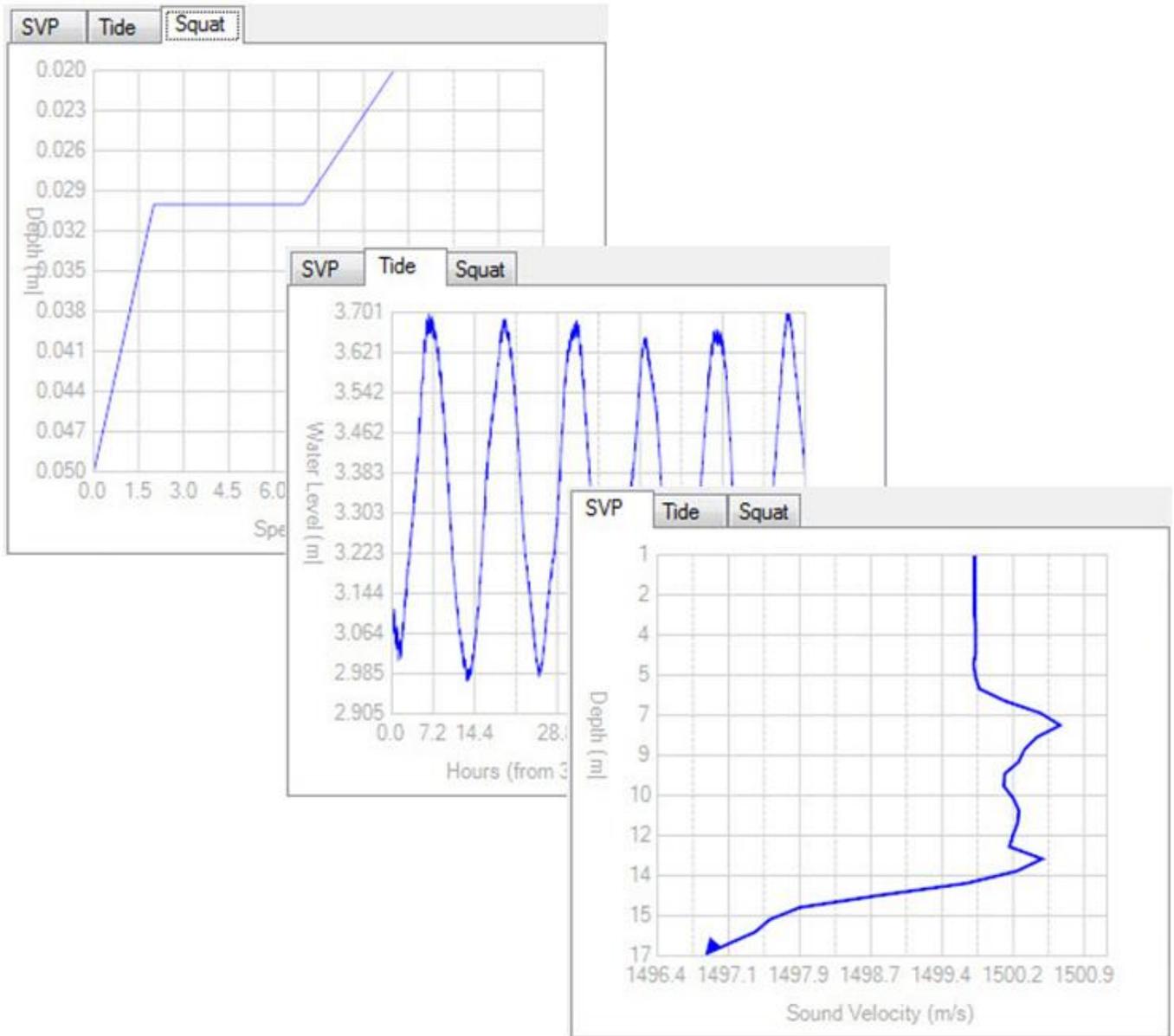


Perspective-MB

-- XML Utilities Guide --



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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 bathymetry 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 and BathyOne 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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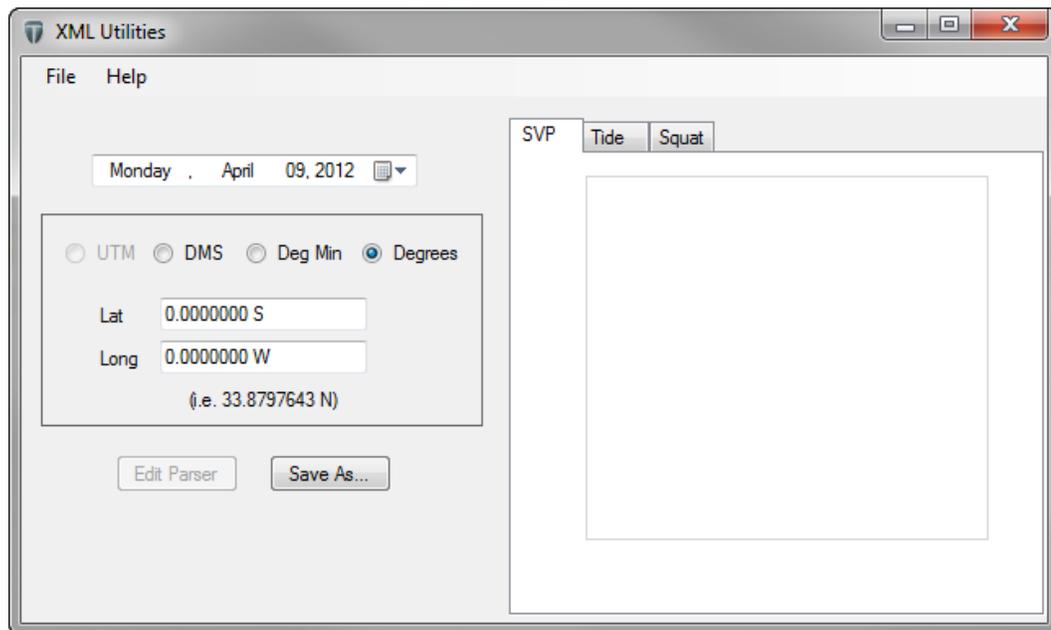
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1.0 Introduction

Perspective uses the XML format for storing and reading information. Before processing bathymetry data it is important to create XML files for the following ancillary data used during bathymetry processing:

