



HYPACK
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Sounding Better!

Merging Dredge Matrix Files

By Christian Shaw

There have been many times that our support department has been contacted when the matrix data that has been painted but not saved.

In DREDGEPACK®, when you are painting the matrix, the matrix is open in the background as an active file. The cells are updated in real time and stored to the file. The matrix file does not “SAVE” and “Close” until you have either closed DREDGEPACK® or selected matrix-SAVE matrix Option from the DREDGEPACK® menu.

If a PC has crashed or DREDGEPACK® has not closed gracefully, there is a probability that if you did not save the matrix, it has lost its updated cell data.

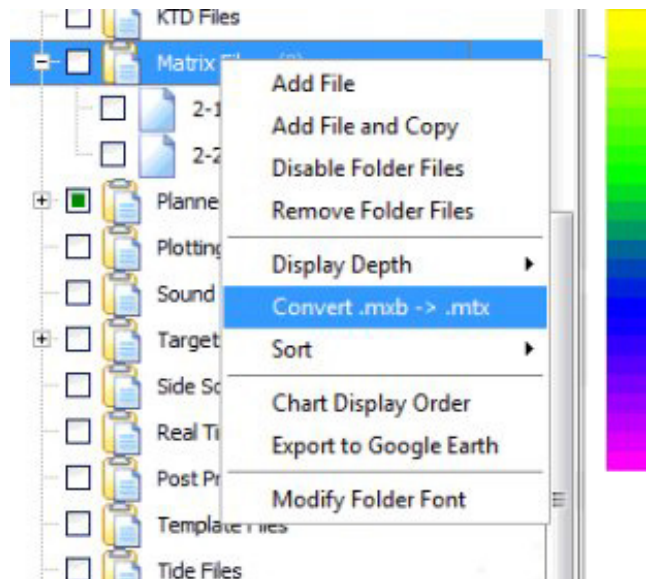
BACKUP AND RESTORE YOUR MATRIX

You have the ability to backup a matrix at a regular, user-defined time interval. You can find this setting in the DREDGEPACK® Navigation Parameters dialog. Select OPTIONS - NAVIGATION PARAMETERS and enter a Matrix Backup time.

These backup files are a series of binary files, one per backup time, that are saved in the project Archive folder in your project folder structure over the course of your work.

You can restore a matrix file from any *MXB backup file in the HYPACK® Project Items list: Go to the HYPACK® Shell and right-click on the matrix file sections and select “Convert MXB to MTX.”

HYPACK® restores the data to the time at which the file was saved. The easiest way to restore a matrix file is to sort by date modified and give the file name a new name so that you can differentiate which one was written the most recently.



MERGING XYZ SOUNDINGS IN A MATRIX FILE

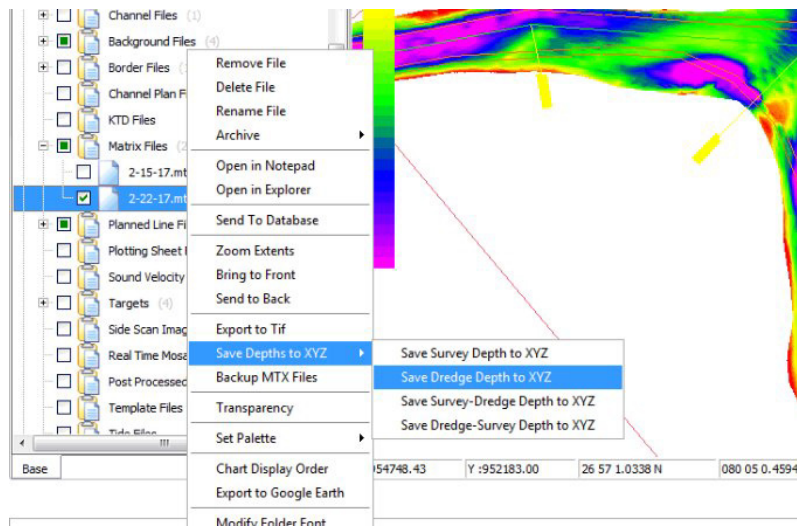
The second part to this article is to show you how to merge XYZ soundings into a matrix file. At times you may have matrix files that have cell updates, “Paint” in certain areas and no

paint in other areas that have been covered. In this section, I will show you how to take two dredge-depth XYZ files and merge them into a matrix file to show complete coverage.

1. **Extract the “DREDGE” Depths from each matrix file.** In the main HYPACK® screen, simply right-click on the matrix file and select Save Dredge Depths to XYZ. Do the same for each matrix.

