New Features
T7.1 Release

TSEVEN

CONTENTS

Introduction

This document describes the new features and enhancements that make up the T7.1 release and differentiate it from the latest T7.0xx releases. T7.1 is distributed as a full release and cannot be installed over a T7.0xx installation as a patch. For a more detailed description of the new features please refer to the relevant sections in the T7 user-manual. This document and the end-user manual uses the term "T7" when referring to the current release version of the software.

Important Notes:

1) T7 license feature versions are “7.1”. T7.1 will not function with a T7.0 (or ealier) license. Please send T7.1 license requests to support@badleys.co.uk.

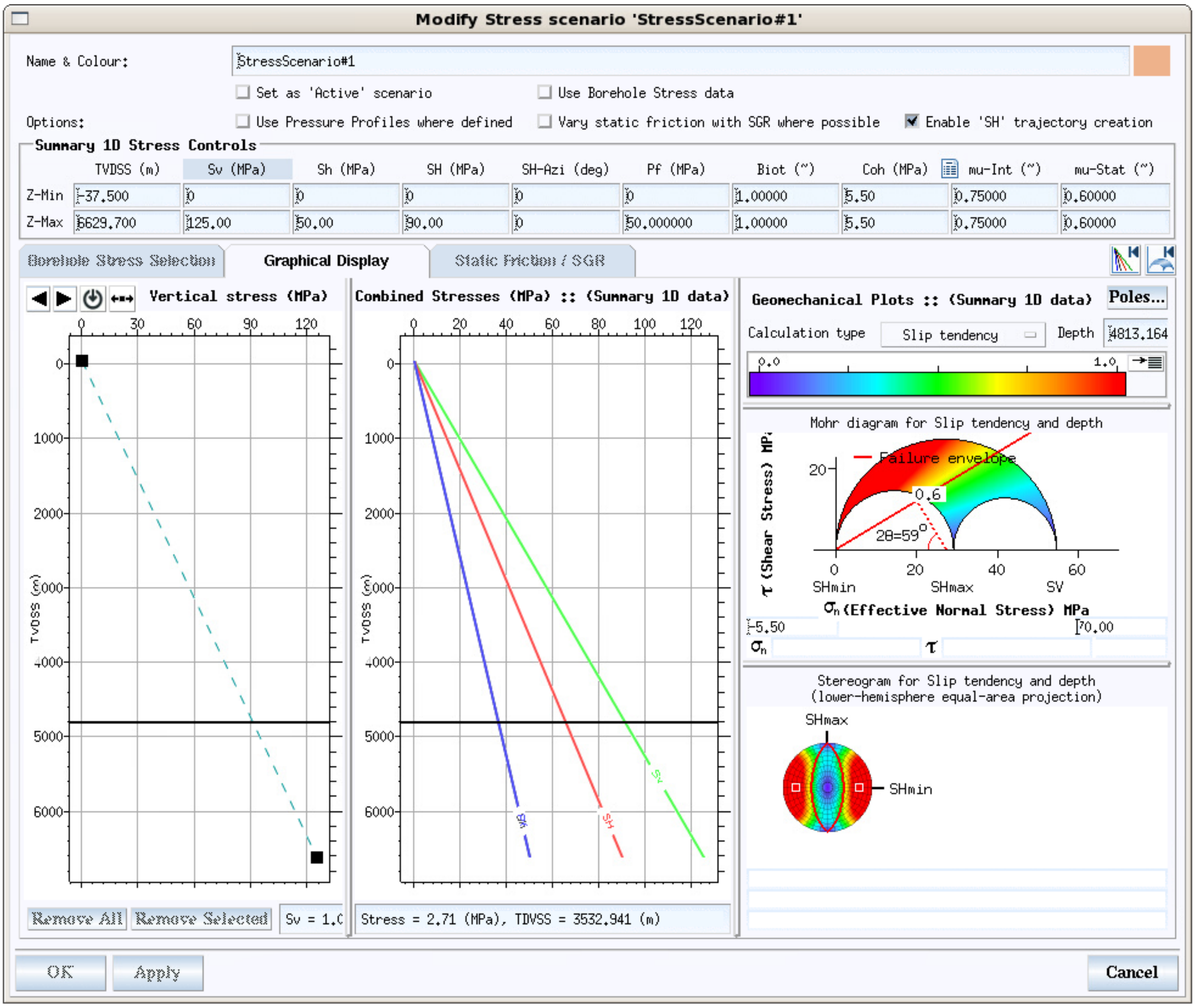
2) T7 uses FlexNet 11.12 for its licensing. The installation will include the 11.12 version of the FlexNet license manager daemon.

3) Once installed, T7 will need to run a database upgrade on existing TrapTester projects. **Please backup you projects before using them with T7.1**. Once a project has been upgraded it will not be accessible using T7.0 or earlier.

4) After a project has been upgraded, the volume editor default shortcut file (defining hotkeys) will be replaced with a more fully featured set of hotkeys and shortcuts. The original shortcut definition file will be renamed to "default.tt6".

3D Stress Analysis System

A new scenario-based system has been added to T7 to allow for in-situ stress analysis using 3D stress fields; this supersedes the earlier 1D approach.

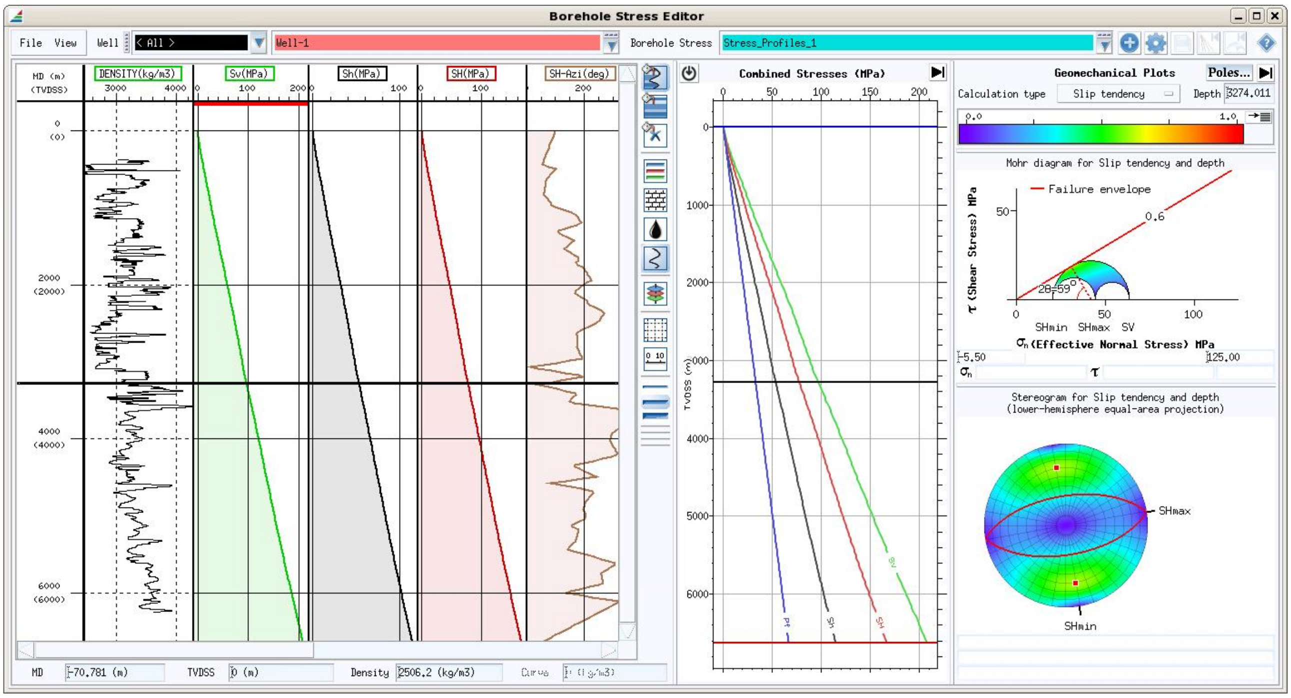


Stress Scenario Accessed From Database Explorer

A stress field, defined by a Stress Scenario, is used to calculate the resolved stresses on critical faults (*e.g.* a boundary fault containing a hydrocarbon reservoir) or fracture network surfaces and to analyse the likelihood of Slip and/or Dilation and hence the likelihood of seal failure and leakage. It is also possible to compute a Fracture Stability attribute for Horizon Surfaces. Analysis of Slip Tendency provides a way of assessing which faults are near the ideal orientation for slip and are therefore the most likely to be associated with increased fracture density and enhanced permeability, *i.e.* the higher the estimated Slip Tendency of a fault, the more likely the fault is to leak. Similarly the Dilation Tendency of faults is controlled by the resolved stresses at the fault surfaces (lithostatic, tectonic and fluid pressure) and the greater the Dilation Tendency of a fault surface, the greater its ability to transmit fluids or gas.

Prior to the 7.1 release, stress analysis in T7 used a 1D stress field whereby the component stress inputs only varied with depth. The 1D approach is still supported and any pre-existing stress-field data in the database will be converted to the new scenario-based system when a project is first opened in T7.1. The ability to construct a 3D stress-field is accomplished by defining the same 1D stress components along one or more well-paths. The spatial position and trajectory of the well-paths provides the horizontal variation of the stress data.

T7.1 includes a new dedicated tool for defining the well-based stress data. The "Borehole Stress Editor" may be accessed through the Database Explorer or from the main T7 Control menu.



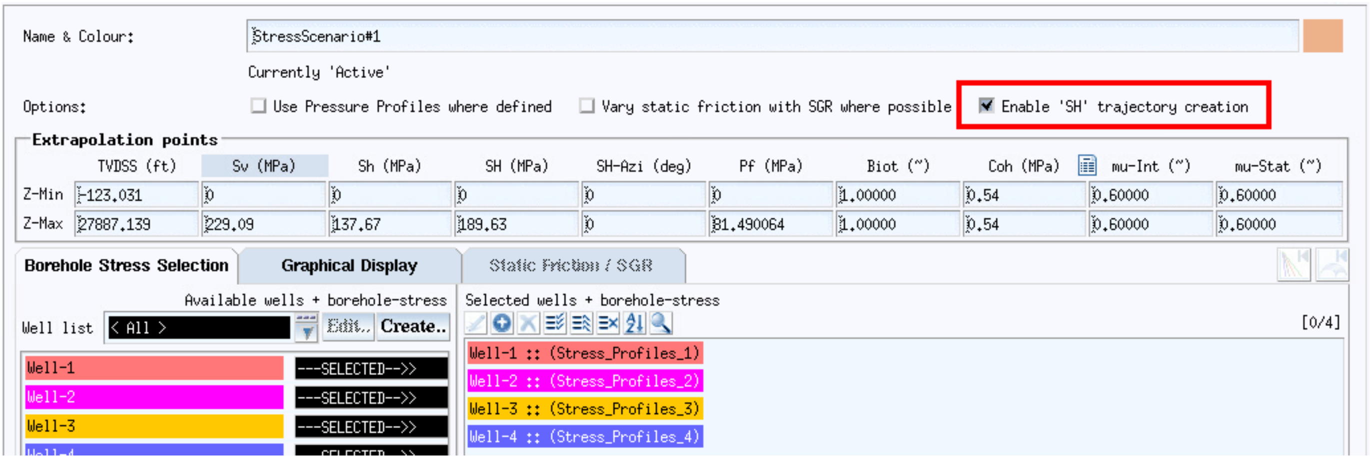
The Borehole Stress Editor

The Borehole Stress Editor enables the creation of "Borehole Stress" data that can be used in the Stress Scenario to define a 3D stress field. A Borehole Stress is essentially a set of stress "component" profiles (or curves) defined along a well path. The component profiles that are required are:

- **Sv** - Vertical stress (average overburden pressure derived by integrating density logs + average sonic velocity from check-shot data)
- **SH** - (or **SHmax**) Maximum Horizontal Stress (constrained by data from borehole breakout, induced fracturing & the world in-situ stress map- *Mueller et al., 2000*)
- **Sh** - (or **SHmin**) Minimum Horizontal Stress (*e.g.* based on leak-off tests & formation integrity tests)
- **SH-Azi** - the azimuth of the Maximum Horizontal Stress (**Sh** and **SH** are mutually perpendicular)
- **Pf** - the Pore Fluid pressure (from repeat formation tests)
- **Boit** - Biot's poro-eleastic coefficient (from porosity and/or velocity logs)
- **Coh** - the rock's intrinsic material strength or Cohesivity
- **mu-Int** - the coefficient of internal friction
- **mu-Stat** - the coefficient of static friction

The Borehole Stress Editor provides various means of defining the various component profiles - including: the integration of density log data, the copying of existing log data, a linear function or a simple constant value.

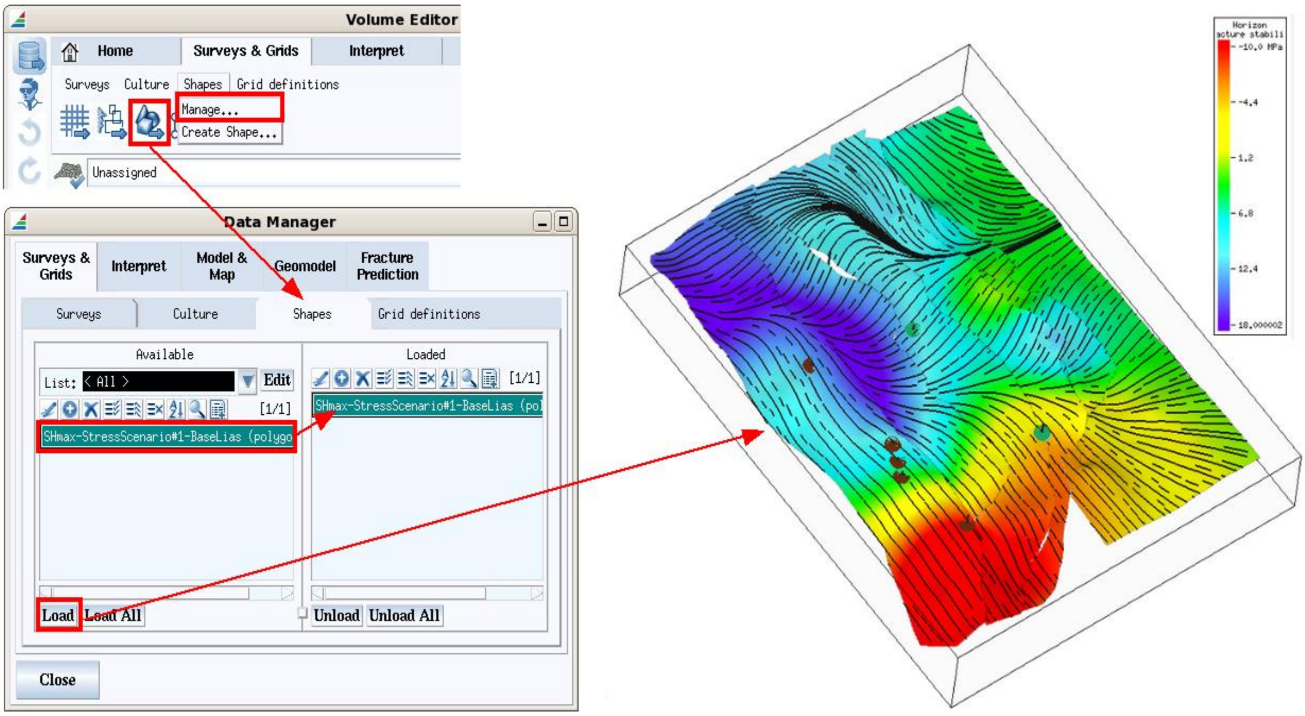
An additional feature of the new 3D stress analysis system is the generation of SHmax trajectory data. This optional output from a Horizon Surface Attribute Sync in the Volume Editor is enabled in the Stress Scenario by switching on the option, **Enable 'SH' trajectory creation**.



Enable 'SH' trajectory creation option in Stress Scenario Editor

With this option enabled, the 'SH' trajectory data is created and stored as a Polyline-Set Shape object in the T7 database during the creation of the horizon surface stress attributes. The name of the Shape object will be made up from the horizon name and stress scenario name.

The Shape object can be loaded in to the Volume Editor via the Data Manager in the Surveys & Grids module as shown below. The picture on the right shows a horizon colour coded with the Fracture Stability attribute. The black lines are the 'SHmax' trajectory lines that have been computed at that horizon and are stored in the Shape object that has been loaded independently.

