

New Release of Geogiga Seismic Pro

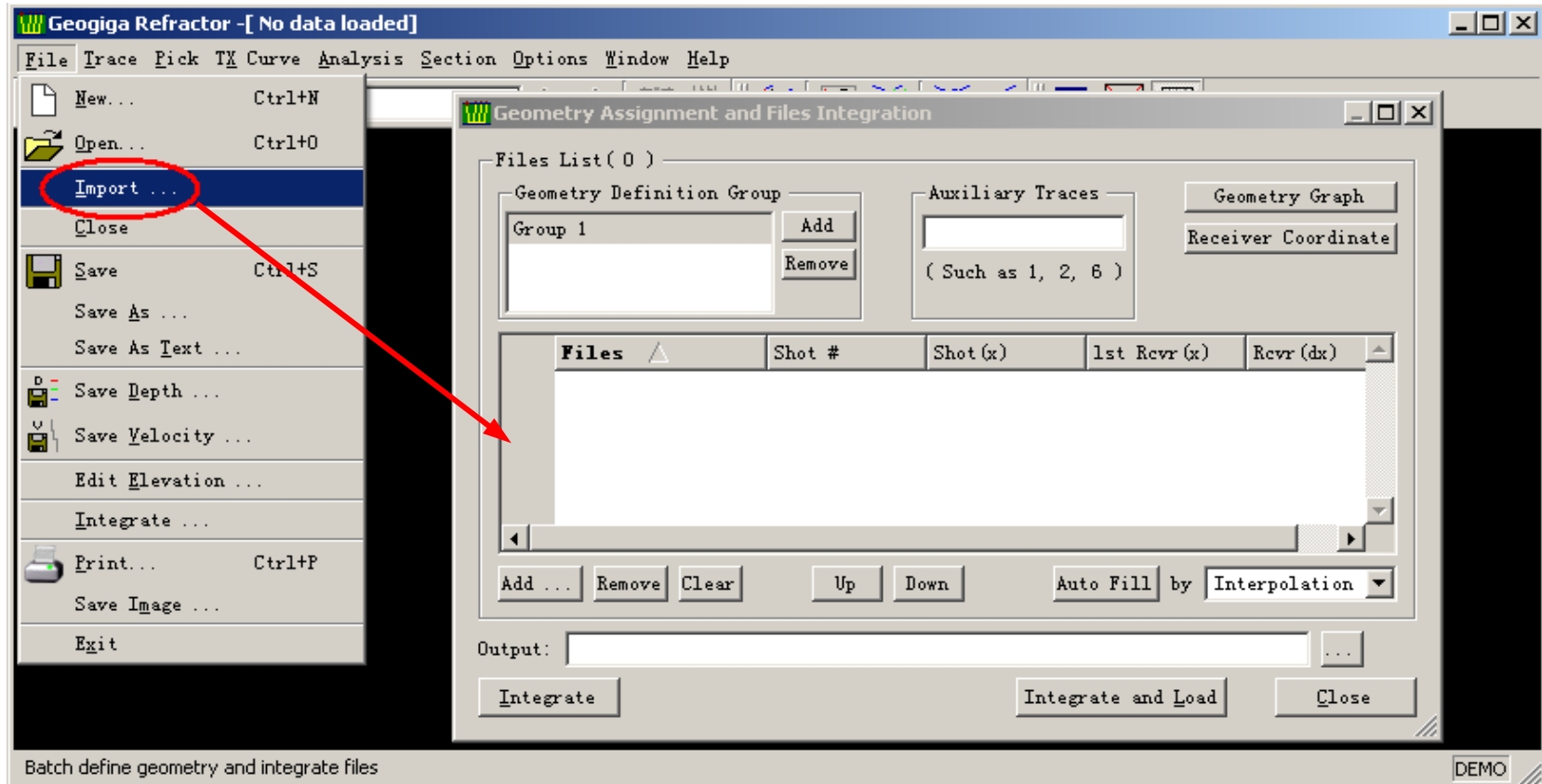
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Common Features in Geogiga Seismic Pro

- Import seismic data
- Define annotation fonts for curve plotting
- Enhance SEG-Y data loading
- Specify the measurement units
- View the sample rate
- Add the getting started guide

