Post Correcting a Level Reference in a Data File

May 2013

Overview

In-Situ Inc. pressure sensors can output level data in three modes based on a pressure measurement. These modes include Depth, Level Surface Elevation, and Level Depth to Water. Level Surface Elevation and Level Depth to Water modes calculate level using a reference point that is either set when the sensor is programmed or when the instrument begins to log data. The reference that is set records a value, called Pressure Head at Reference, and all readings are relative to this value.

Frequently, the user programming the pressure sensor inadvertently sets an incorrect reference not realizing that the sensor must be installed in the water before the reference is programmed. Or the user selects a level mode that does not work well for their application. This technical note explains how to correct inappropriate references or change level modes.

About Post Correcting Level Data

In specific cases, it is possible to correct a level reference in a data file after you have stopped the log and downloaded the data. The following criteria must be met in order for a level reference to be post corrected in a data file.

- Data must be compensated for barometric pressure before the level reference can be corrected. Therefore, data must come from a vented instrument, or if it is from an absolute instrument, it must be compensated through Baro Merge Software before the level reference can be corrected.
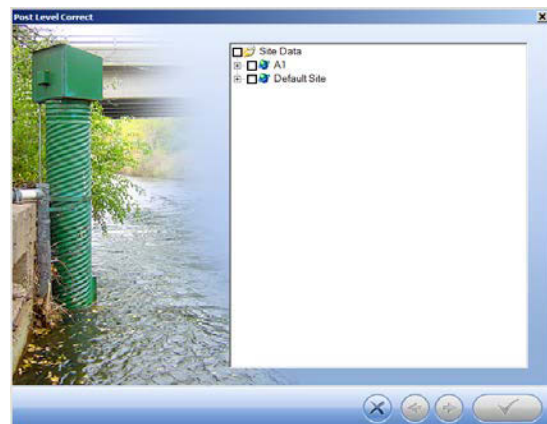- The data file must already contain a level mode.

- The data file must have been created with Win-Situ version 5.6.0.0 or higher in order to post correct for the Depth reference type.
- The data must have been downloaded with Win-Situ version 5.6.24.4
- If the log was originally set to "Zero at start of test" and the user has made changes to the level reference during logging, it is not possible to correct the data with Win-Situ.

Files that have been corrected are stored in a subdirectory named "Post Corrected Files" and "PostLevelCorrection" is added to the file name. The original data file is not altered.
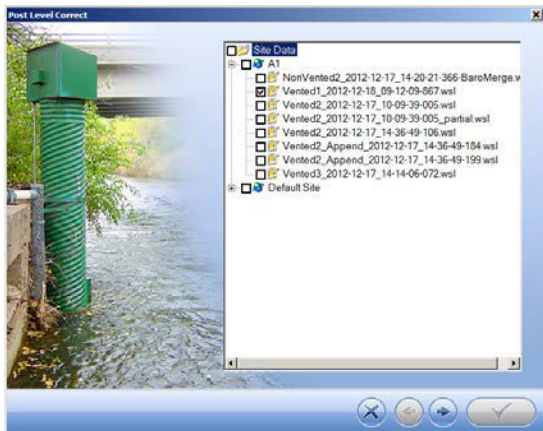
Open Post Level Correction

Post Level Correction can be accessed through Win-Situ 5 Software or through the Baro Merge Software.

1. To open Post Level Correction in Win-Situ 5 Software go to the menu bar and click **Tools > Post Level Correction**.

2. The software loads the compatible files. Expand the site that contains the data file you intend to correct
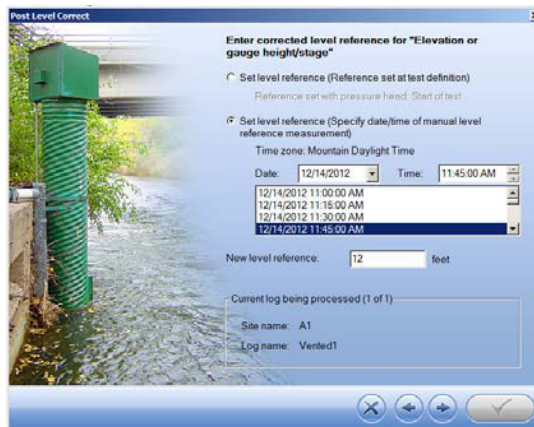
and select the file.

3. Click the **right arrow**.

> ✔ You can also access **Post Level Correction** in Baro Merge Software. To open **Post Level Correction** within Baro Merge, check the appropriate check box in the Baro Merge Wizard. See page 3.