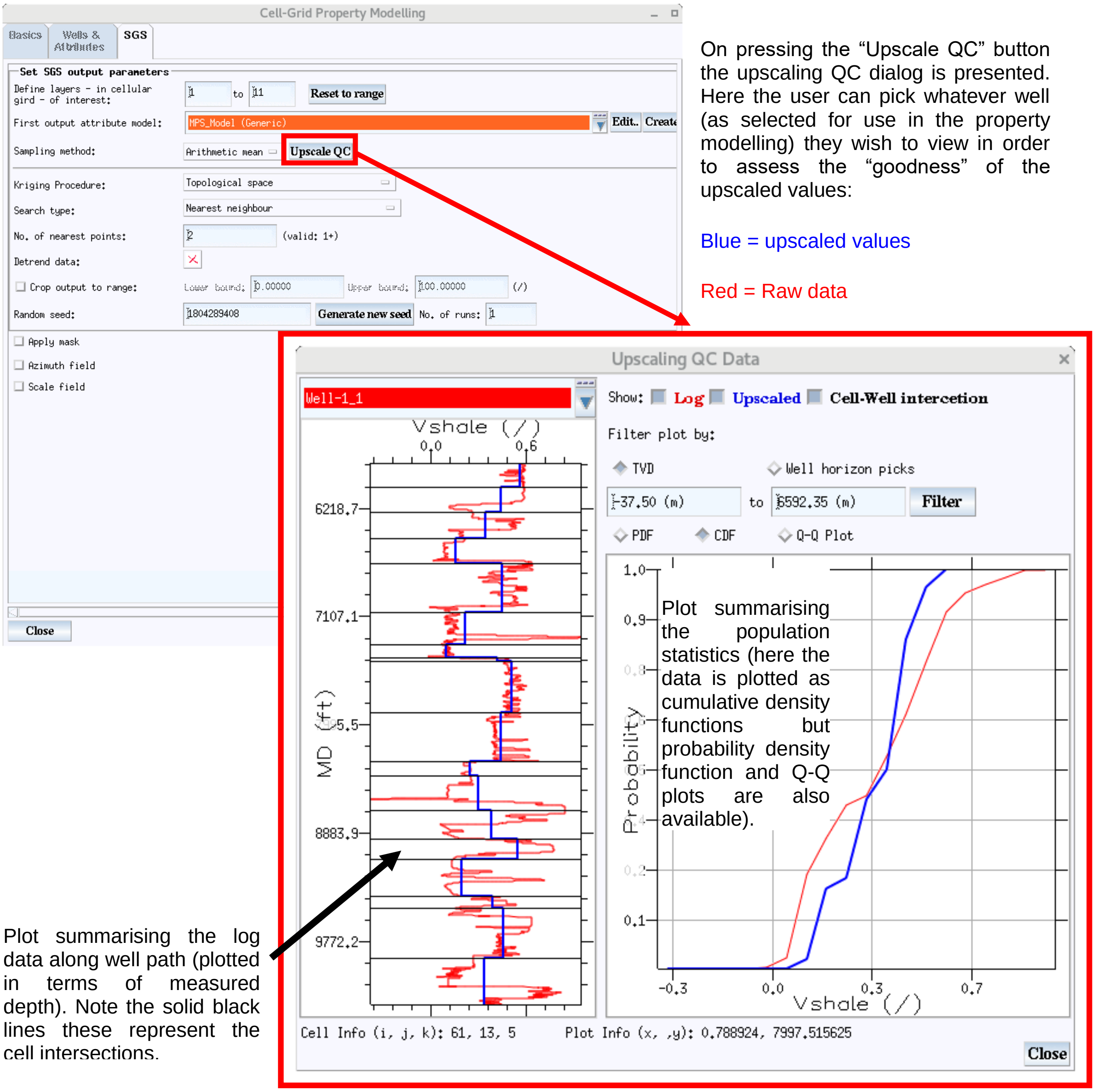


Cell-Grid Property Modelling QC Tools

Additional QC tools have been added to the property modelling workflow. Two new “sub-systems” can be found. The first, checks the well-to-cell upscaling method and how well the upscaling captured the variability in the source well data (petrophysical logs). The second enables the user to check the output results from a single realisation by comparing the model data (for all cells) against the control cells (those with upscaled log data).

Checking the upscaling method

The well to cell upscaling QC tool provides a number of plots which compare the raw log data against the upscaled data for the cell values; the data is compared in terms of both their position along the well path and population statistics. Also provided, are the well-cell intersection points (solid black lines). Furthermore, the data used for comparison can be filtered in terms of stratigraphy or true vertical depth.



On pressing the “Upscale QC” button the upscaling QC dialog is presented. Here the user can pick whatever well (as selected for use in the property modelling) they wish to view in order to assess the “goodness” of the upscaled values:

Blue = upscaled values

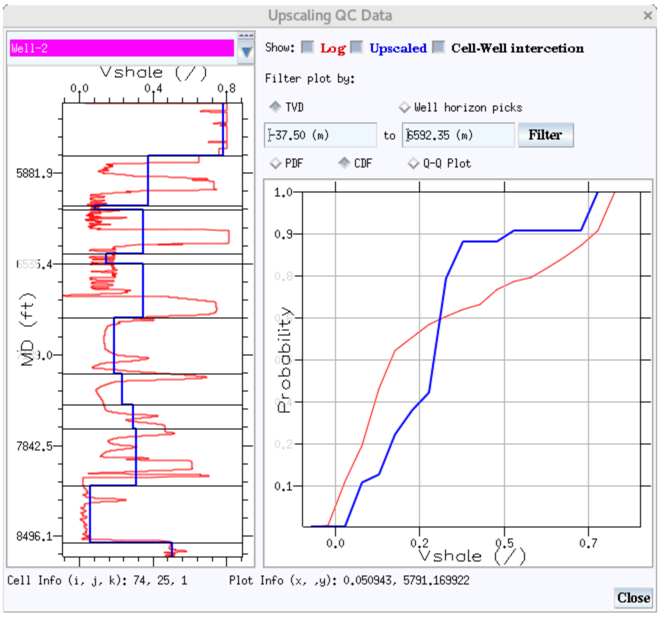
Red = Raw data

Plot summarising the population statistics (here the data is plotted as cumulative density functions but probability density function and Q-Q plots are also available).

Plot summarising the log data along well path (plotted in terms of measured depth). Note the solid black lines these represent the cell intersections.

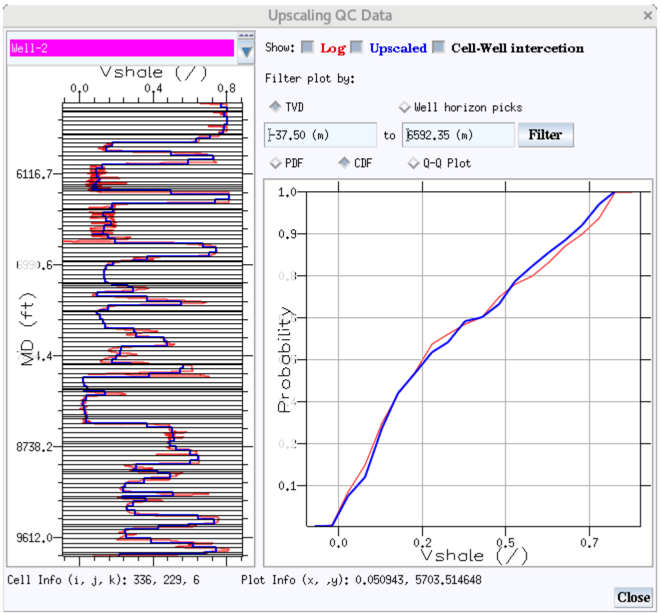
Using the tool it is possible to examine whether or not the CPG dimensions (such as layer spacing) results in upscaled control data that diverges significantly from the actual well data.

Low resolution CPG: 11 layers



Note that in this lower resolution CPG model the population statistics of the upscaled data (blue) departs from the expected distribution of the raw data (red). Therefore, the current CPG dimensions are too coarse; failing to capture the variation in the source data (well data) after the well-to-cell upscaling.

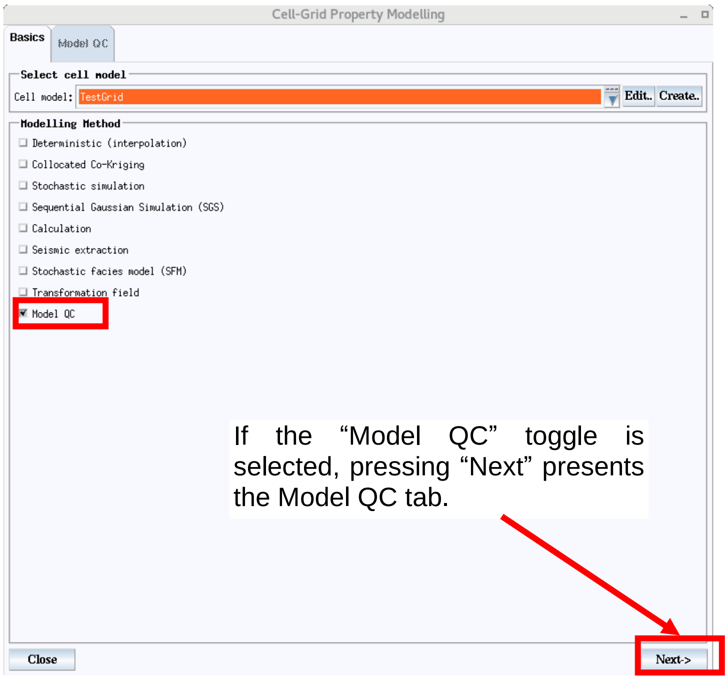
High resolution CPG: 101 layers

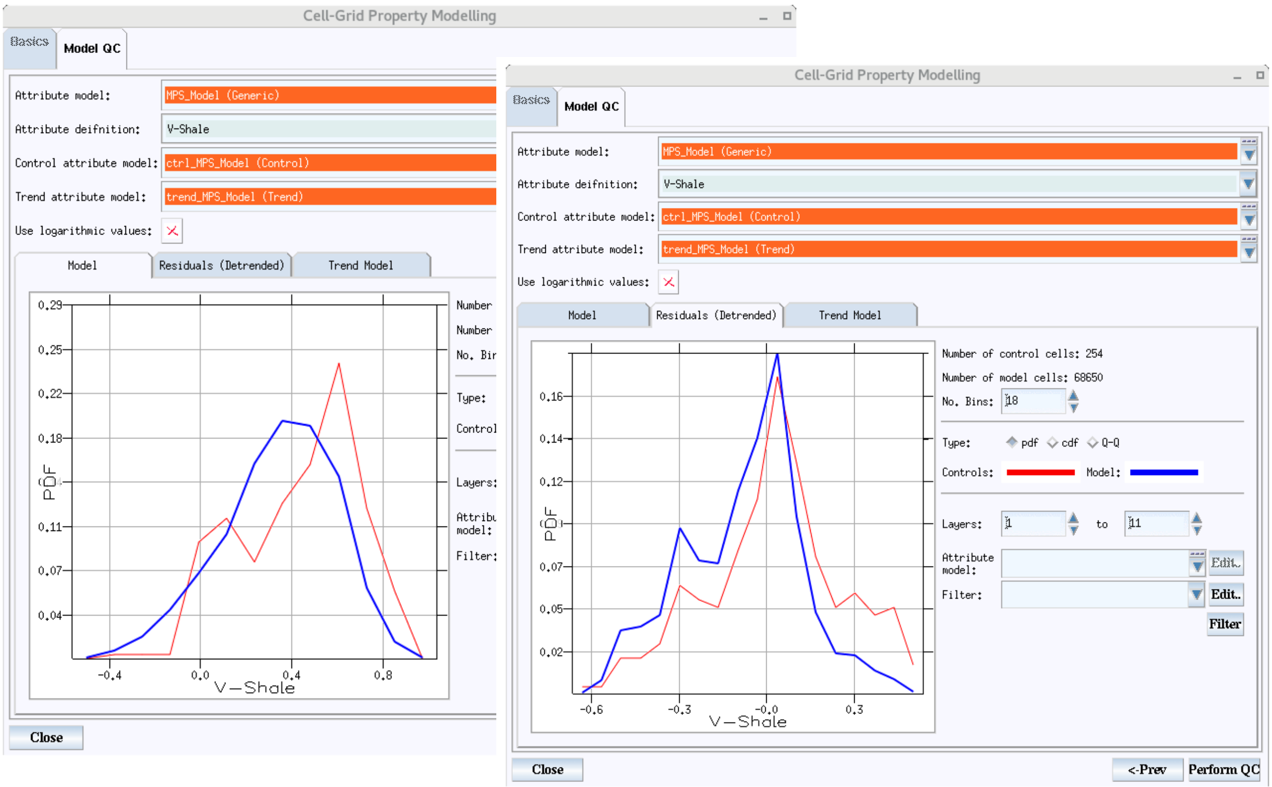


Using the same well data and attribute, but a different and higher resolution CPG model, we can accurately capture the well data distribution in the upscaled data.

Checking the output models

The principal stochastic modelling method employed for continuous variables in T7 is the sequential Gaussian simulation (SGS); here one expects, for each SGS output, a close approximation between the population distribution for the model output (after property modelling) and the input control cells (derived from the well-to-cell upscaling). A new option is available in the Cell Grid Property Modelling dialog: Model QC to test this. Here the output from an SGS model can be compared with the control cell input data. The user has to select an attribute model, an attribute definition (e.g. V-Shale, Porosity) and a control attribute model (this is automatically produced during the SGS run and is denoted by the “(control)” qualifier). If a trend was used for the SGS modelling then the appropriate trend attribute model should also be selected; as with the control attribute model this will be created automatically during the modelling phase. It’s important to note that if a trend was used then a comparison should be made using the control and model residuals.

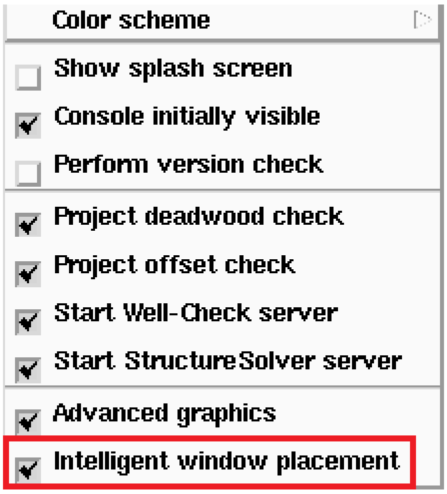




Note that we’re QCing a model where a trend was used during modelling. A quick comparison between the residual populations shows good correspondence between the control and model data distributions. These comparisons can be further refined by depth and/or filtered using by attribute filters (if those were used during modelling).

Intelligent Window Placement

A new system has been added to T7.1 to improve the way in which multi-monitor screen configurations are handled when applications and application dialog windows are popped-up. The new system ensures that, unless otherwise dictated by application saved settings, new applications will attempt to start on the same monitor as that of the application from which it is started. Application dialog windows will open so that they are centred within the host application window. For example, with a dual monitor configuration, the user may move the T7 control menu on to the right-hand monitor (its default location is on the left). Any applications started up from the control menu will then open on that monitor. The “Intelligent window placement” system may be disabled in the T7 Control Menu’s Start-up options.

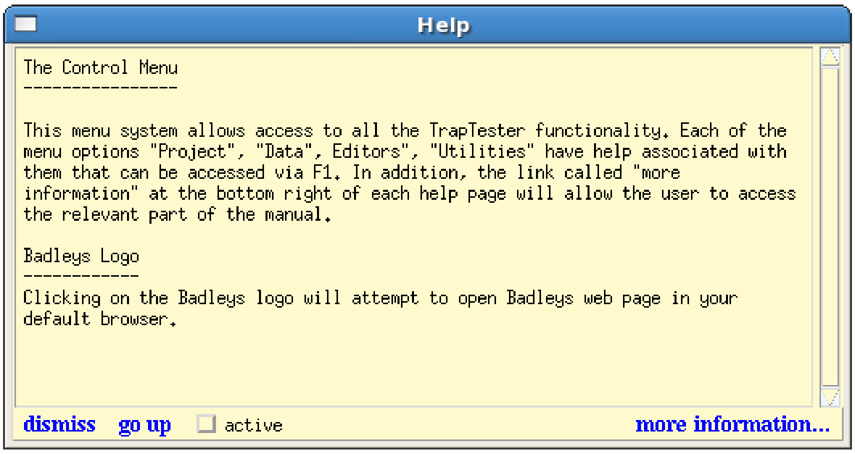


Context Sensitive Help Access

Context Sensitive Help (**CXH**) is a powerful help system available for most T7 applications. It can be accessed in any of the following ways:

- Click on the "**?**" button in a main application window (normally at the top right corner of the main window). This will change the mouse pointer in to a "?". Move the mouse pointer to a part of the application user interface about which more help is required and simply *click* with the mouse **<MB1>** button. This will result in the display of the CXH popup window.
- Move the mouse pointer to a part of the application user interface about which more help is required and simply press the **F1** key. This will result in the display of the CXH popup window.
- Move the mouse pointer to a part of the application user interface about which more help is required and simply press the **F2** key. This will bypass the CXH popup window and, go straight to the T7 Reference Manual if a link is defined.

The image below shows the CXH popup displayed by pressing F1 in the T7 Control Menu.



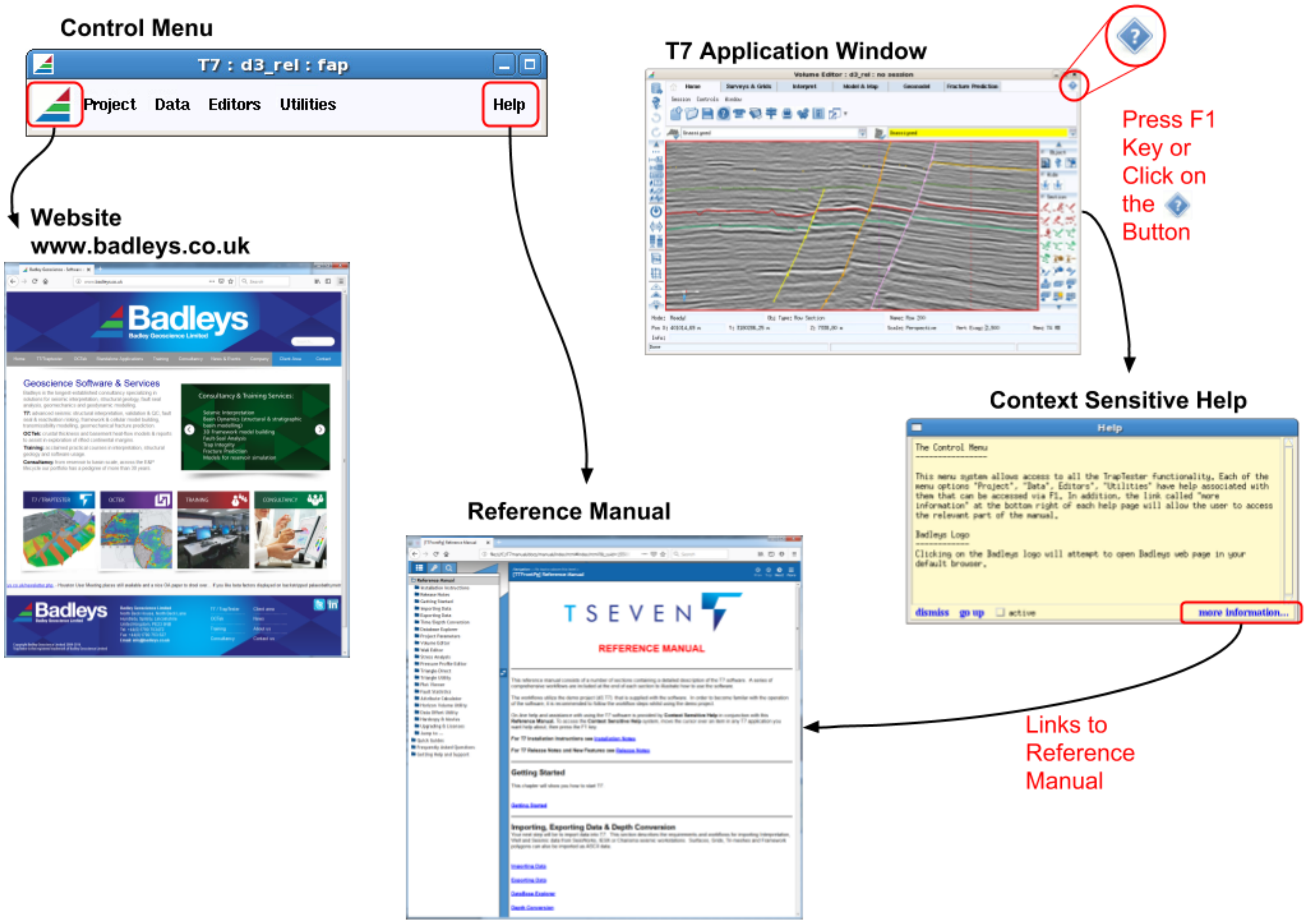
At the time the CXH help is requested, the part of the application user-interface to which the help text is linked will flash several times.