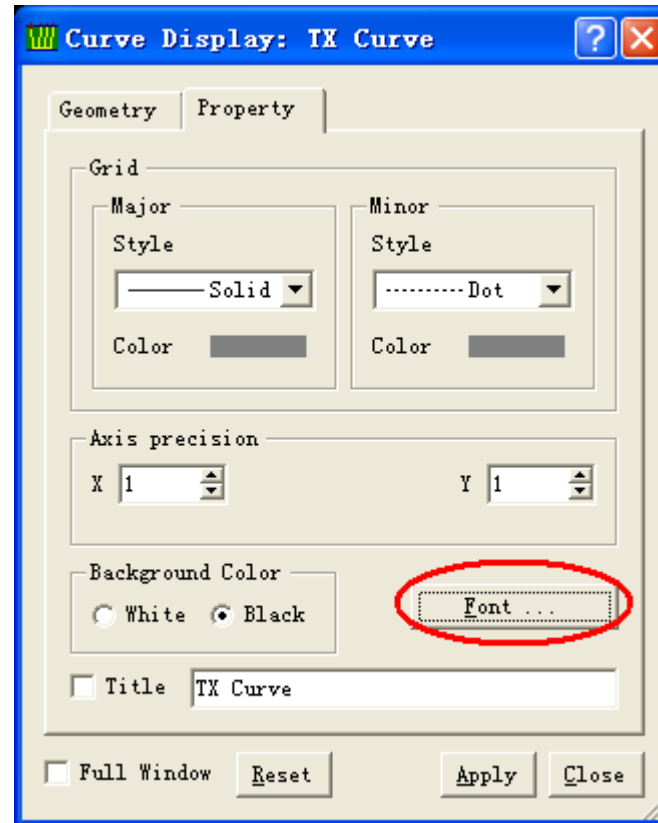
These new features apply to all the applications in Geogiga Seismic Pro.

Common Features – Import Seismic Data



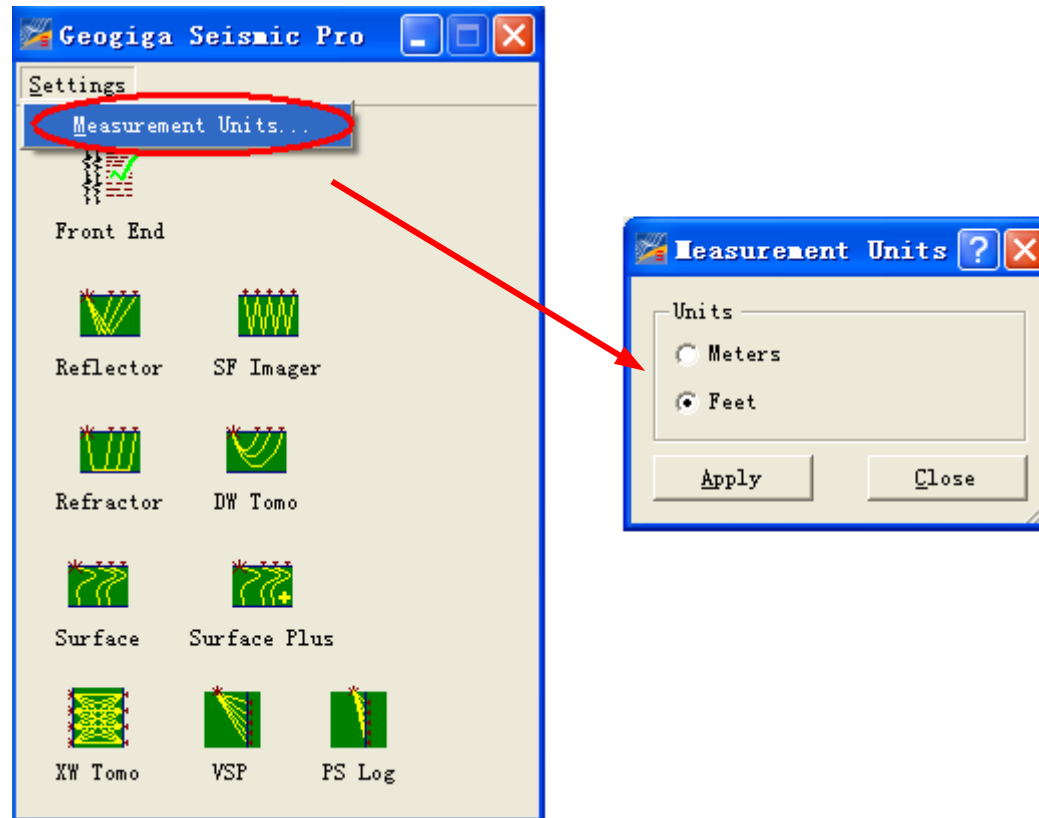
The functionality of importing seismic data in each application is used to assign geometry and integrate individual shot files.

