Highlight features introduced in dbMap/Web 2019.3

শিল্ PETROSYS

SOFTWARE RELEASE NOTES

dbMap/Web Version 2019.3



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 BHT depth (KB MD) 1300.000 m Isotherm Reservoir Pressure Eqn:M Isotherm Reservoir Pressure Eqn:C Time since circulation stopped 2.000 hr Methane (CH₄) Isotherm Air Dried Sample mass 1104.000 g Isotherm moisture & ash type 6.000 cm3/g Isotherm helium grain density 1.000 g/cm3 Isotherm Langmuir volume raw 7.000 cm3/g Isotherm moisture 2.000 % Isotherm Langmuir volume DAF Isotherm ash 3.000 % Isotherm Langmuir pressure 8.000 MPa 9.000 degC Isotherm volatiles 4.000 % Isotherm experimental temperature Isotherm fixed carbon 5.000 % Isotherm remarks Methane results

-Ethane (C₂H₆) Isotherm

Desorption Analysis

Desorption problem? Problem description	Y Test problem]		
Express lab issues	Yes	Lost gas	40.000	n.
Sorption time	1.000 hr	Diffusivity	7.000	1e6/s
Q1 raw	2.000 m ³	n Q1 DAF	8.000	m3/t
Q2 raw	3.000 m ⁻	n Q2 DAF	9.000	m3/t
Q3 raw	4.000 m ³	n Qt DAF	10.000	m3/t
Qt raw	5.000 m ³	n Q3 DAF	11.000	m3/t
Reservoir test temperature	6.000_de	D		
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
Desorbed gas (Q1+Q2, Raw) at time	1.000	m3/t	Desorbed gas (Q1+
C1	2.000	mol %	C1
C2	3.000	mol %	C2
C3	4.000	mol %	C3
iso C4	5.000	mol %	iso C4
n C4	6.000	mol %	n C4
neo C5	7.000	mol %	neo C5
iso C5	8.000	mol %	iso C5
n C5	9.000	mol %	n C5
C6	10.000	mol %	C6
C02	11.000	mol %	C02
N2	12.000	mol %	N2
Air	13.000	mol %	Air
Sample C Analysis			Sample D Analysis

Sample B Analysis	
Sample ID	
Time sample taken	day
Desorbed gas (Q1+Q2, Raw) at time	m3/t
C1	mol %
C2	mol %
C3	mol %
iso C4	mol %
n C4	mol %
neo C5	mol %
iso C5	mol %
n C5	mol %
C6	mol %
C02	mol %
N2	mol %
Air	mol %

Gas Isotope Analysis

Gas	150	tope	Alla	arysis	
Isot	ope	Samp	le A	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 √PDB	delta13C CH4	1.000	ppt √PDB
delta13C C2H6	2.000	ppt ∨PDB	delta13C C2H6	2.000	ppt √PDB
delta13C C3H8	3.000	ppt √PDB	delta13C C3H8	3.000	ppt √PDB
delta13C i-C4H10	4.000	ppt √PDB	delta13C i-C4H10	4.000	ppt √PDB
delta13C n-C4H10	5.000	ppt √PDB	delta13C n-C4H10	5.000	ppt √PDB
delta13C neo-C5H12	6.000	ppt √PDB	delta13C neo-C5H12	6.000	ppt √PDB
delta13C i-C5H12	7.000	ppt √PDB	delta13C i-C5H12	7.000	ppt √PDB
delta13C n-C5H12	8.000	ppt √PDB	delta13C n-C5H12	8.000	ppt √PDB
delta13C C6H14	9.000	ppt √PDB	delta13C C6H14	9.000	ppt √PDB
delta13C CO2	10.000	ppt √PDB	delta13C CO2	10.000	ppt √PDB
delta DCH4	11.000	ppt √PDB	delta DCH4	11.000	ppt √PDB
Isotope Sample C Analysis		=	Isotope Sample D Analysis		

5.000 %	
6.000 %	
7.000 %	
8.000 %	
	5.000 % 6.000 % 7.000 % 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	
									Lamalginite	17.000	8.000
									Non-fluorescing Alginite	18.000	
						Suberinite	19.000				
						Fluorinite	20.000				
						Exsudatinite	21.000				
						Bituminite	22.000				
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		Macrinite	28.000				
Other / Non Plant Organic Matter						Zooclasts	29.000				
						Bitumen	30.000				
						Pyrobitumen	31.000				
						Organoclausts	32.000				
Minerals											
Mineral description											

Proximate Analysis

Relative density Moisture Ash	1.00 2.00 3.00	00 g/cm 00 % 00 %	9 Volatile matter Fixed carbon Proximate moisture & ash type	Equilibrium	4.000 % 5.000 %
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
тос	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	9 S1+S2 potential yield	5.000	mg/g
PC [Pryolysized carbon]	5.000	mg/g	9 82/83	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				

