



**HYPACK**  
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Sounding Better!

## Targeting in Side Scan Mosaicking

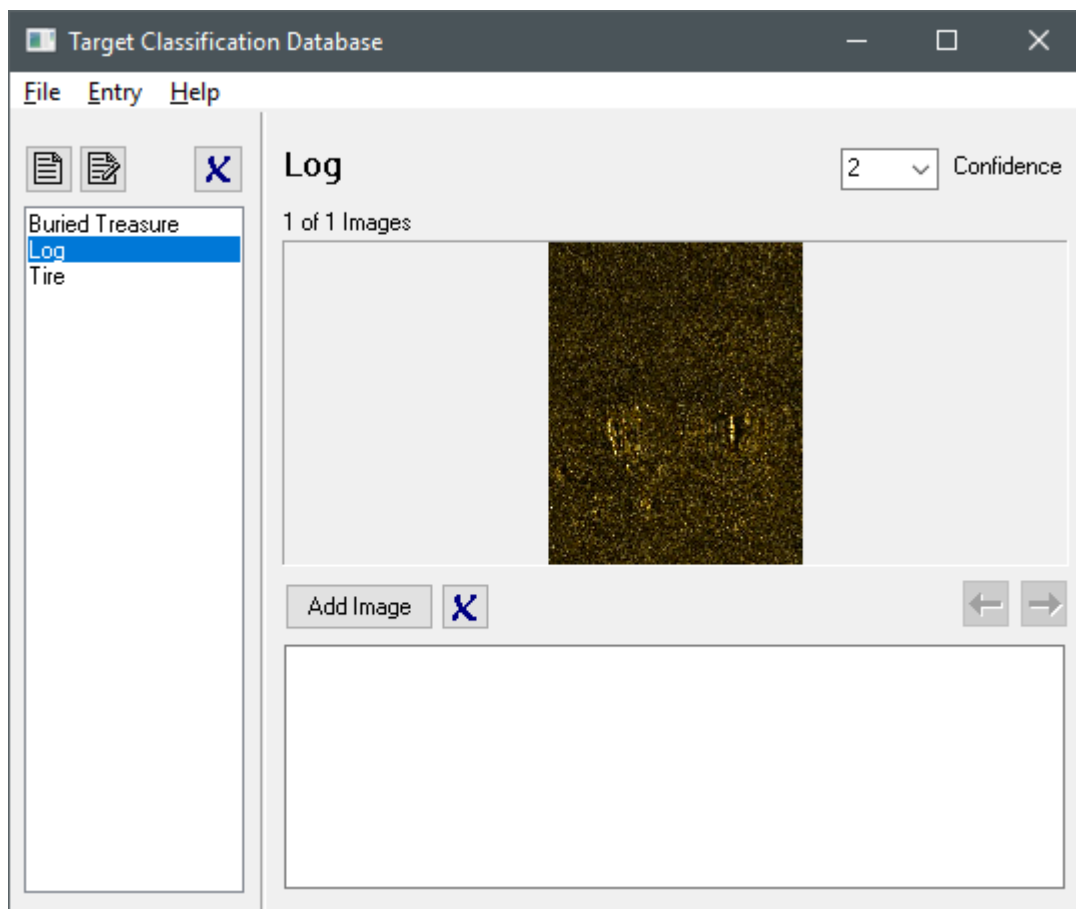
By Daniel Tobin

This article will explain different processes and tools for marking and editing targets in HYSCAN (TARGETING AND MOSAICKING). It will review marking targets, calculating object heights, creating georectified images (GeoTIFFs), and classifying targets.

### CREATING TARGET CLASSIFICATIONS

Targets can be associated with a classification ID. These IDs are created in a separate program, TgtClassDB.exe, which you can find in your HYPACK® install folder (usually C:\HYPACK 20xx\). You must create these classifications before you begin marking targets.