Common Features – Annotation Fonts



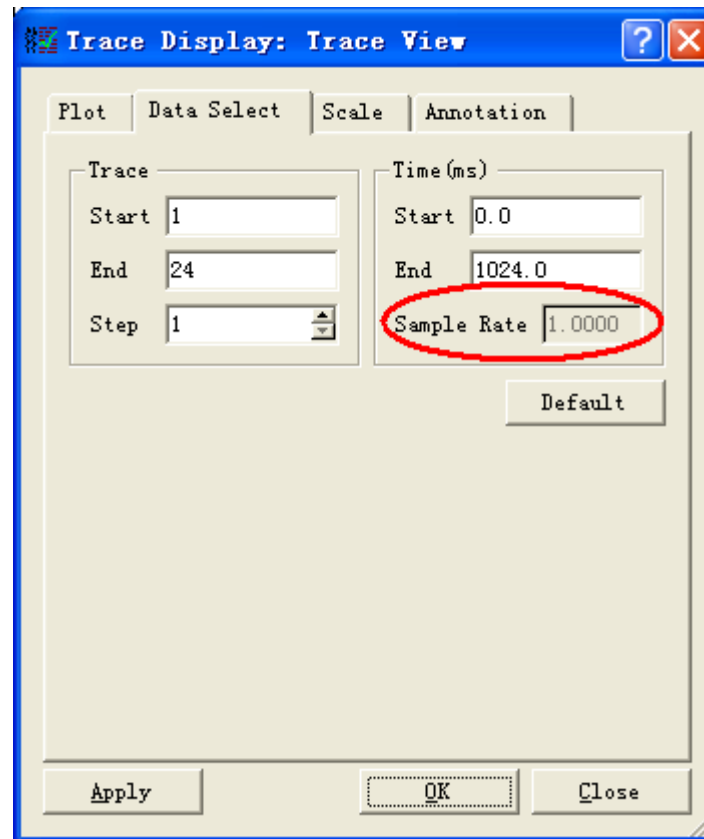
Define annotation fonts for curve plotting in the Curve Display dialog box.

Common Features – Measurement Units



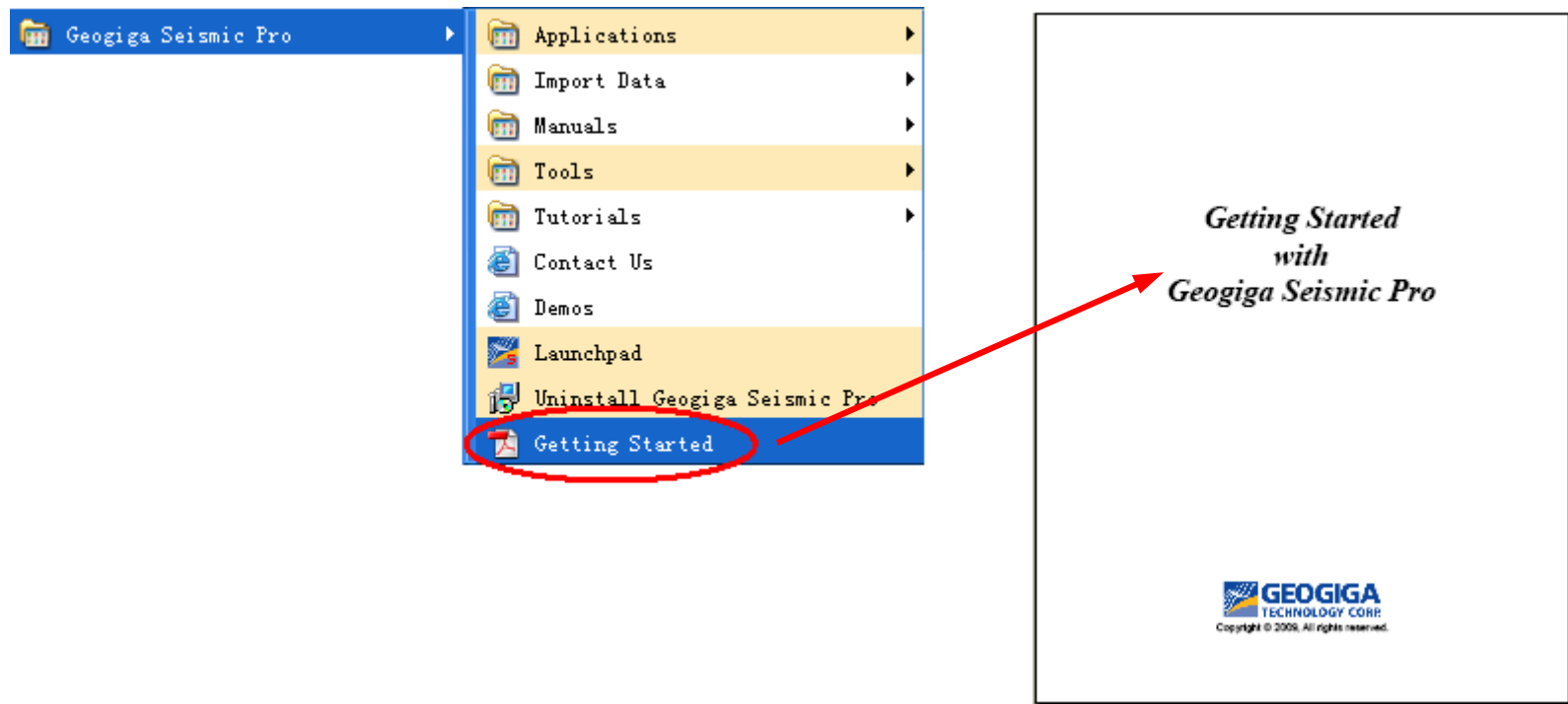
Specify the default Measurement Units as Meters or Feet.

