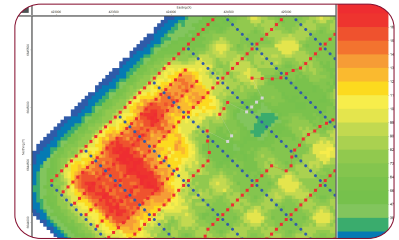
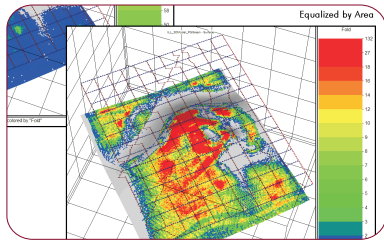




OMNI 3D[®] 9.0

SEISMIC SURVEY DESIGN AND MODELING

- NEW FEATURES FACT SHEET -



PS Converted Wave Analyses

OMNI 3D[®] has expanded handling of PS Converted Ray Tracing in such analyses as Bin Fold, Illumination and PSTM Impulse.

Coil Sail Modeling for Marine Streamers

This feature allows generation of various coiled streamer layouts. Coils may be circular, or may slowly vary in either the inline and/or crossline direction to model continuous shooting. Coiled Streamer surveys produce high-fold, rich-azimuth results.

New Smoothing Rubber Sheet Registration Function

Allows the user to translate, rotate, scale and stretch images and datasets to known locations. Align scanned images onto DXFs as closely as you prefer.

Automatic Script Handling for Infill Stations

The stubline terminology used in previous versions of OMNI 3D[®] has been replaced with "infill". Infill allows for increased station density along lines, as well as between lines. The Interpolate Lines and Interpolate Stations wizards now both have a setting to set the Infill Status for added stations. Infill stations are not counted when creating "Lines x Stations" Scripts, but will be added to patches wherever they overlap.

Automatic Legends

New automatic legends specify what parameters are used in the display and list some of the parameters that are used in the calculation. These can then be incorporated into the Plot View for presentations and reports.

New Array Design Wizards

New Add Shot and Add Receiver Line Wizards have been added to the Array right-click menu to allow experimenting with various parameters on a linear array. See how the parameters affect the array response along specific azimuths.

Inline Offset vs. X-line Offset Chart

The new Inline offset vs. X-Line Offset chart plots a symbol in inline/crossline offset space for all traces in the bin grid. See which offsets are missing.

New Translate (1 or 2 Point) Wizard

Translate, scale and rotate your survey using your choice of 1 or 2 points in a new, easier to use wizard.

Load Multiple SPS Files

Load multiple SPS files into a single survey at the same time. This saves time when the field data has been saved in pieces (swaths). OMNI 3D[®] can also load large SPS files – up to approximately 120GB.

New Orthogonal OBC Design Wizard

This allows the user to see calculated parameters based on user input parameters, which gives a better understanding of the survey.

Bin Offset Kx-Ky Chart

A Kx-Ky Chart option has been added, which is a stack of the Kx-Ky amplitude spectrum of multiple offset selections over the bin grid. (K represents wave number). This display indicates potential footprint and damping of signal.

Signal-to-Noise Gain Color Maps

S/N Gain is defined as the square-root of fold, as mentioned in Mike Galbraith's paper "A new methodology for 3D survey design". Display these color maps to visualize and quickly compare different survey designs.

Gridded Shot and Receiver Attribute and Density Maps

Create gridded color maps of shot and receiver attributes. Example attributes are station density, elevation and shot depth. Choose from Inverse Distance or Triangulation Gridding.

OVT Stack Chart (Bin Fold Analysis Files)

The new OVT Stack chart is a stack of all traces in the bin grid, selected in inline/crossline offset space. It is similar to a Rose Chart, but linear in inline and crossline directions.

Offset Vector Tile Trace Selections

Examine a specific offset vector tile. Find out where offset holes are, and with other Bin Analysis Style options and ray tracing, find the traces that contribute to that tile.



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Improved DXF Display, Including Support for "Unexploded" Layers

Layers are now imported as separate elements and, therefore, can be toggled on or off. Stations can be projected onto selected DXF elements. OMNI 3D® can handle unexploded entities. (Unexploded entities are symbols that have an algorithm that speeds display of that symbol.) DXFs also load faster.

Interactive Fold Analysis and Movie Generation

This new analysis allows interactive fold calculation. Watch the fold build as shots are fired. OMNI 3D® can generate 2D and 3D movies of shot progression and fold buildup. This is useful for evaluating the effectiveness of infill shooting, for example in Streamer Surveys.