1. Sound Velocity Profiles
2. Raw Tide Gauge Data
3. Squat Tables

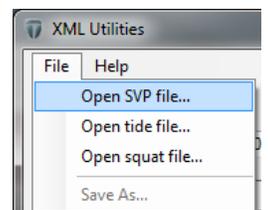
The XML files are created with Triton's XML Utilities application shown below. To launch the XML Utilities application, click on the toolbar button shown right.



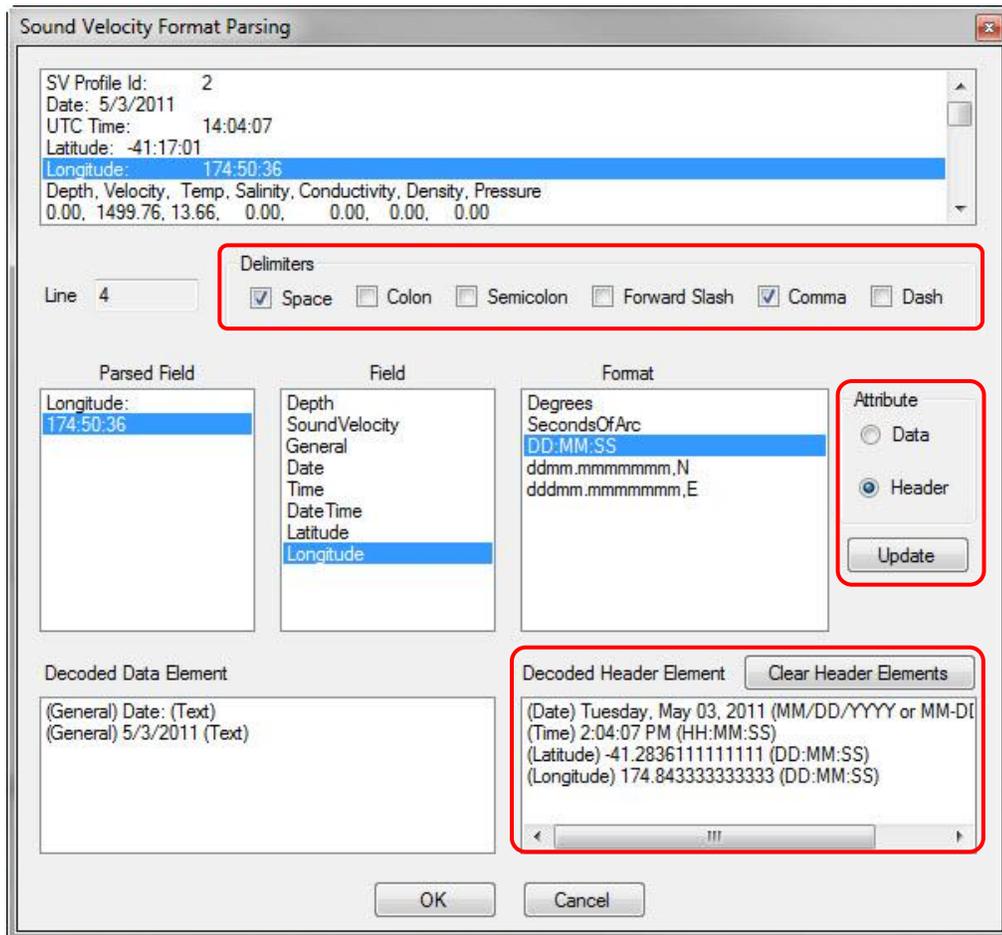
This dialog consists of menu options for opening and saving files, fields to manually enter the date and location (if not extracted from the parsed data), and a small window to display a graph of the input data.