Common Features – Sample Rate



View the Sample Rate in the Trace Display dialog box.

Common Features – Getting Started Guide

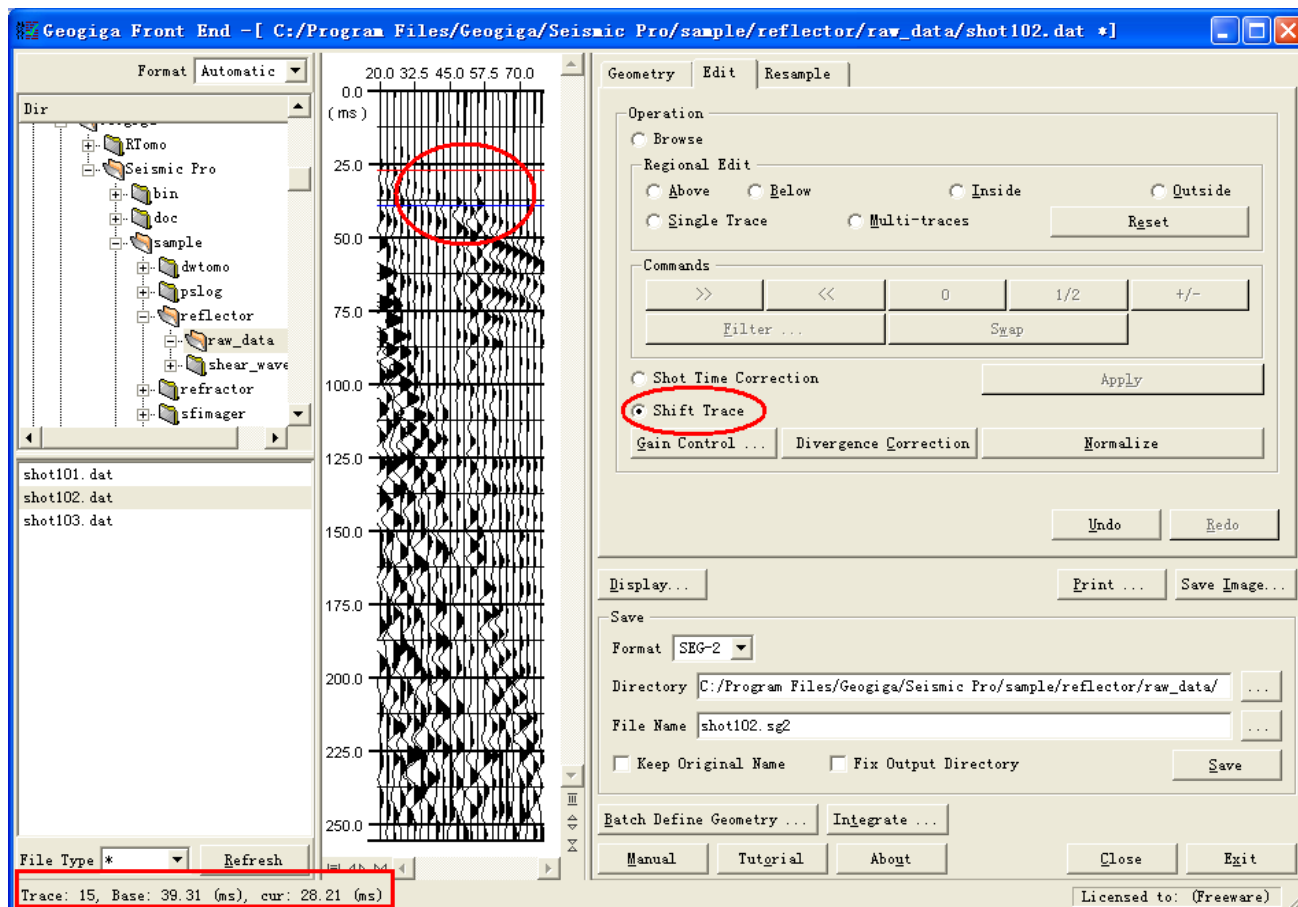


Access the *Getting Started with Geogiga Seismic Pro* from All Programs->Geogiga Seismic Pro->Getting Started.