Clicking on the "**go up**" button will attempt to access additional help that is associated with a higher-level component of the user-interface.

If the CXH popup window shows a **more information** link, clicking on this will open a browser window showing a relevant topic in the T7 Reference Manual.

If it is required to keep only one CXH help window open on your display, and update the contents of the CXH help window each time you press **F1**, then press the **active** toggle button.

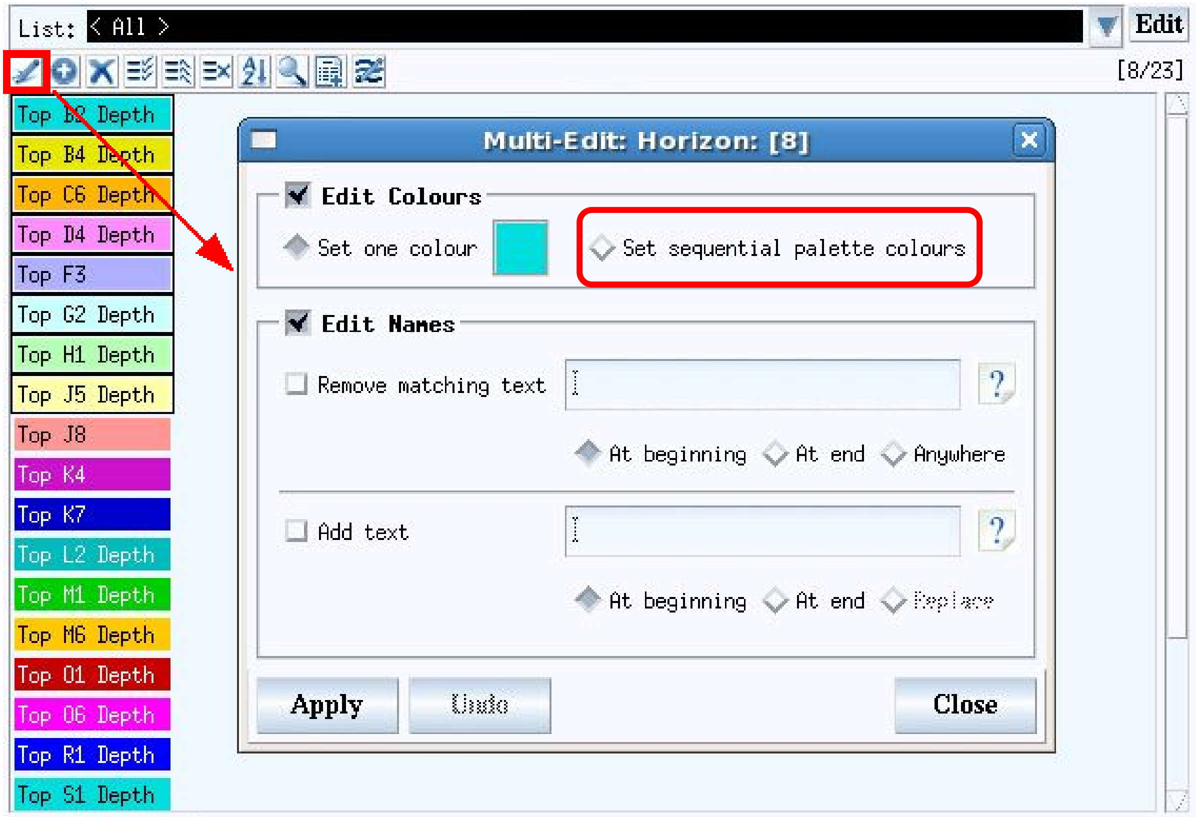
To close the current CXH help window, press the **dismiss** button.



Help System Access

Multi-Object Edit Sequential Colour Option

The Muti-Object Edit window allows simple bulk changes to multiple objects of the same type selected in the Database Explorer or in any list view that supports object editing. The multi-object editor tool can be used modify the colours and/or names of the selected items. The tool has been extended with an option to modify the colours from a set of colours accessed sequentially from the T7 colour palette.

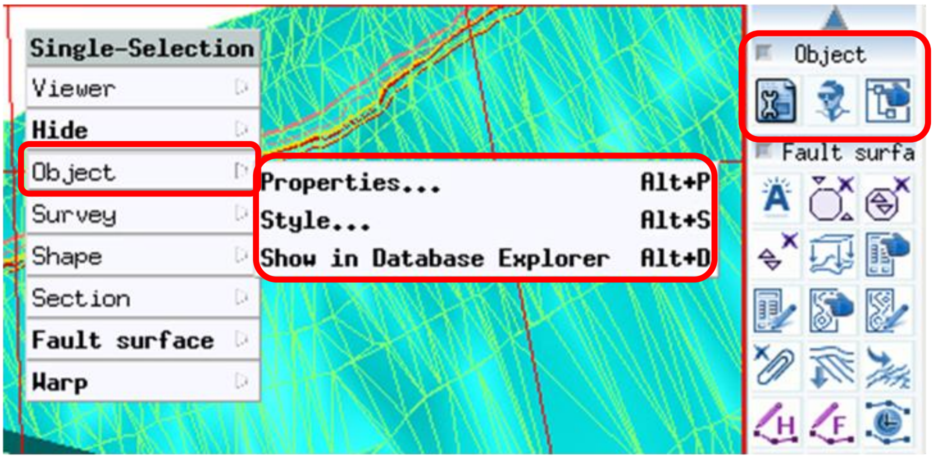


Multi-Object Edit Window accessed from a Horizon List

Volume Editor - Object Menu

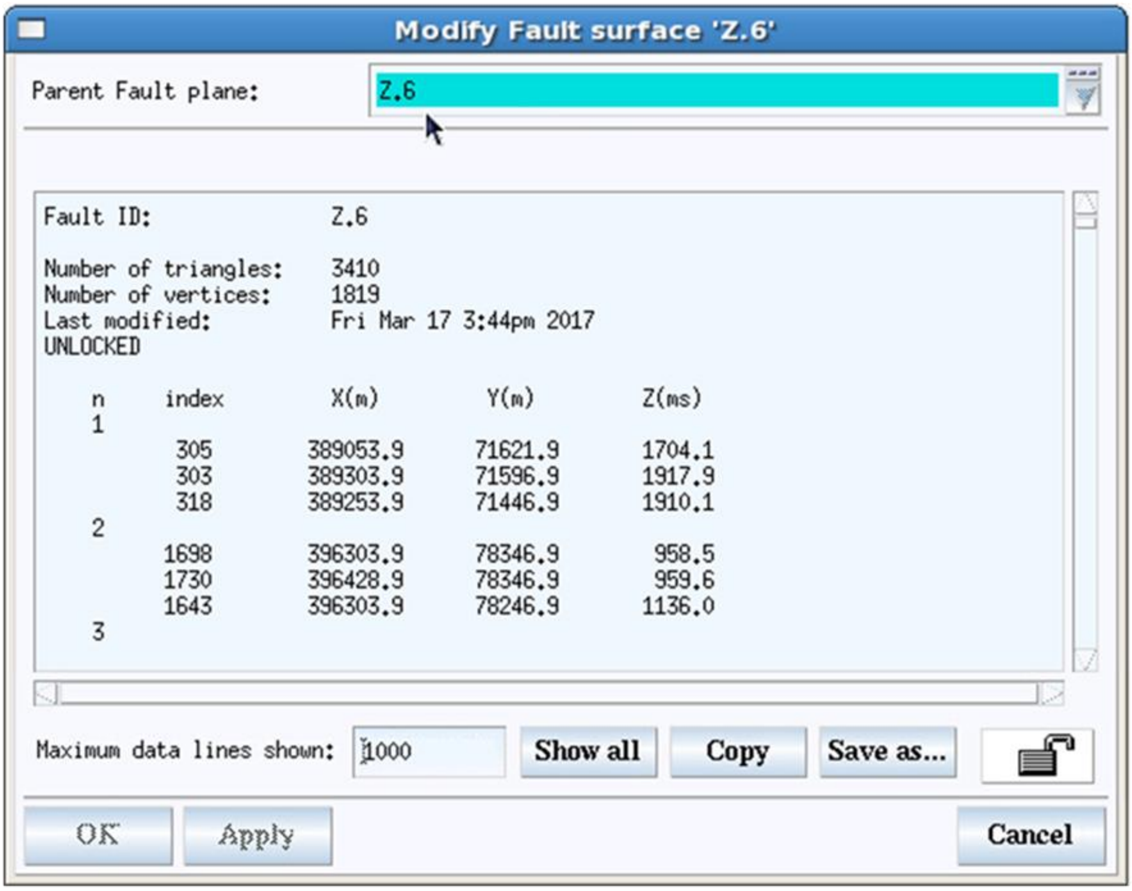
This new Right-Mouse-Button (MB3) menu option in the Volume Editor provides access to a number of options specific to the currently selected object in a viewer.

Selected Fault Surface



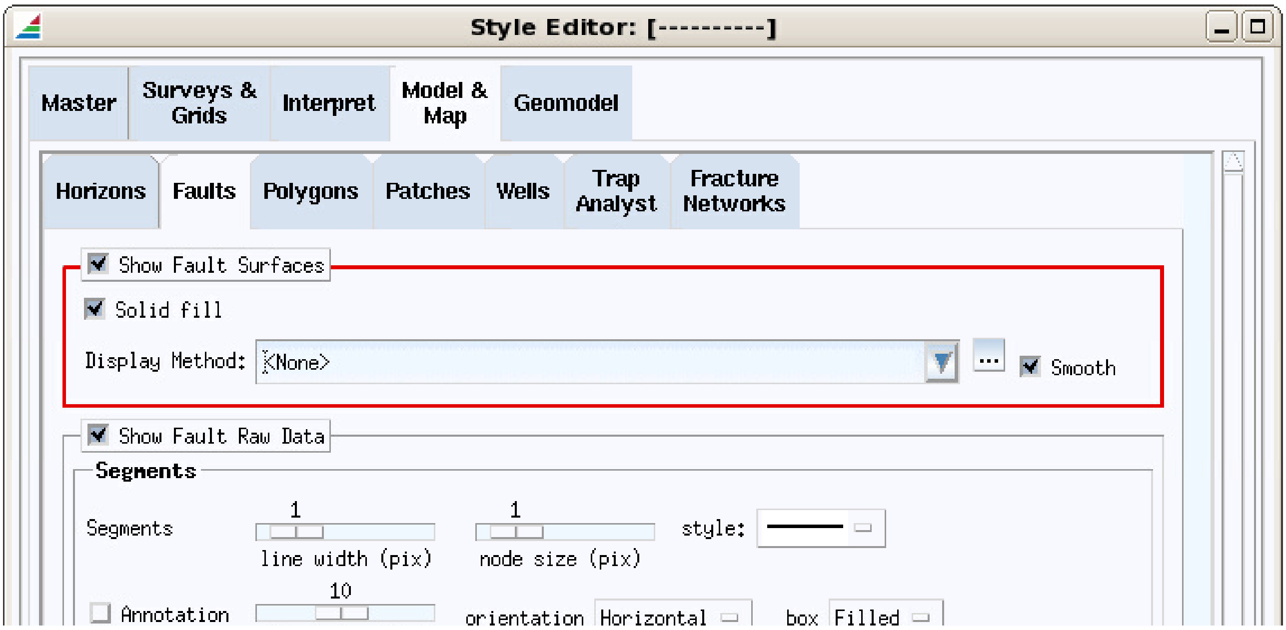
The options are:

Properties - this opens the object-specific editor window (as would normally be accessed via the Database Explorer or from the "Edit" button in an object list-view).



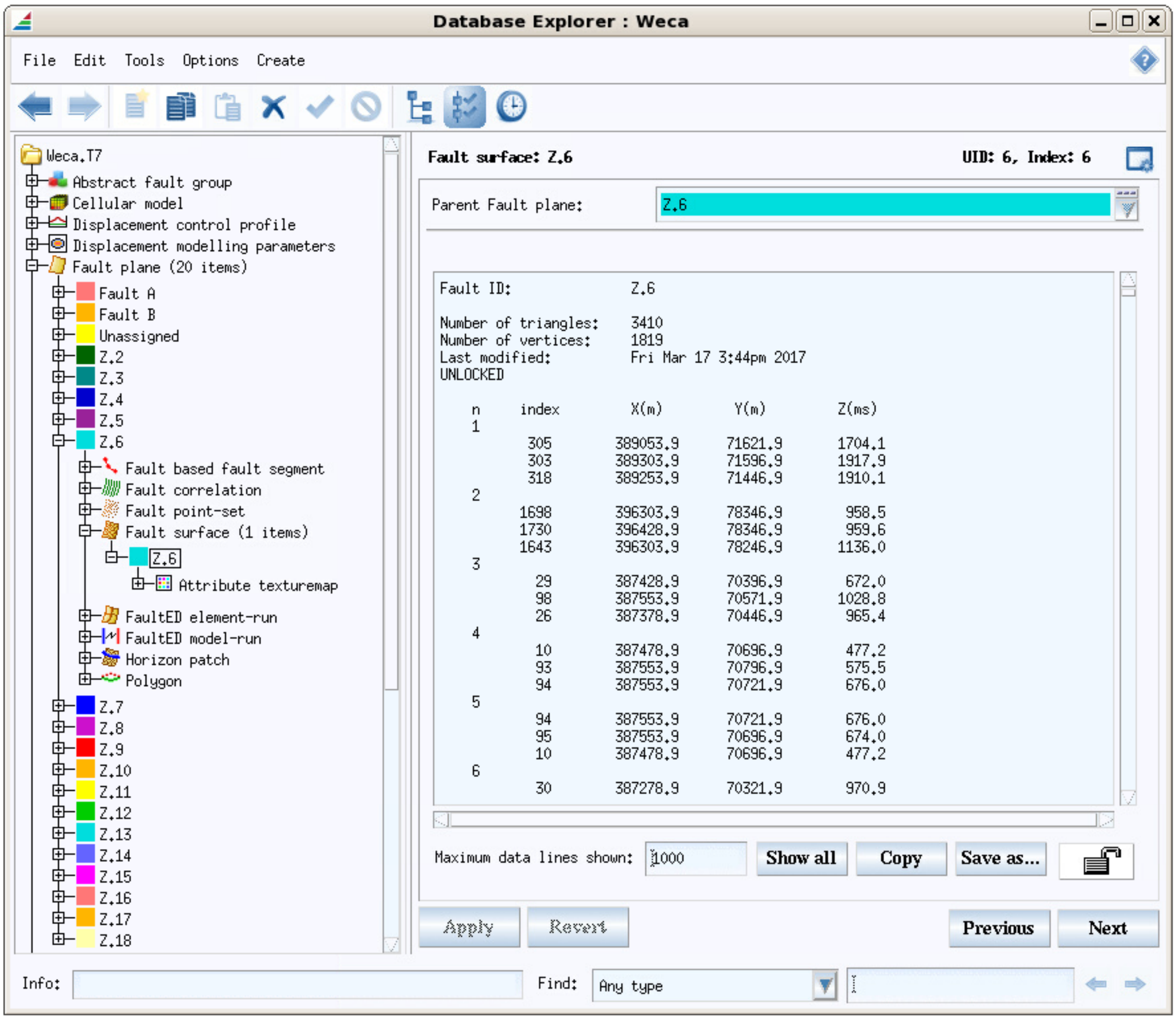
Example properties window (with a Fault Surface selected)

Style - this will open the Style Editor window showing and highlighting the style controls specific to the selected object.



Example showing highlighted style controls (with a Fault Surface selected)

Show in Database Explorer - this will open the Database Explorer window and select the object in its tree-view (provided its "Allow remote object selection" option is enabled).



