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## Release Notes

# CycloLog 2024

Version 2024 – September 2024



In this document, new features as well as improvements, changes, known issues and problems in CycloLog®2024 are summarized. For detailed information about CycloLog® 2024 features, please refer to the Help manual in the CycloLog® software application or the Tutorials on our website:

<https://cyclolog.com/support/tutorials/>

## Release features

The CycloLog® 2024 version has a new feature StratiSolver®, this our next step to make correlation easier and more efficient.

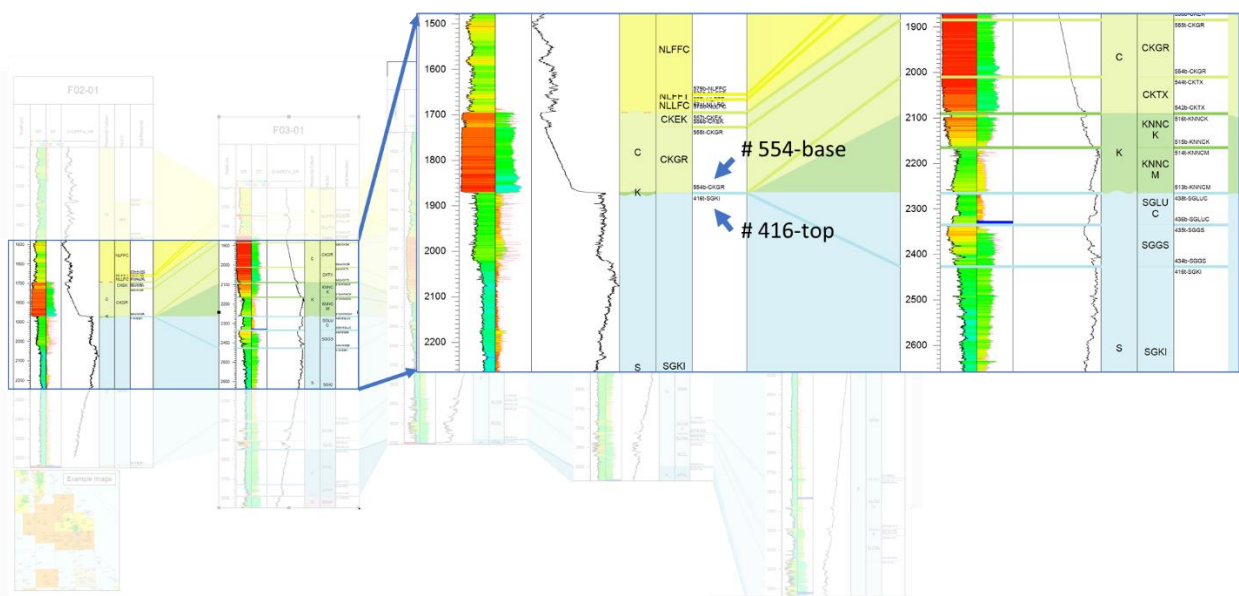
### StratiSolver®

Correlation from wireline data is often underpinned by other stratigraphic data, such as biostratigraphy or seismic tops. This data provides information on different scales from a subset of the wells and can be essential to reduce correlation uncertainties. Establishing and updating this framework is a complex and time consuming puzzle that can now be solved more quickly.

The StratiSolver® is a major enhancement in the CycloLog® toolbox. An algorithm that helps the user analyse and combine and organise different stratigraphic datasets. The tool is non-statistical and keeps the control with the geologist.

StratiSolver® organises all top-base relationships of the input datasets and creates a single break-dataset and added a stratigraphic numbering, events at same depths get the same relative age.

- Consistent stratigraphic numbering of different datasets, missing numbers are unconformities.
- Clarity about non-unique solutions clarity in output
- Fast Updates:
  - » When new datasets are loaded
  - » During the interpretation process
- Ensuring consistent and easy use external data for bounding conditions for your CycloLog INPEFA correlations.



## StratiSolver® Results

The StratiSolver® results are added in the new 'stratisolver' breakset, this can be displayed in composite well chart and the correlation panels.

Apart from the new breakset results and feedback are presented in the StratiSolver sheet. This new worksheet shows validations errors, and the result tables. The feedback sheet is made to assist and guide the user to a consistent correlation. This sheet can be docked and undocked, displayed outside the programme window to optimise screen space.

The StratiTable; contains the input Data Sets and the assigned numbers from old to young. Events with the same number possibly have the same age. They as are present only at the same depth in all wells where both are present as wells and no indirect evidence for a difference in age.