Front End 2.5

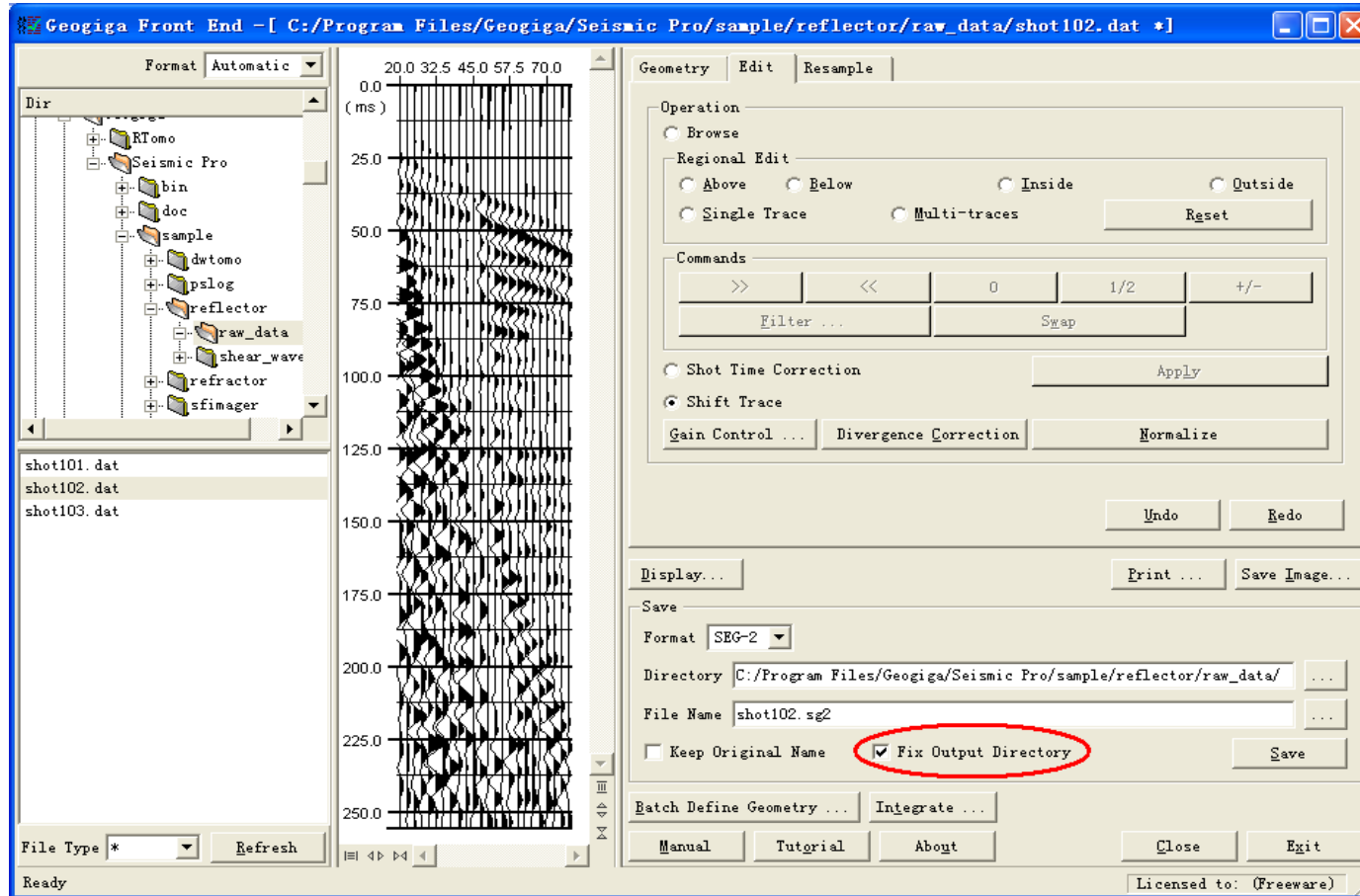
- Shift a trace
- Fix the output directory
- Change the output suffix