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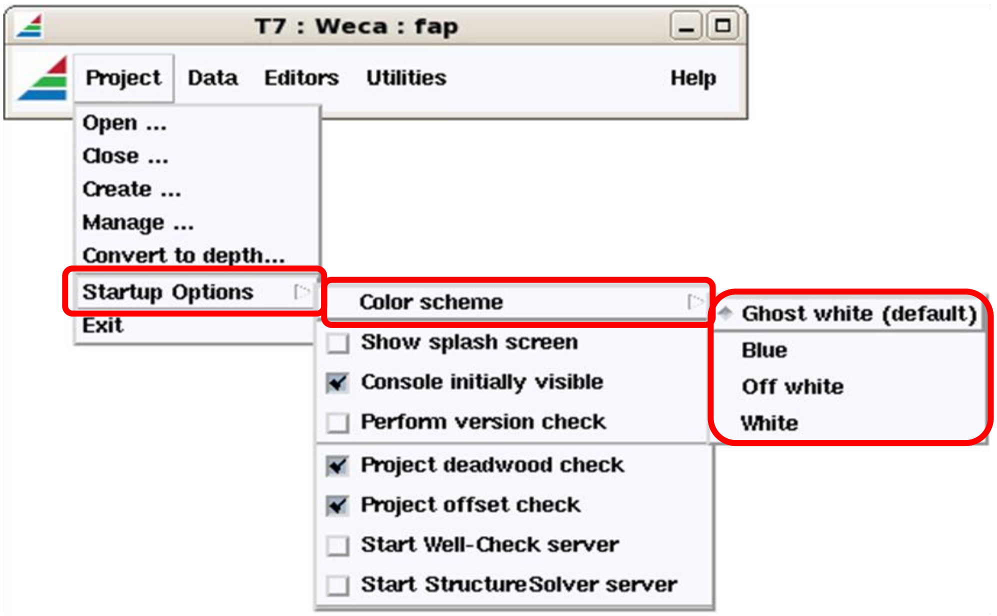
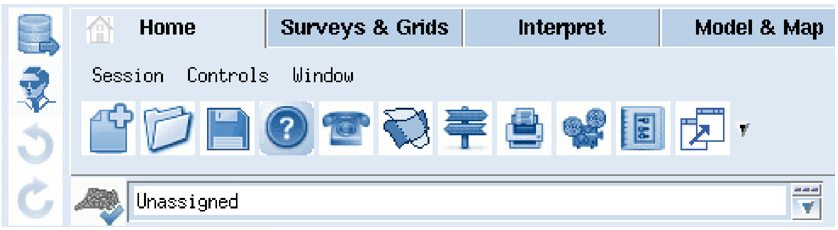
T7-Control Menu - Colour Scheme Option

A new startup-option has been added to control the T7 user-interface colour-scheme.

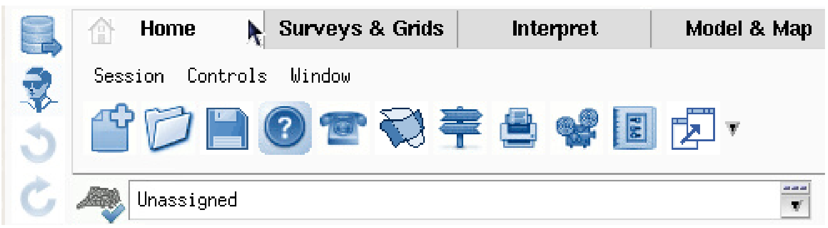


The available colour schemes are:

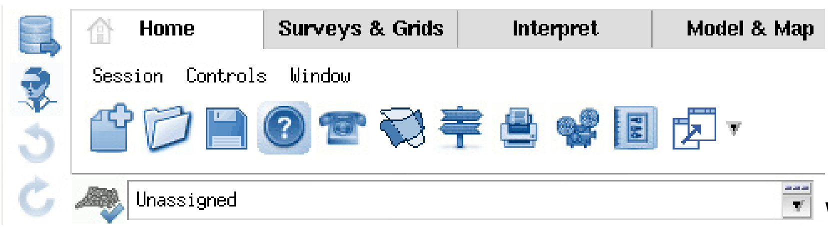
Ghost white



Blue



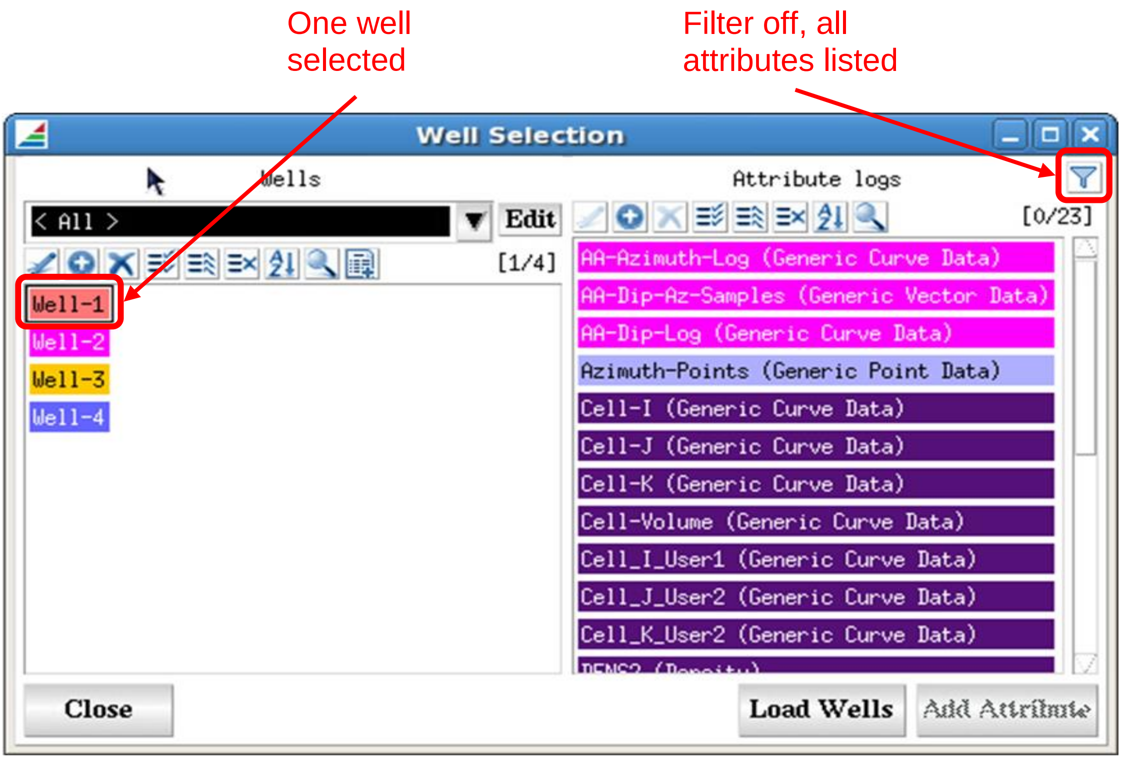
Off white

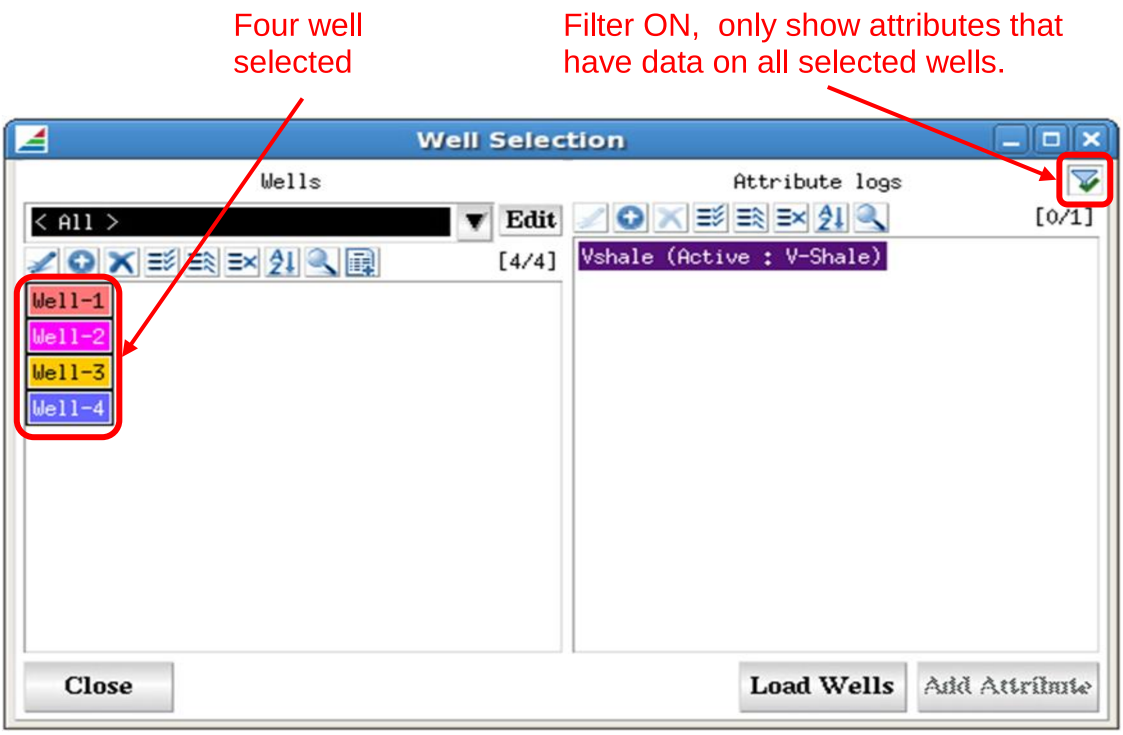


White

Well-Editor - Attribute Loading Filter

The Well Editor load selection window now incorporates a filter toggle for well attributes. When enabled the filter will only list attributes that possess log data for all of the wells selected for loading.





Horizon Data Interpolation

The process for interpolating over gaps in horizon interpretation data belonging to Horizon Data-Volumes has been available in T7 since TrapTester 5.0. The process requires the selection of a Horizon Data-Volume in the Volume Editor and uses the existing data in that Data-Volume, within a user-specified polygonal region, to act as the "interpolation resource". The unpicked data (or null data) within the same defined region and in the same Data-Volume is then interpolated using the "interpolation resource" data.

T7.1 sees this concept extended so that different and multiple interpolation resources may be used to influence the interpolation results. This is especially useful around faults (in particular, reverse faults), where gaps in the interpretation may be in-filled using both the existing data in the Data-Volume and also other data such as a footwall or hangingwall polygon, well horizon picks, horizon point-set data or indeed data belonging to other Horizon Data-Volumes. The workflow to add additional interpolation resources is as follows:

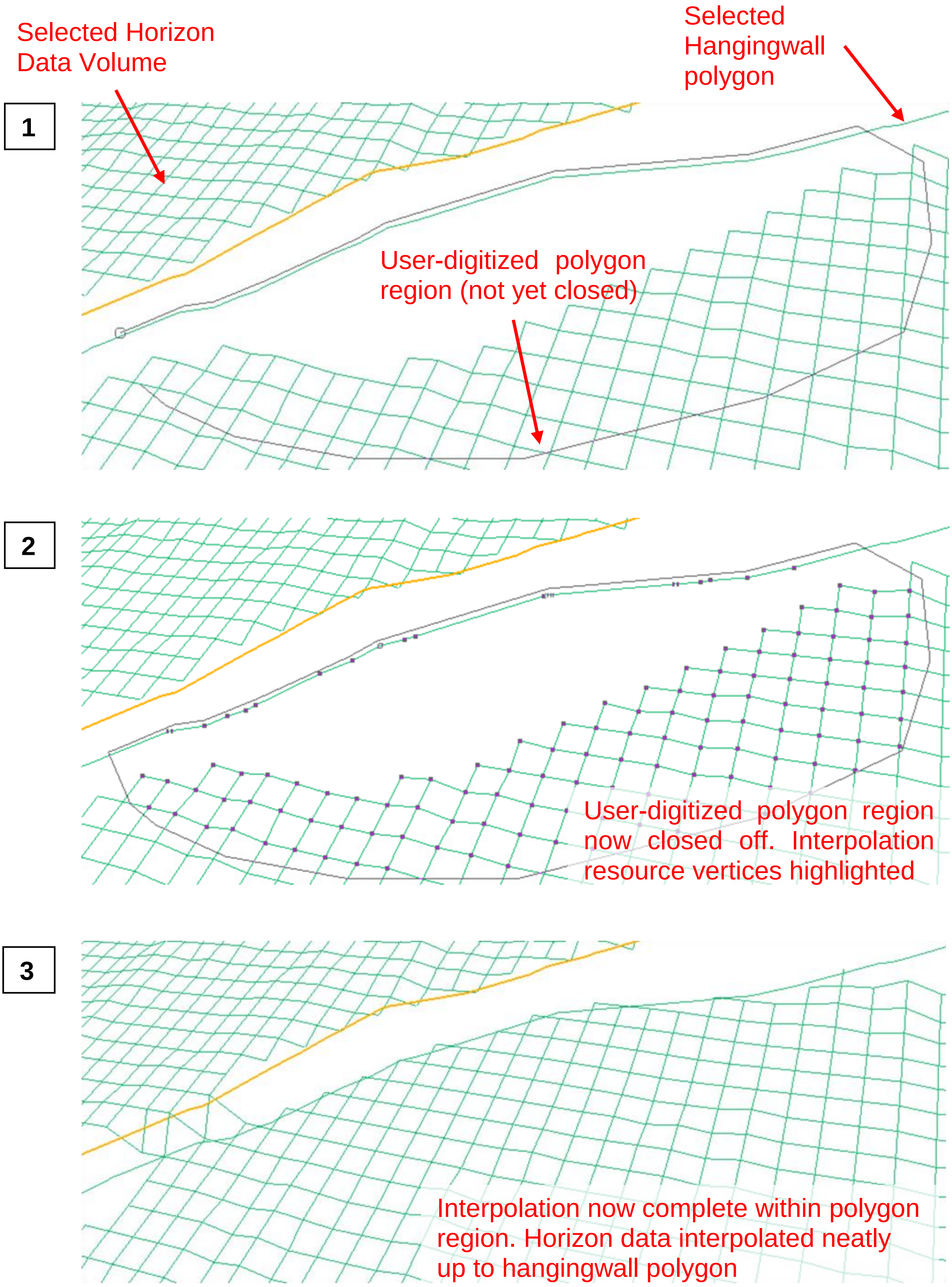
1) With Horizon area mode set to 'PICK'

I. Select the Horizon Data Volume to be interpolated
II. Enter the Interpolation mode: *MB3->Horizon->Edit raw data->Area interpolate (inside)*.
III. Use Ctrl+MB1 to select additional interpolation resources. (NOTE: This step may be performed before step 2 provided only one Horizon Data Volume is selected)
IV. Use MB1 to digitize a polygonal region around the required interpolation resources and area to be interpolated. The closure of the polygon will then highlight all interpolation resource points that lie within the polygon.
V. Use MB3 to perform the interpolation.

2) With Horizon area mode set to 'SHAPE'

I. Select the Horizon Data Volume to be interpolated
II. Use Ctrl+MB1 to select additional interpolation resources. (NOTE: no further Horizon Data Volumes should be selected - as this will disable the interpolation option)
III. Enter the Interpolation mode: *MB3->Horizon->Edit raw data->Area interpolate (inside)*.
IV. Choose the required polygon Shape from the pop-up list and press OK to perform the interpolation.

The pictures below illustrate the process of interpolation using multiple resources.



Use of Velocity Volumes For On-Demand Time/Depth Conversion

When working with time-domain data, there are certain work-flows in T7 that require data to be converted to depth in order to generate meaningful output. Examples of such work-flows include:

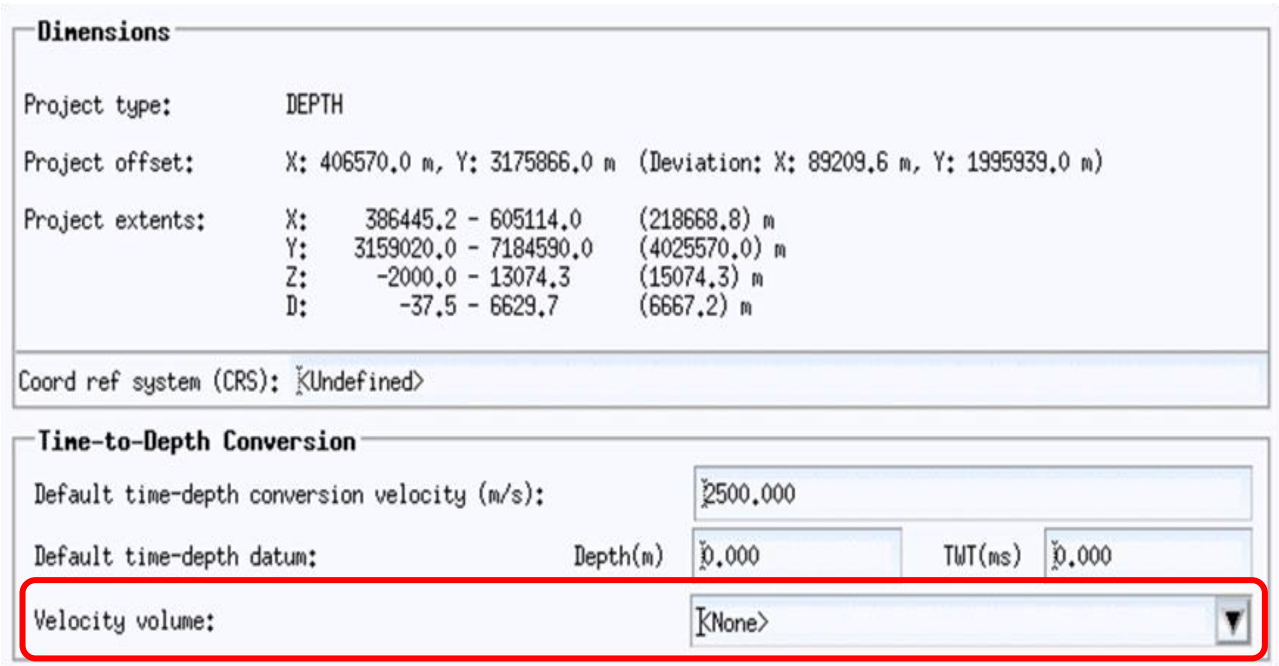
- Creating Hydrocarbon Column Height fault attributes,
- Creating CSP fault attributes.
- Creating stress analysis attributes,
- Creating fault attributes using pressure-profiles,
- Performing fault displacement back-stripping.

Such processes use information from the Project Parameters in order to perform the time-to-depth conversion as and when it is required. Prior to the 7.1 release, the Project Parameters only provided a means of defining a simple, linear velocity function with a time and depth datum. T7.1 includes an option to specify a velocity volume.

