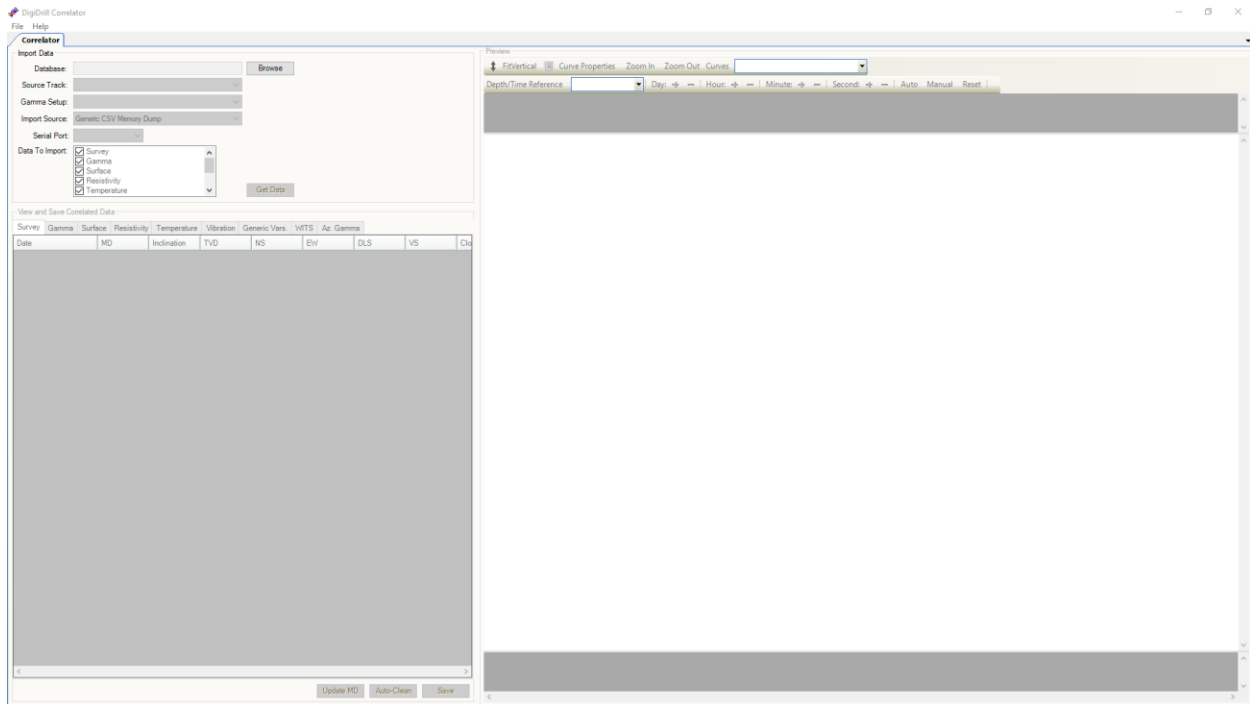


Correlator Update

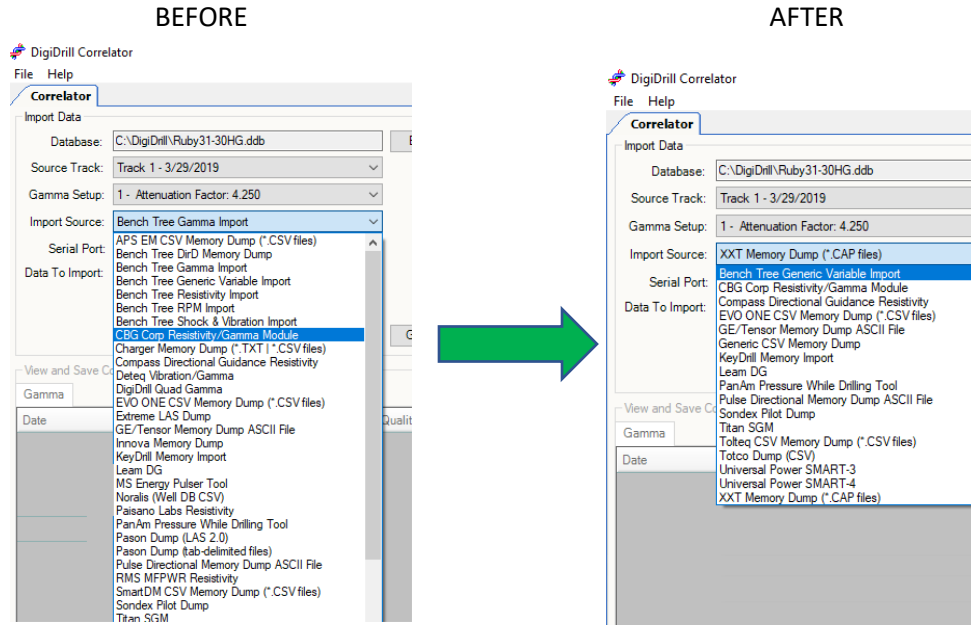
Date	Version Number	Document Changes
04/17/2019	1.0	E. Braddy: Initial draft
5/10/2019	1.1	E. Braddy: Image removed to reflect update.