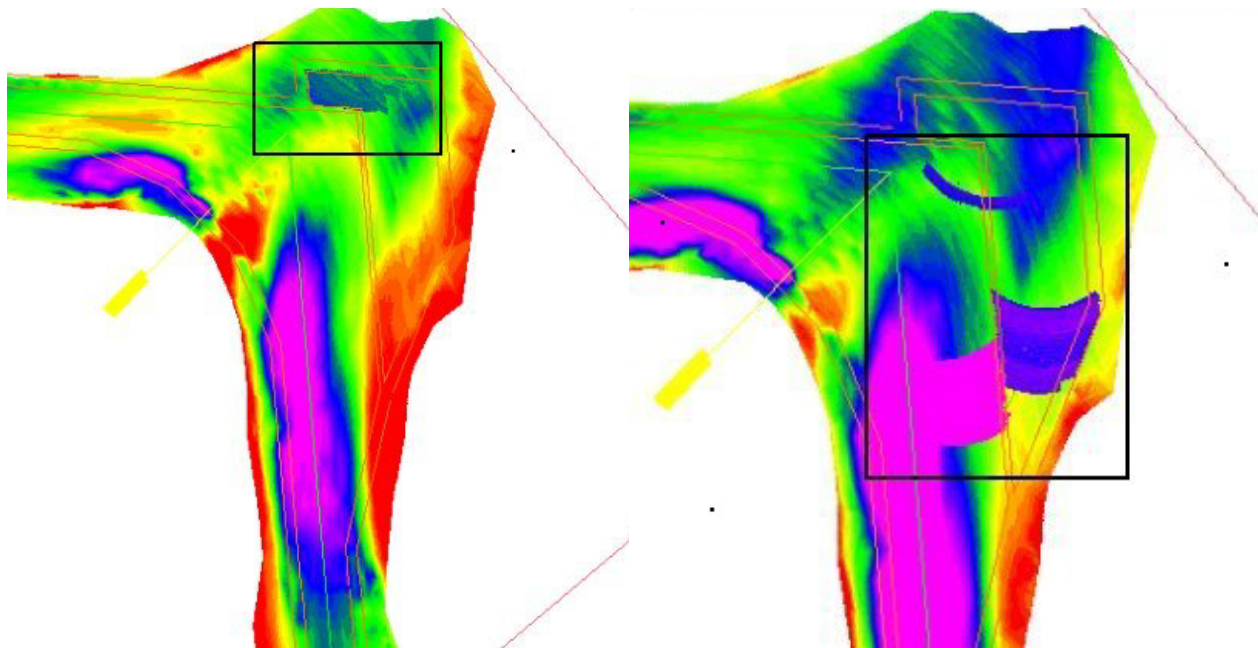
2. **Open the MAPPER program.** Select PROCESSING - SOUNDING SELECTION-MAPPER.

Select one of your matrix files to be used as the footprint of the job.



In the following figure, matrix files covering some of the same area of the project have been updated in different locations. The idea is to use MAPPER to merge these two matrix files together to include all progress in a matrix file.

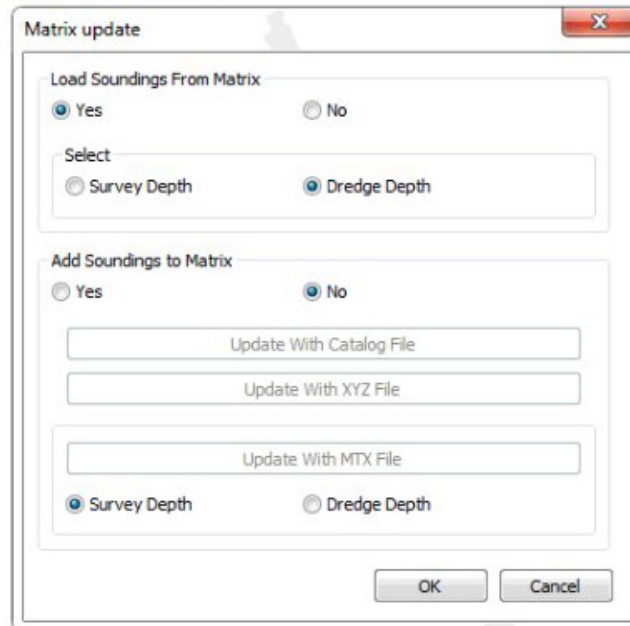
FIGURE 1. Two Matrix Files for the Same Project Contain Updated Dredge Depths in Different Locations



3. **Select FILE-OPEN MATRIX and open one of the matrix files** that you want to merge. It should not matter which one is used. In my case I will use the one that has the oldest date.
4. **Choose which soundings get loaded from the matrix.**
 - **Load Soundings from Matrix:** Select “Yes” and “Dredge Depths”.