**FIGURE 1.** Target Classification Database



1. Select FILE-NEW CODE and enter the name for the ID you wish to create.

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2. **Describe the ID:**

- **Associate images with the ID.** Click [Add Image] and choose an image that represents the ID.
- **Select a Confidence level.**
- **Add notes.**

3. **Repeat the process for each ID.**

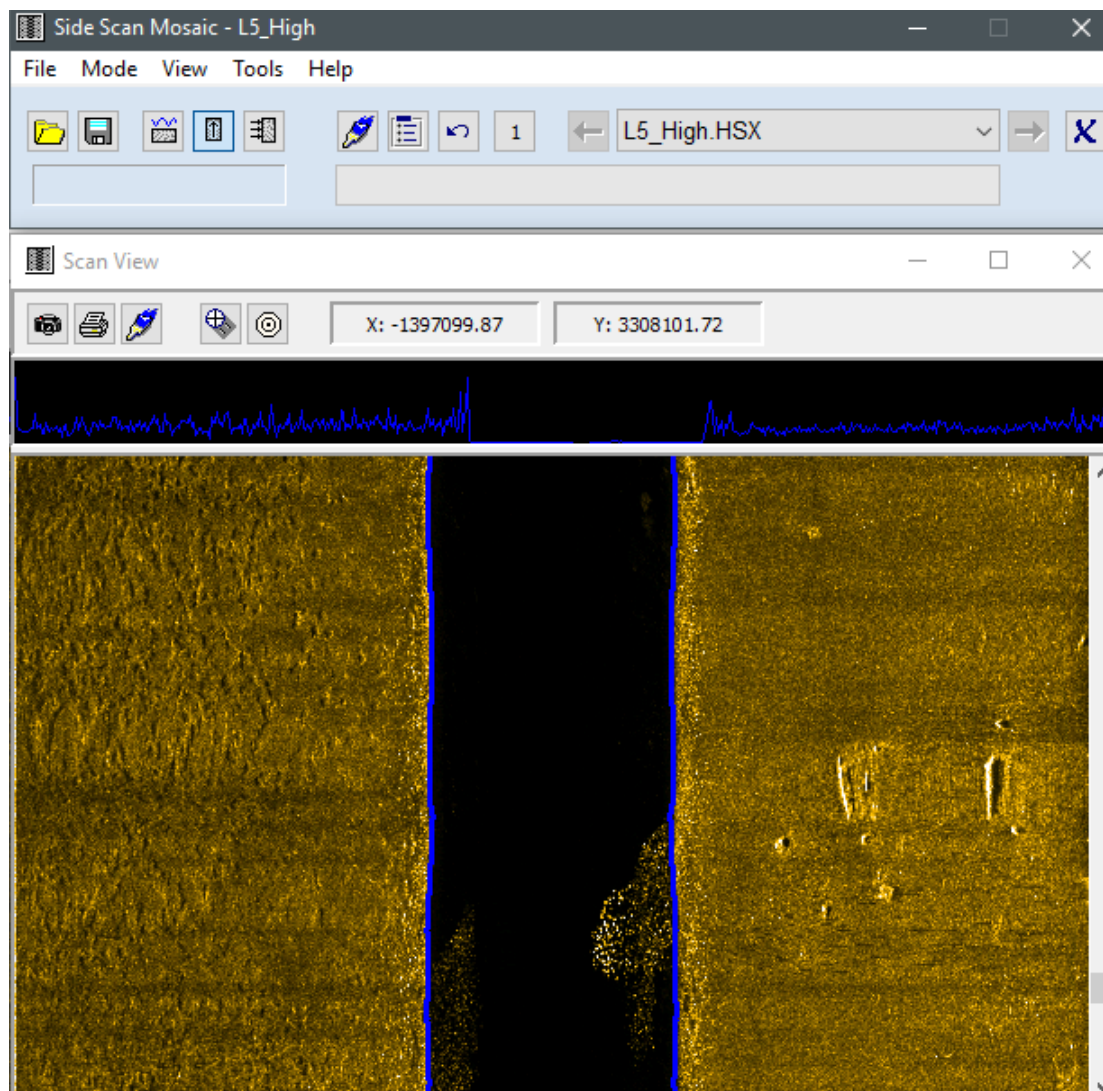
4. **Save the classification database.** Select FILE-SAVE DATABASE then close the Target Classification Database program and open HYSCAN.