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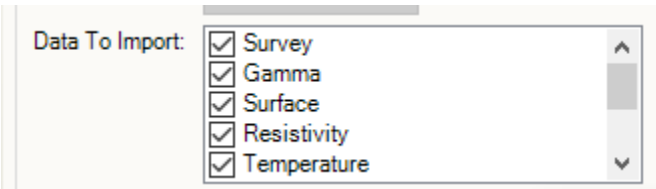
1. Interface Changes



1.1. Import Sources

Most import sources have been consolidated down into the “Generic CSV Memory Dump” Only ones that remain are import sources that require special cases. The “Generic CSV Memory Dump” import source is able to read .csv, .txt and .las files.

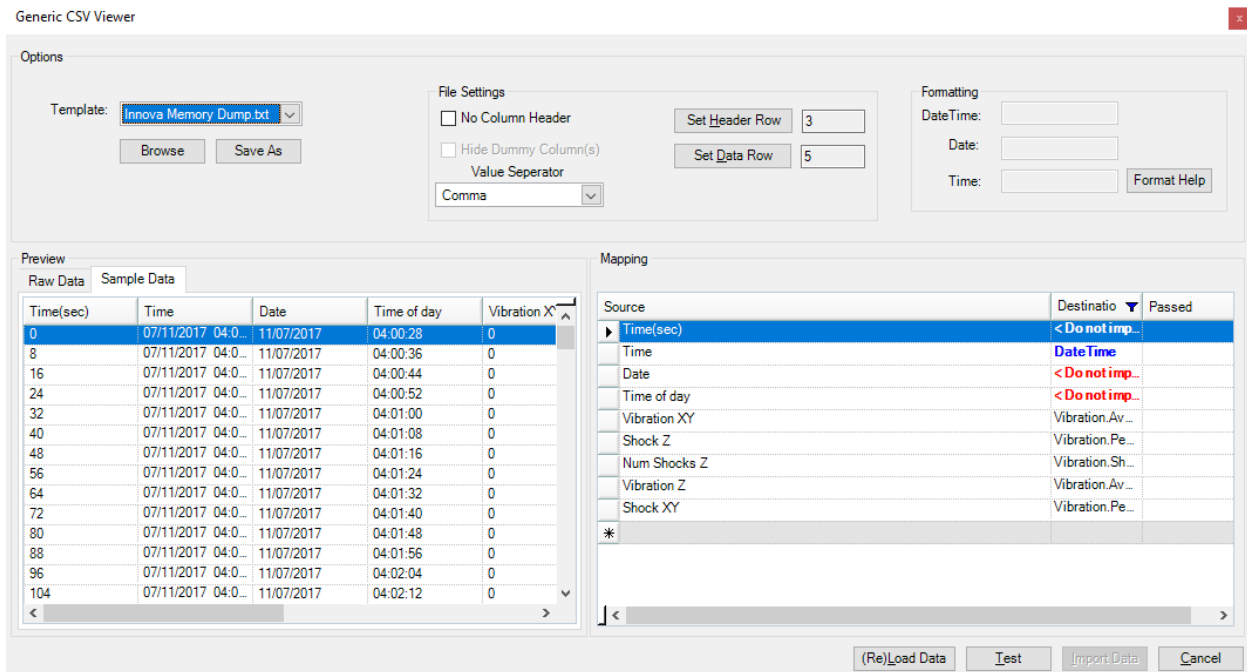
1.2. Data To Import



Previously with import sources, the option to select which data the user wants to import could be selected by checking the boxes within the “Data To Import:” section. This still applies to the import sources that remain other than “Generic CSV Memory Dump” By default all options are selected for this tool. Once the data has been imported the tool will automatically detect which data is being imported.