Front End 2.5 – Shift Trace



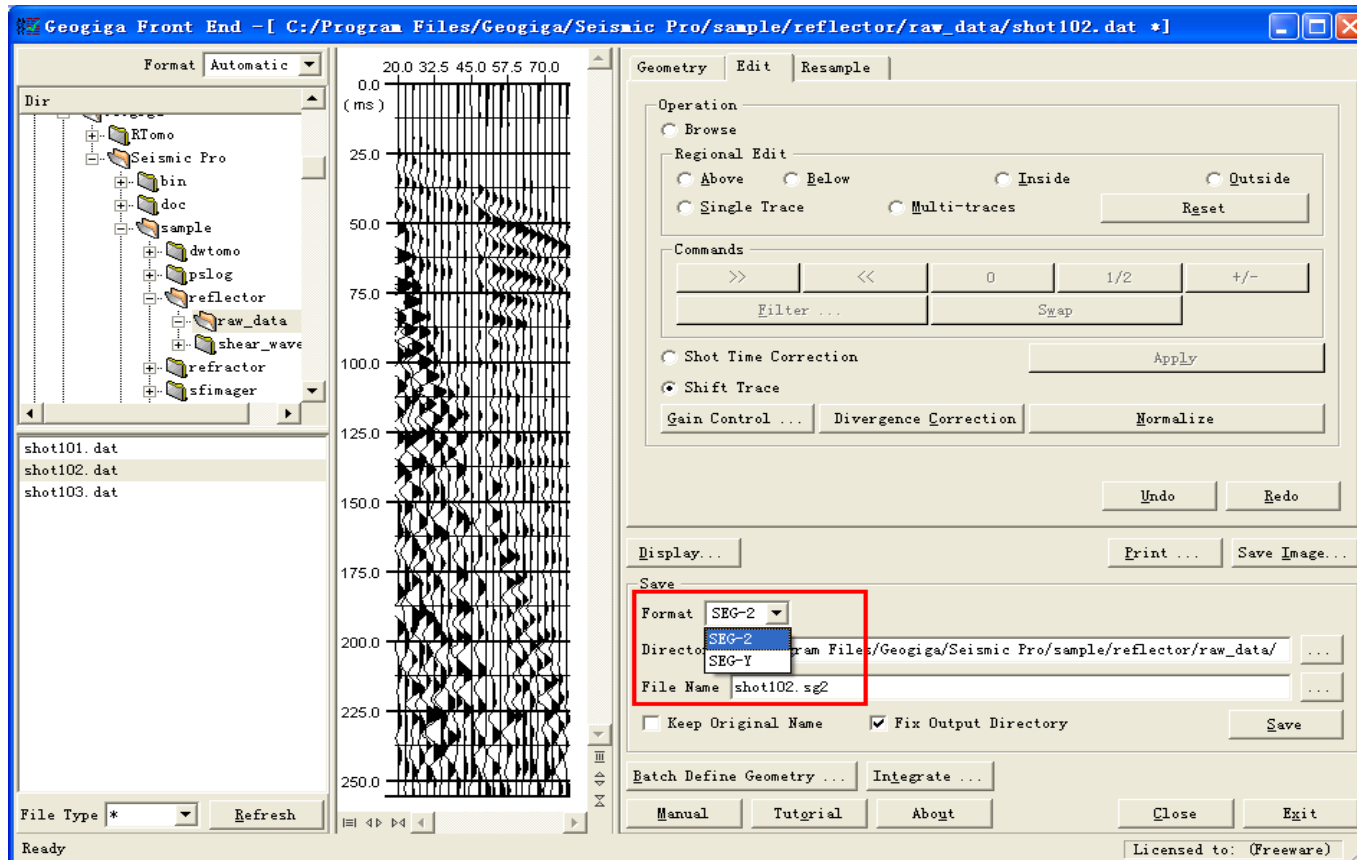
Shift a seismic trace vertically with Undo/Redo supported.

Front End 2.5 – Output Directory



Save files in a specified directory

Front End 2.5 – Output Suffix



Automatically change the output suffix according to different formats.

Reflector 5.4

- Import seismic data
- Save a single gather – According to the gather type, the single gather can be saved as:
 - Common Depth Point(CDP)
 - Common Shot
 - Common Offset
 - Common Receiver

Especially, the common offset section can then be input to SF Imager for further process.