Rock Mechanics Analysis

Analysis type	As Received		Cohesion		8.000	
Test condition	ТВА		Plug orientation	Horizontal		
Bulk density	1.00	0 g/or	n3 Dynamic shear modulus		9.000	psi
Confining pressure	2.00	O psi	Dynamic bulk modulus		10.000	psi
Compressive strength	3.00	O psi	Dynamic Youngs modulus		11.000	psi
Static Youngs modulus	4.00	O psi	Dynamic Poissons ratio		12.000	
Static Poissons ratio	5.00	0	Ultrasonic wave velocity shear		13.000	ft/sec
Ultrasonic wave velocity	6.00	0 ft/s	ec Tensile strength		14.000	psi
compressional			Effective mean stress (confining)		15.000	psi
Unconfined compressive strength (UCS)	7.00	0 psi				
Remark	Placeholder remark					

Ultimate Analysis

Sample preparation	Kerosene		Total sulfur	7.000	ų,
Carbon	1.000	X	Organic sulfur	8.000	%
Hydrogen	2.000	X	Inorganic sulfur	9.000	%
Nitrogen	3.000	X	Atomic H/C	23.833	
Sulfur	4.000	X	Atomic O/C	3.753	
Oxygen	5.000	X	Atomic S/C	1.498	
Iron	6.000	X	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
		Default	
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	I Default	31/05/2019, 11:19:00

Formation Tops

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

Formation Tops		GRR		DEPT		ILM			CNC	
	0.00	GAPI	150.00	F	0.20	ОНММ	200.00	0.45	DEC	-0.15
		SPR				ILD			TENR	
	-160.00	MV	40.00		0.20	ОНММ	200.00	-250.03	LBS	707.30
		CALR								
	6.00	IN	16.00							
		MMM		2200.00				Web-re-		
CRLL 2254.22				2250.00		eR		<u>-</u>		
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				2350.00				<u> </u>		
		wind marine	-	2400.00				Wrymm Och		
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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.

ᄣ아아아 Well Log Viewer	QQ 1 2	?	_	
✓ KupeSth5Log.dlis - KUPE SOUTH-5				
	GR	INDEX5842		PEF
	0.00 74.92 gAPI 150.00	2777.35 m	0.20 ohm.m 200.00	0.00 b 10.00
	CALI		MSFL	INPH
	BIT	-	LLD	0.45 0.45 FRAC -0.15
DRHO - Bulk Density Correction	6.00 8.62 in 16.00		0.20 2.17 ohm.m 200.00	1
DT - Sonic Transit Time	SP	1		1
✓ GR - Gamma Ray	-160.00 mV 40.00			
ILM - Medium Induction Resistivity	5			
LLD - Deep Laterolog Resistivity	<u> </u>	2650.00	<u> </u>	
LLS - Shallow Laterolog Resistivity				
MSFL - Micro Spherically Focused Resistivity		2700.00		
PEF - Photo-Electric Factor		2100.00	F }	
RHOB - Bulk Density			E {	
SP - Spontaneous Potential		2750.00		<u>E</u>
✓ TNPH - Neutron Porosity				
		2000.00	Į	
		2800.00	EL Z	
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		2850.00		
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		2950.00		
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	F	3150.00		

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.

R INDEX5842 ILM PEF 150.00 m 0.20 ohm.m 200.00 0.00 b 10.00 II MSFL TNPH 0.20 ohm.m 200.00 0.45 FRAC -0.15 III 0.20 ohm.m 200.00 0.45 FRAC -0.15 V 40.00 2650.00 III III III IIII IIII IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII										
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	1						OK Apply	Cancel		
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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.

-	Well Failure Analysis	-		-				
4	🕽 \leftrightarrow 🚣 📶 💋 🤅 🗹 🗋 🗹 🕻 💭 Add to map	÷ F	Repo	ort				
K	▼ ■ Wells		-	CQ	Well name	Plays	Failed plays	Status
×	All wells (41)							
	Wells with WFA data (20)	1			Clipper-1	2	2	All WFA plays failed
	WFA Play Status	2		Ŏ	Endeavour-1	2	2	All WFA plays failed
	Plays	3		ŏ	Galleon-1	2	2	All WFA plays failed
	Risk failure Charge (10)	4		ŏ	Resolution-1	2	2	All WFA plays failed
		5		ŏ	Tara-1	2	2	All WFA plays failed
	▼ ■ Plays							I I
	MioU_Mess_ 1_Ng_PP (5)							
	MioL_Aqui_Lang_ 3_NG_LM (6)							
	MioL_Pria_Aqui_ 4_Pg_O (4)							
	Eoc_Than_Pria_5_Pg_E (2)							
	Palc_Maas_Than_6_Pg_Pc (1) -							
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	Clear							

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.