2. Generic CSV Memory Dump

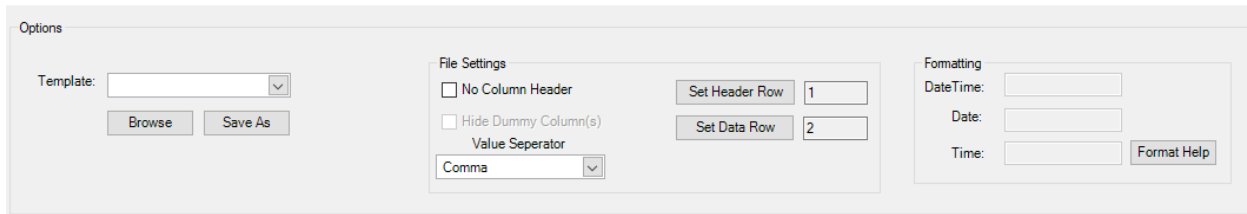
2.1. Interface



The screenshot shows the 'Generic CSV Viewer' application interface. It is divided into several sections:

- Options:**
 - Template: **Innova Memory Dump.txt** (dropdown menu)
 - Buttons: **Browse**, **Save As**
- File Settings:**
 - No Column Header (Set Header Row: 3)
 - Hide Dummy Column(s) (Set Data Row: 5)
 - Value Separator: **Comma** (dropdown menu)
- Formatting:**
 - DateTime: []
 - Date: []
 - Time: []
 - Format Help button
- Preview:**
 - Raw Data / Sample Data tabs
 - Table with columns: Time(sec), Time, Date, Time of day, Vibration X
- Mapping:**
 - Table with columns: Source, Destination, Passed
 - Rows: Time(sec), Time, Date, Time of day, Vibration XY, Shock Z, Num Shocks Z, Vibration Z, Shock XY
- Buttons:** (Re)Load Data, Test, Import Data, Cancel

2.1.1. Options



This screenshot shows the 'Options' section of the interface, which is identical to the one shown in the previous screenshot. It includes the Template dropdown, File Settings, and Formatting options.

Template:

- **Template Drop Down**
 - o Within the option group box, the user can set the properties to correctly import data. Most of the import sources that were removed have been turned into a template. The user can select a template by hitting the dropdown button and select the properly labeled template.
- **Browse**
 - o If the user has saved a template it can be located and used by clicking on the browse button and navigating to the location of which the template is saved to.
- **Save As**
 - o The user may also save a template which will retain the information in the options group box as well as the mapping data which includes header/column names, and the curve names of which each header/column has been mapped to.

File Settings:

- No Column Header
 - o If the imported data file doesn't not contain a row with the header information this box must be checked.
- Hide Dummy Column(s)
 - o In the case that the amount of header/column names does not match the number of columns of data the tool will automatically create a header/column name and will be label as DummyCol1, DummyCol2, etc... Checking this box will allow the user to hide these columns from within the Sample Data tab inside of the Preview box if need be.
- Value Separator
 - o Within the Value Separator drop down are Tab, Comma, Space, and Auto Detect options. This allows the user to specify which type of delimiter separates each value within the file.
 - o The user may select the Auto Detect option if the delimiter is unknown.
 - o The user may also type in a value if the listed ones are not the correct type being used for the file that was loaded.
- Select Header Row
 - o To set the header row, the user must first select a row in the Raw Data tab within the Preview box.
 - o If there is no header then the No Column Header check box must be checked, and the Select Header Row text box will show a default value of zero.
- Select Data Row
 - o To set the data row, the user must first select a row in the Raw Data tab within the Preview box.
 - o A data row must be selected in order for it to be loaded into the Sample Data tab and Mapping box.

Formatting:

- DateTime
 - o When mapping a header/column name to the DateTime value if after tested and it fails then this formatting box for DateTime must be properly filled out in order for it to be correctly imported.
- Date
 - o When mapping a header/column name to the Date value if after tested and it fails then this formatting box for Date must be properly filled out in order for it to be correctly imported.
- Time
 - o When mapping a header/column name to the Time value if after tested and it fails then this formatting box for Time must be properly filled out in order for it to be correctly imported.
- Format Help
 - o Upon clicking this button, a new popup will appear. It contains information in order to help properly format the DateTime/Date/Time boxes.

