results for wells are now even more easily created inside Petrosys PRO. This capability makes it very easy to visualise and analyse risk spatially.



PDF Reporting


In addition to displaying the Well Failure data, it can also be analysed through the easy creation of PDF reports

REPORTwfa.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

Home Tools REPORTwfa.pdf x

71%



Well Failure Analysis

P89-1

Print Date: 28-MAR-2019

Play analysis 4:			
System:	Eocene	Target trap type:	
Top age:	37.8 Ma, Bartonian	Depositional environment:	
Base age:		Lithology:	Sandstone
Cairn play name:	Eoc_Bart_Sst_Palg2	HC shows:	
Formation member:		API:	
Top of reservoir prone interval bmsl (m):	3780	GOR:	
Base of reservoir prone interval bmsl (m):		Net reservoir:	-3780
Gross reservoir:		Porosity range:	
Charge:	Present	Average porosity:	
Reservoir:	Uncertain	Core:	No
Seal:	Present + effective	Tests:	No
Trap:	Absent		

Play analysis 5:			
System:	Eocene	Target trap type:	
Top age:	41.2 Ma, Lutetian	Depositional environment:	
Base age:		Lithology:	Sandstone
Cairn play name:	Eoc_Lut_Sst_Palg3	HC shows:	
Formation member:		API:	
Top of reservoir prone interval bmsl (m):	4120	GOR:	
Base of reservoir prone interval bmsl (m):		Net reservoir:	-4120
Gross reservoir:		Porosity range:	
Charge:	Present	Average porosity:	
Reservoir:	Absent	Core:	No
Seal:	Present + effective	Tests:	No
Trap:	Uncertain		

Source Analysis			
Source:	API	Source average TOC:	5.6
Source age:	152.1 Ma, Kimmeridgian	HI:	400
Source formation:	Kimmeridge Clay Fm	Source maturity:	0.6
Source gross thickness (m):	200	Source facies:	Restricted Shallow Marine
Source net thickness (m):	113	Mud type:	

Temperature Data	
Depth bmsl (m):	3168
Uncorrected temperature:	93.1
Corrected temperature:	
Geothermal gradient:	42

Temperature Data	
Depth bmsl (m):	4024
Uncorrected temperature:	129.1
Corrected temperature:	
Geothermal gradient:	42

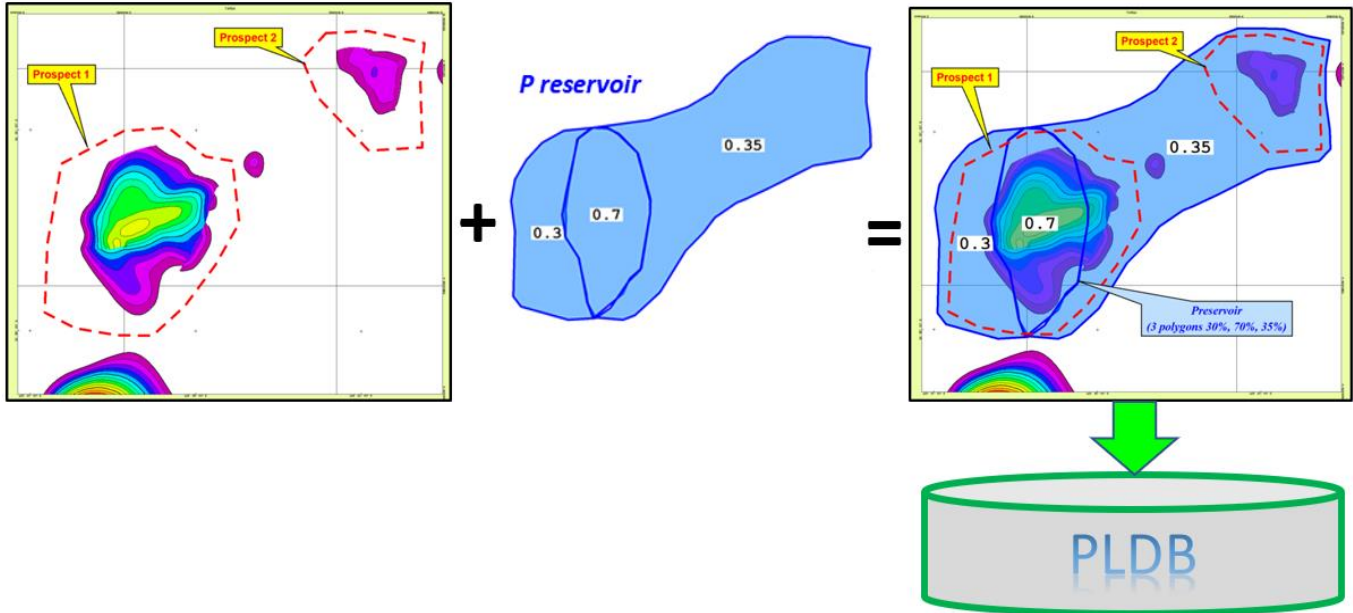
Pressure Data	
Depth bmsl (m):	3000
Pressure (psi):	3000.00045
Fluid type:	Oil
Data source:	GEOVIC
Data links:	
Comments:	

