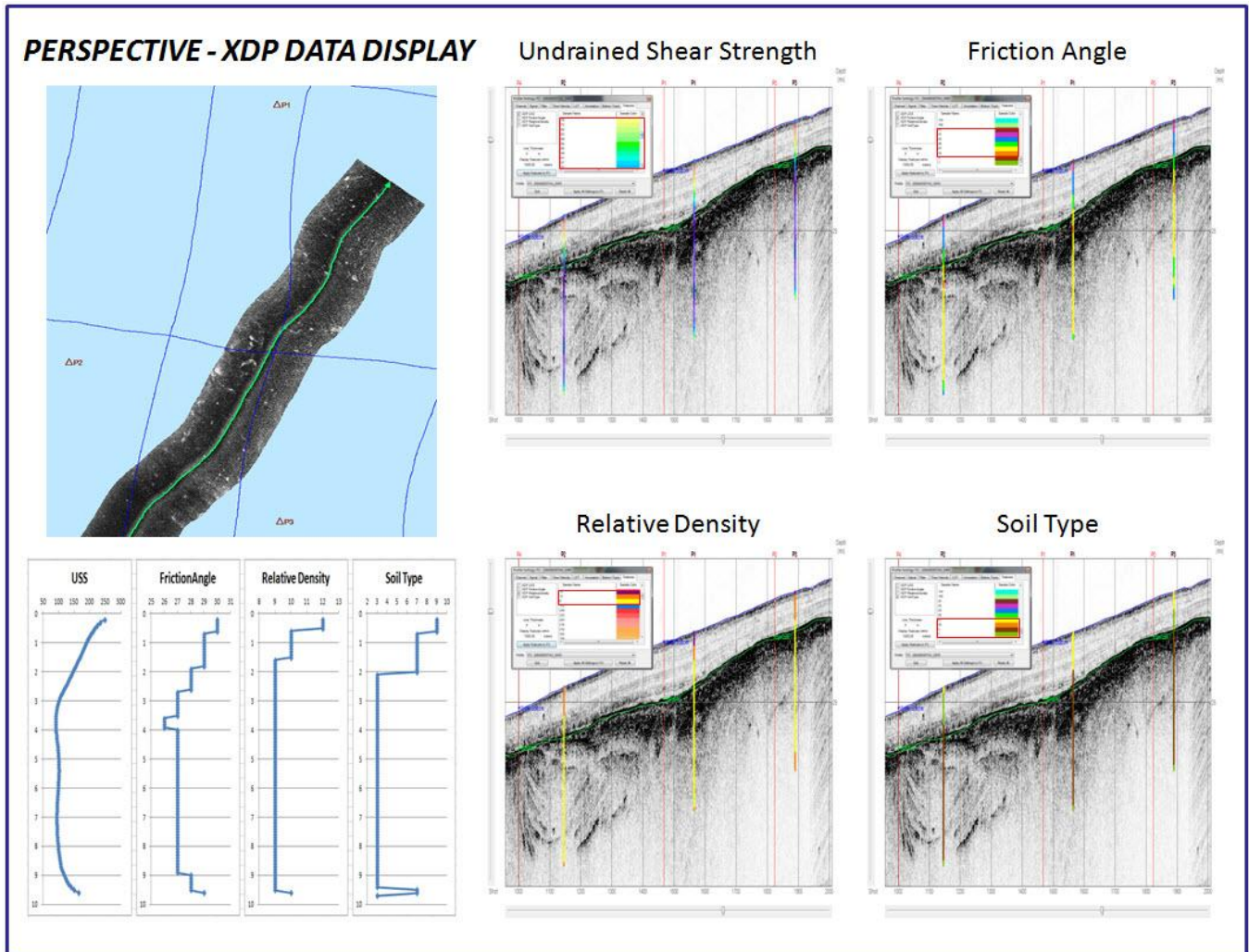


Perspective

-- Point Features --



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This user guide is provided as a means to become familiar with TRITON's software through an explanation of the options available for processing sidescan data. The user interface presented in this guide is subject to change to accommodate software upgrades and revisions. While every precaution has been taken to eliminate errors in this guide, TRITON assumes no responsibility for errors in this document.

Users of this document are required to have a valid license for Perspective in order to activate the software. TRITON hereby grants licensees of TRITON's software the right to reproduce this document for internal use only.