With a velocity volume specified, all on-demand time-to-depth conversion will use the velocity data defined by that volume in preference to the "Default time-depth conversion velocity & datum".

When a velocity volume is selected it will be loaded in to shared-memory the first time it is required. After that point the volume will remain loaded in shared memory while the project is open. The shared memory volume will be relinquished when the project is closed or the velocity volume selection in the Project Parameters is changed.

The volume will be loaded in to shared memory by the first T7 application that requires it. Depending on the volume size this loading process can potentially add a significant delay at that time (e.g. when starting the Volume Editor).

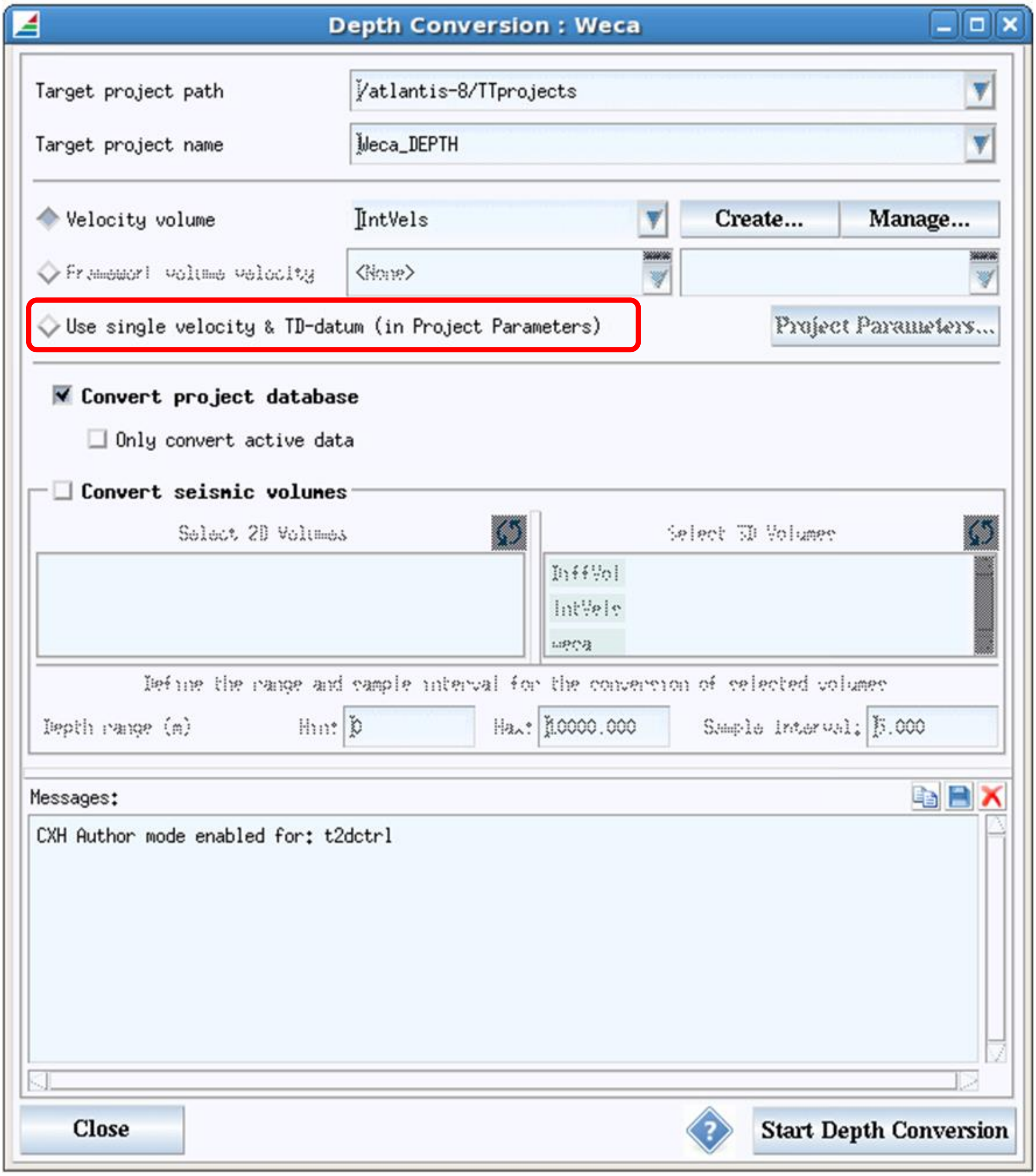


Velocity volume selection option in Project Parameters

Time/Depth Conversion Using Mixed Domain Velocity Volumes

Velocity volumes can exist in the time or depth domain - ie a time-domain velocity volume contains velocity data varying with two-way-time whereas a depth-domain velocity volume contains velocity data varying with depth. Prior to T7.1, conversion of time-to-depth required a time-domain velocity volume while the inverse conversion required a depth-domain velocity volume. This restriction is lifted in T7.1 though using a velocity volume that is not of the same domain as the data being converted will be a little slower.

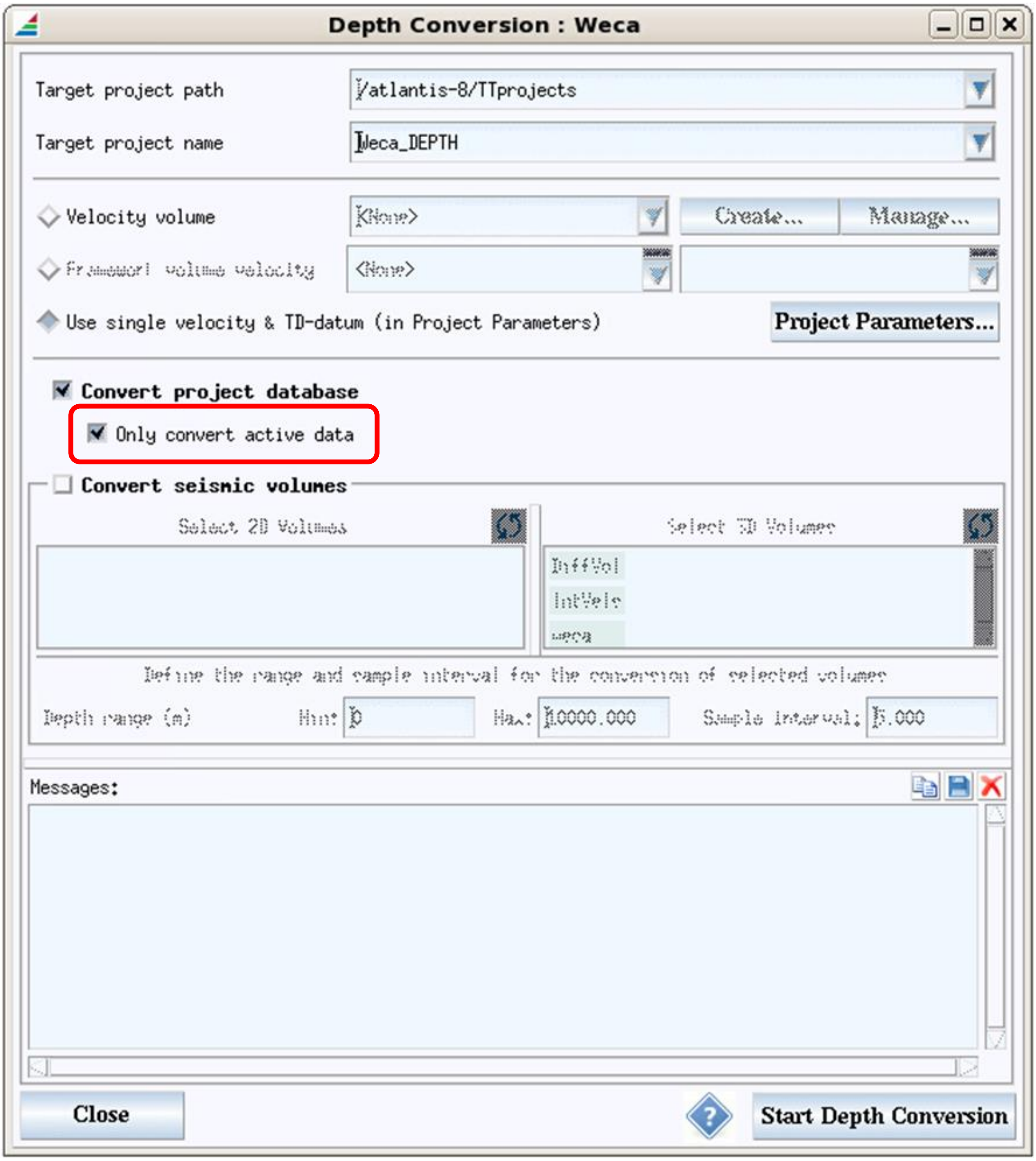
The ability to use either a time or depth domain velocity volume to perform a time or depth conversion means that a single volume may be used to perform two-way conversions (ie conversion to depth and then back from depth to time). (The Seismic Volume Manager can be used to create a link to a volume in a different project - this permits volumes to be shared between multiple projects).



Time Depth Conversion Of "Active" Database Content

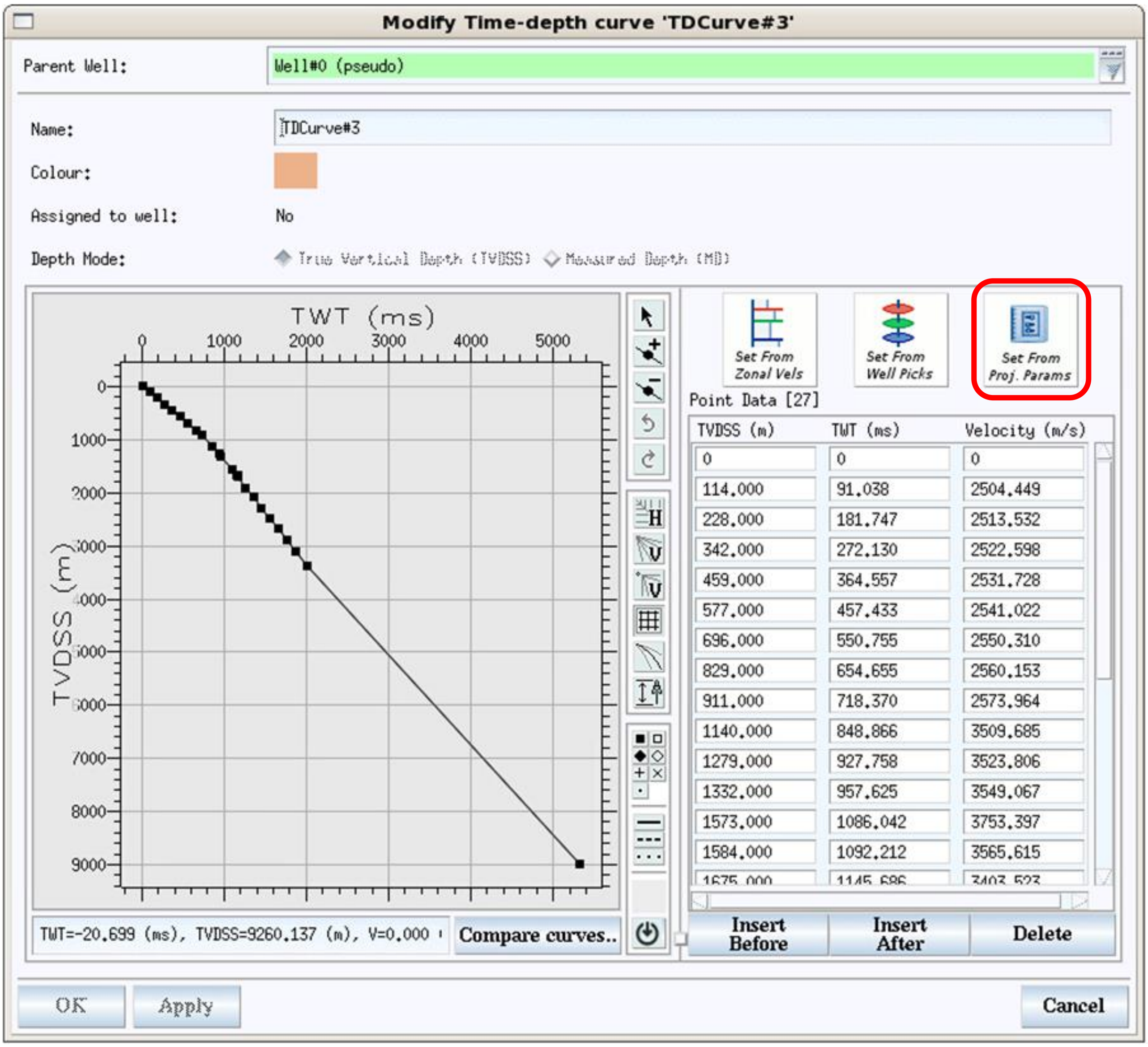
The T7.1 Time/Depth conversion tool has been given an option so that only the "Active" content of the T7 database is converted to the chosen target project. This provides the user with the ability to be more discerning about what data is created in the target project.

The "Active"/"Inactive" state of database content is managed in the Database Explorer.



Creation of Well Time/Depth Curves from Velocity Volumes

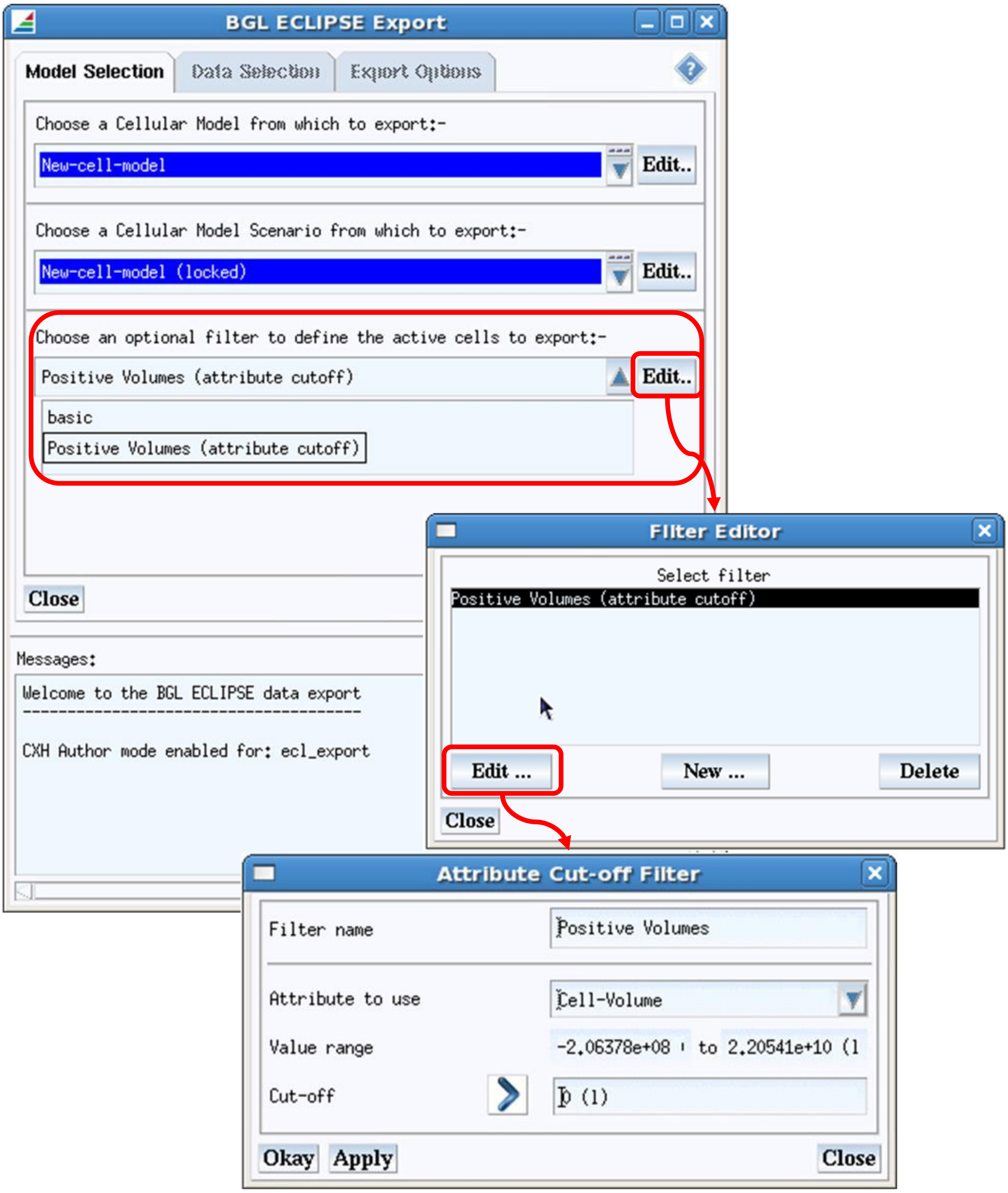
It is now possible to create a Well Time-Depth Curve using the velocity model defined in the Project Parameters. If the Project Parameters is set with a velocity volume then this will be used - otherwise the basic velocity and datum values will be used.



The above picture shows a time-depth curve created using the "Set From Proj. Params" option. In this instance, a time-domain velocity volume is specified. The volume only contains velocities to 2000ms - the velocity at the base of the volume is extended to the last point in the well trajectory at 9000m.

