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## Displaying SEG-Y/External Seismic

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A SEG-Y file can be displayed along with other seismic in a SeisWorks project after you have done the following:

- checked that there are at least two lines in the .sgy file.
- indexed the file with the SegyAnalyzer in a SeisWorks version of 2003.12.1.2 or later. Indexed files bear the extension .idx.
- registered the indexed file in the SegyAnalyzer before initializing PowerView. SEG-Y files are not automatically registered.
- ensured that the .idx file is in the project directory.

If a SEG-Y file is not associated with a seismic project, you can still display it in PowerView.

Before you do so, you must set the environmental variable

LGC\_SEGYNDX\_DATA

in your .lgcogin file and there specify a particular directory for the .idx files. This environmental variable makes a special interface appear in the SEG-Y Analyzer that lets you create SEG-Y index files when you scan files in the analyzer. SEG-Y index files are required to access SEG-Y files efficiently. Otherwise, traces are written in an arbitrary order and are difficult to find in a direct way.

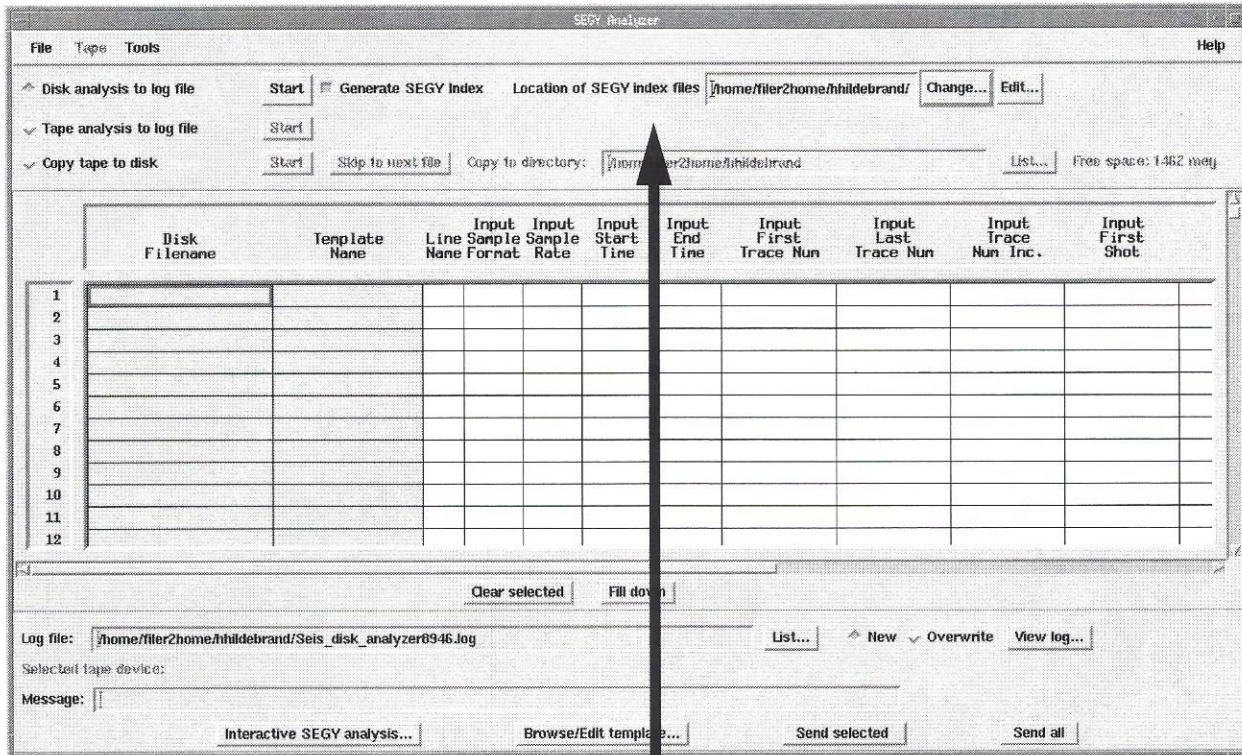
After you type in the environmental value, follow it with the path to the directory where you want your index files to reside.