Prospects & Leads

Common Risk Segments

Petrosys Prospects & Leads module now supports storing Common Risk Segment (CRS) polygons against play interval chance factors and using spatial comparison with the Prospect or Target polygon to determine the appropriate Play chance factors to use in the resource computation.

The CRS polygons are expected to have an attribute defining the risk for each polygon, and can be loaded into the database using the Petrosys PRO Spatial Data Translator, from data sources such as shape files exported from GIS-PAX Player software.



Detailed Release Notes Summary dbMap/Web 2019.3.2

Bug Fixes

dbMap/Web - Client

[75674](#) PLDB - User access screen fixed (Santos)

[75602](#) PLDB - Fixed validation rule when setting prospect to 'Current' (Santos)

dbMap/Web - General

[75597](#) Mapping - Style attribute included when loading WMS base layers

Petrosys Release dbMap/Web 2019.3.2

Detailed Release Notes

dbMap/Web - Client

Bug Fixes

PLDB - User access screen fixed (Santos)

75674

Fixed an error on the "Admin / Security / Prospect & Leads / User access" screen for Santos

PLDB - Fixed validation rule when setting prospect to 'Current' (Santos)

75602

The validation rule that prevents the prospect status being set to current if a polygon does not exit has been fixed.

dbMap/Web - General

Bug Fixes

Mapping - Style attribute included when loading WMS base layers

75597

Fixed a bug preventing WMS base layers from being displayed due to the "STYLE" attribute not being included in the request for the layer.

Detailed Release Notes Summary dbMap/Web 2019.3.1

Enhancements

dbMap/Web - Client

- [74577](#) Updated LIMS database URL (Santos)
- [75261](#) Core Coal Analysis - Allow any well sample to be used as a sample group (Origin)
- [74634](#) Core Coal Analysis - Gas Composition analysis can be linked to any Adsorption Isotherm analysis for the well (Origin)
- [75437](#) Mapping - Added map extents (Santos)
- [75469](#) Mapping - Well name correctly displayed in annotations and list of selected features (Santos Data Hub)
- [74823](#) The Field, Well type and Config type are now read only on the Well Spec Card panel (Origin)
- [75551](#) Wells - Added custom fields (Santos Data Hub)
- [75359](#) Wells - Changed permit tree filter grouping (Origin)
- [74665](#) Wells - Rename Well numeric ID to GPinfo Well ID (Cooper)
- [75554](#) Wells / Completions - Added custom fields (Santos Data Hub)
- [74633](#) Wells / Core Samples - Formations and seams shown for any interpreter (Origin)

dbMap/Web - General

- [75468](#) Records Management - Allow preview of LAS files as an ASCII file
- [74960](#) Wells cross reference now supports filtering by a Records Management list
- [75527](#) Some additional well symbols have been added
- [74789](#) Well log viewer - Improved support for reading non-standard LAS files
- [74945](#) Well log viewer - Updated the browser tab title to show the log file name first
- [75553](#) Wells / Well Support Facilities - Added rig details to list