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## MARKING TARGETS

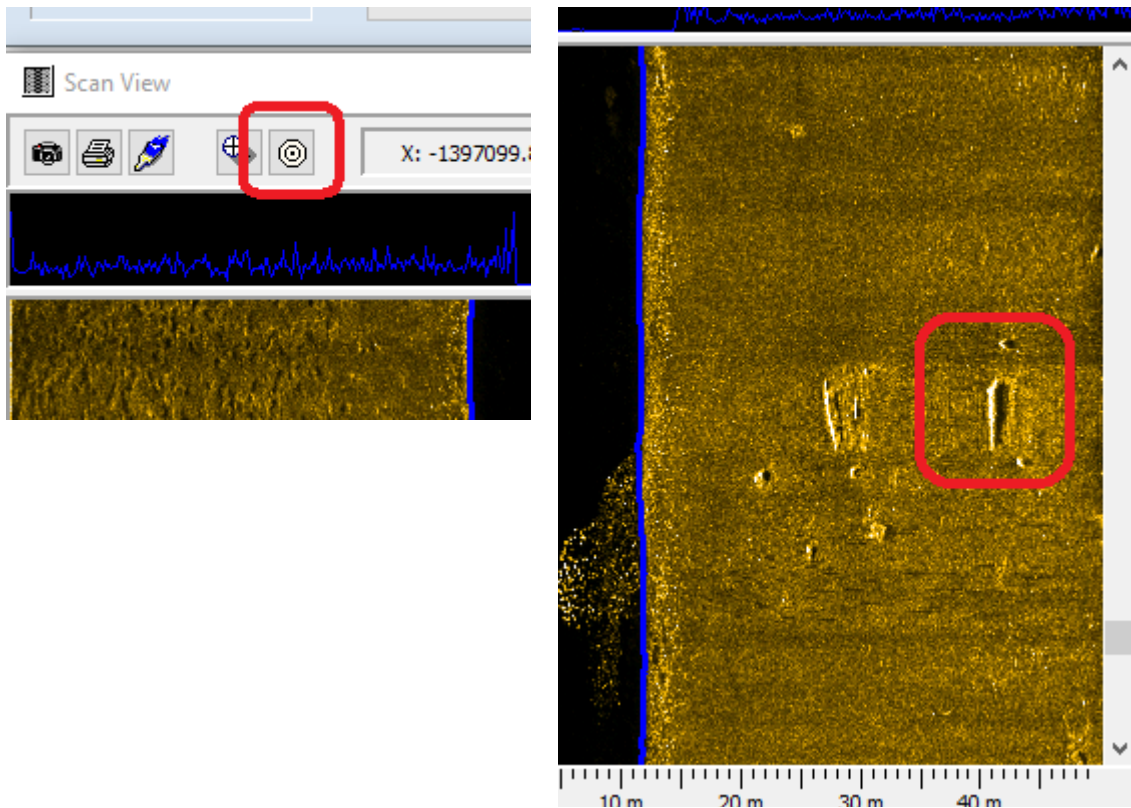
1. **Load your data into HYSCAN, apply bottom tracking, proceed into phase 2, and apply any gains.**

**FIGURE 2.** Side Scan Data in HYSCAN



2. **Right-click on the waterfall and check “Show Targets”**, then scroll the Scan View window until the object you wish to mark is on-screen.
3. **Mark your target.**
  - Double-click where you wish to target
  - Select the Target tool and click to mark a target.

**FIGURE 3.** *Marking a Target*



Once you mark your target, a Target window appears with a few target parameters along the left side.