Then follow this procedure:

1. Open the SEG-Y Analyzer by selecting **Data > Management > Seismic Project Manager** from the OpenWorks main launcher.
2. When the Seismic Project Manager main launcher appears, select **Seismic > SEG-Y Analyzer**.

A message box asks you to choose a screen for the SEG-Y Analyzer.

After you do, the SEG-Y Analyzer appears.



Because you have set the LGC\_SEGYNDX\_DATA environmental variable, the top of the dialog box includes the following:

- a **Generate SEG-Y Index** option, selected by default
- a **Location of SEG-Y index files** text field, already filled in with the directory you specified in your .lgclogin.
- A **Change...** button that summons a dialog box where you can select another directory for your index files
- An **Edit...** button that summons the SEG-Y Index File Editor, the same dialog box that appears when you select **Tools > SEG-Y Registration** from the PowerView main menu.

### A special note about the Edit option

The **Edit...** button in the SEG-Y Analyzer summons the SEG-Y Index File Editor. The **Select...** button from this dialog box takes you to the user's home directory instead of the designated LGC\_SEGYNEX\_DATA directory. You will then have to search for the Index directory and file when indexing from PostStack.

If you open the same dialog box from within PowerView by using **Tools > SEG-Y Registration**, the SEG-Y Index File Editor opens in the proper directory, allowing you to view the .idx files in the Index directory.

3. Select **File > Select** from the main SEG-Y Analyzer menu and choose a disk file from the resulting Disk File Selection dialog box.
4. Press the **Start** key next to **Disk analysis to log file**.

The SEG-Y Analyzer runs the operation.

5. After the SEG-Y Analyzer creates an index file, click on **Edit** in the SEG-Y Analyzer or select **Tools > SEG-Y Registration...** from the PowerView main menu.

The SEG-Y Index File Editor appears.

6. Press **Select** to choose an **Index File**.

The screenshot shows the 'SEG-Y Index File Editor' dialog box with the 'Grid Definition' tab selected. The 'Index File' is set to '/home/ffler2/home/hhildebrand/1027.sgy.idx', 'SEG-Y File' to '/home/ffler2/home/hhildebrand/1027.sgy', 'SeisWorks Project' is 'Not assigned (external data source)', and 'Description' is 'Generated by the SegyAnalyzer'. The 'Grid Definition' section contains a table for mapping line-trace coordinates to Easting and Northing coordinates.

	Line	Trace	Easting	Northing
Point 1:	0	0	0	0
Point 2:	0	0	0	0
Point 3:	2455	2060	620471	5753395
Grid Increment:	1.0	1.0		
Distance Between Lines:	0.0			
Distance Between Traces:	0.0			
	Units: meters			

The following fill the text fields at the top of the dialog box:

- the index file's name
  - the SEG-Y file from which it was created
  - the associated SeisWorks project
  - a description of the file.
7. In the **Grid Definition** tab, map the file to the 3D world coordinate system. You need do this only once.
  8. Press **Apply** or **OK**.
  9. Click on the **Data Type/Domain** tab.

The screenshot shows the 'SEG-Y Index File Editor' dialog box with the 'Data Type/Domain' tab selected. The 'Data Type' section has 'Velocity Data' selected with a type of 'RMS' and velocity units of 'ft/sec'. The 'Domain' section has 'Depth' selected with a sample rate of 4 and units of 'meters'.

10. If you are working with **Velocity Data**, toggle on that button and the **Depth** button in the tab.

Or, toggle on the **Conventional Seismic Data** and **Time** buttons.

When you have made your choices, the **Apply** button becomes active.

11. Make sure the information in the **Units** text field is correct.
12. Press **Apply**.
13. To register other .idx files, press **Select** and restart the process.
14. Press **Apply** when you are done.
15. When SEG-Y/External Seismic files become available, they appear in the Select Session Data dialog box. Select and display them as you would other seismic files.