2.0 Sound Velocity Profiles

From the *File* menu in the XML Utilities application, select the *Open SVP file* option as shown right to convert raw data downloaded from a sound velocity profiler into XML format.



This will open a file browser to locate the raw SVP file. Once the file is selected, the *Sound Velocity Format Parsing* dialog will launch as shown below:

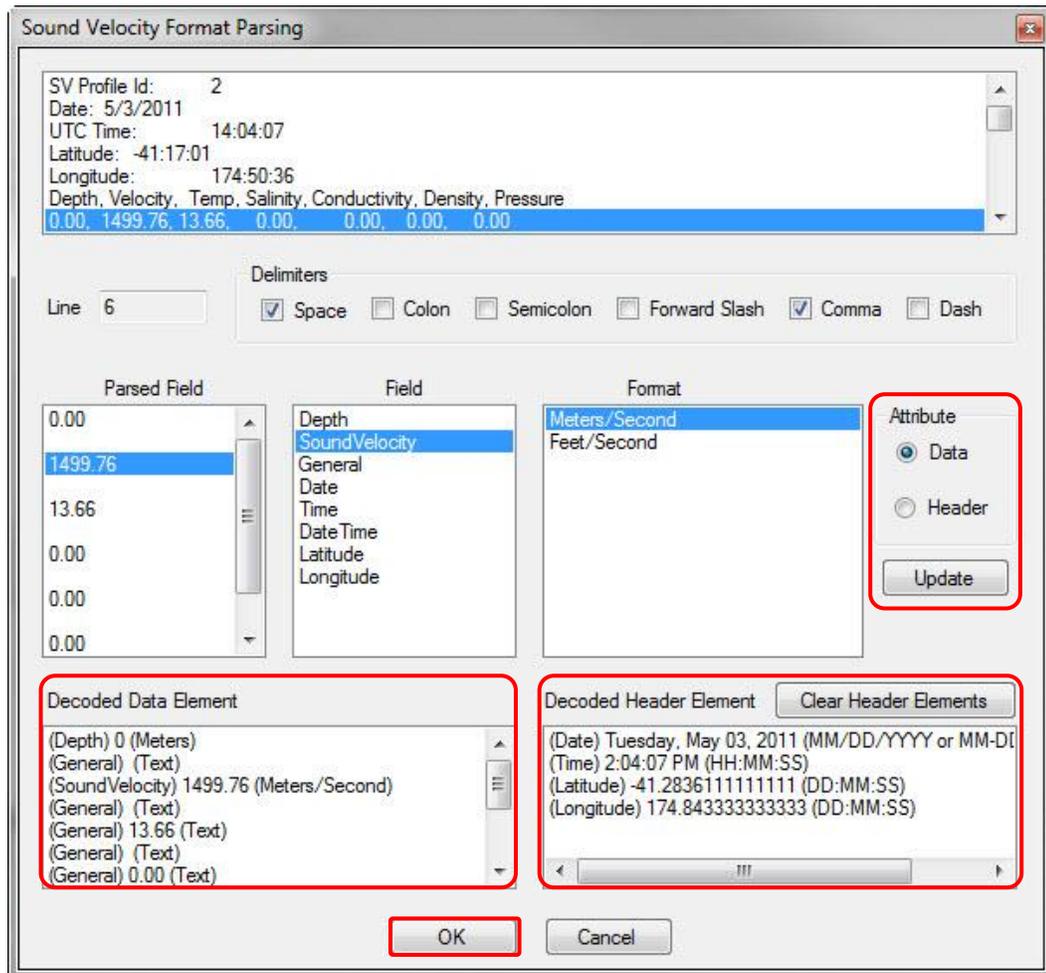


The top section of the parsing dialog is a read-out of the raw data file. This read-out shows that text and values are separated by spaces and commas in this file. Below the data read-out the *Delimiters* can be set to separate the values in the file. For this example both the *Space* and the *Comma* checkboxes are selected.

Some data files include a header section with information about the location of the profile (time, latitude/longitude, cast ID, etc.). To parse the values in the header section:

1. select a line in the file display field at the top
2. in the *Parsed Field* section on the left select the value
3. indicate what type of value it is in the *Field* section
4. select the correct format of the value in the *Format* section
5. make sure the *Attribute* type is set to *Header*
6. then select *Update* to apply the settings

The *Decoded Header Element* section in the bottom right corner of the dialog shows the information extracted from the header.



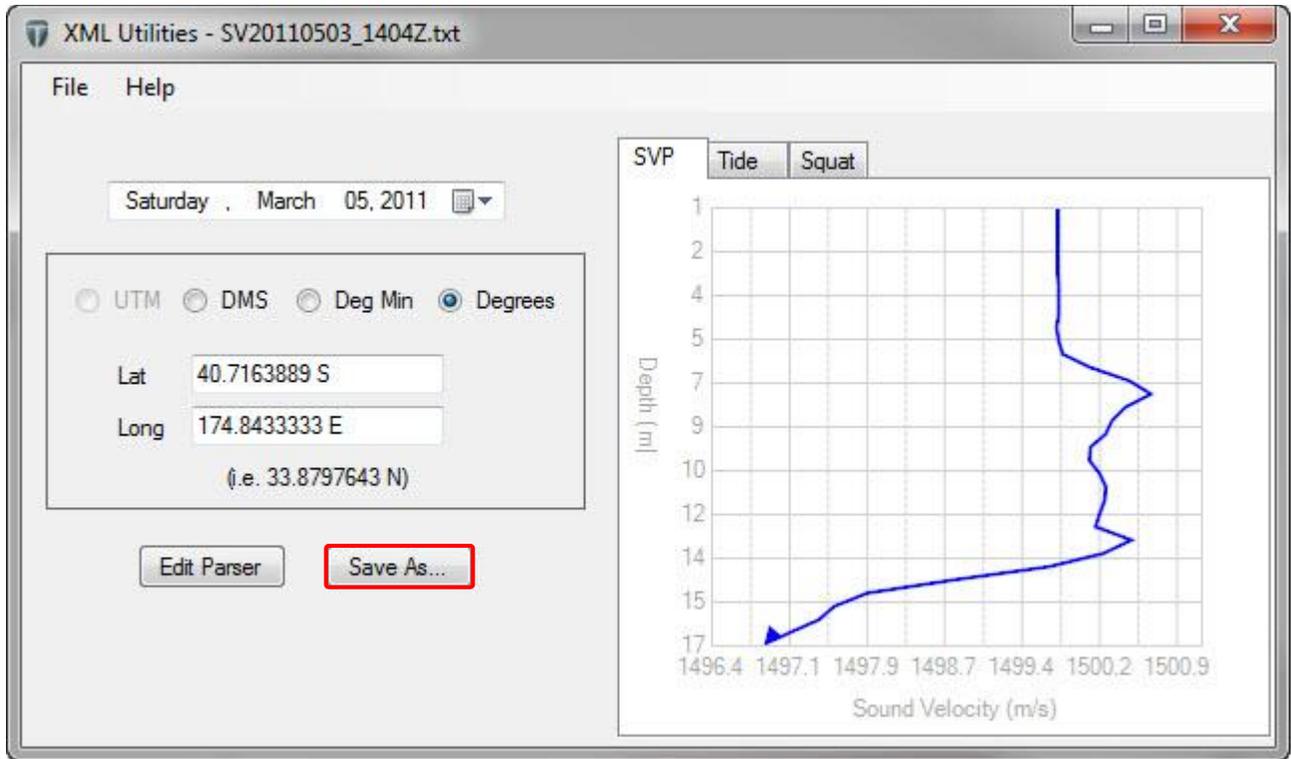
For the data in this file the only values of interest are the depth value and the corresponding sound velocity. Even though Temperature and other values have been recorded in this file we can ignore them and only define the values of interest as shown in the *Decoded Data Element* section in the example above.