ECLIPSE Cell-Grid Export - Filter Selection Option

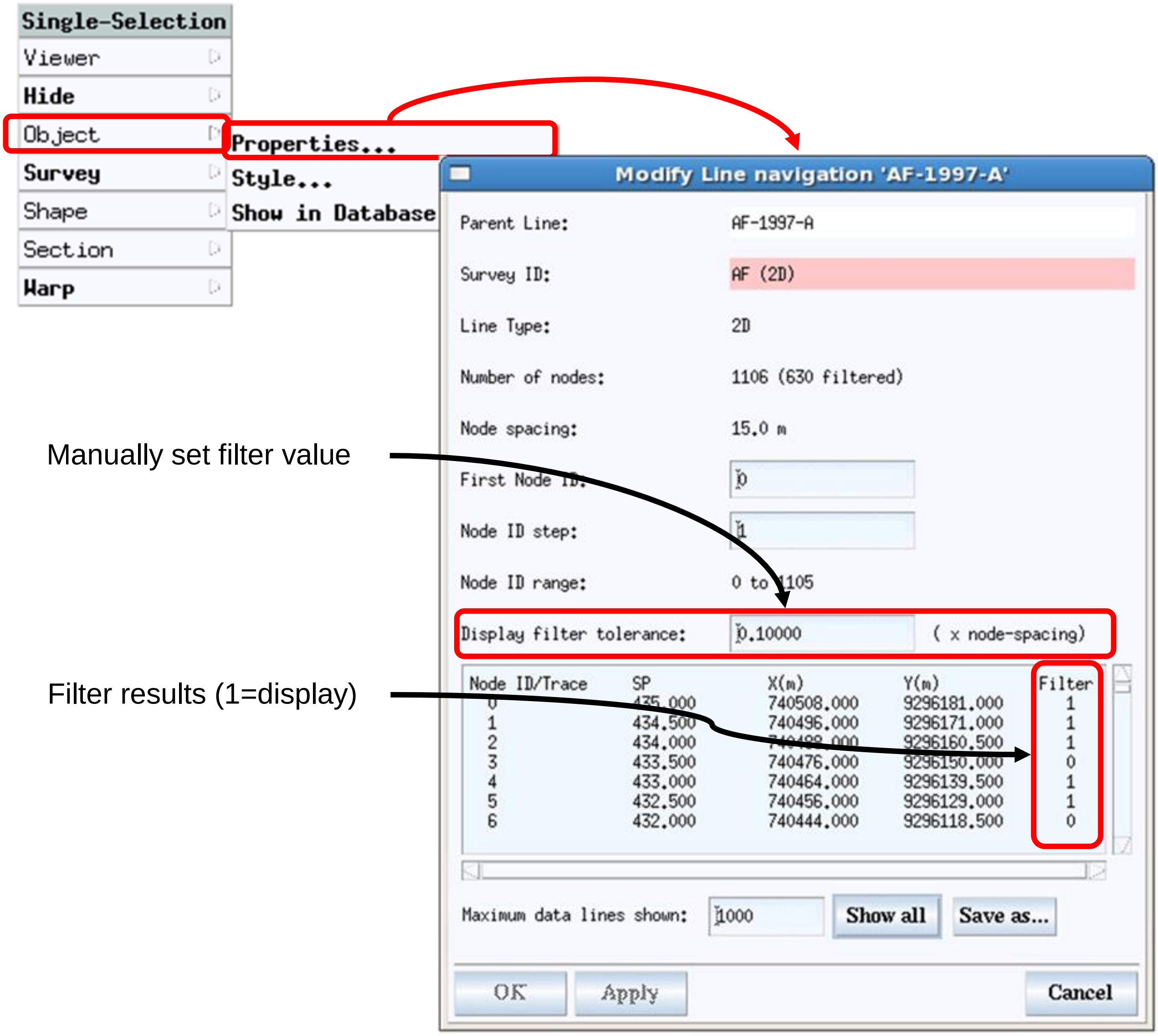
In order to provide a more flexible way to control the export of active Cell-Grid cells from a Cell-Model in T7, the ECLIPSE export tool has been provided with an option to choose (or create) a filter. The filter can be an existing filter for filtering the display of Cell-Grid property data in the Volume Editor or it can be created from within the ECLIPSE export tool. The cells that do not pass the filter will be exported with a corresponding zero ACTNUM value. The below example shows a filter that ensures any cells with a negative volume a given a zero ACTNUM.



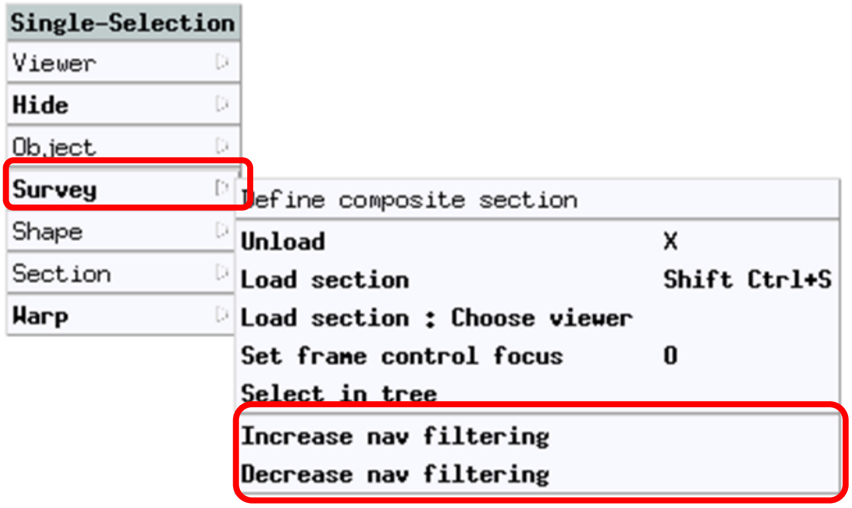
2D Line Navigation Filtering

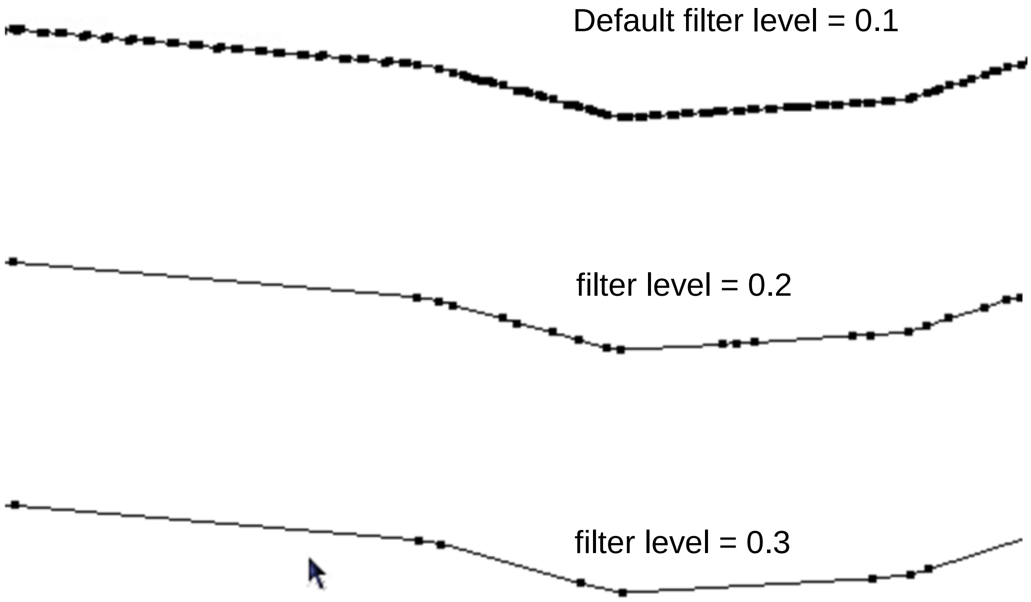
2D Seismic lines may be represented in the Volume Editor as basemap lines and as seismic section displays. The points (traces) that define the 2D path of the line in the XY plane are known as the "navigation" data. The navigation data is stored at is full resolution in the T7 database. When it comes to displaying this data in the Volume Editor a filter is applied so that only those points that are seen to act as significant turning points (or way-points) are used. This can greatly reduce the graphics overhead - especially when there are a significant number of lines or the lines are particularly long. On occasions, the navigation data can lack precision in its trace XY locations; this can often be the case if the data has been imported from ASCII files that omit XY decimal places. In such cases, every point can be identified as a turning point so the default filtering is ineffective.

A new parameter has been added to the 2D line navigation properties that controls and stores the level of filtering along 2D lines. This can be edited by hand on a per-line basis in the Database Explorer or by accessing the 2D Line Navigation properties editor from the Volume Editor. Alternatively, the filter values can be increased or decreased by pre-set amounts using MB3 popup-menu options in the Volume Editor. This latter option can be applied to a multiple selection of 2D basemap lines.



The following pictures show how the filtering levels effect a typical 2D basemap line in the Volume Editor.

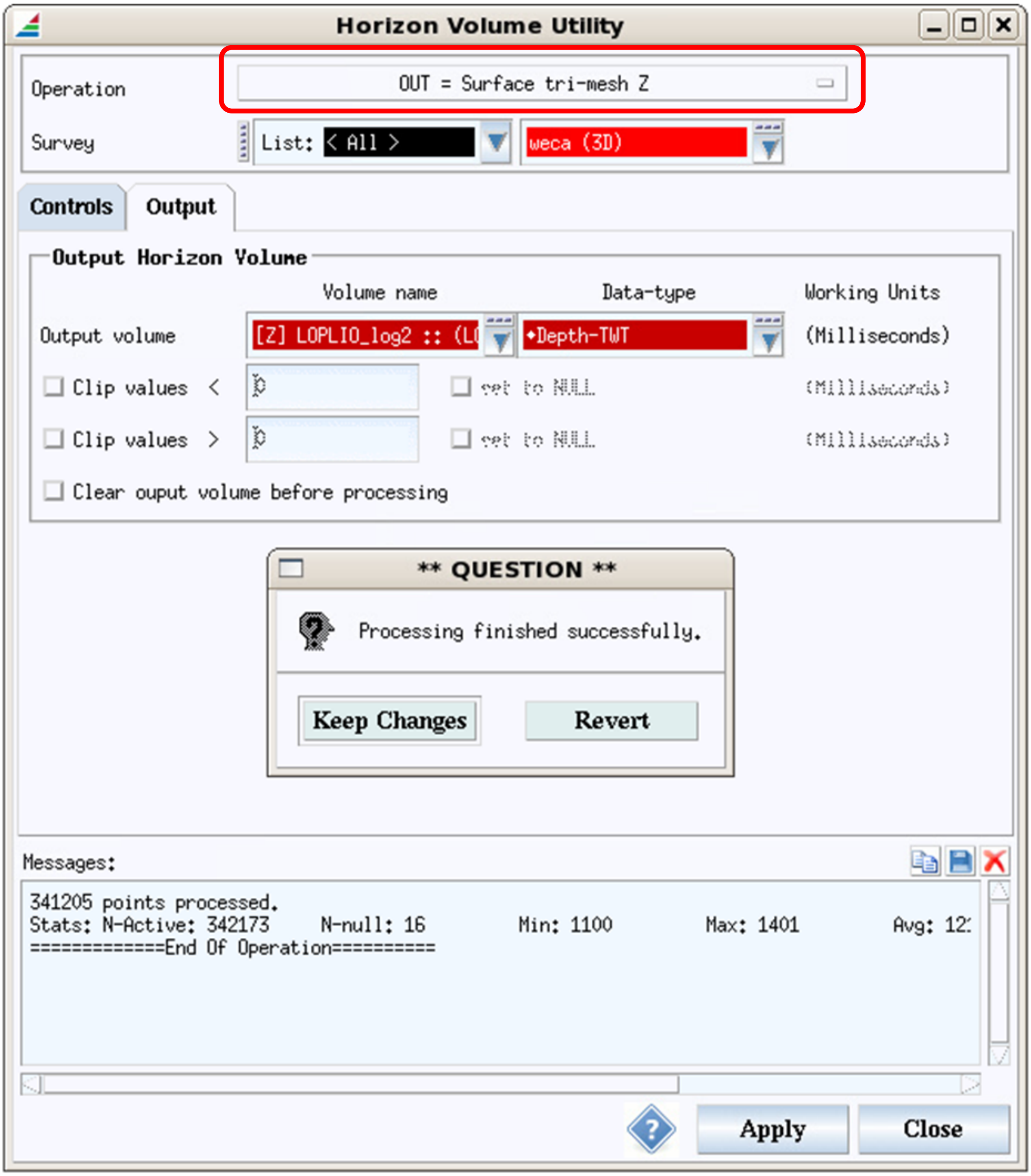




The filter value itself is applied as a multiple of the local trace-spacing along the 2D lines. If the filtering is made too severe it may result in the line being insufficiently defined when interpreting on sections. When using the MB3 popup menu options, *Increase nav filtering* and/or *Decrease nav filtering*, the filter value is increased and decreased in steps of 0.1. The minimum and default value is 0.1 and the maximum is 2.0.

Extraction of Z-Values From Horizon Tri-Mesh Data

This new option in the Horizon Volume Utility provides a means of setting a Horizon Data Volume values to the Z values extracted from a horizon tri-mesh. This can be a useful feature when it is required to obtain grid-form data that may be displayed and edited on sections when the only original data for the horizon is in the form of a surface tri-mesh.

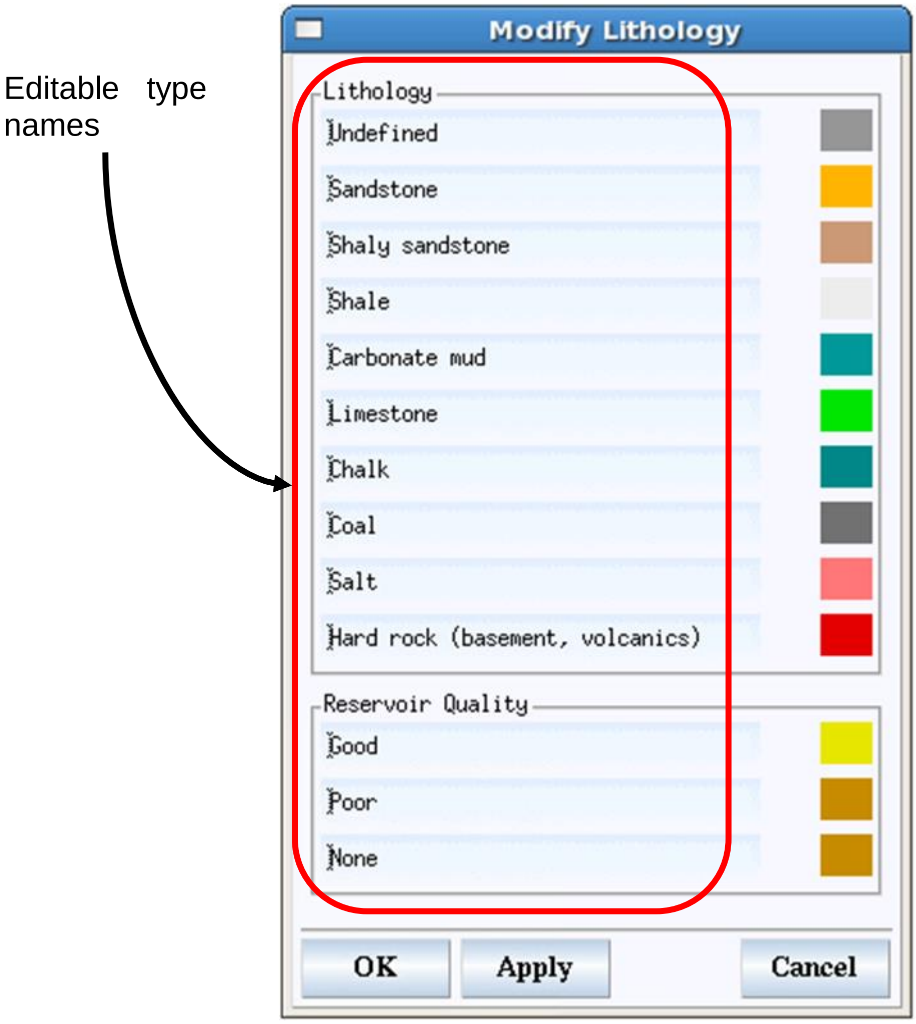


This option in the Horizon Volume Utility has no "Input" tab as the surface tri-mesh is taken from the horizon to which the output Horizon Data Volume belongs.

Editable Lithology & Reservoir Quality Names

Lithology and reservoir quality types may be assigned to T7 horizons. These may be used to colour code the intervals between horizons when they are displayed in the Well Editor or when stratigraphic intervals are displayed upon fault surfaces in the Volume Editor. These assignments can also be used as the basis for creating Display Method colour-maps and filters for controlling the display of fault surface attributes.

Up to the release of T7.1 the lithology and reservoir quality type names were fixed. Using the Database Explorer, these names can now be edited and tailored to a given project's requirements.