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Point Features

Features are used in Perspective to allow the user to import geolocated ASCII data for displaying locations in the map and profile views, and when relevant vertical information on the profiles such as from boreholes or cores. In the main map window, there is a *Feature* file tree node where ASCII point data is organized in the project. For viewing the vertical information (soil type, density, shear strength, etc.) overlaid on subbottom profiles, options are found in the *Features* tab of the *Profile Settings* dialog.

Feature File Format

The format of the feature files is currently very specific and needs to be adhered to exactly for the data to be parsed correctly. As shown in the image below, for each point there are four types of information to be included: location, ID/Date/Time, comments and depth information.

		Location (degrees or meters)			ID, Date, Time			Comments ↓ Value and Depth Interval (depths in meters)									
UTM	4902594.72	635568.23	Meters	C1	05/20/11	13:44:00	Transect 1	Soft mud	0	1.6	Layered silt and sand	1.6	6	Limestone	6	6.2	
	4902576.72	635932.33	Meters	C2	05/20/11	14:10:00	Transect 1	Soft mud	0	2.1	Limestone	2.1	2.3				
	4902511.90	636260.38	Meters	C3	05/20/11	14:37:00	Transect 1	Soft mud	0	2.1	Layered silt and sand	2.1	8.1	Limestone	8.1	8.3	
	4902490.29	636628.07	Meters	C4	05/20/11	14:49:00	Transect 1	Soft mud	0	0.9	Layered silt and sand	0.9	6.8	Limestone	6.8	7	
	4902465.09	636995.77	Meters	C5	05/20/11	15:15:00	Transect 1	Fine to medium Sand	0	0.4	Layered silt and sand	0.4	1.5	Limestone	1.5	1.7	
	4902429.08	637334.64	Meters	C6	05/20/11	15:41:00	Transect 1	Fine to medium Sand	0	0.3	Layered silt and sand	0.3	5.9	Limestone	5.9	6.1	
	4902396.67	637695.13	Meters	C7	05/20/11	16:05:00	Transect 1	Fine to medium Sand	0	0.6	Layered silt and sand	0.6	8.8	Limestone	8.8	9	
	4901903.99	635493.87	Meters	C8	05/20/11	16:17:00	Transect 2	Soft mud	0	1.2	Fine to medium Sand	1.2	1.6	Layered silt and sand	1.6	9	
	4901862.04	635823.39	Meters	C9	05/20/11	16:37:00	Transect 2	Soft mud	0	2.4	Fine to medium Sand	2.4	3.6	Layered silt and sand	3.6	9	
	4901829.77	636146.45	Meters	C10	05/20/11	17:03:00	Transect 2	Soft mud	0	1.6	Fine to medium Sand	1.6	2.1	Layered silt and sand	2.1	9	
	4901797.50	636450.12	Meters	C11	05/20/11	17:19:00	Transect 2	Soft mud	0	1.8	Fine to medium Sand	1.8	2.3	Layered silt and sand	2.3	9	
	4901774.91	636776.41	Meters	C12	05/20/11	17:44:00	Transect 2	Soft mud	0	1.4	Fine to medium Sand	1.4	1.8	Layered silt and sand	1.8	9	
LAT-LON	44.2639696	-73.3015355	Degrees	C1	05/20/11	13:44:00	Transect 1	Soft mud	0	1.6	Layered silt and sand	1.6	6	Limestone	6	6.2	
	44.2637396	-73.2969806	Degrees	C2	05/20/11	14:10:00	Transect 1	Soft mud	0	2.1	Limestone	2.1	2.3				
	44.2630950	-73.2928894	Degrees	C3	05/20/11	14:37:00	Transect 1	Soft mud	0	2.1	Layered silt and sand	2.1	8.1	Limestone	8.1	8.3	
	44.2628316	-73.2882905	Degrees	C4	05/20/11	14:49:00	Transect 1	Soft mud	0	0.9	Layered silt and sand	0.9	6.8	Limestone	6.8	7	
	44.2625357	-73.2836925	Degrees	C5	05/20/11	15:15:00	Transect 1	Fine to medium Sand	0	0.4	Layered silt and sand	0.4	1.5	Limestone	1.5	1.7	
	44.2621478	-73.2794585	Degrees	C6	05/20/11	15:41:00	Transect 1	Fine to medium Sand	0	0.3	Layered silt and sand	0.3	5.9	Limestone	5.9	6.1	
	44.2617880	-73.2749528	Degrees	C7	05/20/11	16:05:00	Transect 1	Fine to medium Sand	0	0.6	Layered silt and sand	0.6	8.8	Limestone	8.8	9	
	44.2577674	-73.3026456	Degrees	C8	05/20/11	16:17:00	Transect 2	Soft mud	0	1.2	Fine to medium Sand	1.2	1.6	Layered silt and sand	1.6	9	
	44.2573285	-73.2985304	Degrees	C9	05/20/11	16:37:00	Transect 2	Soft mud	0	2.4	Fine to medium Sand	2.4	3.6	Layered silt and sand	3.6	9	
	44.2569777	-73.2944936	Degrees	C10	05/20/11	17:03:00	Transect 2	Soft mud	0	1.6	Fine to medium Sand	1.6	2.1	Layered silt and sand	2.1	9	
	44.2566305	-73.2906996	Degrees	C11	05/20/11	17:19:00	Transect 2	Soft mud	0	1.8	Fine to medium Sand	1.8	2.3	Layered silt and sand	2.3	9	
	44.2563660	-73.2866200	Degrees	C12	05/20/11	17:44:00	Transect 2	Soft mud	0	1.4	Fine to medium Sand	1.4	1.8	Layered silt and sand	1.8	9	