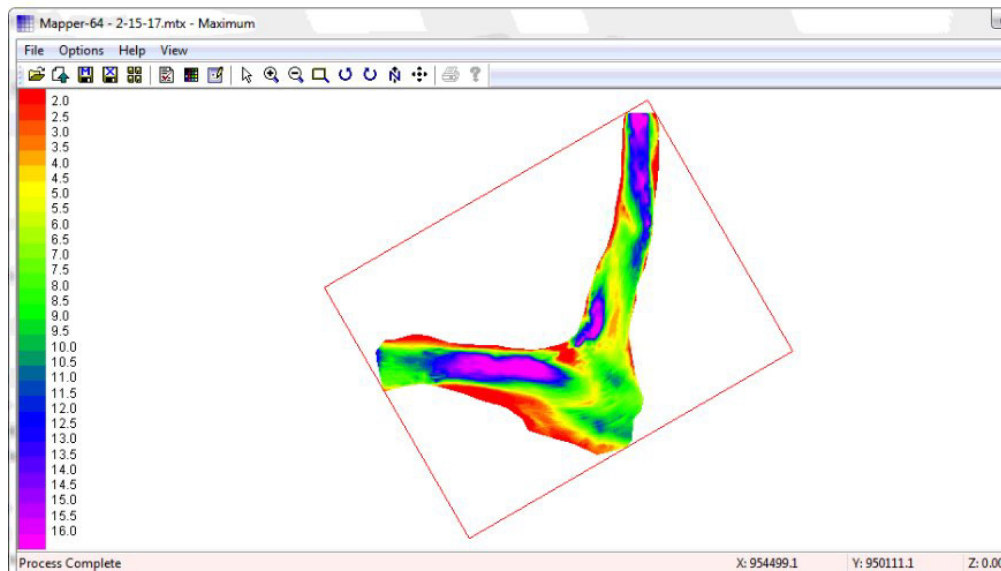
- **Add Soundings to Matrix:** Select “No”. We will do this in another step.

FIGURE 2. *Matrix Update Options*



You will see the dredge depths from initial matrix in MAPPER.

FIGURE 3. *MAPPER Displays the Dredge Depths from the Selected Matrix*



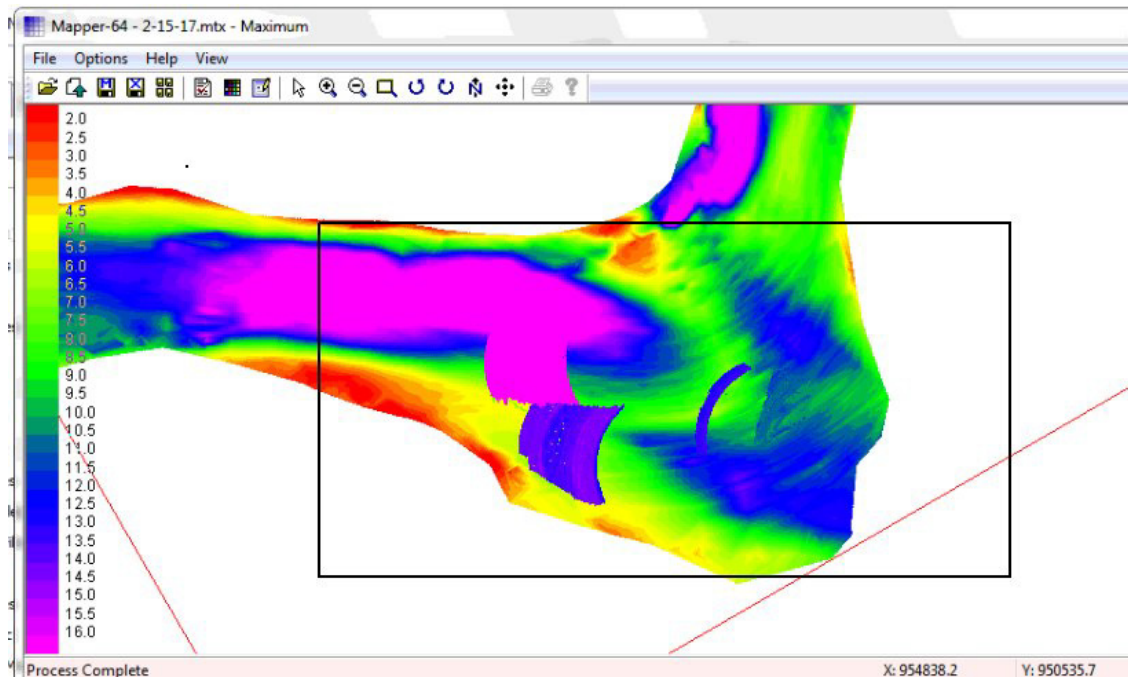
Now that you have the matrix loaded in MAPPER, it is time to add the XYZ depths that were saved from each matrix backup that I explained about above.