Detailed Release Notes Summary dbMap/Web 2019.3.1

Bug Fixes

dbMap/Web - Client

- [74746](#) The reference screen for Completion method now matches Petrosys PRO (Santos)
- [75301](#) Core Coal Analysis - Calculations executed when using data loaders (Origin)

dbMap/Web - General

- [74721](#) Well log viewer - Curve segments on a logarithmic scale are no longer linear
- [75425](#) Well log viewer - Fixed curve header tracking/units field obscured when using opaque fills
- [75389](#) Well log viewer - Improved DLIS reader to better handle index spacing errors
- [75061](#) Well log viewer - Templates now store formation tops tracks
- [75067](#) Wells / Core Samples - A copy of a Sample can now be created using the "Save as" button

dbMap/Web - PLDB

- [74988](#) PLDB - Basin name is shown on the prospect header even if no country is selected (Origin)
- [75307](#) PLDB - Fixed distribution plot for "Bo"
- [75498](#) PLDB - Correct gas units shown on the Prospect Milestones and Chronology screens
- [75087](#) PLDB - Employees with names longer than 15 characters can now have basins assigned

Petrosys Release dbMap/Web 2019.3.1

Detailed Release Notes

[dbMap/Web - Client](#) [Enhancements](#)

Updated LIMS database URL (Santos) 74577

The Santos Well LIMS database URL has been updated to point to the new server.

Core Coal Analysis - Allow any well sample to be used as a sample group (Origin) 75261

Changed selection of "Isotherm sample group" on the "Wells / Core Samples" panel to allow selection of any well sample.

Core Coal Analysis - Gas Composition analysis can be linked to any Adsorption Isotherm analysis for the well (Origin) 74634

Linking from a Gas Composition analysis to an Adsorption Isotherm analysis now includes any Adsorption Isotherm analysis for the same well.

Mapping - Added map extents (Santos) 75437

Added requested map extents to the standard and data hub Santos environments.

Mapping - Well name correctly displayed in annotations and list of selected features (Santos Data Hub) 75469

Annotations and the list of selected featured only displays the well name value for a well.

The Field, Well type and Config type are now read only on the Well Spec Card panel (Origin) 74823

Since the Field, Well type and Config type are read only in the database, they are now read only on the Well Spec Card panel.

Wells - Added custom fields (Santos Data Hub) 75551

Inclusion of additional fields on the Well Header for the Santos Data Hub environment.

Wells - Changed permit tree filter grouping (Origin) 75359

Changed the "Permit" filter on the "Wells" screen to allow easier selection of wells operated by Origin.

Wells - Rename Well numeric ID to GPinfo Well ID (Cooper) 74665

The Well numeric ID is now called GPinfo Well ID for Cooper.

Wells / Completions - Added custom fields (Santos Data Hub) 75554

Added fields to the "Wells / Completions" screen to show the "Average geothermal gradient" and "Surface temperature".

Wells / Core Samples - Formations and seams shown for any interpreter (Origin) 74633

The "Wells / Core Samples" screen has been updated to show related formation and seam information based on relates "Wells / Tops" from any interpreter.

The reference screen for Completion method now matches Petrosys PRO (Santos) 74746

The sort order, columns and location of inputs are now the same in dbMap/Web and Petrosys PRO

Core Coal Analysis - Calculations executed when using data loaders (Origin) 75301

Fixed a bug preventing calculations being executed when creating records using the Core Coal Analysis data loaders.

[dbMap/Web - General](#) [Enhancements](#)

Records Management - Allow preview of LAS files as an ASCII file 75468

LAS files stored in Records Management can now be previewed as plain text (ASCII) files.

Wells cross reference now supports filtering by a Records Management list 74960

It is now possible to create a list of wells based on a list of linked records management items.

Some additional well symbols have been added 75527

Some missing well symbols have been added to match Petrosys PRO

Well log viewer - Improved support for reading non-standard LAS files 74789

The LAS reader is now tolerant of non-standard LAS files containing blank lines. These can now be viewer in the Well Log Viewer.