2.1.2. Preview

Preview

Raw Data Sample Data

Row#	Row Data
1	
2	17267.3/5/2019 21:55:03.21
3	17268.3/5/2019 22:17:40.28
4	17269.3/5/2019 22:18:10.30
5	17270.3/5/2019 22:18:40.32
6	17271.3/5/2019 22:19:10.34
7	17272.3/5/2019 22:19:40.32
8	17273.3/5/2019 22:20:10.30
9	17274.3/5/2019 22:20:40.37
10	17275.3/5/2019 22:21:10.26
11	17276.3/5/2019 22:21:40.27
12	17277.3/5/2019 22:22:10.28
13	17278.3/5/2019 22:22:40.32
14	17279.3/5/2019 22:23:10.28
15	17280.3/5/2019 22:23:40.24

Preview

Raw Data Sample Data

Column1	Column2	Column3
17267	3/5/2019 21:55:03	21
17268	3/5/2019 22:17:40	28
17269	3/5/2019 22:18:10	30
17270	3/5/2019 22:18:40	32
17271	3/5/2019 22:19:10	34
17272	3/5/2019 22:19:40	32
17273	3/5/2019 22:20:10	30
17274	3/5/2019 22:20:40	37
17275	3/5/2019 22:21:10	26
17276	3/5/2019 22:21:40	27
17277	3/5/2019 22:22:10	28
17278	3/5/2019 22:22:40	32
17279	3/5/2019 22:23:10	28
17280	3/5/2019 22:23:40	24
17281	3/5/2019 22:24:10	39

- Row Data
 - o After clicking on Get Data and selecting a data file to import the first 100 lines of raw data within the file is displayed within this tab.
 - o Selecting a row in this tab allows the user to set either the header or data row.
- Sample Data
 - o After the options of the import source tool have been properly set and the user has clicked on the (Re)Load Data button the first 100 lines of data in loaded file will be separated into columns and named according to the header row that was set along with the data of that column.
 - o If there is not a header row the columns will be named Column1, Column2, etc...
 - o If Dummy Columns were created they will also be displayed unless the Hide Dummy Columns is checked.

