Version 2021.1

May 2021

Techlog

Because every well counts

Release notes

Schlumberger

Contents

Techlog wellbore software platform 2021 release notes

The Techlog wellbore software platform delivers an industry leading desktop solution that provides petrophysicists, geoscientists and engineers with a fully integrated, interactive, easy to use analysis tool for interpretation of all wellbore data types (core, logs, images, photos, and so on). Using Techlog software, these different disciplines can collaborate effectively by accessing and incorporating the same data into their workflows, helping you to fully capitalizing on previous data investments.

Details of improvements and additions can be found in the following pages.

The Techlog team

Techlog environment

Operating systems

Techlog is supported on the following 64-bit architectures workstations:

- Microsoft® Windows 10.
- Microsoft® Windows Server® 2012 R2 (64-bit).
- Microsoft® Windows Server® 2016 (64-bit).

Note: Techlog 2021 does not support Microsoft Windows 7 and 8.

Schlumberger license server upgrade

Techlog 2021 requires the 2021 version of Schlumberger Licensing Tool.

Schlumberger License Server 2021 is compatible with all supported Techlog versions (2016, 2017, 2018, and 2019).

System requirements

Configuration	Minimum	Recommended
Operating System	Windows 10 (64-bit)	
Processor	Multi-core processor (best with a fast clock speed and high cache)	Quad-core processor (best with a fast clock speed and high cache)
Memory	16 GB	32 GB
Display	Single display 1280 x 1024 pixels	Dual display with 1920 x 1200 pixels.
Graphic card	NVIDIA Quadro® mid-range card with latest driver version 461.09 or above	
Network	100 Mbps	1 Gbps
Disk Storage	Hard-Disk Drive (HDD) – 7200 rpm	Solid State Drive (SSD)

Note: Techlog can work on 4k and High DPI screen resolution but it is not fully supported.

Printers

- HP DesignJet (1055CM).

- Epson Stylus Pro.

- Printrex.

- Iterra.

- Standard A4, Letter printers (HP CLJ 3700/4730).

Working with Techlog projects

We do not recommend that you work on a project when a synchronization is being performed using the One Drive tool, as this can lead to project errors. Any backup tool must be set to perform the backup at night. Techlog must be closed to avoid having two different tools accesing the project at the same time.

You cannot move or copy a project when the project is open in Techlog.

Please zip any project (tlp + associated fodlers) you want to move to a different location especially on network drive.

What's new in the 2021.1?

General

ℹ️ KMod legacy method

- 2021 is the last year that the KMod legacy method will be supported.

NEW KMod

- KMod is now available as an AWI workflow method and can be combined with any other AWI methods.
- You can now preserve the seed property used for computation.
- You can now save the model in the workflow and apply it to another well without having to build the model again.
- Improved the error plot interaction.

NEW RGB display for core image data

- You can now display Core Image data stored as colored array using the new display option "Matrix RBG 16" under the display direction properties of the array in the logview.

NEW CRS

- The CRS catalog (ESRII ArcGIS 10.7.1) and engine to 1.5.8 for Petrel, Techlog and Studio has been updated.
- You must now use the Studio companion XML file instead of CTL (independent of the engine).
- The full CRS "Well Known Text" is now encoded in the well property.

NEW Annotation management

- Improved usability around annotation management.
- You can now define annotation for a single depth using tail.
- You can now define the tail position to a specific depth.
- You can now define background and border colors.
- Fixed an issue applying LogView template with annotation dataset.
- You can now define annotation on any track.

NEW	Calculator

- The Calculator plugin tool has been added to Techlog.
- You now have the ability to:
    - Easily perform user-defined equation-based calculations.
    - Run equations in single or multi-well.
    - Display results on the logview.
    - Run computations over a zonation or use interactive selection intervals.
    - Load and save equations.
- History of last used equations.
- Embedded endpoints calculator, which helps you quickly perform some key computations such as porosity from density, water properties (Rw and salinity), shale properties and so on.

NEW	Zonation

- The full list of patterns and symbols defined in the patterns and symbols manager are now available from the Global zonation dock window to be assigned to zones.
- When a zone-type catalog is converted to global zonation, the catalog name is used to group global zonations resulting of the zone-type catalog categories conversion.
- The grouping of global zonations in the Techlog Project Browser is reflected in the selection list of the Global zonation dock window.
- Collapse and expand buttons have been added to the zonation hierarchy view in the Global zonation dock window.
- Impacted wells are now listed when renaming a zone.
- Full synchronization on zone split between, zone editor, AWI and logview.
- Zone description and property values are now displayed as a tooltip when you hover over the zone in the global zonation tree view.
- HTML copy of the global zonation takes into account the zones hierarchy.
- Added a new property to the LogView zonation track to adjust manually the font of the zone names displayed in the track.

Domains

NEW 3DP-High angle well evaluation

- **Auto-population of tool setting and borehole parameters for Forward Modeling and Inversion:** Tool settings and borehole parameters, such as mud density and borehole diameter, are now automatically populated. 3DP reads this information from the properties of the input measured logs, or their parent datasets.

- **Fine tune the model through synchronization between dip sinusoids and the model** : You can now fine-tune the local layer model through the new synchronization features which link the dip sinusoids to the model:

  - When a square log is horizontally adjusted, or you drag a boundary, the associated sinusoid is adjusted (update of the sinusoid depth and shape).

  - When the boundary dip is updated (either through the mouse wheel or a change of the transverse dip), the associated sinusoid shape is updated.

  - When a boundary is created, a corresponding sinusoid is created and displayed in the same track where other sinusoids are displayed.