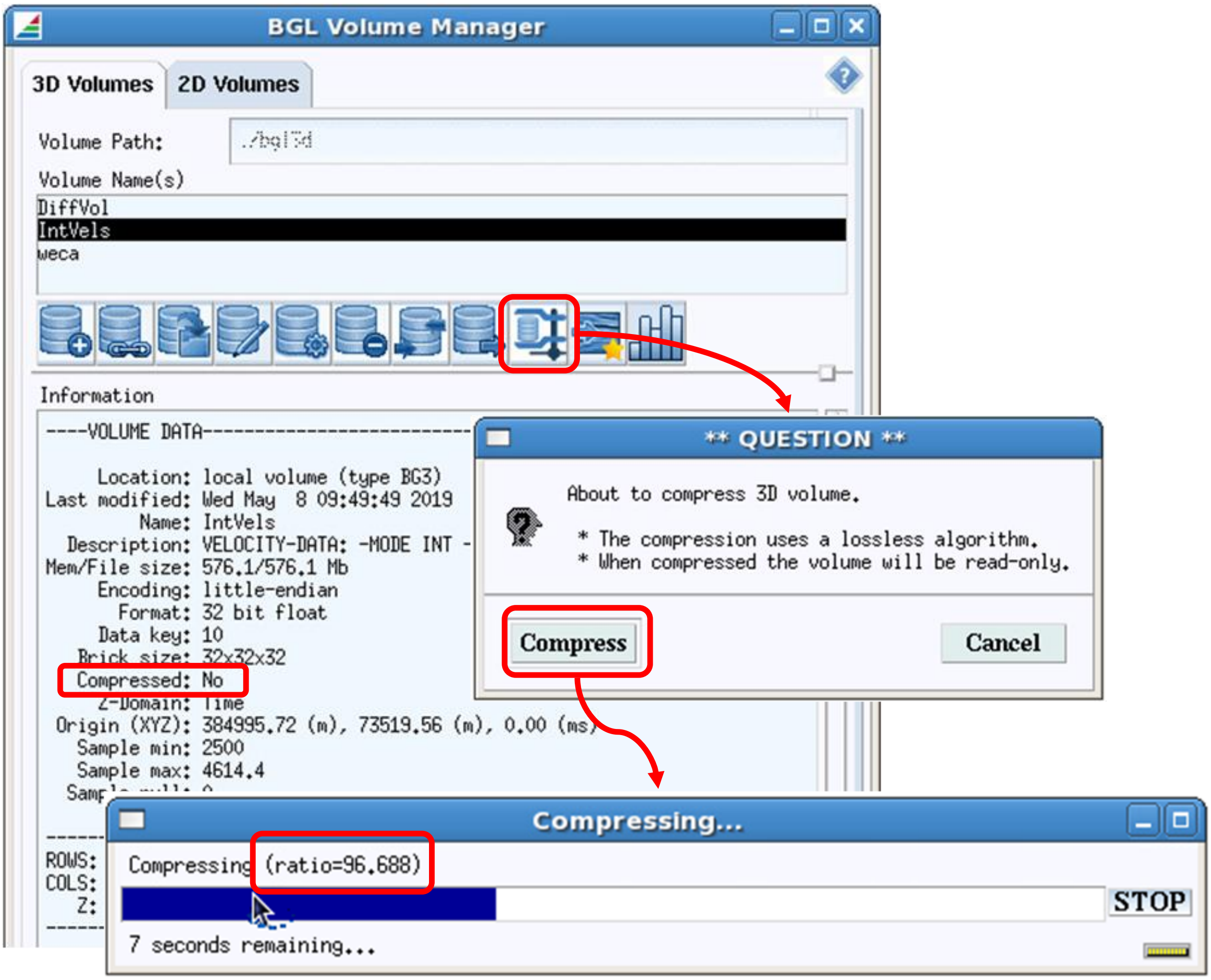
The Lithology Editor window showing the default type-names

Compression Option for 3D Seismic Volumes

The Seismic Volume Manager has been extended to cater for the optional compression of 3D seismic volumes (including velocity volumes or any other data stored in this form).

The compression algorithm used is lossless meaning that the data quality is in no way compromised in the compression/decompression cycle. The compression ratio achieved will depend greatly on the type of data. For example, some 32-bit floating-point velocity volumes may achieve a 100:1 compression or more while an 8 bit seismic volume may achieve only a 2:1 ratio.

Once a volume has been compressed it may be used in much the same way as a non-compressed volume; it cannot, however, be used as a target volume for a merge operation.



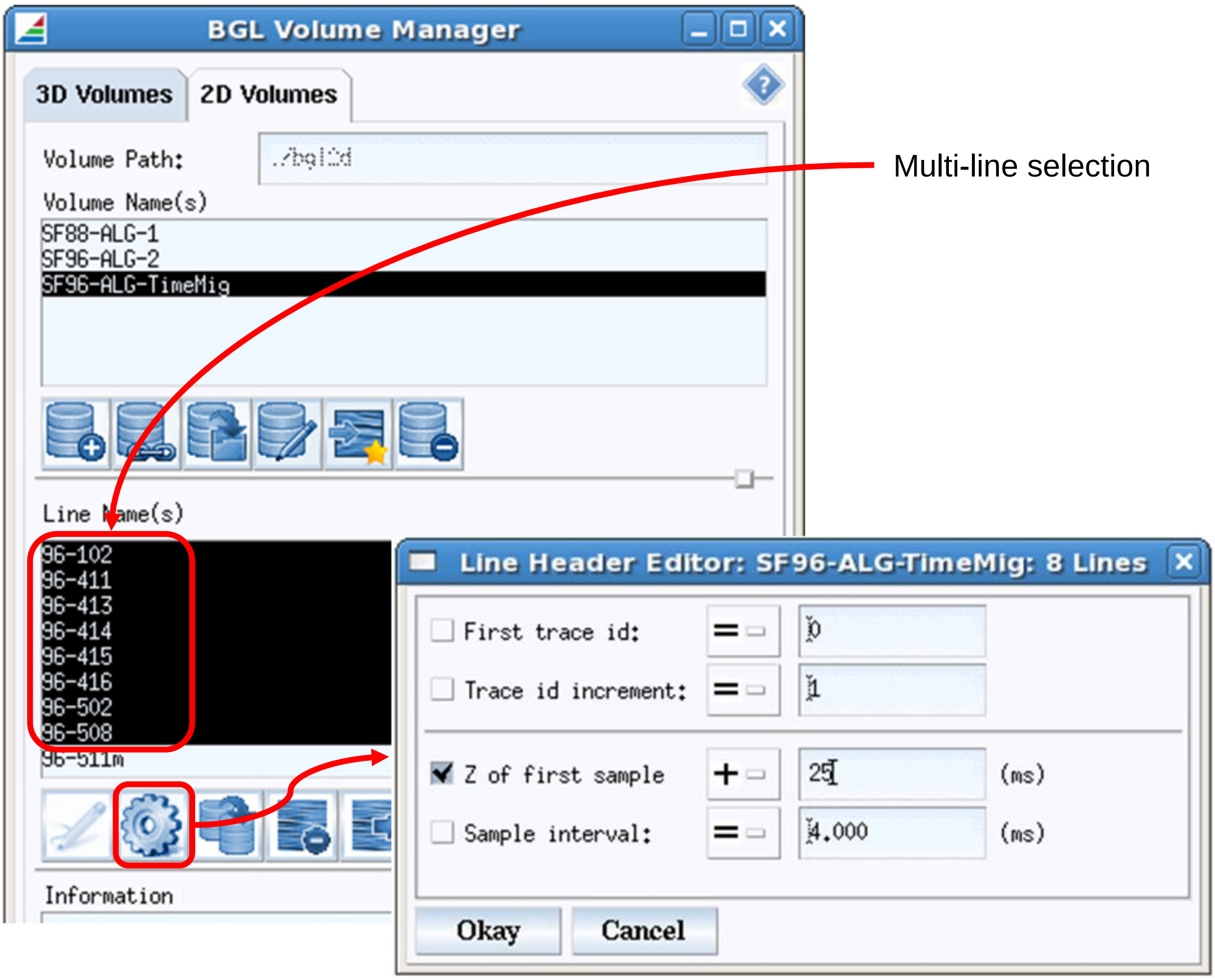
The advantages of compressing 3D volumes are:

- Reduce disk space overhead
- Can improve volume load-times (in high compression cases)

The compression ratio is reported as the compression progresses. If the process is not achieving the required compression level it may be stopped.

2D Seismic Volume Header Editing Improvements

The 2D Seismic Line Header Editor in the Seismic Volume Manager has been improved to handle a multiple line selection and to permit changes to be made in a more controllable way.



The Line Header Editor permits any of the following header properties to be modified:

- First trace id
- Trace id increment
- Z of first sample
- Sample interval

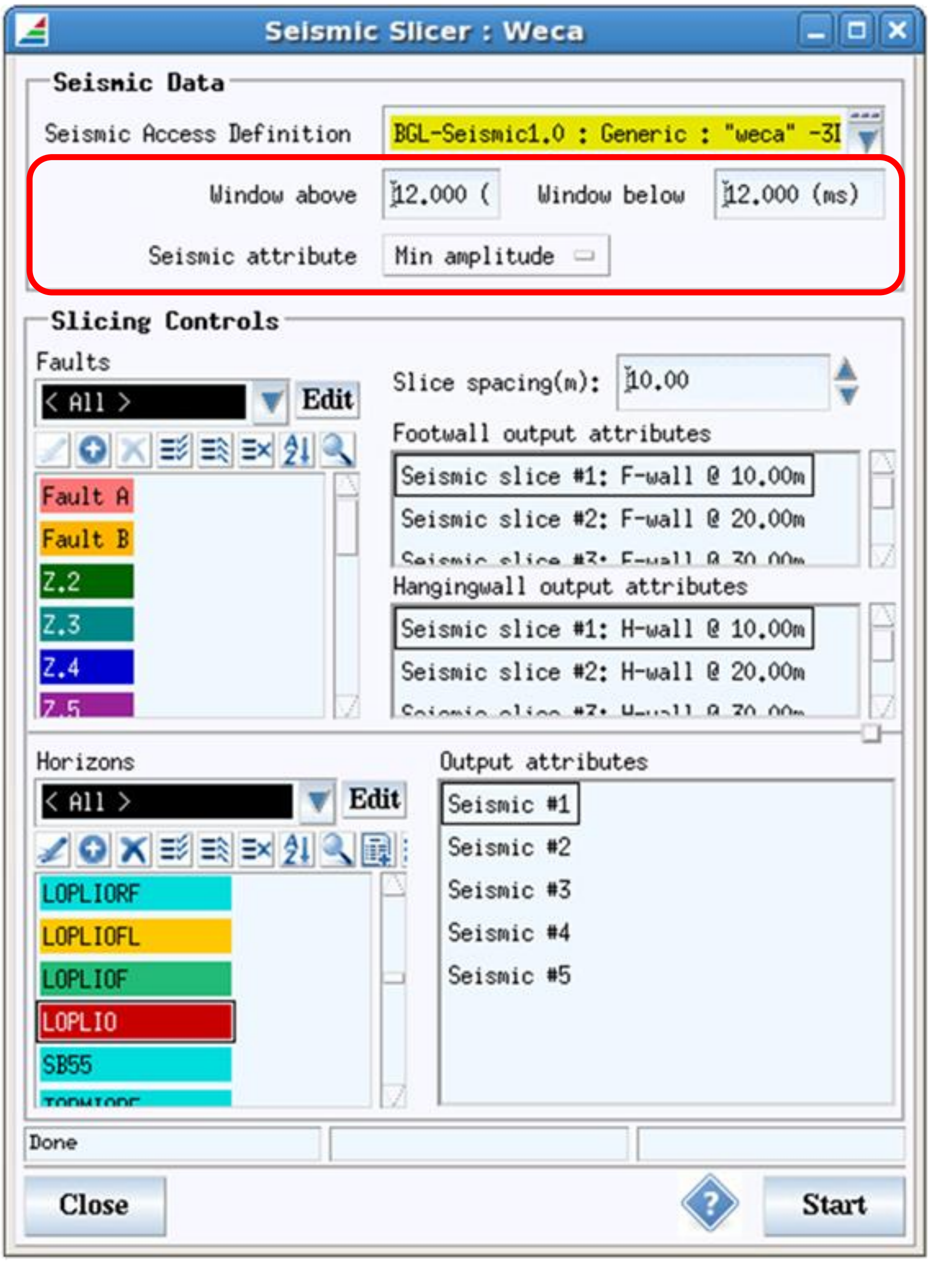
Only those properties which are toggled ON will be updated. The modification of each of the chosen line header properties can be applied in the following ways:

- = set the property to the supplied value
- + add the supplied value to the existing header property
- - subtract the supplied value from the existing header property
- x multiply the existing header property by the supplied value
- / divide the existing header property by the supplied value

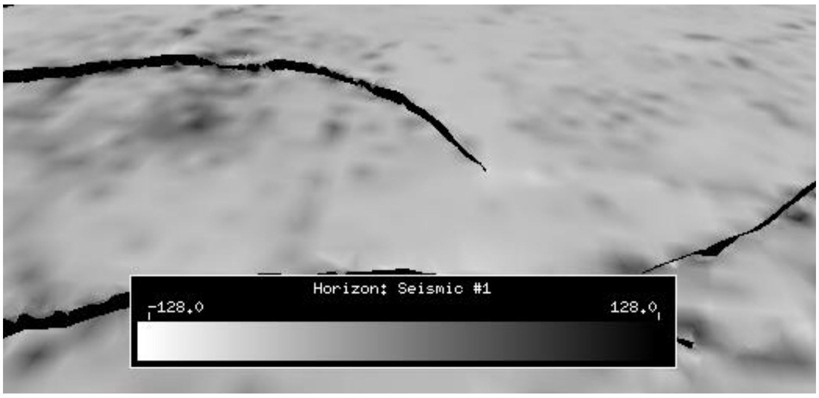
Seismic Slicer Windowed Sampling Options

The Seismic Slicer utility (accessed from the Volume Editor) is a tool for extracting seismic data at fault and/or horizon surface tri-meshes. The data can then be displayed on the host surface using a corresponding Display Method. The T7.1 release includes an extension to the Seismic Slicer that permits the extraction of the data to be performed over a nominated vertical window; the data extracted as a surface attribute from the seismic volume can be chosen from one of the following properties calculated over the window:

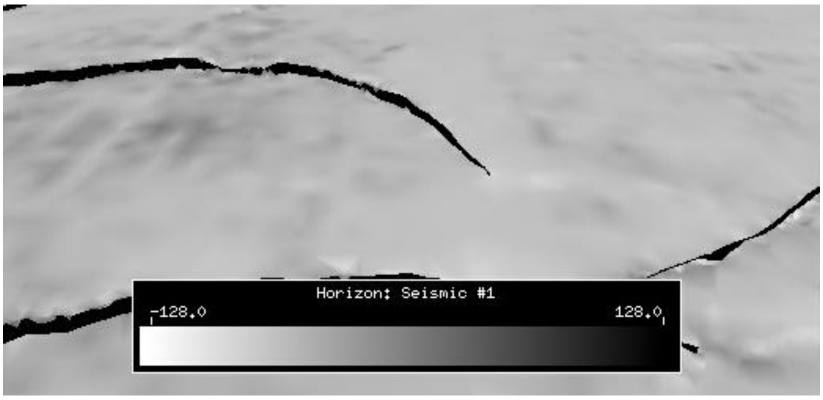
- Minimum amplitude
- Maximum amplitude
- Mean amplitude
- RMS amplitude
- Max magnitude
- Average energy



The following images show the results of some of the available seismic attributes extracted for a horizon surface (input seismic volume sampling interval = 4ms).

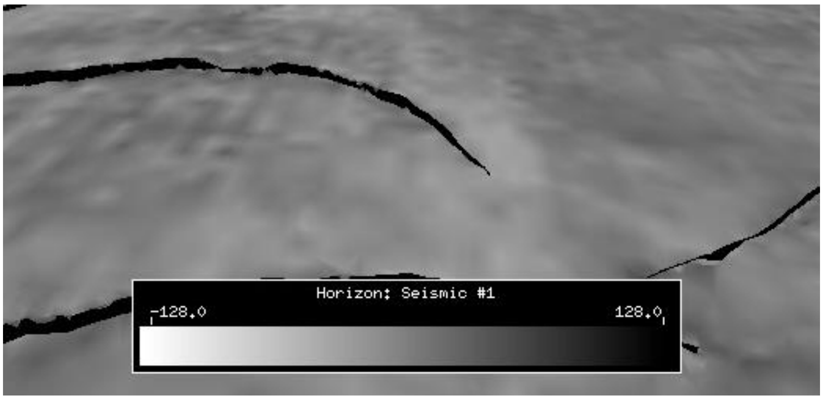


Min amplitude: Window above = 0ms, Window below = 0ms (Default)



Min amplitude: Window above = 12ms, Window below = 12ms

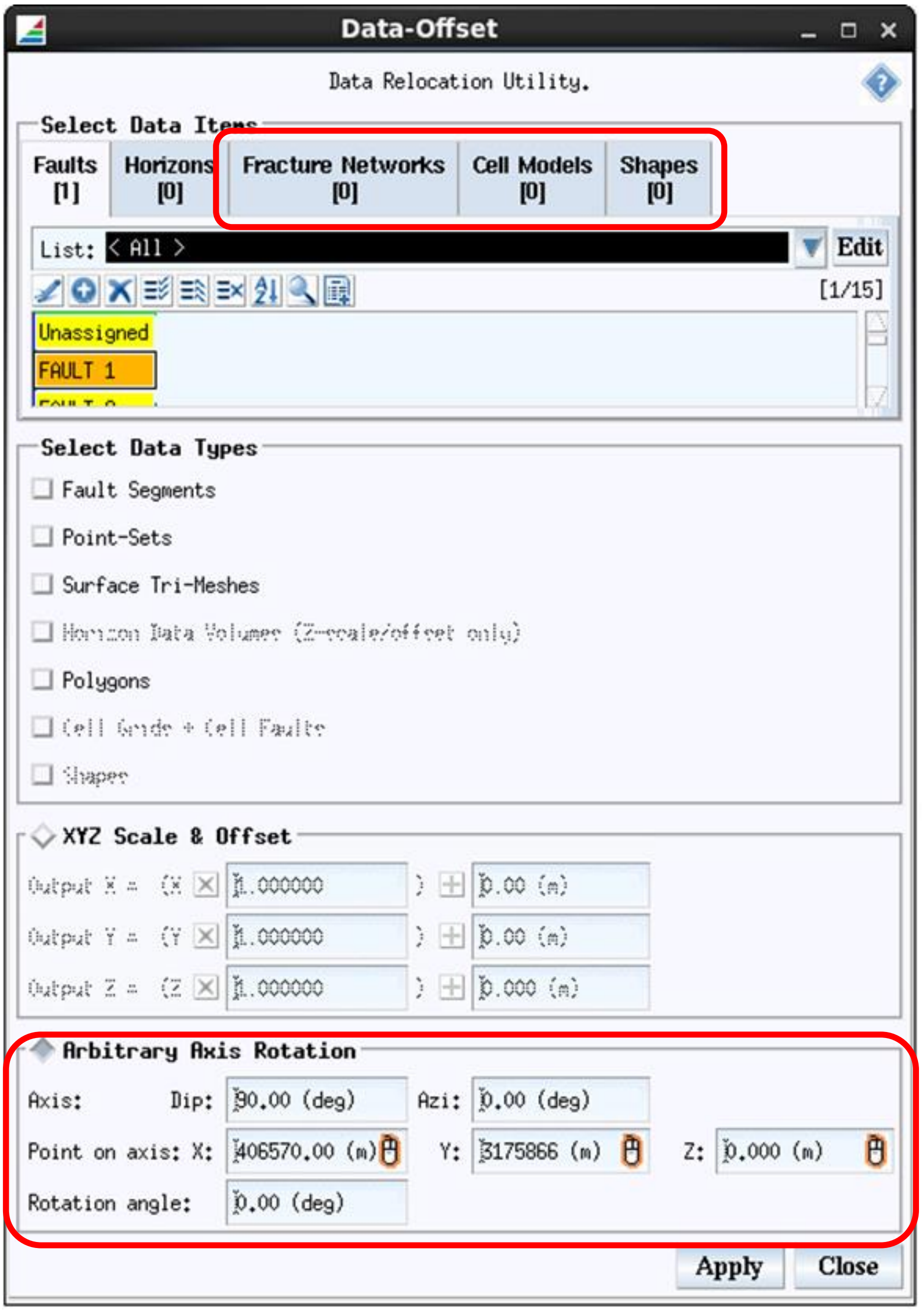
Max amplitude: Window above = 12ms, Window below = 12ms



Mean amplitude: Window above = 12ms, Window below = 12ms

Offset Utility Options For Arbitrary Axis Rotation

The Data Offset Utility has been extended to apply to additional object types (Fracture Networks, Cellular Models and Shapes) and given a new option to apply a rotational transform to the chosen data items. The option to apply an "Arbitrary axis rotation" is mutually exclusive to the option to apply an XYZ scale & offset.