Although *Features* were developed primarily to display subsurface information on seismic profiles, leaving the depth information columns blank allows the user to bring in any point data such as for displaying the locations of SVP and Tide stations, known wrecks in the area, etc.

For subsurface data, in addition to sediment types any data value associated with depth can be displayed on the profiles included downhole geophysical measurements, as long as the data is formatted as shown above.

Specifications for each section are as follows:

LOCATION: The first two columns of the feature file are for either Northing-Easting values or for Latitude-Longitude. The third column is to indicate the types of coordinates used. Both of these files will import into the same location without the projection wizard asking what projection/datum to select. Perspective will assume the datum is WGS84 and that values in meters are for the project UTM zone.

ID, DATE, TIME: These three columns are for indicating the feature ID to be used for labeling in the map and profile views plus the date and time the data was collected. Please note the format of the date and time. The date is **mm/dd/yy** (can also use **dd/mm/yy** if preferred) and the time is **hh:mm:ss** (24 hour time). These fields are optional and can be left blank if desired.

COMMENTS: This section is for comments of any kind. Please make sure there are no commas in the comment as they will be treated as delimiters when the software parses the CSV or TXT file.

VALUE AND DEPTH INTERVAL: This is where the downhole information is entered. There can be as many layer types and number of units as desired. For each layer there are three columns. The first is for the data value. All unique data values in the feature file will be automatically entered into the *Profile Settings Feature* tab for selecting the color to use for the profile display. The next two columns for each layer indicate the start and end depths in meters for that unit. The top unit always starts at a depth of zero since the depths are referenced to the water bottom surface.

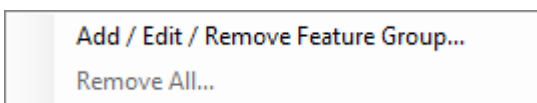
A couple important notes regarding the format of feature files:

- The file types read by the feature import options include .CSV and .TXT (comma separated) files.
- The header used to create the file must NOT be included in the imported file as shown in the two examples on the previous page of the same samples but with one projected and the other not.
- For feature files with no vertical information (tide stations, classification points, etc.), the Value and Depth Interval column can be left blank.