**NOTE:** It will take a moment for this window to produce imagery.

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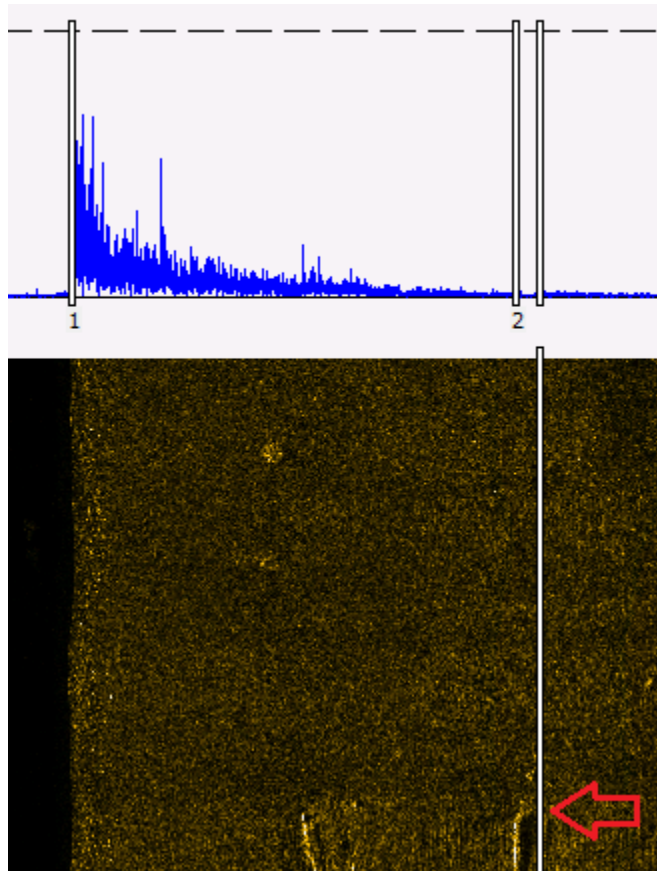
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To **calculate the height**, drag the third bar until it lines up with the end of the shadow of the object. A vertical line will appear while you're dragging on the image to help with alignment.

**Tip:** If you need more precision for alignment, you can use the zoom controls in the bottom-left of the window.

**FIGURE 5.** *Zooming In on the Target Display*



You'll notice that, once you've finished aligning it with the shadow, the Height parameter is automatically filled.

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## **SAVING AN IMAGE OF THE TARGET**

If you choose, you can capture an image and associate it with the target:

1. **Click the camera icon** in the bottom-left of the window then click and drag a box around the area you wish to capture. A window will pop up with the area you just selected.
2. **Save the image.** Click the Save Image icon in the top-left of the new window, name your image then close that window.

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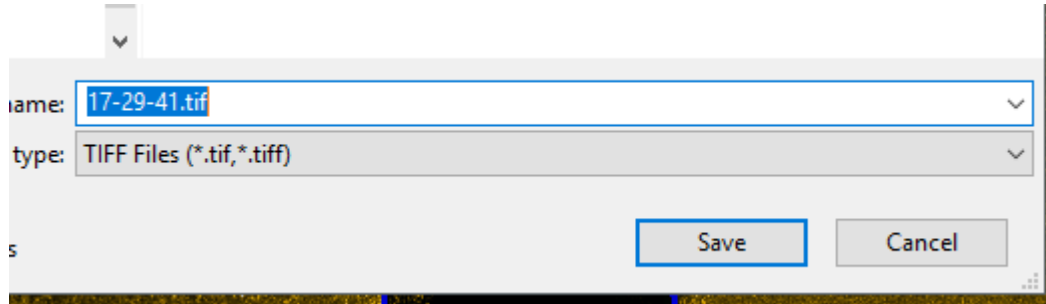
**NOTE:** If you choose to save the image as a TIFF file (setting the Save As Type drop-down in the save dialog) the image will be georectified and can be viewed in its correct world