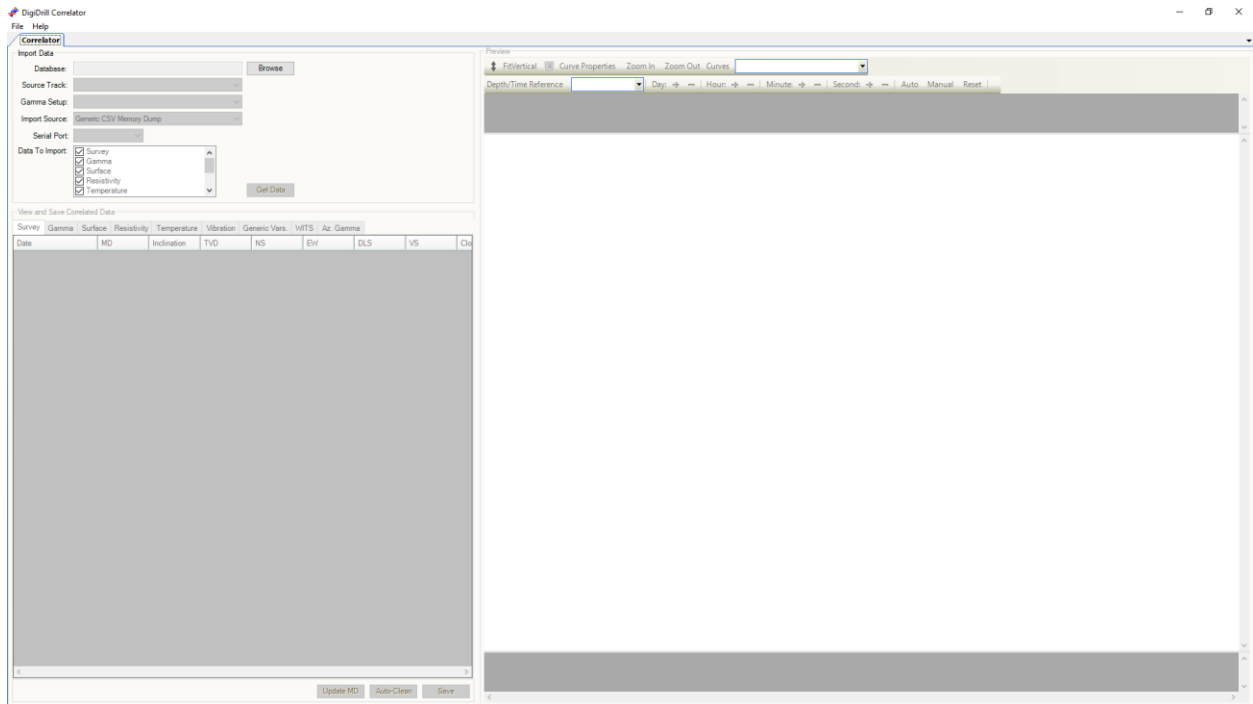
2.1.3. Mapping

Source	Destinatio	Passed
Time(sec)	< Do not imp...	Passed
Time	DateTime	Passed
Date	< Do not imp...	Failed
Time of day	Gamma API	Failed
Vibration XY	Vibration Av...	Passed
Shock Z	Vibration Pe...	Passed
Num Shocks Z	Vibration Sh...	Passed
Vibration Z	Vibration Av...	Passed
Shock XY	Vibration Pe...	Passed
*		

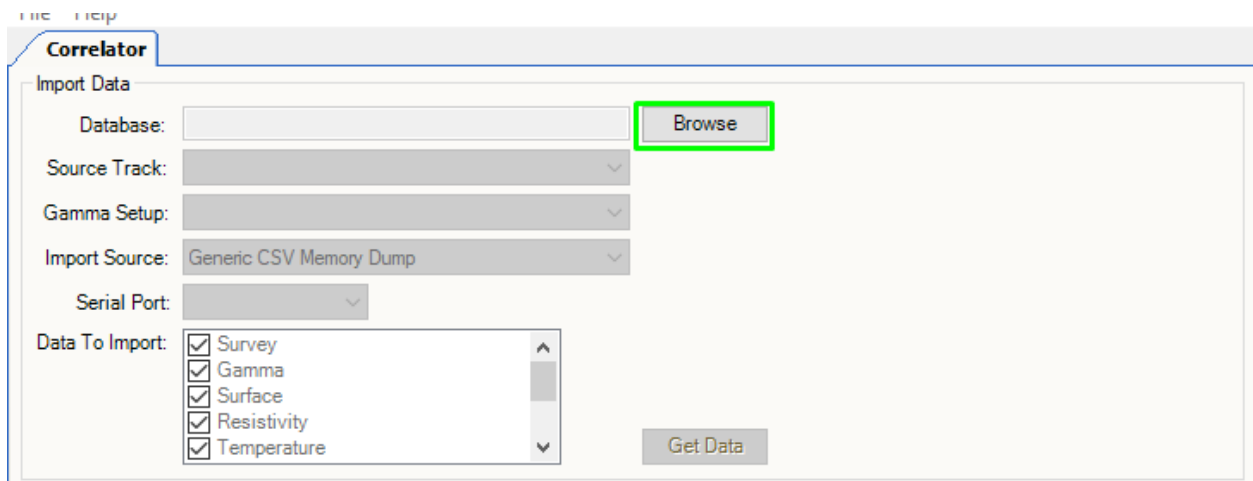
- Source Column
 - o Contains each header/column name
 - o There is not a naming constraint for this column. This allows the user to have two rows of the same value. Example of this is if the user had a column that contained data for gamma counts the column could be mapped to two different curves.
- Destination Column
 - o Contains a dropdown list of all curves that may be mapped to as well the values Date, Time, DateTime, and Depth. If the user does not wish to import a certain column the value of <Do not import> may be selected.
 - o The values will be highlighted green if the imported DDB contains data for the specified curves.
- Passed
 - o Once all source columns have been mapped to the correct curve destinations and the test button has been clicked. The tool will attempt to test each row as if it were to be imported. If there is an issue with any individual row the row itself will be highlighted red and the password column will have a value of Failed. If the test is successful, all columns that have been mapped will have their rows highlighted in green and the passed column will have the value of Passed.
- Create New Row
 - o In order to map the same column to two different curves a new row must be created.
 - o To make a new row the user must click on the very last row that is greyed out. The user must then specify the value for the source column with one of the listed column names from the drop down. Once this is done it will be created. If the row is no longer needed the user may right click on the row and delete it to have it removed.