Well log viewer - Updated the browser tab title to show the log file name first 74945

To improve visibility when multiple Well Log Viewer tabs are open, the browser tab titles now start with the name of the well log file, followed by the path.

Wells / Well Support Facilities - Added rig details to list 75553

The "Wells / Well Support Facilities" displays a generic list of facilities for the well. Additional columns have been added to the list to provide more information, when the facility is a rig.

Well log viewer - Curve segments on a logarithmic scale are no longer linear 74721

Previously, curve segments rendered on a logarithmic track were rendered on a linear scale between points. This caused minor mismatches between the tracking cursor and curve segment at high zoom levels. Now, both the tracking cursor and the line segments use a logarithmic scale.

Well log viewer - Fixed curve header tracking/units field obscured when using opaque fills

75425

Previously, the curve units and tracking information was obscured by the fill color shown in the curve header. When using opaque fills, the field was completely covered. This has now been fixed.

Well log viewer - Improved DLIS reader to better handle index spacing errors

75389

The DLIS reader used by the Well Log Viewer has been improved to support a larger range of DLIS files. Specifically those containing mismatching index spacing and range and those with non-uniform samples depths.

Well log viewer - Templates now store formation tops tracks

75061

Previously, formation tops tracks weren't saved to the template. Now, when you save a template containing formation tops, the track location and style is maintained.

Note: The formation tops selection is not stored in the template.

Wells / Core Samples - A copy of a Sample can now be created using the "Save as" button

75067

A bug preventing a sample record from being copied using the 'Save as..' button has been fixed.

dbMap/Web - PLDB

Bug Fixes

PLDB - Basin name is shown on the prospect header even if no country is selected (Origin)

74988

If no Country was selected for a prospect then the basin code was shown instead of the basin name. This has been fixed so the basin name shows with or without a country selected.

PLDB - Fixed distribution plot for "Bo"

75307

Fixed a bug preventing the distribution plot for variable "Bo" being displayed.

PLDB - Correct gas units shown on the Prospect Milestones and Chronology screens

75498

Fixed a bug causing incorrect units to be displayed for gas values on the "Milestones" tab on the prospect header, the "Prospect Chronology" list and the "Target Chronology" list. This was only an issue for clients that do not use BCF as the default gas unit.

PLDB - Employees with names longer than 15 characters can now have basins assigned

75087

A bug preventing users with names longer than 15 characters from being assigned basins has been fixed.

Detailed Release Notes Summary dbMap/Web 2019.3

Enhancements

dbMap/Web - General

- [74589](#) Well log viewer - Icon improvements
- [74235](#) Well log viewer - Resizeable tracks
- [74152](#) Well log viewer - Support for LAS v2.1

dbMap/Web - PLDB

- [73653](#) PLDB now supports Discovered Resources
- [73673](#) PLDB Chronology enhancements
- [74697](#) PLDB - Company interest is now included in the dashboard tree filter (Santos)

Detailed Release Notes Summary dbMap/Web 2019.3

Bug Fixes

dbMap/Web - General

- [74572](#) Core Coal Analysis - Cancelling creation of analysis records now works consistently
- [74560](#) Core Coal Analysis - New Gas compositions can now specify the linked Adsorption isotherm analysis as part of initial creation
- [74468](#) Core Coal Analysis - The counts on buttons under the Core sample panel are now updated when adding and deleting records

Petrosys Release dbMap/Web 2019.3

Detailed Release Notes

[dbMap/Web - General](#) [Enhancements](#)

Well log viewer - Icon improvements 74589

The icons for cross-plots and composite log charts have been updated to better represent the functionality,.

Well log viewer - Resizeable tracks 74235

The width of tracks can now be resized interactively in the Petrosys Well Log Viewer.

Well log viewer - Support for LAS v2.1 74152

LAS format version 2.1 is now supported for displaying in the Petrosys Well Log Viewer.