**STRATI-TABLE** (also saved as "strati\_table.csv" in the solver output directory "Examplefor2023-eage.StratiSolver")

NBS	PBS	SEISMIC TOPS	NLOG-supergrp	NBS	PBS	SEISMIC TOPS	NLOG-supergrp
		31	32			s31	N-Top
		30				s29	
		29				s28	
		28				s26	
		27				s25	
26				C730N			
25				C720N			
24				C710N			
23				C700N			
21	22			C1400N	N6900P		
20				C1100P			
18_1			19				N-Base
17			18_2	CKEK-top			C-Top
16				K2200P			
15				K2100P			
		14					
		13				Ceno-top-bound	
						Ceno-base-bound	
11			12_1   12_2				K-Top   C-Base
				K1000N			
9			10_1   10_2				S-Top   K-Base
8				J1300N			
8				J1200N			
6			7				Z-Top
			5_1   5_2   5_3	J1100N			
							A-Top   S-Base   U-Top
			4				U-Base
			3				Z-Base
			2_1   2_2				A-Base   R-Top
			1				R-Base

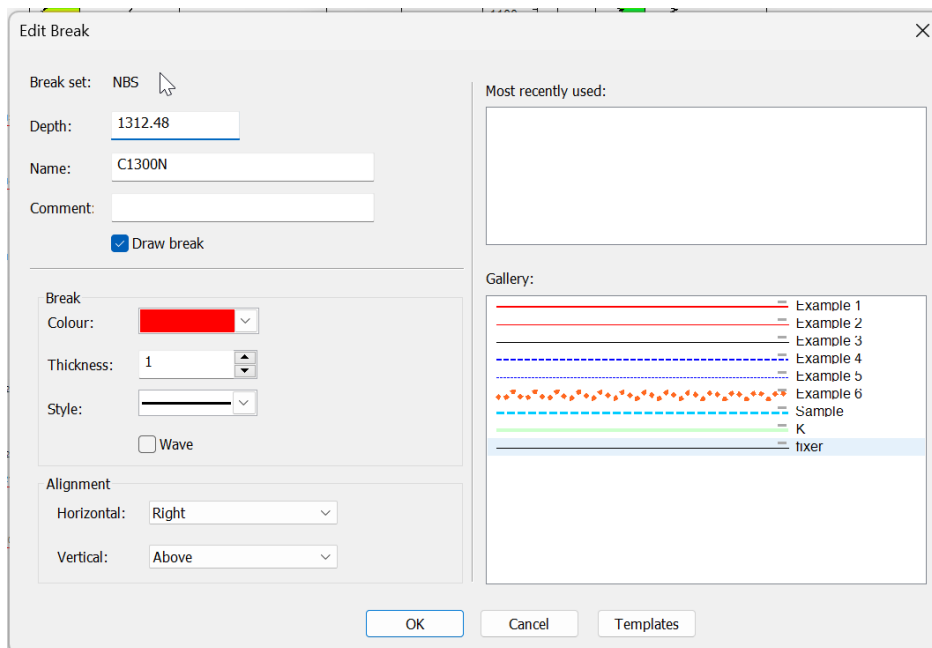
Results table; all input events are stratigraphically organised and shows the depth value (MD) for each well.