3. Sample Run

Start Correlator:

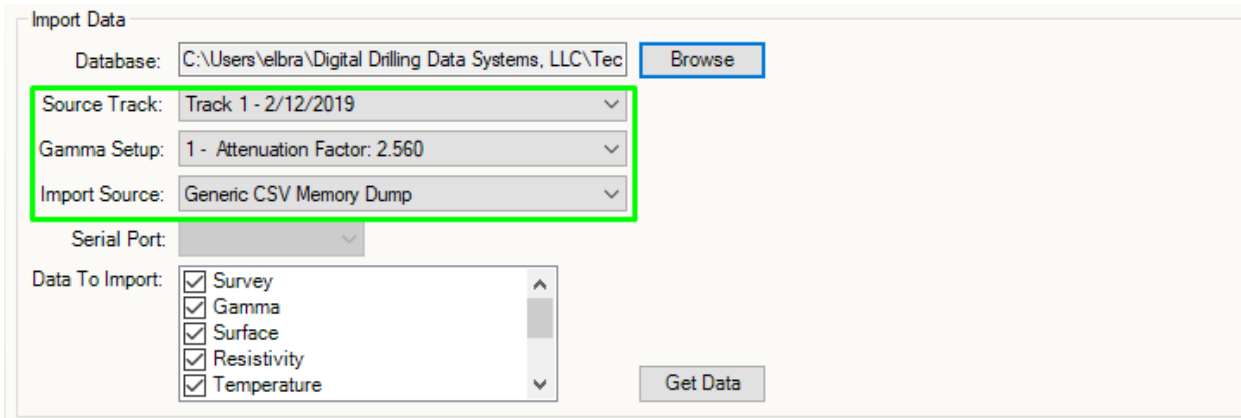


Click on browse and navigate to the database file to correlate:



[Correlator Update - Ver 5.31.50.X - 04-17-19]

Select the source track, gamma setup, and import source. In most cases the Generic CSV Memory Dump import source will be used.



Import Data

Database: C:\Users\velbra\Digital Drilling Data Systems, LLC\Tec

Source Track: Track 1 - 2/12/2019

Gamma Setup: 1 - Attenuation Factor: 2.560

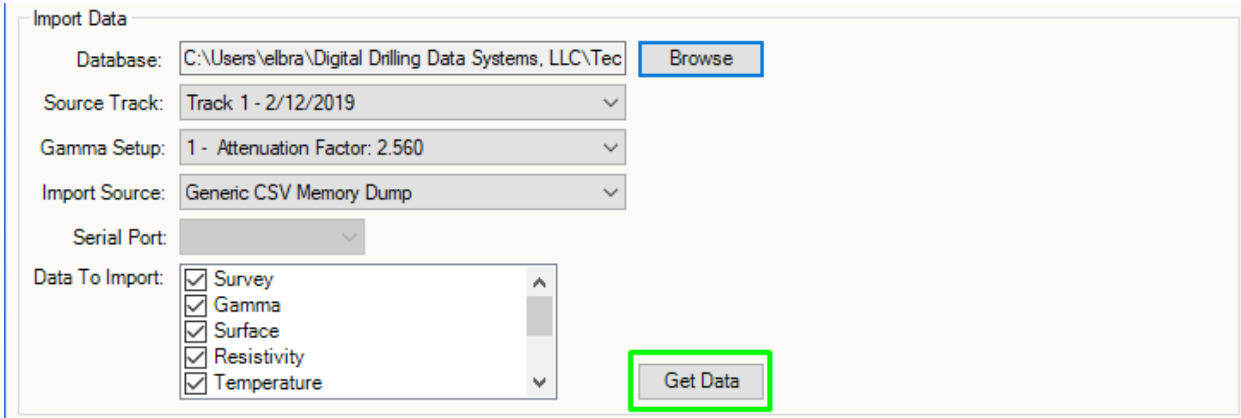
Import Source: Generic CSV Memory Dump

Serial Port:

Data To Import:

- Survey
- Gamma
- Surface
- Resistivity
- Temperature

Click on get data and navigate to the data file:



Import Data

Database: C:\Users\velbra\Digital Drilling Data Systems, LLC\Tec

Source Track: Track 1 - 2/12/2019

Gamma Setup: 1 - Attenuation Factor: 2.560

Import Source: Generic CSV Memory Dump

Serial Port:

Data To Import:

- Survey
- Gamma
- Surface
- Resistivity
- Temperature

[Correlator Update - Ver 5.31.50.X - 04-17-19]

This is where the user will set the options of the tool to load, test, and then import the data to be correlated.