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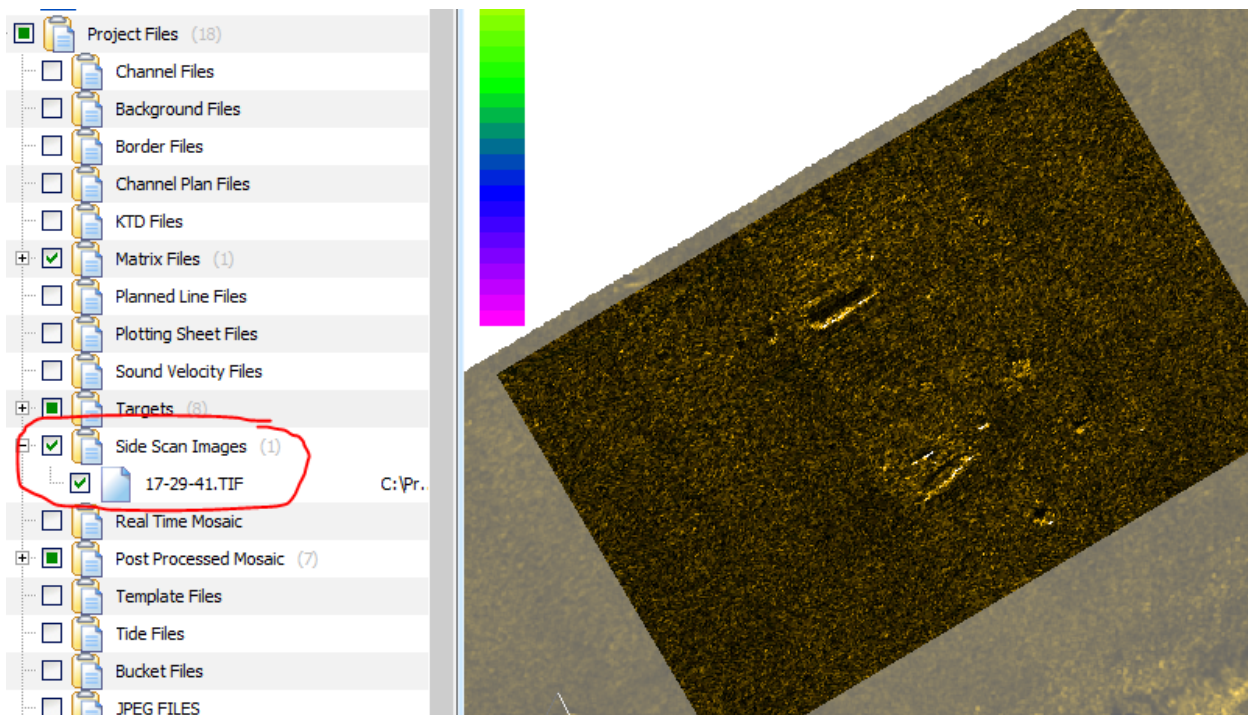
position in the HYPACK® shell. It appears in the Sidescan Images folder of the Project Items list

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**FIGURE 6.** *Saving your Image as a Geo-TIF*



**FIGURE 7.** *Captured Image Appears in the Side Scan Images Folder*



3. Click **[Save Target]**. This saves the target information to the project targets database. (Every target you create in a given project is saved there.)

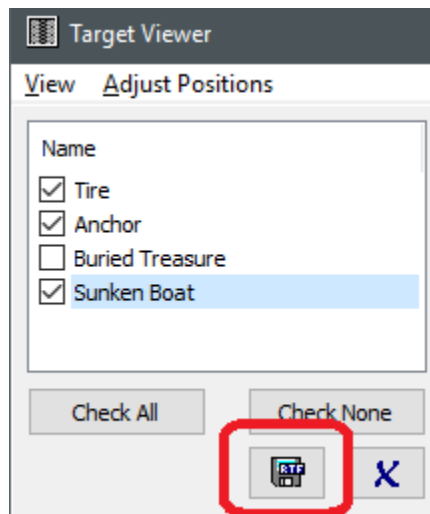
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## **VIEWING, EDITING, AND EXPORTING TARGETS**

There are two ways to view previously marked targets: They can be viewed in the HYPACK® shell under Targets, or in HYSCAN under TOOLS-TARGET VIEWER where you can edit the properties of any target created in HYSCAN.