To parse the data section of the file:

1. select the first line with data values in the top window
2. select the value of interest in the *Parsed Field* section on the left
3. indicate what type of value it is in the *Field* section
4. select the correct format of the value in the *Format* section
5. set the *Attribute* type to *Data*
6. then select *Update* to apply the settings

Once the important header elements have been defined and the data section is parsed, click on the *OK* button to return to the *XML Utilities* dialog.

Shown below are the results of the *Sound Velocity Format Parsing* dialog:



The sound velocity profile is graphed in the window to the right as a QC tool to verify the results of the parsing dialog. It is important to review the range of values and axis labels and compare them with expected results to make sure the correct *Field* and *Format* were applied.

Note that the date and location were automatically selected using the decoded header information. If there was no header information in the raw data file the date can be selected using the drop-down menu and the location can be entered manually as shown right.

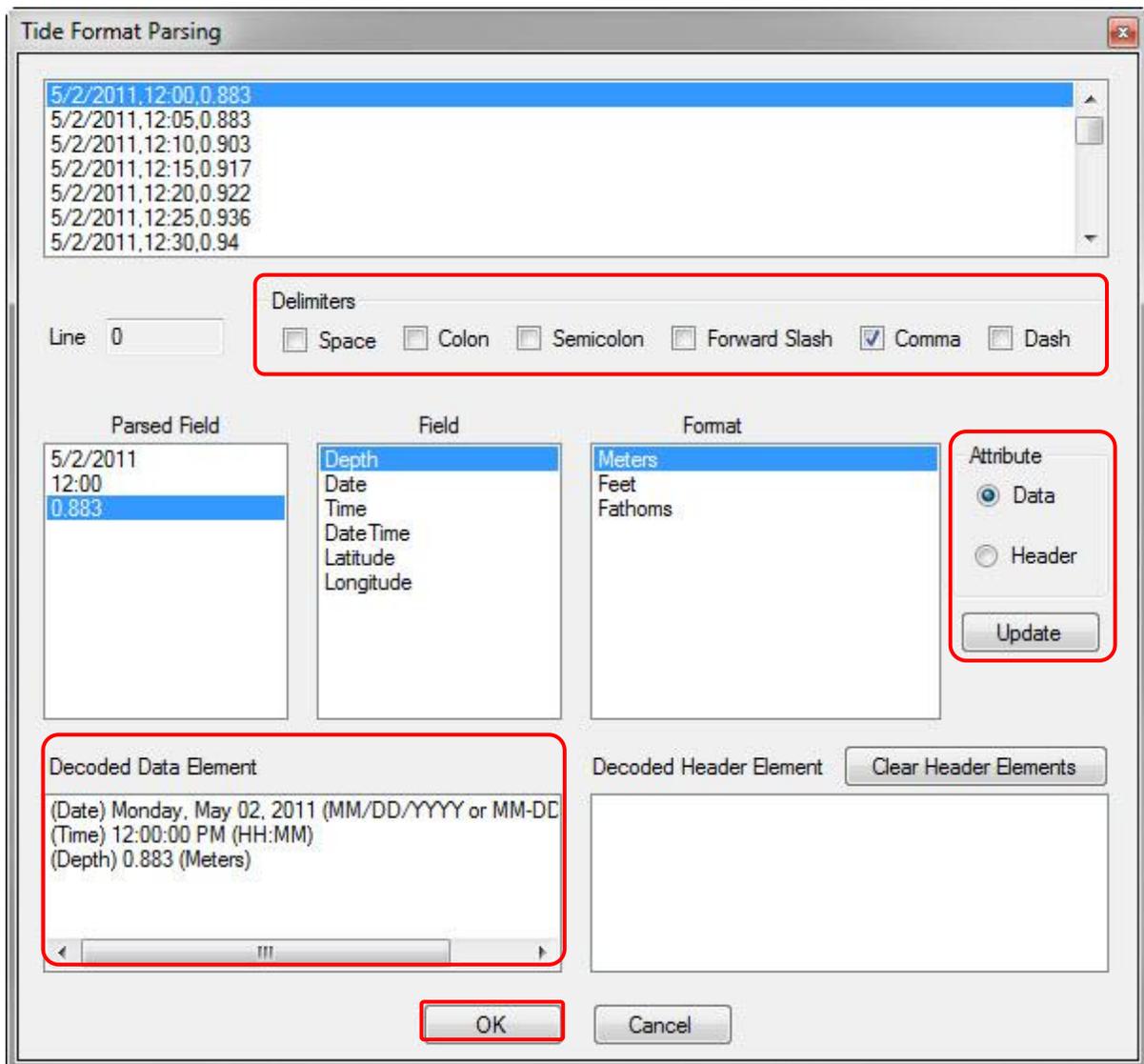
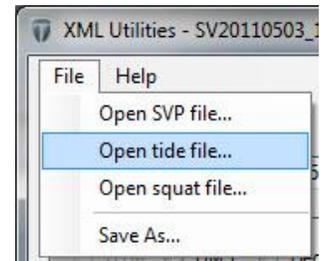