Adding Features to Perspective

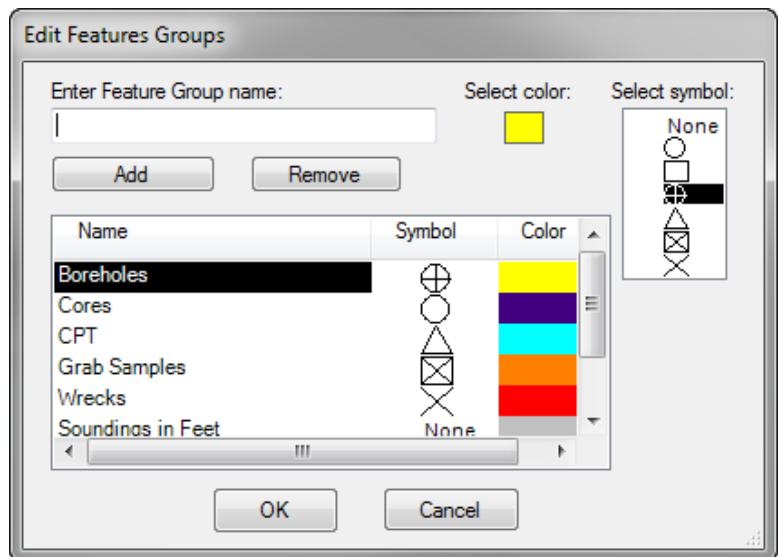
Before adding feature files to Perspective it is important to first create a *Feature Group* to add the feature into. Feature Groups are used to organize features into user defined groups. Each group is defined by a group name used to identify the group in the file tree, with a symbol for displaying the location of the feature on the map view and also a user selected color.

Feature groups are created by right-clicking on the root node of the Features file tree and selecting *Add / Edit / Remove Feature Group*.



Selecting this option will open the dialog shown right. Shown in this dialog are the existing feature groups and their associated symbol and color.

To create a new feature group, enter a name for the feature group, then select a color and symbol to use. Selecting the color will open a color dialog to allow the user to select a pre-defined or custom color.



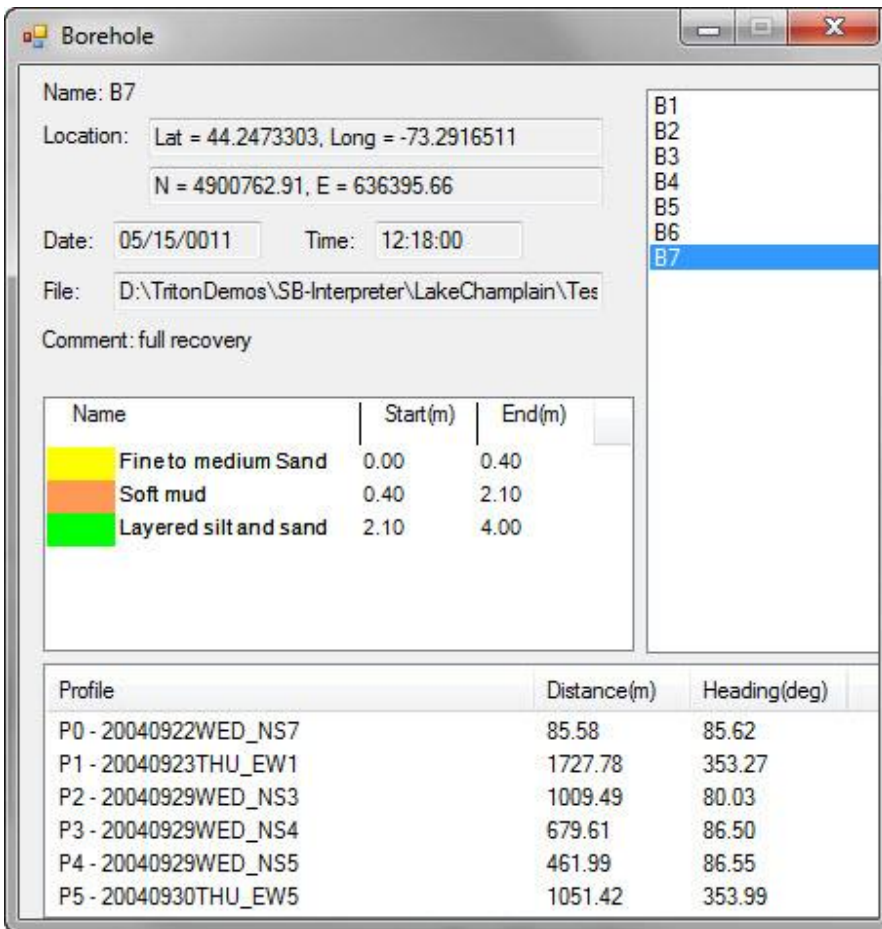
A couple important notes regarding feature groups:

1. To display sounding data in the map view, select *None* for the symbol type. This will put the labels (depths) centered on the feature location. Selecting a symbol will offset the label up to the right of the symbol.
2. To add a new feature group when some already exist, you need to first deselect the feature group highlighted in the list or its symbol will change when selecting the symbol for the new feature group.

