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Sounding Better!

3D Options in the 2018 HYPACK Shell

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When the HYPACK® Map window is in 3D Mode, there are several options to configure how various features are drawn. This article is an overview of the new 3D Options and Levels tab found in the HYPACK® 2018 Control Panel.

FIGURE 1. *Control Panel—3D Options and Levels Tab*

FILES WITHOUT DEPTH

There are several file types the Map window can display that don't have depth. In the 3D Settings, most of these are grouped together by file type where you can set the depth at which they display. The default depth, in most cases, is at the water line (depth = 0). Raster charts default to 1 to prevent conflict with other features drawn at the waterline.

Background Charts: This option applies only to raster charts (eg. geo-tiffs, web maps, and ENC charts). It's recommended that you draw background files just below your deepest soundings to avoid obstructing soundings, track lines or planned lines.

Raw Data Tracklines and Soundings don't technically have depths yet since positioning hasn't been interpolated for each sounding yet.

Also you can set a level where **plotting sheets** draw.

FIGURE 2. *Setting the Display Levels for Files Without Depth Information*

Raw Data Tracklines	0	Raw Data Soundings	0
Background Files	0	Plotting Sheets	0
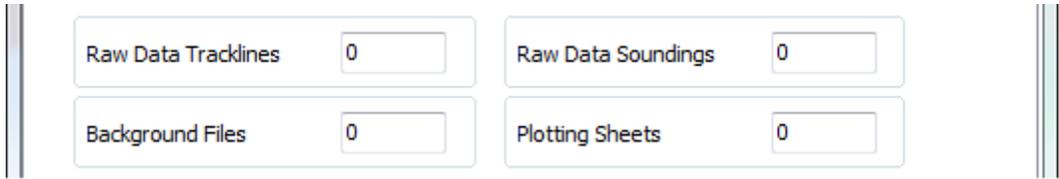
EDITED FILES AND PLN FILE

Channel plan files (*.PLN) soundings and track lines of edited data are drawn, by default, in three dimensions using the depth information they contain.

Alternatively, you have the option to draw them in two dimensions at a fixed depth, which can make them easier to see in a matrix or an XYZ point cloud.

FIGURE 3. *Setting Fixed Display Levels for Files With Depth Information*

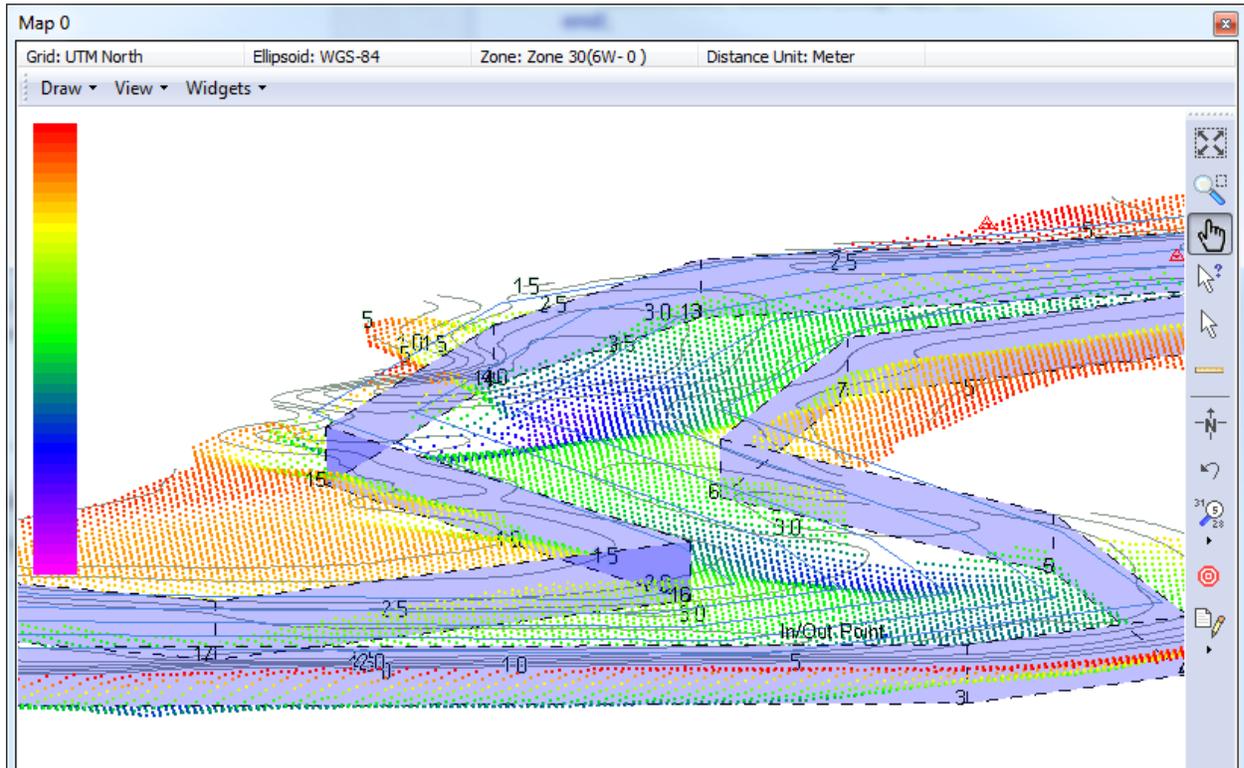| ☐ Fixed Edited Track Level	0
☐ Fixed Edited Sounding Level	0
☐ Fixed PLN Files Level	0

BORDERS

Border files draw, by default, in two dimensions at the water level, but can be drawn in thre dimensions (fence) to make it easier to distinguish points inside and outside of the border when there is a tilt applied to the display.