Generic CSV Viewer

Options

Template:

File Settings

No Column Header 1
 Hide Dummy Column(s) 2
Value Separator:

Formatting

DateTime:
Date:
Time:

Preview

Raw Data Sample Data

Row#	Row Data
1	1 02/11/2019 12:30:02 2.9883
2	2 02/11/2019 12:30:05 3.1539
3	3 02/11/2019 12:30:06
4	4 02/11/2019 12:30:07
5	5 02/11/2019 12:30:08 3.0538
6	6 02/11/2019 12:30:10
7	7 02/11/2019 12:30:11 2.8869
8	8 02/11/2019 12:30:12 3.1128
9	9 02/11/2019 12:30:14 2.9537
10	10 02/11/2019 12:30:17 2.9203
11	11 02/11/2019 12:30:19 2.9883
12	12 02/11/2019 12:30:20 2.9203
13	13 02/11/2019 12:30:22
14	14 02/11/2019 12:30:23 2.937
15	15 02/11/2019 12:30:24

Mapping

Source	Destination	Passed
*		

(Re)Load Data Test Import Data Cancel

If there is a template related to the data file selected it would be picked at this time.

Generic CSV Viewer

Options

Template: **MS Energy Gamma (No h)**

File Settings

No Column Header 0
 Hide Dummy Column(s) 1
Value Separator:

Formatting

DateTime: MM/dd/yyyy/HH:mm
Date:
Time:

Preview

Raw Data Sample Data

Column1	Column2	Column3
1	02/11/2019 12:3...	2.9883
2	02/11/2019 12:3...	3.1539
3	02/11/2019 12:3...	
4	02/11/2019 12:3...	
5	02/11/2019 12:3...	3.0538
6	02/11/2019 12:3...	
7	02/11/2019 12:3...	2.8869
8	02/11/2019 12:3...	3.1128
9	02/11/2019 12:3...	2.9537
10	02/11/2019 12:3...	2.9203
11	02/11/2019 12:3...	2.9883
12	02/11/2019 12:3...	2.9203
13	02/11/2019 12:3...	
14	02/11/2019 12:3...	2.937
15	02/11/2019 12:3...	

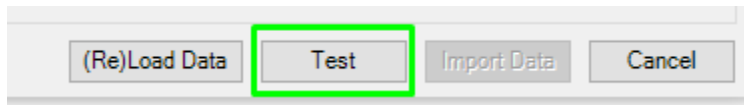
Mapping

Source	Destination	Passed
Column1	< Do not imp...	
Column2	Date Time	
Column3	Gamma.Cou...	
Column3	Gamma.APL...	
*		

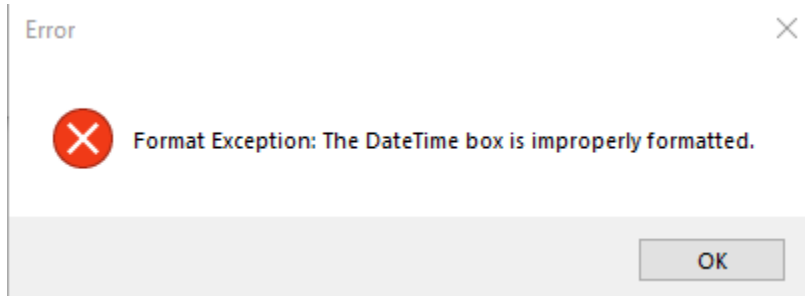
(Re)Load Data Test Import Data Cancel

[Correlator Update - Ver 5.31.50.X - 04-17-19]