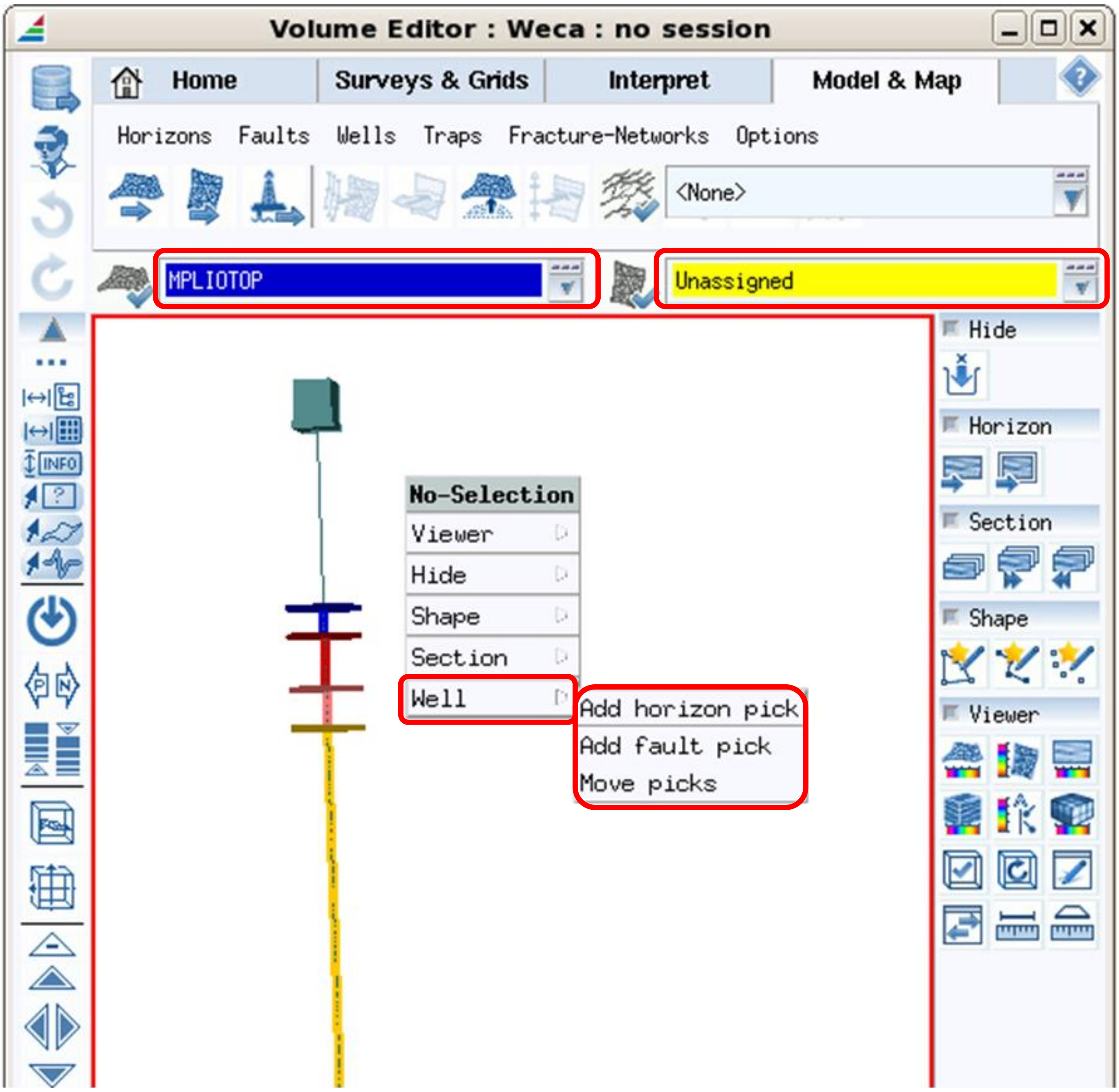


The option to apply an "Arbitrary axis rotation" requires the specification of an axis dip and azimuth, an XYZ location along the axis and an angle of rotation about the axis.

Create Well Horizon And Fault Picks In Volume Editor

The interactive well-editing capabilities have been improved in T7.1 with the Volume Editor now providing the functionality to add new fault and horizon well picks.

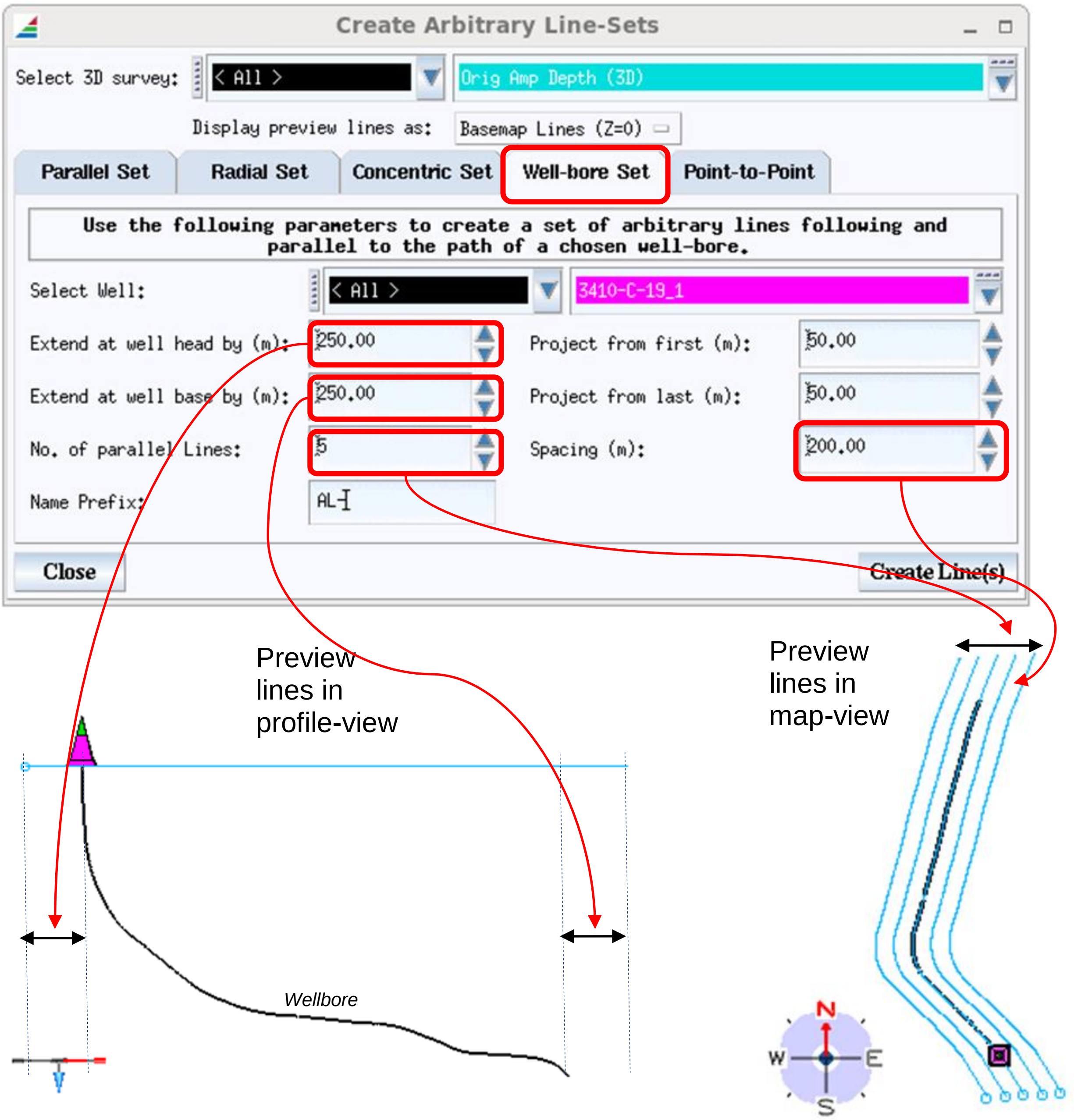
Once a well is loaded in the Volume Editor the MB3 popup menu will provide access to the well pick creation and editing options. The picks created will be assigned to the currently "Active" horizon/fault as set in the Volume Editor.



Entering the mode to "Add horizon pick" or to "Add fault pick" will create new picks as the mouse is clicked at the required point along the well-path. If the picks are need to be moved the "Move picks" mode can be used to click and drag well picks up or down the well path. If the "Active" horizon is set to be a marker horizon the location mode for the well pick will be set to "Absolute" as a default. This can be altered in the Well Editor.

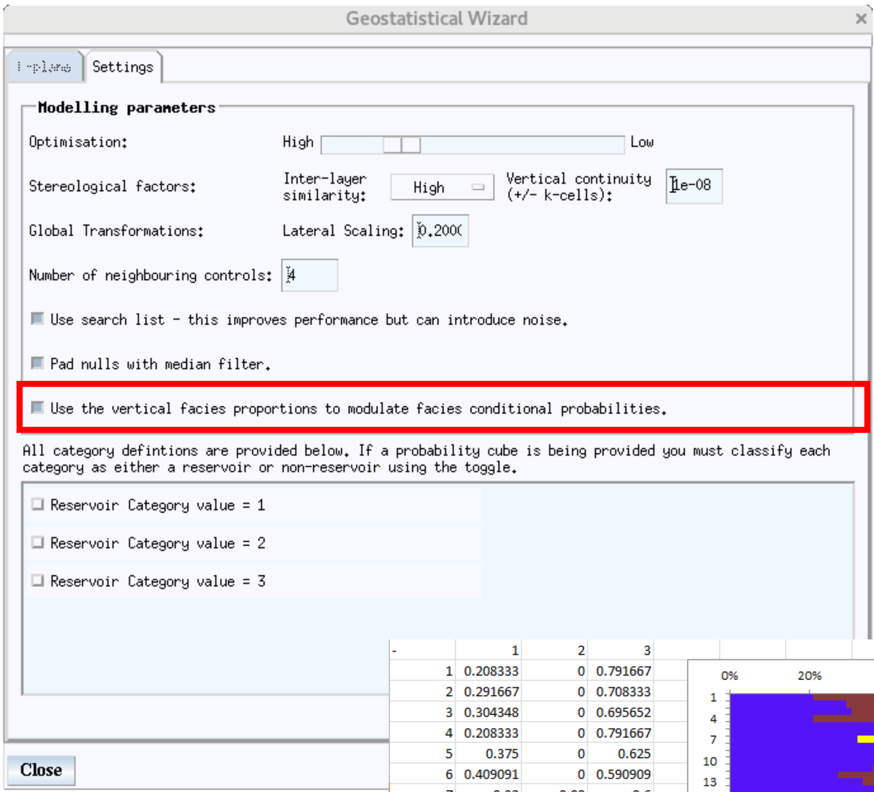
Create Arbitrary Lines Along Wellbore Paths

T7 already provides a simple means of creating arbitrary seismic lines that follow the path of a chosen well trajectory. This option is available in the Volume Editor's MB3 Popup Menu and Shortcut Toolbar for a single or multiple well selection. The T7.1 release includes a more sophisticated tool for creating arbitrary lines based on wellbores. The new tool is accessed from the Volume Editor's Interpret Tab: *Sections->Create Arbitrary Lines* and caters for the creation of multiple parallel lines that follow and optionally extend the path of a chosen wellbore. Such arbitrary lines provide a powerful tool for checking the seismic data ahead and to the flank of a well as it is being drilled.



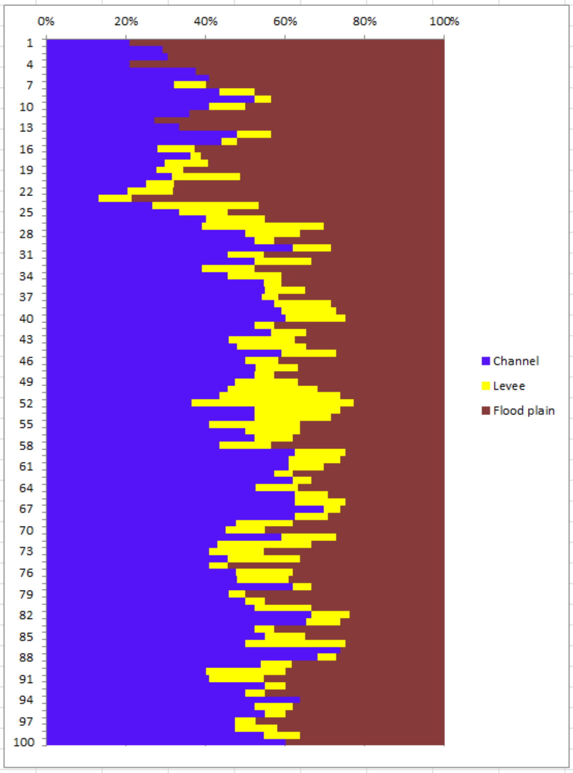
Property modelling: creating facies proportion curves

The stochastic facies modelling workflow has been enhanced with the option of computing the facies proportion curves (FPC) prior to modelling; these are automatically produced during well-to-cell upscaling. FPCs show the proportion of each facies type, as captured by the control cells – they are computed for each layer in the model. The data is outputted to an eponymous file in the project area with a "_fpc" suffix and ".txt" extension. So for example if the output attribute model is called "TestModel" then the file containing the FPC will be called "TestModel_fpc.txt".



Toggle on in order to use the FPC as the prior during modelling.

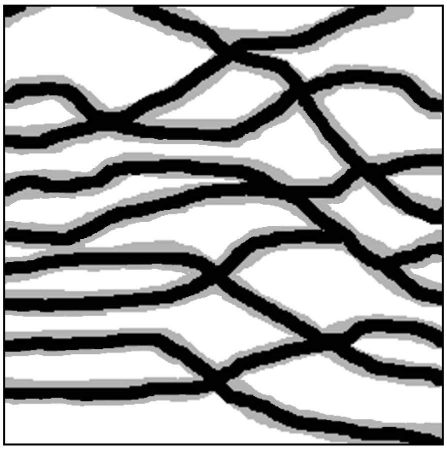
-	1	2	3
1	0.208333	0	0.791667
2	0.291667	0	0.708333
3	0.304348	0	0.695652
4	0.208333	0	0.791667
5	0.375	0	0.625
6	0.409091	0	0.590909
7	0.32	0.08	0.6
8	0.434783	0.086957	0.478261
9	0.521739	0.043478	0.434783
10	0.409091	0.090909	0.5
11	0.36	0	0.64
12	0.272727	0	0.727273
13	0.333333	0	0.666667
14	0.478261	0.086957	0.434783
15	0.44	0.04	0.52
16	0.27907	0.093023	0.627907
17	0.361111	0.027778	0.611111
18	0.296296	0.111111	0.592593
19	0.275862	0.068966	0.655172
20	0.314286	0.171429	0.514286
21	0.25	0.071429	0.678571
22	0.204545	0.113636	0.681818
23	0.131148	0.081967	0.786885
24	0.266667	0.266667	0.466667
25	0.333333	0.121212	0.545455
26	0.4	0.15	0.45
27	0.391304	0.304348	0.304348
28	0.5	0.136364	0.363636
29	0.52381	0.047619	0.428571
30	0.619048	0.095238	0.285714
31	0.454545	0.090909	0.454545
32	0.52381	0.142857	0.333333
33	0.391304	0.130435	0.478261
34	0.454545	0.136364	0.409091
35	0.545455	0.045455	0.409091
36	0.55	0.1	0.35
37	0.541667	0.041667	0.416667
38	0.571429	0.142857	0.285714



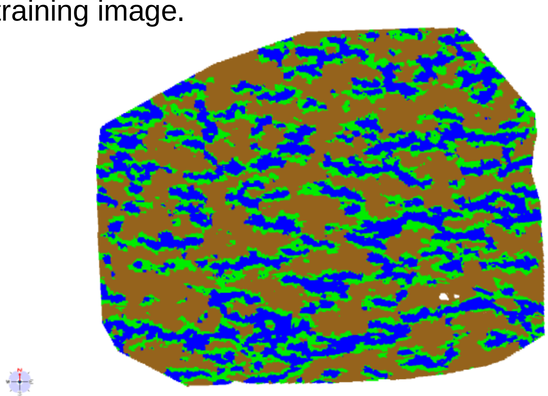
The data as outputted on file and plotted showing the relative proportions of each facies type down the model (as computed from control cells).

If the FPC is used during modelling (toggled-on in the Geostatistical Wizard dialog) then the facies proportions are used as a priori during the modelling the phase – i.e. the facies proportion in the model tend to honour the facies proportions captured in the FPC as opposed to the training image (the converse is true).

Training image of channel system



Prior distribution derived from training image.



Prior distribution derived from FPC.