[dbMap/Web - General](#) [Bug Fixes](#)

Core Coal Analysis - Cancelling creation of analysis records now works consistently 74572

Pressing the Cancel button after starting to add a new sample analysis (Adsorption isotherm, Desorption etc..) would sometimes leave the panel in state where the new blank record remained on the screen. This has been fixed.

Core Coal Analysis - New Gas compositions can now specify the linked Adsorption isotherm analysis as part of initial creation 74560

You can now add a new gas composition and link it to an Analysis isotherm before clicking the Save button. Previously the gas composition had to be saved first before it could be linked to an Adsorption Isotherm.

Core Coal Analysis - The counts on buttons under the Core sample panel are now updated when adding and deleting records 74468

The count of Sample analysis records that is shown on the buttons below the Core sample panel are now correctly updated when new Sample analysis records are added or deleted.

[dbMap/Web - PLDB](#) [Enhancements](#)

PLDB now supports Discovered Resources 73653

PLDB had existing support for Prospective, Contingent and Reserves resource computations. This release adds support for Discovered resources which are part of the Society of Petroleum Engineers PRMS standard. Key functionality includes:

- A new Discovered resource computation dialog for targets, which supports copying from Prospective resources.
- Separate Prospect level roll-up of Discovered resources for primary targets, which is visible in the Prospect chronology list and new Prospect Milestone list or via the Prospect summary report.
- As they are stored separately, Discovered resources are not included in aggregation/enrollment of Exploration resources performed during automated roll-up, reporting, dashboarding, or on-demand roll-up.
- Discovered resources are only able to be created once a target status has been classified as proven successful.

PLDB Chronology enhancements

73673

The existing Prospect Chronology screen has been enhanced and the introduction of Milestones gives a clearer picture of the key changes to a Prospect's resources over time. Some of the key functionality include:

- Milestones can be defined as special types of events, and the list is customisable by clients.
- Prospect Chronology only shows key milestones by default, but full details of incremental changes and other prospect, portfolio, target and drilling opportunity events can be shown on request.
- The Prospect and dashboard tree filters have been expanded to support seamless search & find based on milestone, and the Prospect header dialog displays the current milestone.
- The Prospect Header dialog lists all key milestones to allow easy viewing without having to drill-down through the Prospect Chronology dialog.
- A Prospect level resource summary chart has been added to show how the Prospective resource estimates have changed over time, along with the milestones and Discovered resources.

PLDB - Company interest is now included in the dashboard tree filter (Santos)

74697

Prospects can now be filtered by whether a company has an interest in a prospect. (Santos only)

Detailed Release Notes Summary dbMap/Web 2019.2

Enhancements

dbMap/Web - Client

[74341](#) PLDB activated for Origin

dbMap/Web - General

[72863](#) Core Coal Analysis

[73476](#) Well Log Viewer - Enhancements

[74367](#) Well Perforation data loader extended to support additional columns

[74521](#) Well Failure Analysis - Enhancements to data loading in 2019.2

dbMap/Web - PLDB

[69405](#) PLDB - Size of distribution variable values has been increased

[72682](#) Prospect roll-up now produces more consistent results for Prospects with single targets

Detailed Release Notes Summary dbMap/Web 2019.2

Bug Fixes

dbMap/Web - PLDB

[74424](#) Correct play probability factors are now shown for target scenario resource computations

[74305](#) Performance of PLDB_TARGET_POLYS view improved

Petrosys Release dbMap/Web 2019.2

Detailed Release Notes

[dbMap/Web - Client](#) [Enhancements](#)

PLDB activated for Origin

74341

PLDB functionality has been enabled.

[dbMap/Web - General](#) [Enhancements](#)

Core Coal Analysis

72863

A new coal core analysis module has been added to our well functionality. The PPDM 3.9 Sample Analysis model is used to manage Samples as well as analysis for :

- Adsorption isotherm
- Desorption
- Gas composition
- Isotope
- Petrology
- Proximate
- Rock evaluation
- Rock mechanics
- Ultimate

Well Log Viewer - Enhancements

73476

A number of enhancements have been made to the Well Log Viewer introduced with dbMap/Web 2019.1.