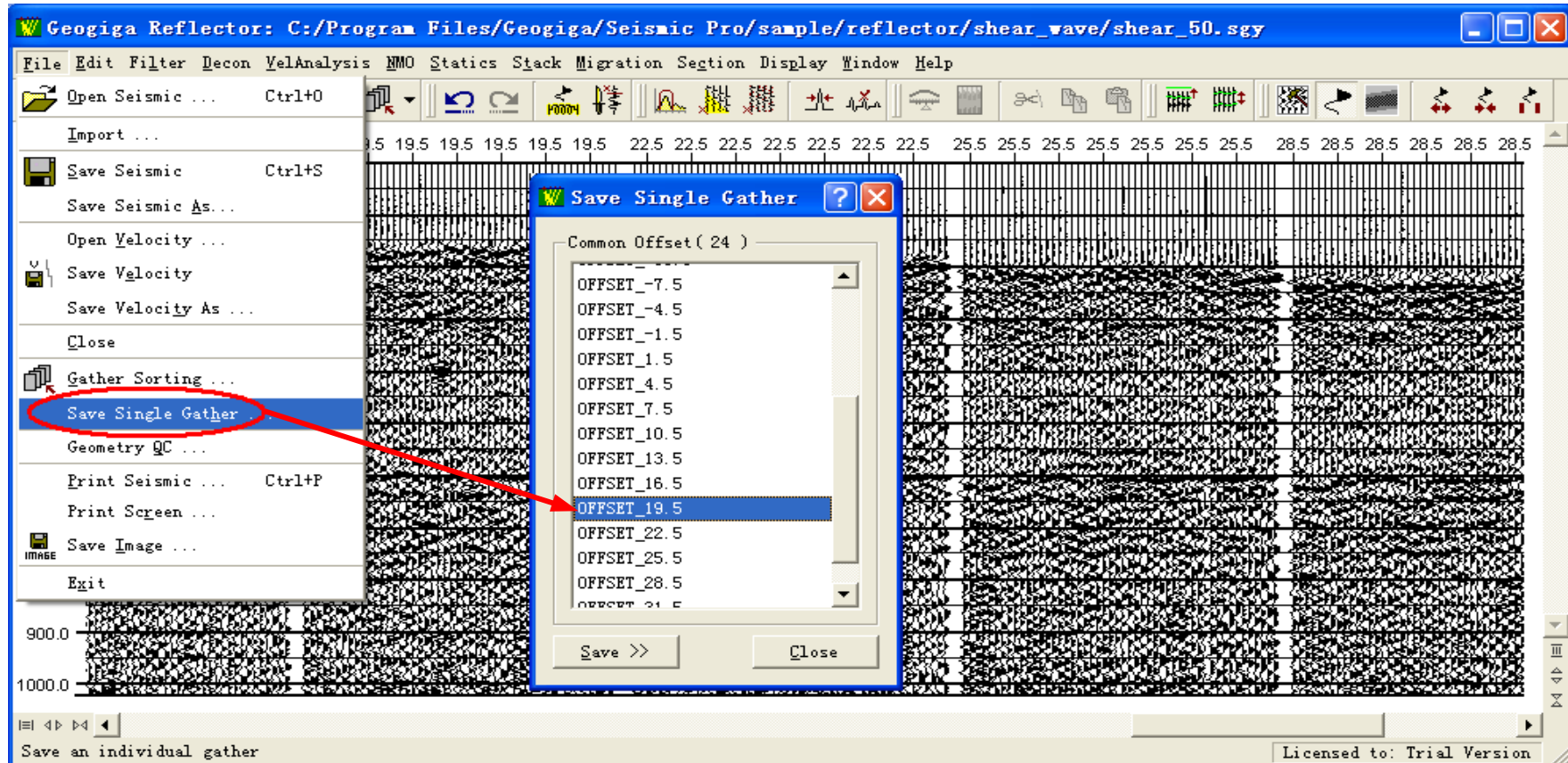
Reflector 5.4 – Import Seismic Data

The screenshot displays the Geogiga Reflector software interface. The 'File' menu is open, with the 'Import ...' option highlighted by a red circle and a red arrow pointing to the 'Geometry Assignment and Files Integration' dialog box. The dialog box contains a 'Files List (20)' table with columns for Files, Shot #, Shot (x), 1st Rcvr #, 1st Rcvr (x), and Rcvr (dx). Below the table are buttons for 'Add ...', 'Remove', 'Clear', 'Up', and 'Down'. The 'Output' field is set to 'D:/data/sample/reflect/sample1/all_shots.sgy'. The 'Auto Fill' dropdown is set to 'Interpolation'. The 'Integrate' and 'Integrate and Load' buttons are visible at the bottom of the dialog.