	×							
Query p	arameters							
Play selection - optional 🖉 in 🔻 阳	Play selection - optional 🖉 in 🔻 Plio_Piacen_Neog1							
Charge risk - optional 📄 in 🔻								
Reservoir risk - optional 🕢 in 🔻 3it	tems selected							
Seal risk - optional 📄 📊 🔻								
Trap risk - optional in 💌								
	- Reservoir							
Properties Query								
Query name WFATEST1: Filter: Choose t								
Factors(s)	2 Absent							
Description Filter well list based on wells	3 Not penetrated							
selected plays.	4 Present + effective							
Owner PUBLIC Uid	5 Present + not effective							
Created by TESTER Created date	6 Present + uncertain effectiveness							
Updated by TESTER Last updated	7 🕑 Probably absent							
	8 Probably present							
	9 🔲 Uncertain							

Source Analysis

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

	Well Summar	y So	urce Analysis 1	Temperature 2	Pre	Pressure 1		5		
-	Source analysis : Kimmeridge, 152.1 Ma, Kimmeridgian, Kimmeridge Clay Fm, 200, 113, 5.6, 400, 0.6, Restricted Shallow Marine, API									
ф	↔ 🕹 📶 🤅	🕂 New Sou	irce 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 Analys		ysis Temperature 2	Pressure	e 1 Play Analysis 5	
- 1	Temperature : 3168, 93.1, , 42, GEOVIC					
٥	⇔ 🚣 📶	🕂 🕂 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 Summa	iry	Source Analysis	Pressure 1	Pla			
- F	Pressure : 3000, 3000.00045, Oil, GEOVIC							
Ф	🌣 ↔ 📩 📶 🤅 🛟 New Pressure							
	Depth	Pressure		Fluid type				9
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

Wen Summary Source Analysis i		Temperature z		Flessure i		iay Analysis 5			
Play analysis : Plio_Piacen_Neog1 (Success)									
\leftrightarrow 📥 📶 🤅 🛟 New Pla	y analysis								
Play name	Series	Top age	Base age	Charge	Reservoir	Seal	Trap	F	
Plio_Piacen_Neog1	Pliocene	2.6 Ma, Piacenzian		Present	Present + effective	Present + effective	Present		
MioL_Burd_Serr_Sst_Neog2	Lower Miocene	11.6 Ma, Serravallian	16 Ma, Burdigalian	Present	Present + effective	Present + effective	Present		
Eoc_Pria_Carb_Palg1	Eocene	33.9 Ma, Priabonian		Absent	Present + effective	Absent	Absent		
Eoc_Bart_Sst_Palg2	Eocene	37.8 Ma, Bartonian		Present	Uncertain	Present + effective	Absent		
Eoc_Lut_Sst_Palg3	Eocene	41.2 Ma, Lutetian		Present	Absent	Present + effective	Uncertain		
	Play analysis : Plio_Piacen_ ↔ ▲ III : Pay name Play name Plio_Piacen_Neog1 MioL_Burd_Serr_Sst_Neog2 Eoc_Pria_Carb_Palg1 Eoc_Bart_Sst_Palg2 Eoc_Lut_Sst_Palg3	Play analysis : Plio_Piacen_Neog1 (Success → ▲ III : ↓ New Play analysis Play name Series Plio_Piacen_Neog1 Pliocene MioL_Burd_Serr_Sst_Neog2 Lower Miocene Eoc_Pria_Carb_Palg1 Eocene Eoc_Lut_Sst_Palg3 Eocene	Play analysis : Plio_Piacen_Neog1 (Success) ← ▲	Play analysis : Plio_Piacen_Neog1 (Success) ← ▲	Play analysis : Plio_Piacen_Neog1 (Success) ← ▲ ▲	Play analysis : Plio_Piacen_Neog1 (Success) ← ▲ ▲	Play analysis : Plio_Piacen_Neog1 (Success) → ▲ Image:	Play analysis : Plio_Piacen_Neog1 (Success) → ▲ Play name Series Top age Base age Charge Reservoir Seal Trap Plio_Piacen_Neog1 Pliocene 2.6 Ma, Piacenzian Present Present + effective Absent Absent Absent Absent Absent + effective Absent + effective	

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

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	Temperature Da	ta		
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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.



6 entries

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

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

Well log viewer - Resizeable tracks

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

Well log viewer - Support for LAS v2.1

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

dbMap/Web - General

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 records⁷⁴⁴⁶⁸

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

PLDB now supports 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/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.

9 entries

Bug Fixes

74589

74235

74152

<u>Enhancements</u>

73653

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.

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)

7 entries

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

<u>74424</u>	Correct play probability factors are now shown for target scenario resource computations
<u>74305</u>	Performance of PLDB_TARGET_POLYS view improved

Petrosys Release dbMap/Web 2019.2

Detailed Release Notes

dbMap/Web - Client

PLDB activated for Origin

PLDB functionality has been enabled.

dbMap/Web - General

Core Coal Analysis

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

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.

Enhancements

Enhancements

74341

72863

73476

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

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 improved⁷⁴³⁰⁵

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.

Bug Fixes

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)
- T3537 Easting/Northing values are now shown on well header (Greymouth)
- 73879 Spotfire link updated to latest version of Sportfire (Santos)
- 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
- <u>72766</u> 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

5 entries

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)
- <u>73365</u> Users with a full stop in their username can now use web mapping

dbMap/Web - General

- <u>73274</u> 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)

The Well header panel how 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).

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

dbMap/Web - Client

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.

Enhancements <u>dbMap/Web - General</u>

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 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.

73537

Bug Fixes

73014

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.

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

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 charts⁷²⁹⁴²

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

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

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

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 compution.

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.

Enhancements

Bug Fixes

73928

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.