When finished be sure to select *Save As* to select a location and name for writing the parsed information into an XML file. The resulting file will have a *.svp_xml* extension and will be used in the *BathyOne* processing wizard to correct the data for changes in sound velocity through the water column.

3.0 Raw Tide Gauge Data

From the *File* menu in the *XML Utilities* application, select the *Open tide file* option as shown right to convert raw data downloaded from a tide gauge into XML format.

This will open a file browser to locate the raw tide file. Once the file is selected, the *Tide Format Parsing* dialog will launch as below.



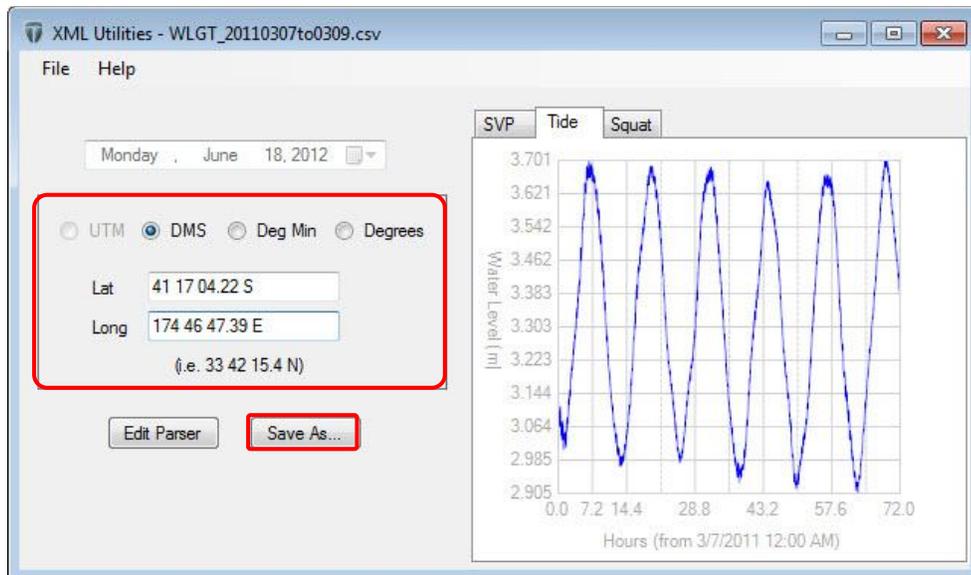
Note that this file does not contain any header information and starts with data at the top of the file. Since there is no header information, it is very important that the surveyor documents the location of the tide station for manual entry in the data parser.

To parse the raw tide gauge data:

1. select the first line with data values in the top window
2. select the value of interest in the *Parsed Field* section on the left
3. indicate what type of value it is in the *Field* section
4. select the correct format of the value in the *Format* section
5. set the *Attribute* type to *Data*
6. then select *Update* to apply the settings

Once *Update* is clicked the *Decoded Data Element* window will update indicating how the value is being interpreted.

After the data section is parsed, click on the *OK* button to return to the XML Utilities dialog as shown below:



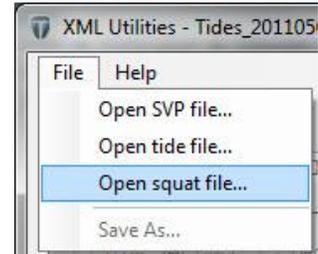
For this example, since there was no header information the location of the tide station had to be manually entered.