  - When a boundary is deleted, the associated sinusoid is also deleted.

  - When unwanted sinusoids are removed in the LogView display, the associated boundary is removed and the square logs are updated accordingly.

NEW Quanti.Elan

- You can now use variables in Quanti.Elan parameter slots, for clay parameters, for example Shale resistivity, wet and dry end points. This lets you use wet clay end point trendlines for the computation.

- You can now incorporate into Quanti.Elan solver, the fast neutron cross section (FNXS) and neutron porosity (TPHI) measurements from the Pulsar cased hole service. These measurements are associated to linear response equations in Quanti.Elan and help to differentiate and quantify gas-filled porosity from liquid-filled porosity and very low porosity formations.

NEW **Environmental Corrections**

- Techlog now supports processing and environmental corrections of Schlumberger ThruBit Gamma Ray, Spectral Gamma Ray, Neutron, Density, Induction Resistivity and Laterolog Resistivity.

- Techlog now supports processing and environmental corrections of the following Schlumberger LWD tools:

  - OmniSphere DN (ADN4B) tool: This is covered in adnVISION density standard resolution, density high resolution, image derived density, neutron, azimuthal neutron, and density caliper methods.

  - adnVISION 825 with stabilizer size of 10 1/8in: This is covered in adnVISION density standard resolution, density high resolution, image derived density, 825 neutron, and density caliper methods.

- Techlog now performs neutron processing and environmental corrections of the Schlumberger LWD stabilized adnVISION 825 (SADN8) tool in a new standalone method. This is because of an update in the type of input count rates (from sectored waveforms to average) for the method. The update is aimed at alignment with the enhancements performed on the log data acquisition system.

- The entire adnVISION environmental correction methods have been updated (inputs and parameters). This is aimed at alignment with the enhancements and upgrades performed on the log data acquisition system. The adnVISION environmental correction workflows generated in previous versions of Techlog, must be re-built in Techlog 2021.1.

Studio

NEW **Studio server**

- Windows server 2019 supported for Studio server installation.

- SQL server 2019 supported for Studio database installation.

NEW **Techlog Studio client**

- The entity lock owner information is now displayed in a "Lock owner" column added to project and repository browsers. In addition to this, entities locked by you are displayed with a blue lock icon to clearly segregate them from entities locked by others.

- You can now drag and drop data entities from the project browser to the repository browser and the opposite way with a selectable default conflict resolution method.

Bug fixes 🔧

The following bugs have been fixed in this release:

- Fixed an issue in well predict module when using a unit system, where outputs were not converted into the unit system.

- Fixed an issue when printing alphanumerical variable in LogView where the variable wasa printed as a block curve instead of text.

- Fixed an issue when displaying dip on a stereonet plot track per zone in the LogView .

- Fixed an issue when importing .pyc in python AWI workflow.

- Fixed an issue with LAS 3.0 import which did not parse correctly the dataset names when the name contained an underscore.

- The family auto assignement python API has been updated with more options (level, catalog, and apply mode).

- Fixed an issue with UNL (geolog ASCII) import with variable versioning.

- Optimized studio data transfer for large array data.

- Added an option to merge datasets with equivalent sampling rate for UNL import.

- Fixed a crash when using interpolated variables on any AWI plots.

- Fixed a crash on SHM core build model method.

- The script Zones to Flag under the Toolbox menu is now available under tlbase license.

- Fixed an issue where the TechlogStatAdvanced python module could not be imported.

- Fixed a crash when using area fill between two variables and data has been removed from the project browser.

- Fixed an issue when converting patterns and color from legacy zonation catalog into global zonation.

- Fixed a family assignment issue on Wellbore stability method output.

- Fixed an issue with 4k screen resolution when using custom widget.

- TVD computation: Fixed an issue with vertical well index creation not created in this mode.

- TVD computation: Added X, Y, Z as outputs of the module and corrected grid north orientation results for Dx, Dy, and also the X offset, Y offset have been aligned with Petrel results.

- Fixed an issue on multiple selection not being enabled when opening an AWI Python script using empty lists.

- Fixed an issue when using ValueChanged function and it not working with AWI v2 engine in some cases.

- Added the support of .Net core runtime 3.1.10 for Stochastic Wellbore Stability module.

- Fixed an issue with global zonation conversion from a company catalog and using save as option from user or company level to project.

- Fixed an issue reflecting zone colors in the zone editor when changing zone colors in the global zonation dock.

- Fixed an issue reflecting zone colors in the AWI when changing zone colors in the global zonation dock.

- Fixed a performance issue adding zones from a global zonation to the Geomechanics PPP AWI module.

- Fixed a Techlog crash when creating and saving a global zonation at the user or company level.

- Fixed an issue when converting a zone-type catalog to global zonations with the wrong colors assigned to zones and patterns missing.

- Fixed an issue on LogView area fill type set to color and pattern display zone colors and patterns into both normal and zonation tracks and not only into normal tracks.

- Fixed an issue when renaming a zone in the logview: All the zones with the same name in all the datasets were renamed and the zone properties (color and pattern) were maintained conserved, as if the zone was renamed in the global zonation dock window.

- Fixed an issue deleting a zone in the global zonation dock window where it does not get deleted in zonation datasets.

- Fixed a global zonation saving issue if the company folder or user folder does not exist, or is in read only mode.

- Fixed an issue renaming a zone in the LogView which made the zone disappear.

- Fixed an issue when inserting hydraulic zones in the FPress gradient analysis AWI module.

- Fixed an issue adding auto-completion to the zone object in the Python editor.

- Fixed an issue displaying interzone in the LogView zonation track, now a begin zone appears from the top to first zone all the time.