**RESULTS TABLE** (also saved as "results\_table.csv" in the solver output directory "Examplefor2023-eage.StratiSolver")

Strat num	In group	Unrelated to group(s)	Name	Original set	F02-01	F03-06	F03-04	F01-01	F02-02	F02-03	F02-04	F02-05	F03-01
32			N-Top	NLOG-supergrp	100.00	100.00	70.08	0.00	0.00	0.00	0.00	0.00	100.00
31			s31	SEISMIC TOPS	546.51	529.10	476.27						
30			s29	SEISMIC TOPS	794.12	737.51	568.86						
29			s28	SEISMIC TOPS			604.93						
28			s26	SEISMIC TOPS	1030.95	989.02	658.88						
27			s25	SEISMIC TOPS	1081.07	1048.93	856.08						
26			C730N	NBS			1002.39			949.49			
25			C720N	NBS	1196.48	1181.30	1103.05						
24			C710N	NBS	1276.38	1279.46	1232.90						
23			C700N	NBS			1333.56						
22			N6900P	PBS	1500.20	1419.30	1389.87			1194.69			1336.89
21			C1400N	NBS									1438.72
20			C1100P	NBS									1591.18
19			N-Base	NLOG-supergrp	1694.99	1693.00	1858.00	1600.00	1888.00	1502.99	1487.00	1406.00	1844.00
18_2	6	9	C-Top	NLOG-supergrp	1695.00	1693.00	1858.00	1600.00	1888.00	1503.00	1487.00	1406.00	1844.00
18_1	9	6, 7	CKEK-top	NBS						1503.00			1844.00
17	4	7	K2200P	NBS									1855.11
16	4	7	K2100P	NBS									1986.28
15	4	7	K2100N	NBS									2009.20
14	7	4, 9	Ceno-top-bound	SEISMIC TOPS	1700.09	1693.00	1858.00						
13	7	4, 9	Ceno-base-bound	SEISMIC TOPS	1872.00	1872.00	2277.00						
12_2			C-Base	NLOG-supergrp	1872.00	1892.00	2277.00	1856.00	2203.00	1602.00	1667.00	1556.00	2090.00
12_1			K-Top	NLOG-supergrp	1872.00	1892.00	2277.00	1856.00			1667.00		2090.00

## Edit Display - Break Set and Reservoir Set

The breaks and reservoirs in reservoirs are always stored in a 'Set' when opening the dialog this Set is now visible.

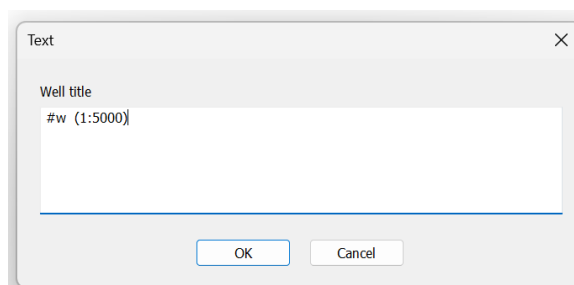


## Upgrade in CWC editing of breaks and reservoirs

When using the mouse pointer to select and edit breaks and reservoirs in columns of a CWC, the user can now only edit the breaks visible in that specific column. Creating a more intuitive and flexible user experience, as set selection was only possible using the break-reservoir toolbox.

## #w for wellnames

When making a composite well chart, you can customise the title of the chart quickly by using #w for the well name. This will be applied when using this chart as a template for making charts as a batch.

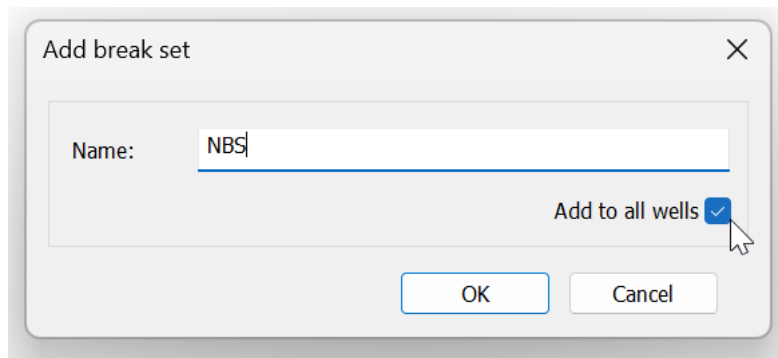


## Adding new Set, able to add to all wells in project.

To reduce time spent on the creation of Break and Reservoir Sets in a project. When adding a breakset you can now tick the box to add the new empty set in all wells.

It follows these rules:

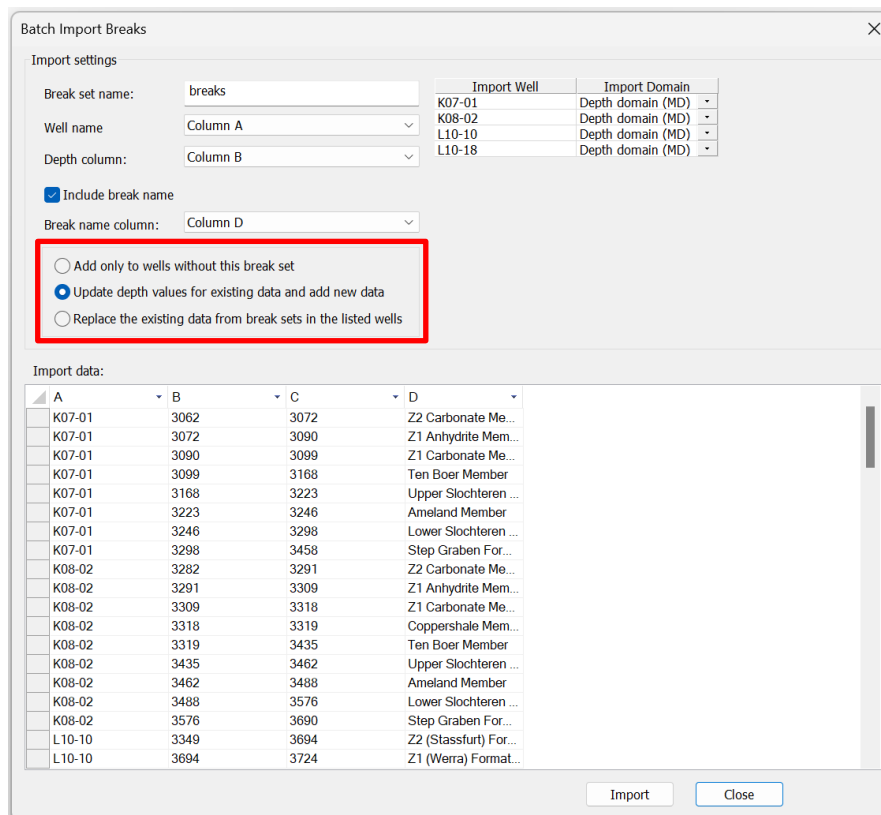
- If not present in the well the empty dataset is added to the well
- If a set with the same name is already present in a well the existing data is unaltered.



### Importing Break sets – improved overwrite function

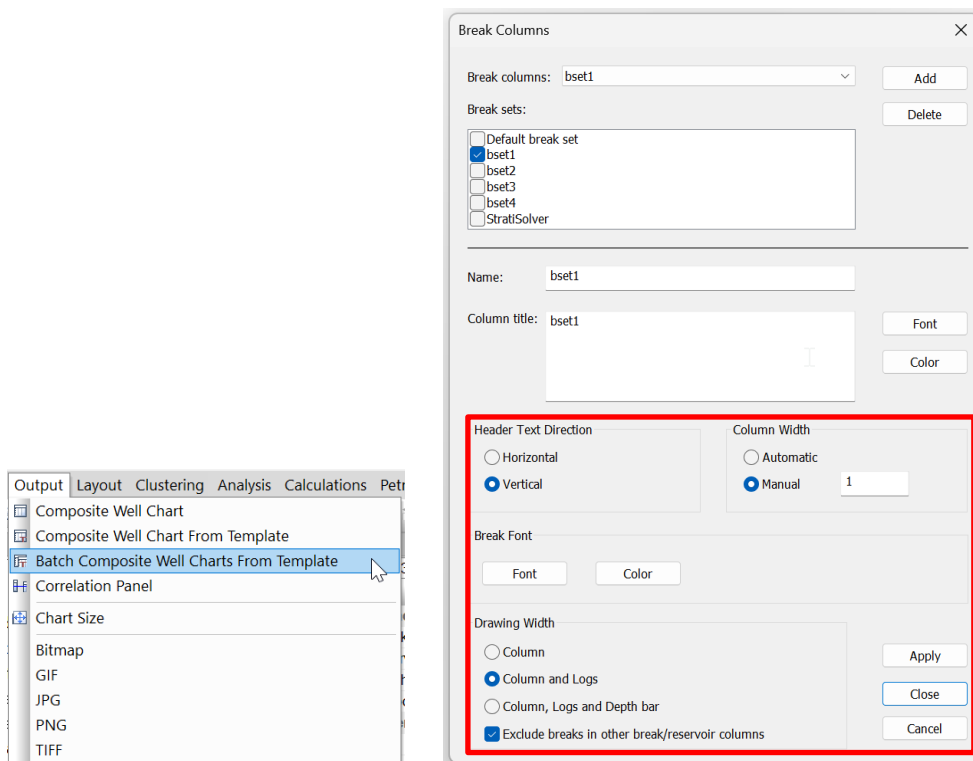
The batch importing breaks is improved with additional options. When there is an updated import file is presented you can choose between,

1. Only add to wells without this break set. Useful if breaks in wells were updated.
2. Update depth values for existing data and add new data. Data in the import data overwrites the data in the project, other data is kept.
3. Replace the existing data from the break set in the listed wells. This means the break set in the listed wells is deleted and the new are imported.