Note that when applying tides from a single tide station the location need not be entered. Changes in tide will be applied uniformly over the entire survey area. However, when applying tides from multiple tide stations, it is important to enter an accurate location for the tide stations for interpolating between stations.

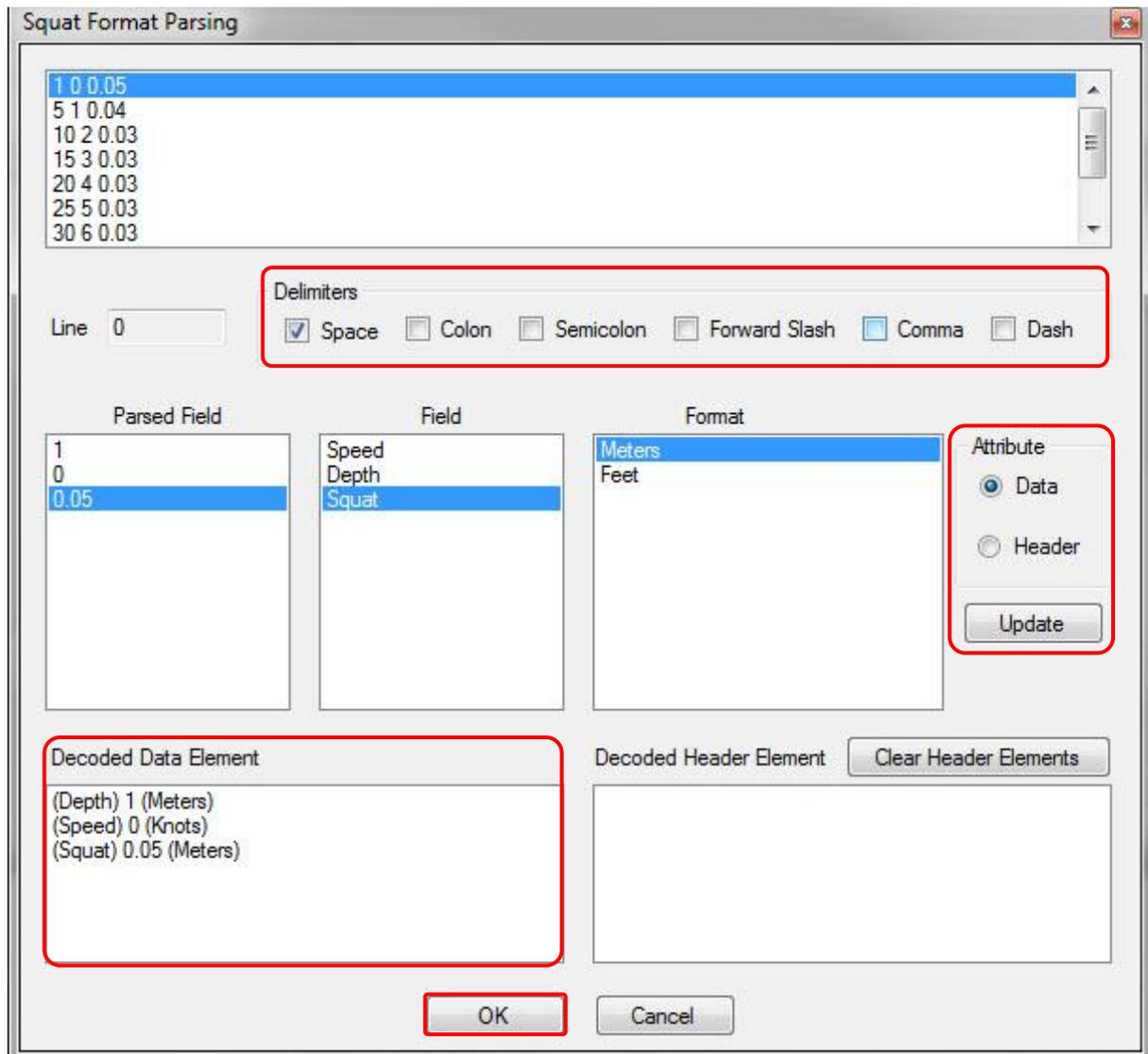
It is important to review the range of values and axis labels and compare them with expected results before clicking *Save As* to create a *.tide_xml* file.