New "Interpolate Stations" Wizard

This wizard adds missing stations based on station number increment along lines, same as in the SegP1 loader. Fill gaps with evenly spaced stations or add stations with tighter spacing to a line. Station spacing and number of new stations are interpreted based on station number.

Alternative Methods of Defining Unique Fold

OMNI 3D® can now calculate unique fold in 8 different ways:

- Unsigned offset (i.e. nondirectional)
- Signed offset (i.e. projected inline)
- 360 degree azimuth (i.e. direction only)
- Reciprocal azimuth (i.e. mirrored 180° to honor reciprocity)
- 360 degree rose (i.e. segmented offset and azimuth groups)
- Reciprocal rose (i.e. mirrored 180° to honor reciprocity)
- Offset Vector Tile (i.e. no azimuthal bias, linear inline/xline)
- Reciprocal OVT (i.e. mirrored 180° to honor reciprocity)

Each way shows the data in a slightly different way, thereby improving the possible scope of analysis.

Equalize Colors by Area Color Scale Option

This function adjusts the levels of the Color Scale, in a nonlinear fashion, such that the resulting color map will have approximately equal areas of each color. This helps differentiate between color levels when most of the values are grouped in a narrow range.

2D Ray Model and VISTA® 2D/3D Seismic Data Processing

Save 2D Ray Models as ASCII files. These can then be opened in VISTA® 2D/3D Seismic Data Processing. ASCII files from VISTA® can also be loaded into OMNI 3D® 2D Ray Models.

Export Lines or Points to Shapefile Format

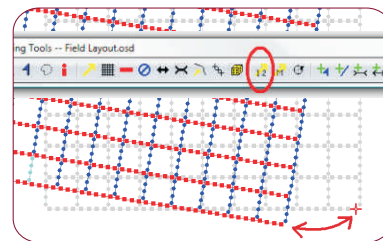
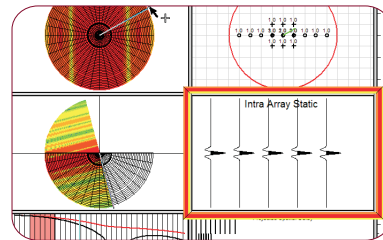
Save time redrawing survey lines on shapefiles depicting stations. OMNI 3D® can now export lines to shapefile format.

Interactive Intra-Array Statics

Watch the effect the array statics have on wavelets for different azimuths and dips. These are adjusted using the horizontal and vertical response displays located in the same View as the Interactive Intra-Array Statics.

Save Intra-Array Static SEGY Filter

Create the intra-array statics filters as SEGY traces. The resulting traces illustrate the smearing effect on the signal due to tilting of Receiver Arrays over a range of dips and azimuths.



VSP Color Maps

Uses the elevations of the receivers to trace the ray, hence, an accurate reflection point is calculated. VSP reflection point binning has been added to several areas: 4D Files, Layout Analyses, Workshop Analyses.

Additional Style Dialogs for Boxes within Views

Style dialogs allow the user to format each individual box separately within a single View. For example, a title can be added to the box of interest when creating presentations.

2D Ray Model Font

Font type and size for 2D Ray Model analysis snapshots can now be changed. Improve a presentation by making the font size larger or by changing the font style.

Improved File Creation Default Path

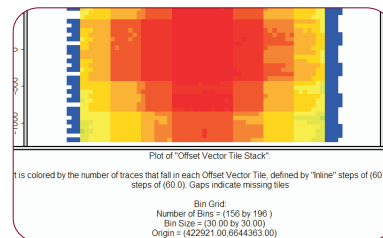
All file creation functions default to the "project-files" folder. Saves the user time and helps keep project files together.

Improved Project Tree Organization

Additional folders have been added to the Project Tree for easier organization. These are: Analyses for Marine Streamers, Horizons for 2D Ray Models, Attribute Grids for Surveys.

Popup Color Buttons

Color boxes in style dialogs now have a button that displays a popup palette of color buttons. Clicking on the color box will still open the color dialog with color palette and custom color definition.



GEDCO Office

Direct: +1 (403) 262-5780
Fax: +1 (403)262-8632
Email: info@gedco.com

Software Sales

Direct: +1 (403) 303-8691
Email: sales@gedco.com

Software Technical Support

Direct: +1 (403) 303-8693
Email: support@gedco.com