Select Level Reference Type

In order to post correct the level reference in a data file, the original data must have been collected in level mode.

1. You can keep the original level reference type, or you can select one of the following reference types.

   - Pressure head (Depth)
   - Depth to water
   - Elevation or gauge height/stage

2. Click the right arrow.

Set the Level Correction

1. Select **Set level reference (Reference point set at test definition)** if you want to change the level reference at the time you originally set up the log.

2. Select **Set level reference (Reference at user selected data point)** if you measured your level reference at any point after the start of the test. You must then select the time from which to apply the correction. The level correction will be applied to all data collected after the selected point.
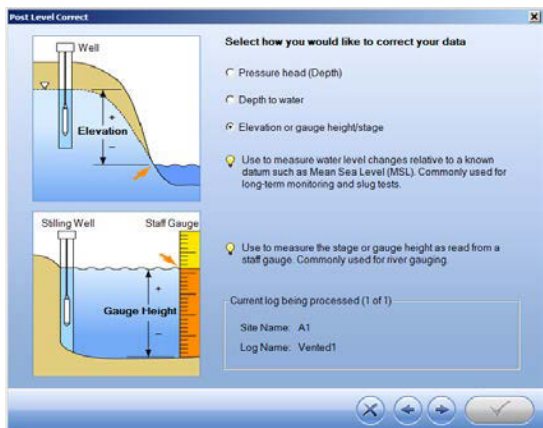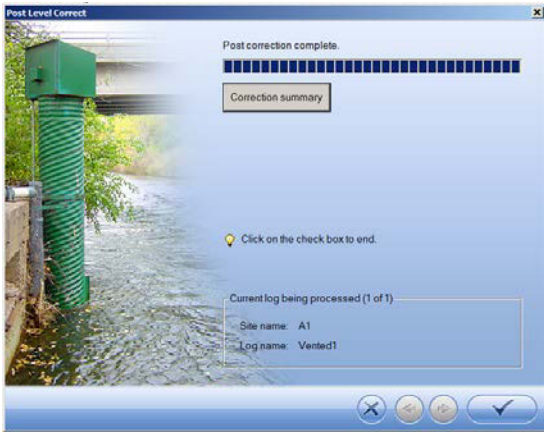

3. Enter the correction value in the **Level reference** field.

4. Click the **right arrow** button.

5. Select a value for specific gravity and click the **right arrow** button.

> ✔ This step is necessary only if the value for specific gravity was set incorrectly in the original file.
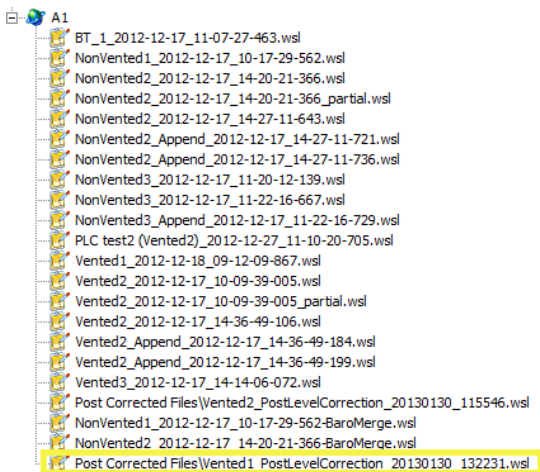
> Click the **Correction summary** button to view the changes before you apply them to the file.

6. When post correction is complete, click the **check mark** button.

View Post Level Corrected Data

1. To view post corrected level data, go to the **Data** tab.

2. Open the appropriate site in the **Site Data** folder.

3. Files that have been corrected are stored in a subdirectory (on your hard drive) named "Post Corrected Files" and "PostLevelCorrection" is added to the file name. The original data file was not altered.

4. You can view the data in Win-Situ 5 or export the data to Excel.

Post Level Correction within Baro Merge

It is also possible to post correct a level reference in data collected from an absolute sensor if the data has been compensated through Baro Merge Software.

1. Follow the steps to compensate the absolute data for barometric pressure.

2. When you reach this screen in the Wizard, you can select the check box to **Post correct files for level**.

Conclusion

The Depth to Water and Elevation level modes require the user to set a level reference so that the log data is represented correctly. In order to set the reference properly, the user must first install the instrument in its permanent deployment location.

If the reference was incorrectly set, or no reference was set but a level mode is present in the log, Win-Situ can be used to recalculate Depth to Water and Elevation.