4.0 Squat Tables

From the *File* menu in the XML Utilities application, select the *Open squat file* option as shown right to convert a squat table into XML format.



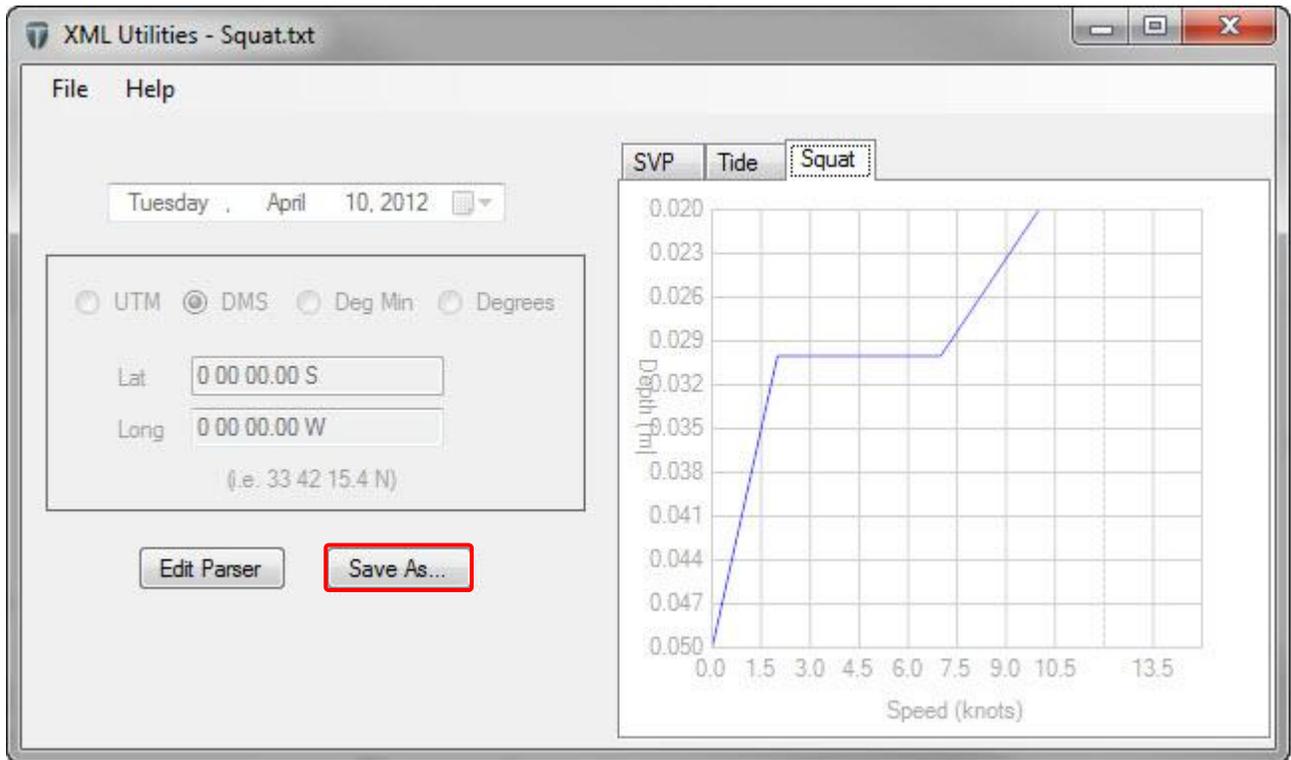
This will open a file browser to locate the raw tide file. Once the file is selected, the *Squat Format Parsing* dialog will launch as shown below:



To parse the squat table, select the first data line in the data read-out at the top of the window, separate the data by setting the *Delimiter* to *Space*, choose the correct *Field* and *Format* for each *Parsed Field*, make sure the *Attribute* is set to *Data*, and

When finished review the *Decoded Data Elements* to verify the data was parsed correctly before clicking the *OK* button.

Selecting *OK* will close the parsing dialog and return the user to the main XML Utilities dialog shown below:



Note that since squat is not dependent on the position or the date, both of these fields are grayed out. Make sure to click *Save As* before exiting from the XML Utilities dialog to save the parsing results to a .squat_xml file.

5.0 Review Data

At this point all data files needed for processing in Perspective should now be ready for use. This includes the following:

- downloaded SVP data → converted to XML
- downloaded Tide Gauge data → converted to XML
- calculated squat table → converted to XML