Templates

Support for user-defined well log templates which incorporate track and curve layouts and styles. Once a well log view is configured, it can be saved as a template. Templates can be applied to any well log and provide a quick-and-easy method of displaying log curves with a consistent layout and style. Quickly switch between different views of your log data using templates.

Formation Tops

Added support for displaying formation tops from the database in a separate track and across all tracks.

Crossplots

A new display mode has been added to show the well log data in a cross-plot. The cross-plot mode supports customizable axes and line of best fit calculations.

Wrapping

Well log curve data can optionally be wrapped to show the extents of data spikes. Up to two levels of wrapped data can be displayed.

Other Enhancements

- Support for selecting from multiple frames of DLIS data.
- The Well Log Viewer display can now be exported to a PNG image file with a single click.
- Reverse a curve's display range with a single click.

Well Perforation data loader extended to support additional columns

74367

The well perforation data loader has been extended to support importing additional columns.

Well Failure Analysis - Enhancements to data loading in 2019.2

74521

A series of enhancements and fixes have been made to the data loading functionality for Well Failure Analysis data. Changes include:

- Reference Elevation values including 'SS' are now supported. In some cases they are automatically translated to standard values such as 'MSL'.
- The allowed length of Data source values has been increased
- More information is now provided when the data to be imported has invalid numbers
- Play analysis well test types are now automatically created if they don't already exist
- The allowed length of Well result has been increased.

[dbMap/Web - PLDB](#) [Enhancements](#)

PLDB - Size of distribution variable values has been increased 69405

The size of PLDB resource computation distribution variable values has been increased to support analysis of larger areas.

Prospect roll-up now produces more consistent results for Prospects with single targets 72682

The Prospect rollup of target resources now produces more consistent results for prospects with a single target. Previously you could get slight differences in the Total MMBOE distribution values compared with the target's original values.

[dbMap/Web - PLDB](#)

[Bug Fixes](#)

Correct play probability factors are now shown for target scenario resource computations 74424

When creating a new Prospect target scenario resource computation, the Probability factors tab now shows the correct Play chance factors. Previously it just showed the total as 1.

Performance of PLDB_TARGET_POLYS view improved 74305

The performance of the database view PLDB_TARGET_POLYS has been significantly improved. Where previously it could take 5 minutes to select all records from the view, it now takes about 2 seconds.

Detailed Release Notes Summary dbMap/Web 2019.1

Enhancements

dbMap/Web - Client

- [73439](#) Geological Province changed to Basin in the wells tree filter (Santos)
- [73640](#) Row-based security has been added for Wells (Origin)
- [73537](#) Easting/Northing values are now shown on well header (Greymouth)
- [73879](#) Spotfire link updated to latest version of Sportfire (Santos)
- [73429](#) Three new columns have been added to the view FRAC_SPOTFIRE_VW (Santos).

dbMap/Web - General

- [73014](#) Well Failure Analysis
- [73193](#) The formation summary records are re-calculated when using the data loader
- [73475](#) Well log viewer
- [72845](#) Performance improvements have been made to the Well log curve summary report
- [73287](#) CQ batch job has been optimised and can now continue from previous run
- [72942](#) Dashboard pie charts have been changed to donut charts
- [72766](#) Performance improvements have been made to displaying panels by caching the buttons

dbMap/Web - PLDB

- [35852](#) Prospects & Leads now supports Common Risk Segment polygons
- [70509](#) New tree filter options have been added for Onshore and Offshore

Detailed Release Notes Summary dbMap/Web 2019.1

Bug Fixes

dbMap/Web - Client

[73606](#) Catalogued items are recorded with the media type of Electronic file (Origin)

[73365](#) Users with a full stop in their username can now use web mapping

dbMap/Web - General

[73274](#) Lookups in the Advanced search query builder no longer cause the embedded browser in PETROSYS PRO to crash

[73928](#) Aliases can now be created for Formations

[74106](#) Well log browser screen - Depths now have a space comma instead of a space as the thousand separator

Petrosys Release dbMap/Web 2019.1

Detailed Release Notes

[dbMap/Web - Client](#) [Enhancements](#)

Geological Province changed to Basin in the wells tree filter (Santos)

73439

"Geological province" replaced by "Basin" for consistency with SANTOS DATA HUB (PPDM).