5. **Select FILE-LOAD SOUNDINGS.** Load each XYZ file that you have created from the Matrix Backups. You will start to see the soundings appear in the display window in MAPPER.

You will start to see the updates appear in the MAPPER window. As you see here the surface is updated by the XYZ files.

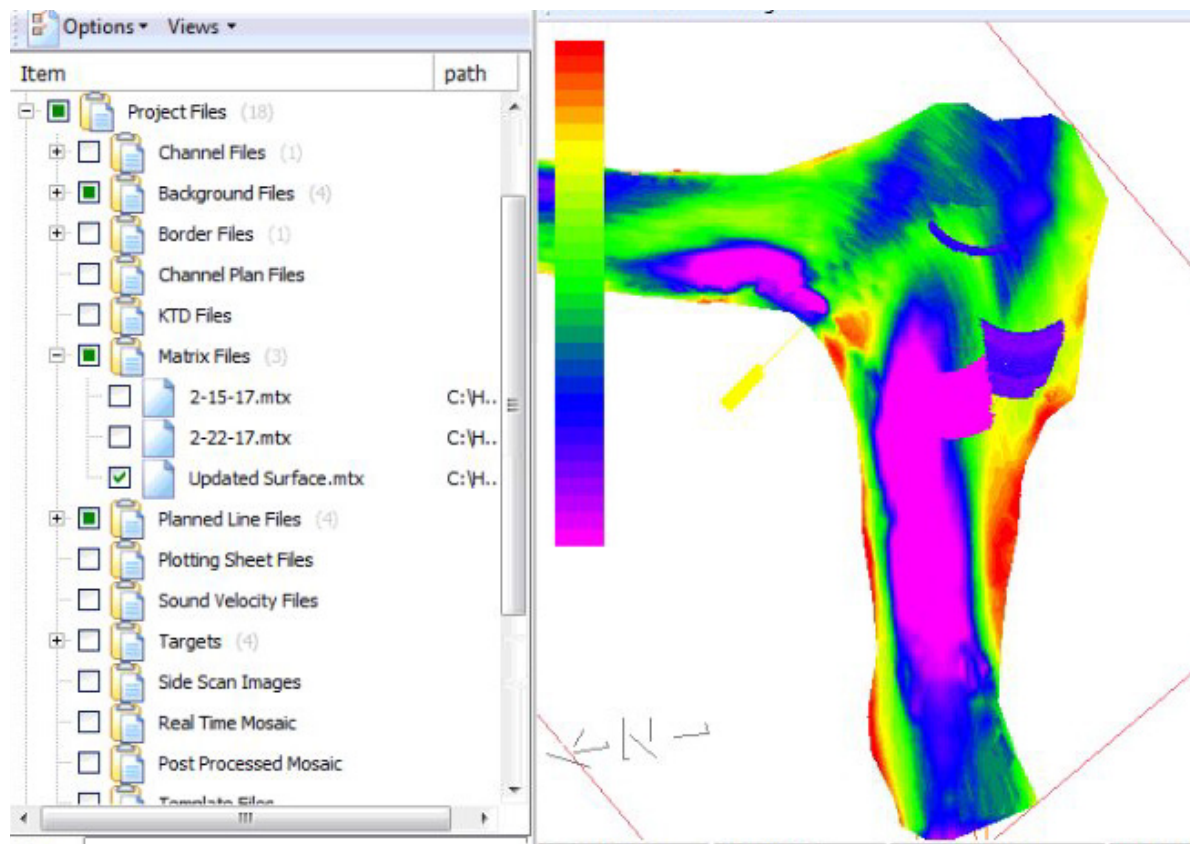
6. **If you do not see the updates on the screen**, change the way the “Data Selection” is setup in MAPPER: Select OPTIONS-DATA SELECTION. In Depth Mode, set this option to Maximum. In Elevation Mode use the Minimum option.

FIGURE 4. Initial Matrix Updates with Dredge Depths from your XYZ Files



7. Once you are satisfied with the XYZ files that you import and you have all your progress back, **save your matrix**. In MAPPER, select FILE-SAVE SOUNDINGS- MATRIX FORMAT. Now you will have a matrix file that has all of your progress and you can use it in DREDGEPACK®.

FIGURE 5. *New Updated Matrix Surface in the HYPACK® Area Map*



If you do not see the matrix surface in the HYPACK® Shell, ensure that you are displaying the matrix in Survey Depth mode. (Right-click on the Matrix Files folder in the Project Items list and select DISPLAY DEPTH-SURVEY DEPTH. The matrix will not contain dredge depths until you use it once in DREDGEPACK®.