- **To view it in two dimensions at a different level**, set both options to the new level.
- **To view the border in 3 dimensions**, enter the depth range.

FIGURE 4. *Drawing Border Files in 3D*

Border Files
Depth Level | 0 | Raised Fence | 0 |

FIGURE 5. *3D Border File*

Map 0

Grid: UTM North   Ellipsoid: WGS-84   Zone: Zone 30(6W-0)   Distance Unit: Meter

Draw ▾   View ▾   Widgets ▾

PLANNED LINE FILES

With planned line files (.LWN), there are 3 options. **Fixed level** will draw all the lines at a set depth. The other 2 options use the template data from the files to draw the lines at those depths.
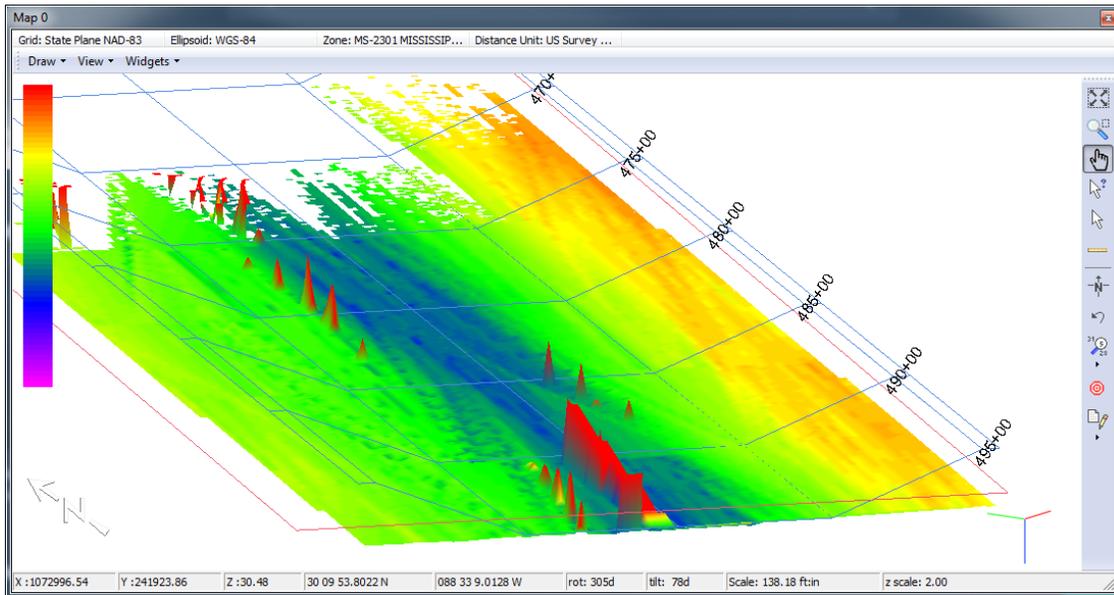
Template Depth just draws the lines at those depth.

Template Mesh draws those lines with the segments connecting between the lines.

FIGURE 6. *Planned Line Display Options*

Planned Line Files
◉ Fixed Level   ◯ Template Depth   ◯ Template Mesh

Fixed Level | 0 |
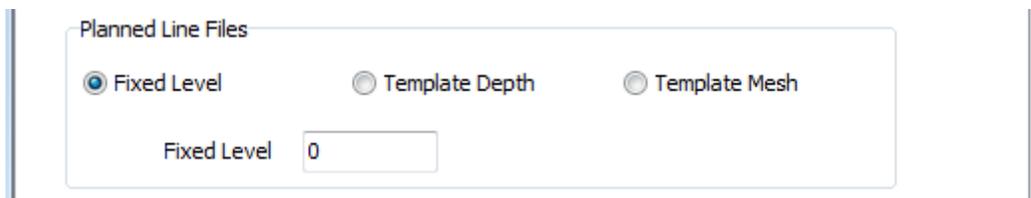
FIGURE 7. *Planned Lines Drawn Using the Template Mesh Method*

TARGETS

Targets also give you 3 ways to be displayed:

Without Depth and **Use Target Depth**: The targets will draw at the water line or at the depth, respectively. In both cases, they draw in the normal fashion with circles or the alarm and any symbol set for it.

3D Between draws a cylinder between the 2 depths.

FIGURE 8. *Target Display Options*
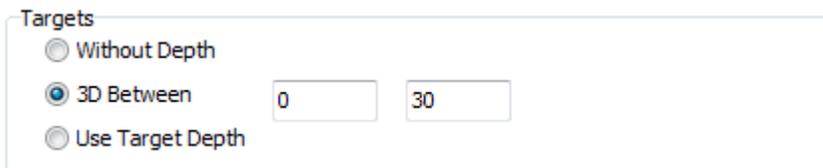
FIGURE 9. *Targets Drawn Using the 3D Between Option*