Row-based security has been added for Wells (Origin)

73640

Row-based security, that uses the well's confidential_type column as been added for Origin.

Easting/Northing values are now shown on well header (Greymouth)

73537

The Well header panel now shows Easting/Northing values.

Spotfire link updated to latest version of Sportfire (Santos)

73879

The link 'Laboratory Data (LIMS)' on the Well panel was updated to match the latest configuration of Spotfire.

Three new columns have been added to the view FRAC_SPOTFIRE_VW (Santos).

73429

The three new columns added to the view FRAC_SPOTFIRE_VW are Closure Gradient, Pore Gradient and Adjusted KH.

[dbMap/Web - Client](#)

[Bug Fixes](#)

Catalogued items are recorded with the media type of Electronic file (Origin)

73606

A bug with cataloguing RM items has been fixed so they are categorised as 'Electronic file' Media type.

Users with a full stop in their username can now use web mapping

73365

Fixed a bug causing mapping to fail for users with a full stop (.) in their username.

[dbMap/Web - General](#) [Enhancements](#)

Well Failure Analysis

73014

A new module to conduct 'Well Failure Analysis' is now available. This module allows companies to analyse data from existing wells to determine where plays have been successful and unsuccessful. The reasons for the failure in the unsuccessful plays can also be queried and mapped, allowing better decisions or research to be conducted ahead of future wells.

The formation summary records are re-calculated when using the data loader

73193

When importing records via the data loader, the formation summary records will be re-calculated.

Well log viewer

73475

A new integrated well log viewer has been added to dbMap/Web which provides a quick and easy method to interactively view the well log curves within catalogued LAS and DLIS files.

Note: A separate license is required to access the well log viewer. Please contact Petrosys support for more details.

Performance improvements have been made to the Well log curve summary report

72845

The well log curve summary report is now faster to generate.

CQ batch job has been optimised and can now continue from previous run

73287

Confidence and Quality (CQ) batch job has been optimised to be faster with a new option added to continue from the last run.

Dashboard pie charts have been changed to donut charts

72942

All pie charts on all dashboards in dbMap/Web have been changed to donut charts that are easier to read and now have colors that are consistent with other charts.

Performance improvements have been made to displaying panels by caching the buttons

72766

By caching the panel buttons, panels are faster to load and display on the web page.

dbMap/Web - General

Bug Fixes

Lookups in the Advanced search query builder no longer cause the embedded browser in PETROSYS PRO to crash

73274

A bug causing the embedded browser to crash when a user activated the advanced search and tried to select values from a lookup has been fixed; only the embedded (PETROSYS PRO) browser was affected.

Aliases can now be created for Formations

73928

A bug that prevented Aliases from being added to Formations has been fixed.

Well log browser screen - Depths now have a space comma instead of a space as the thousand separator

74106

Previously on the well logs browser screen, depths that were larger than 999 were displayed with a space as the thousand separator in lists. They are now displayed with a comma instead. For example depths are now formatted as 1,234.56

dbMap/Web - PLDB

Enhancements

Prospects & Leads now supports Common Risk Segment polygons

35852

Petrosys Prospects & Leads module now supports storing Common Risk Segment (CRS) polygons against play interval chance factors and using spatial comparison with the Prospect or Target polygon to determine the appropriate Play chance factors to use in the resource computation.

The CRS polygons are expected to have an attribute defining the risk for each polygon, and can be loaded into the database using the Petrosys PRO Spatial Data Translator, from data sources such as shape files exported from Player. By default the attribute used is named "Risk2", but this can be configured by modifying the PLDB_PLAY_CHANCE_POLY_ATTR_NAME code group value on Admin/Reference Tables/General dialog.

New tree filter options have been added for Onshore and Offshore 70509

New filter options for Onshore and Offshore have been added to the tree filter for Prospects.