**To export the targets from the Target Viewer**, click the Save icon at the bottom right. This creates a text file with information about each target.

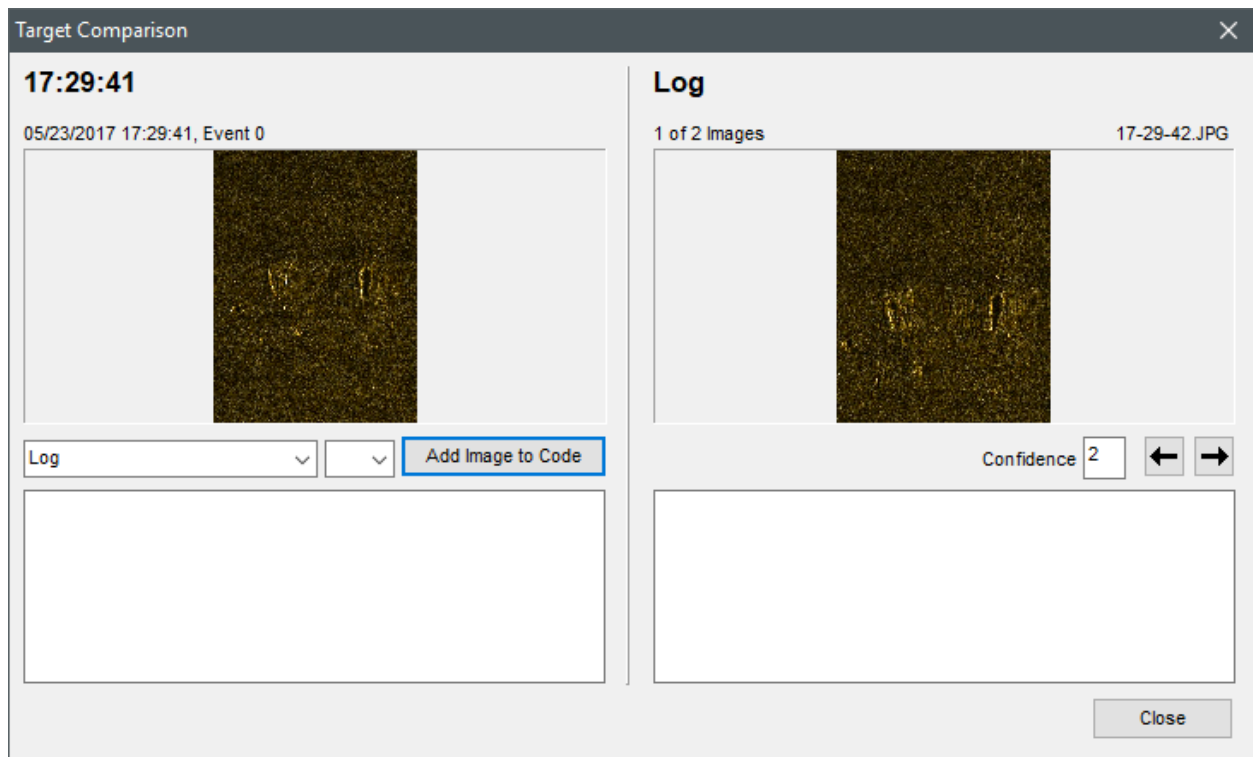
**FIGURE 8.** Saving Targets from the Target Viewer



## CLASSIFYING TARGETS

1. Select **TOOLS-TARGET VIEWER** and choose a target you wish to classify.
2. Select a **classification ID** for your target from the drop-down menu.
3. Click the **[?]** next to the drop-down, the Target Comparison menu will open.

**FIGURE 9.** Classifying Targets



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You can use this to compare your image to saved images associated with the selected classification. Use the arrow buttons on the right to move between images.

**To add the current image to the classification images**, click [Add Image to Code].