Once *Feature Groups* are created, then features can be added to them by right-clicking on the group name in the file tree and selecting *Add*.

Feature Information

When feature files are added to the project, the information embedded in the ASCII file is extracted and displayed in an information dialog. The information dialog can be launched by right-clicking on the individual features in the file tree. Information displays for all feature types are identical. An example of the information display for a group called "Borehole" is shown below:

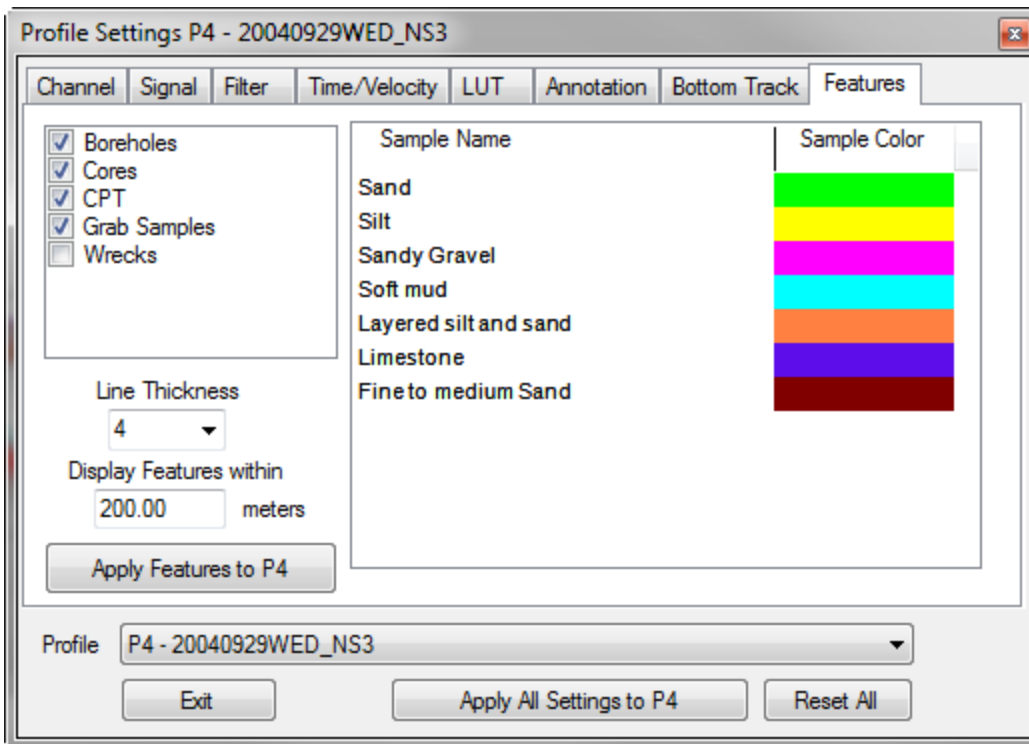


Included in the information dialog is the feature location, date & time if present in the feature file, which file that feature is from, comments, and a graphical display of the vertical layers present in the file with the depth interval each layer was defined. Also indicated is the projected distances and headings to each of the subbottom profiles loaded in the project.

The list on the top right shows the other feature files in this group present in the project. To see the information for other boreholes, simply select the borehole in the list and the display will update to represent the currently selected feature. When information is shown for a particular feature, the label in the map view for that feature will increase in size to highlight in the map which feature you have queried.

Displaying Features on Subbottom Profiles

For features that include vertical information such as sediment type, it is possible to display this information overlain on subbottom profiles loaded in the project. Display options are found in the subbottom *Profile Settings* dialog under the *Features* tab. Shown below is an example with 5 feature groups listed on the left and all the unique values (in this case sediment types) identified with a pre-selected color.



Display Options

The left side of the window has feature display options including:

- list allowing users to select which features to display
- line thickness adjustment
- set the distance to project features onto the profile line

Colors

Shows color used for displaying each layer type identified in the import files on profiles. To change the color, double-click on the color to change and use the *Color* dialog to select another option as shown right.