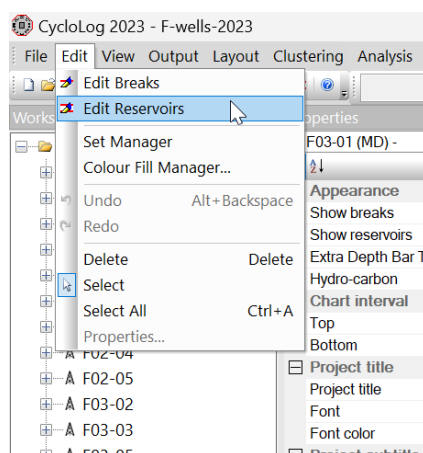
## Fix column display from CWC for template reservoir & break settings.

The column display settings for reservoir and breaks are now applied identically from the template when making composite well charts (CWC) in batch. This makes it easier to apply custom text orientation, column width and drawing options.



## Fix in the Edit Break and Edit Reservoir

The edit reservoir and edit break dialog under edit bar allow the selection of all wells and domains. Note this is different from accessing the break and reservoir manager from the well directly – then user can only access that specific well.



## Fix in the Edit Break name positioning in CWC

Break names can be displayed on the left, center or right of the break column in the CWC to prevent overlapping names.

## Known Issues

The following issues and problems related to the CycloLog® 2024 functionalities are known. We aim to fix these in a near future release.

### Small visual displacements

Due to the pandemic, work environments had to be adapted for our clients. In some cases minor displacements in some of our menu's are reported. The functionality is not impaired, and we continue to resolve all these display issues.

### MESA and Log Response data panes cannot be scaled with mouse pointer

In CycloLog® 2024, the user can manually change the vertical scaling of log data panes and composite well charts by placing the mouse pointer on the depth bar, subsequently holding down the left mouse button (LMB), and then dragging the pointer up or down. This way the vertical scaling can be adjusted according to the user's preference. This functionality, however, is not supported for the Log Response and MESA data panes.

#### **Workaround**

*To change the vertical scaling using the dragging functionality, the user is advised to open another log data pane next to the MESA or 'Log Response' panes. Make sure that Toggle Auto Vertical Scaling is activated and then drag with the LMB the depth bar of the opened log. This way the user can set his preferred scale.*

*Alternatively, click with the right mouse button (RMB) on the MESA or 'Log Response' data panes and select Vertical Scale to set the preferred vertical scaling.*

### Exporting log data as ASCII file yields impractical file structure

The data structure of a log data file in ASCII format that has been exported from CycloLog® 2021 is not ideal. In the ASCII file header, the log names are listed below each other, in separate rows. Re-importing such a file into a new CycloLog project (using the General ASCII import functionality) will require a manual input of the log names for each of the logs listed in the import wizard, which can be time consuming.

#### **Workaround**

*Before importing an ASCII file into CycloLog, the user should check and, when necessary, adjust the structure of the log names header in the ASCII file. This can be done using a data processing software such as Excel (or Notepad). All log names should be in one row and separated by TABS (see example below).*

*Alternatively, the user can export the log data from CycloLog as a LAS or CLG (CycloLog) format file.*



DEPTH	Log1	Log2	Log3	Log4		
3600.000000		8.291000	68.081497	0.000000	0.000000	
3600.200000		20.959227	67.850243	0.000000	0.000000	
3600.400000		54.639637	68.026237	0.000000	0.000000	
3600.600000		57.169765	68.301064	0.000000	0.000000	
3600.800000		57.303669	68.265106	0.000000	0.000000	
3601.000000		19.155800	67.964798	0.000000	0.000000	
3601.200000		16.259031	67.728462	0.000000	0.000000	
3601.400000		15.155625	67.577156	0.000000	0.000000	
3601.600000		14.593274	67.484848	0.000000	0.000000	
3601.800000		13.377397	67.458305	0.000000	0.000000	
3602.000000		11.191200	67.519203	0.000000	0.000000	
3602.200000		9.685138	67.632431	0.000000	0.000000	
3602.400000		9.021322	67.771362	0.000000	0.000000	

*Example of an ideal ASCII file structure for import into CycloLog®.*

## Contact

Please contact the PanTerra Geoconsultants Support team for any questions about the CycloLog® software or for suggestions that would help us to improve our software. We strongly rely on Users to provide ideas for improvements, not only to the software but also to all related documentation.

Contact our support team at: [cycloLog@panterra.nl](mailto:cycloLog@panterra.nl), or call: +31 (0) 71 58 13 505 Our normal office hours are CET, from 9 AM to 5 PM, Monday to Friday.

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