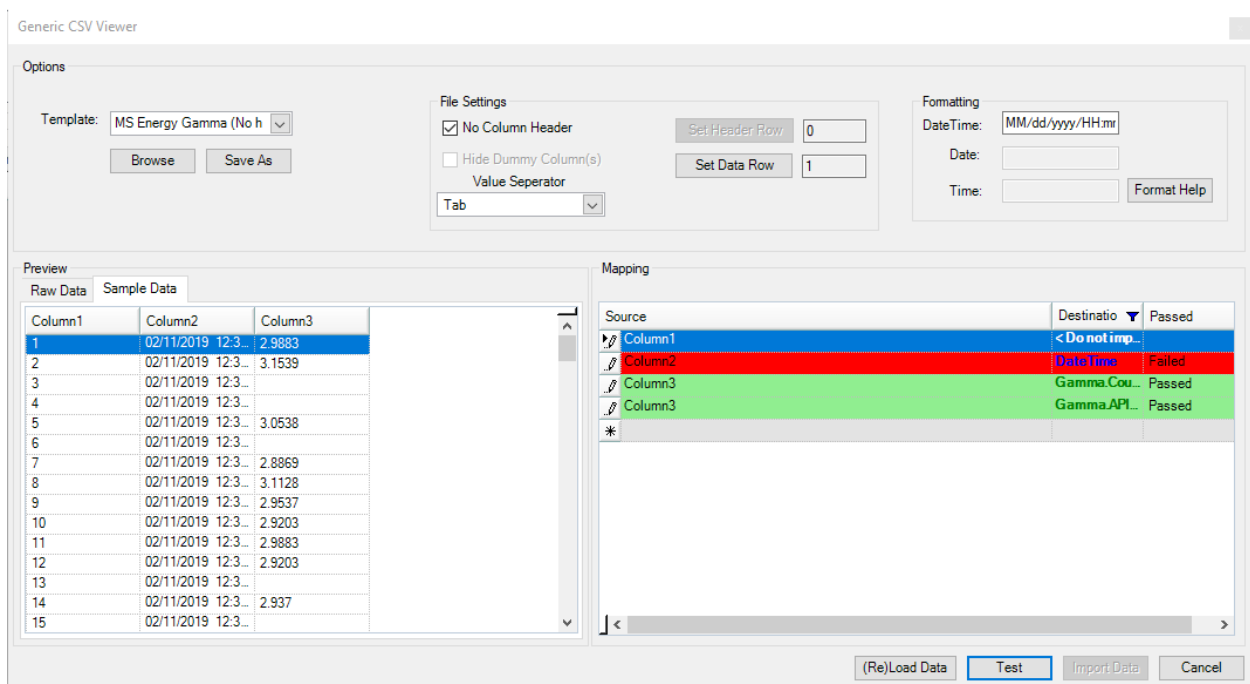
Once the options have been correctly set and columns have been mapped the user must test the import by clicking on the test button.



If the test is not successful a message box will be displayed giving the user information related to which row failed.



After hitting okay, the Mapping group box will have a row highlighted red indicating that it failed.



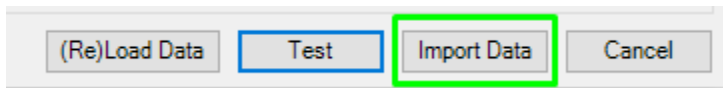
In this case the formatting box for DateTime is filled out and should not be. Once removed the test succeeded.

All rows are now also highlighted green.

Mapping

Source	Destination	Passed
Column1	< Do not imp...	
Column2	DateTime	Passed
Column3	Gamma.Cou...	Passed
Column3	Gamma.API...	Passed
*		

Once all rows have passed then click on Import Data.



If Gamma data is being imported this is where the user will be prompted to either scale Gamma.API or not. By default, the value in the text box will be the previously selected Gamma Setup(Attenuation Factor).

Import Data

Database: C:\Users\velbra\Digital Drilling Data Systems, LLC\Tec Browse

Source Track: Track 1 - 2/12/2019

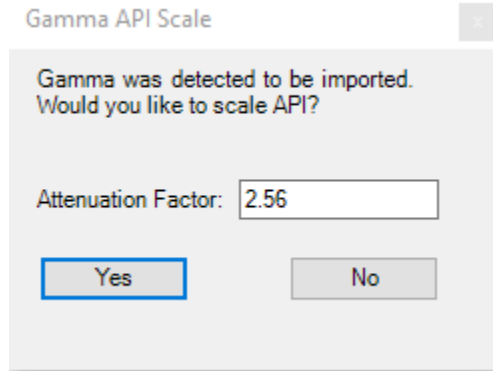
Gamma Setup: 1 - Attenuation Factor: 2.560

Import Source: Generic CSV Memory Dump

Serial Port: v

Data To Import: Survey Gamma Surface Resistivity Temperature

Get Data



In this case yes was selected and the data has been imported. The user may now save the data to the current track or a separate track.

