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Compute Isopach Map

Tools > Depth Conversion > Compute Isopach Map

The **Compute Isopach Map** tool uses two time surfaces or an isochron map, which is converted to depth using velocity information to create an isopach map.

An **isopach** is the absolute value of the difference between two depths. The first (shallower) time map is subtracted from the second (deeper) time map creating an isochron. The velocity function is then employed to convert the isochron to depth, resulting in an isopach.

An isopach map is generated from **isopach control points**, or time-velocity pairs within the interval.

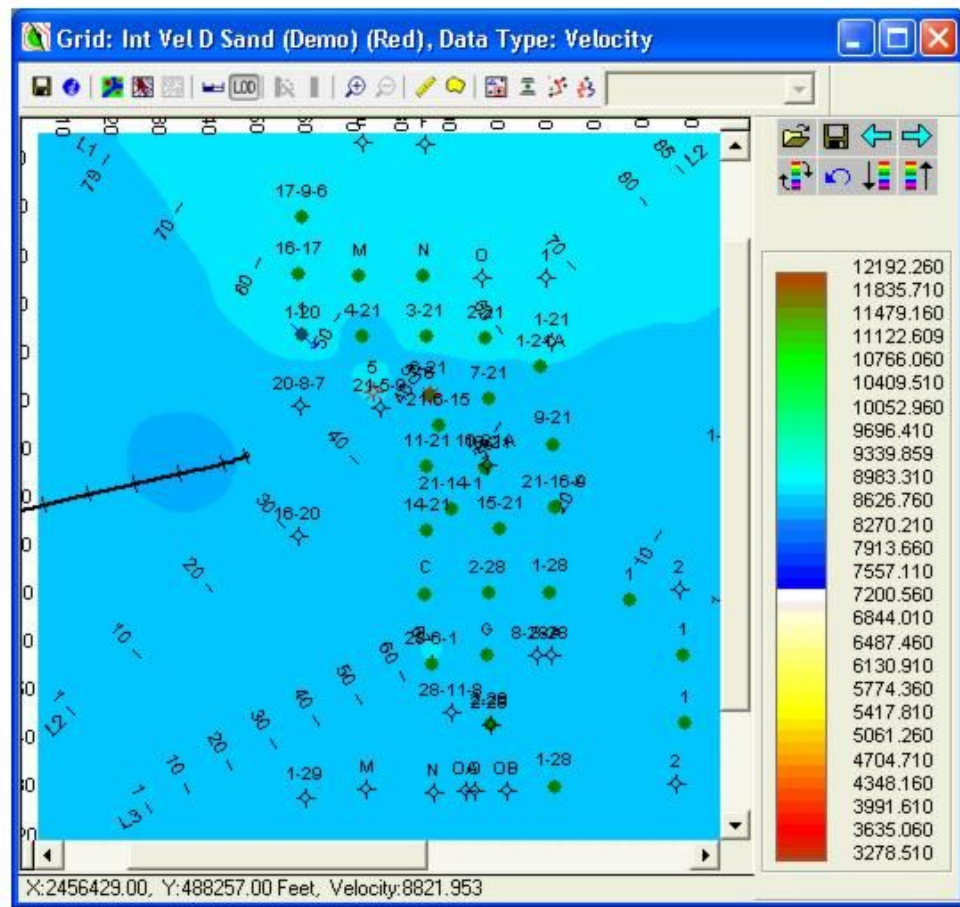
The output will either be a **grid** or **horizon** in feet or meters.

Dialog box items include:

- **New Isopach Map Name** is the output grid name. Enter a new isopach name, or use the down arrow to select an existing isopach grid for the output. If an existing grid is selected, then it will be overwritten. Only grids with **[*Isopach (Depth)]** as the grid data type will appear in this list.
- **New Isopach Map Color** sets the display color for the new isopach map. Use the down arrow to select a color from the color palette.
- **Input Map Type** specifies whether the input time surfaces are **Grids** or **Horizons**.
- **Horizon/Grid Type** specifies whether the surfaces are two **Time** horizons or grids, or one single **Isochron** map.
- **Select Upper Horizon/Grid** is valid with the **Time** horizon/grid type. This specifies the shallower time surface that will be converted to depth. Use the down arrow to select the upper input time horizon or grid that will be used to calculate the isopach control points. The seismic datum <Seismic Datum> can also be used as the upper horizon or grid.
- **Select Lower Horizon/Grid** is valid with the **Time** horizon/grid type. This specifies the deeper time surface

- **Select Isochron Map/Grid** is valid with the **Isochron** horizon/grid type. This specifies the isochron map that will be converted to depth. Use the down arrow to select the isochron horizon or grid that will be used to calculate the **isopach** control points.
- **Velocity Type** specifies whether the interval velocity used in the depth conversion will come from a **Constant** or an existing **Velocity Map**.
- **Interval Velocity** specifies a constant interval velocity value.
- **Interval Velocity Map** specifies an existing interval velocity map. Use the down arrow to select the interval velocity grid that will be used to calculate the **isopach** control points. Only grids with **[*Velocity (Time)]** as the grid data type will appear in this list. Naturally, the interval velocity map should have been computed using the same two time surfaces as the **Upper** and **Lower Horizon/Grid**.
- **View isopach when done**, when checked, automatically displays the calculated **isopach** map in a new base map. When unchecked, the resulting **isopach** map will not display on a base map but will be available in the Project Tree.
- **OK** accepts selections and closes the dialog box. The [Grid: Specify Grid Parameter \(for Velocity/Depth\) Map](#) dialog box opens.
 - Select the gridding algorithm parameters, or accept the defaults and click **OK**.

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Above is the resulting D Sand Interval Velocity Map between the D Sand Grid and the Base D Sand Grid with velocity values from 12,192.259 to 3,278.05 feet/second. This map indicates that there are multiple rock layers within the interval.

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