	Files	Shot #	Shot (x)	1st Rcvr #	1st Rcvr (x)	Rcvr (dx)
1	shot101.dat	101	0	200	17.5	2.5
2	shot102.dat	102	2.5	202	20	2.5
3	shot103.dat	103	5	204	22.5	2.5
4	shot104.dat	104	7.5	206	25	2.5
5	shot105.dat	105	10	208	27.5	2.5
6	shot106.dat	106	12.5	210	30	2.5
7	shot107.dat	107	15	212	32.5	2.5
8	shot108.dat	108	17.5	214	35	2.5
9	shot109.dat	109	20	216	37.5	2.5
10	shot110.dat	110	22.5	218	40	2.5
11	shot111.dat	111	25	220	42.5	2.5
12	shot112.dat	112	27.5	222	45	2.5

Assign geometry and integrate files

Reflector 5.4 – Save Single Gather

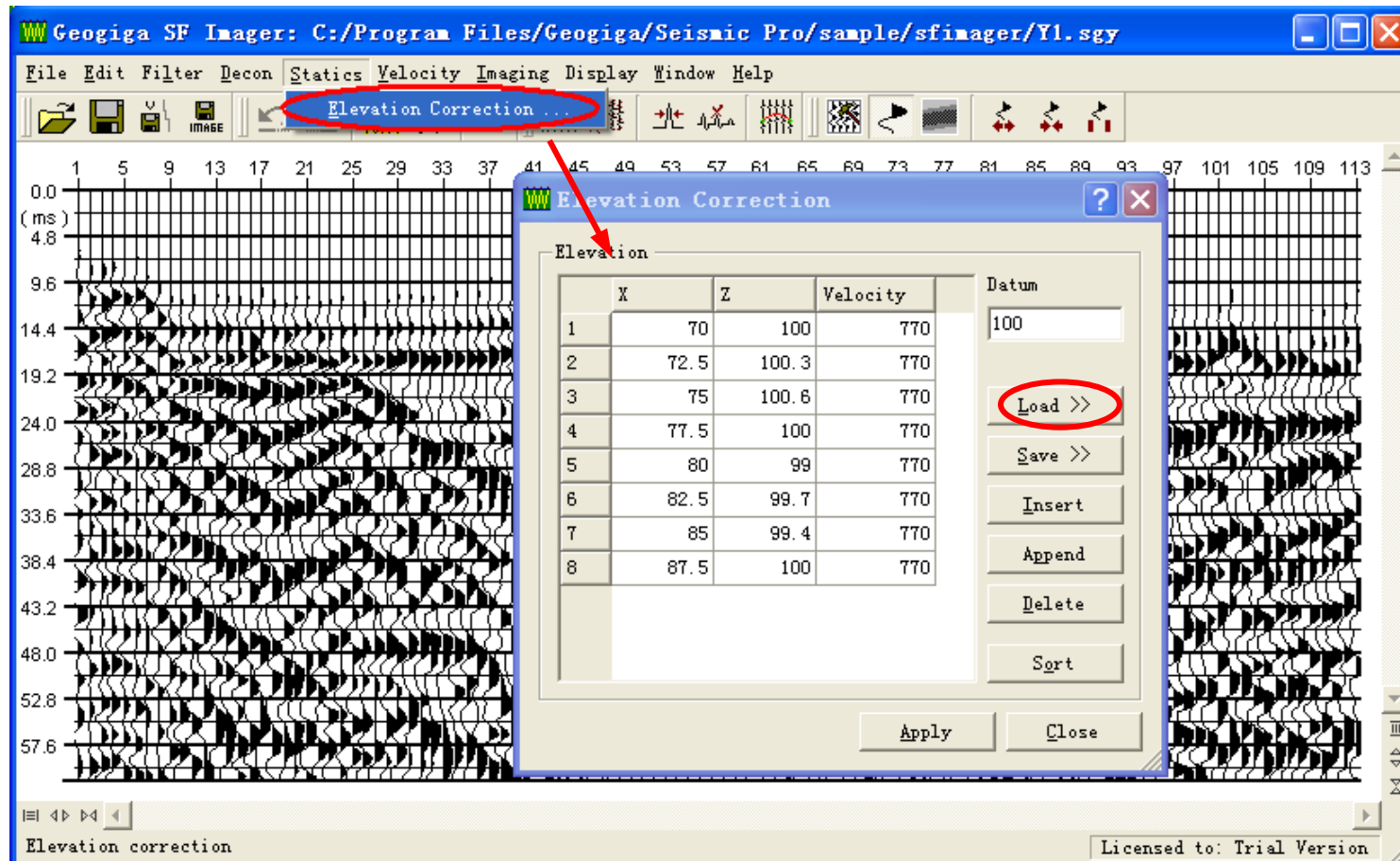


A single CDP/common shot/common offset/common receiver gather can be saved out.

SF Imager 2.0

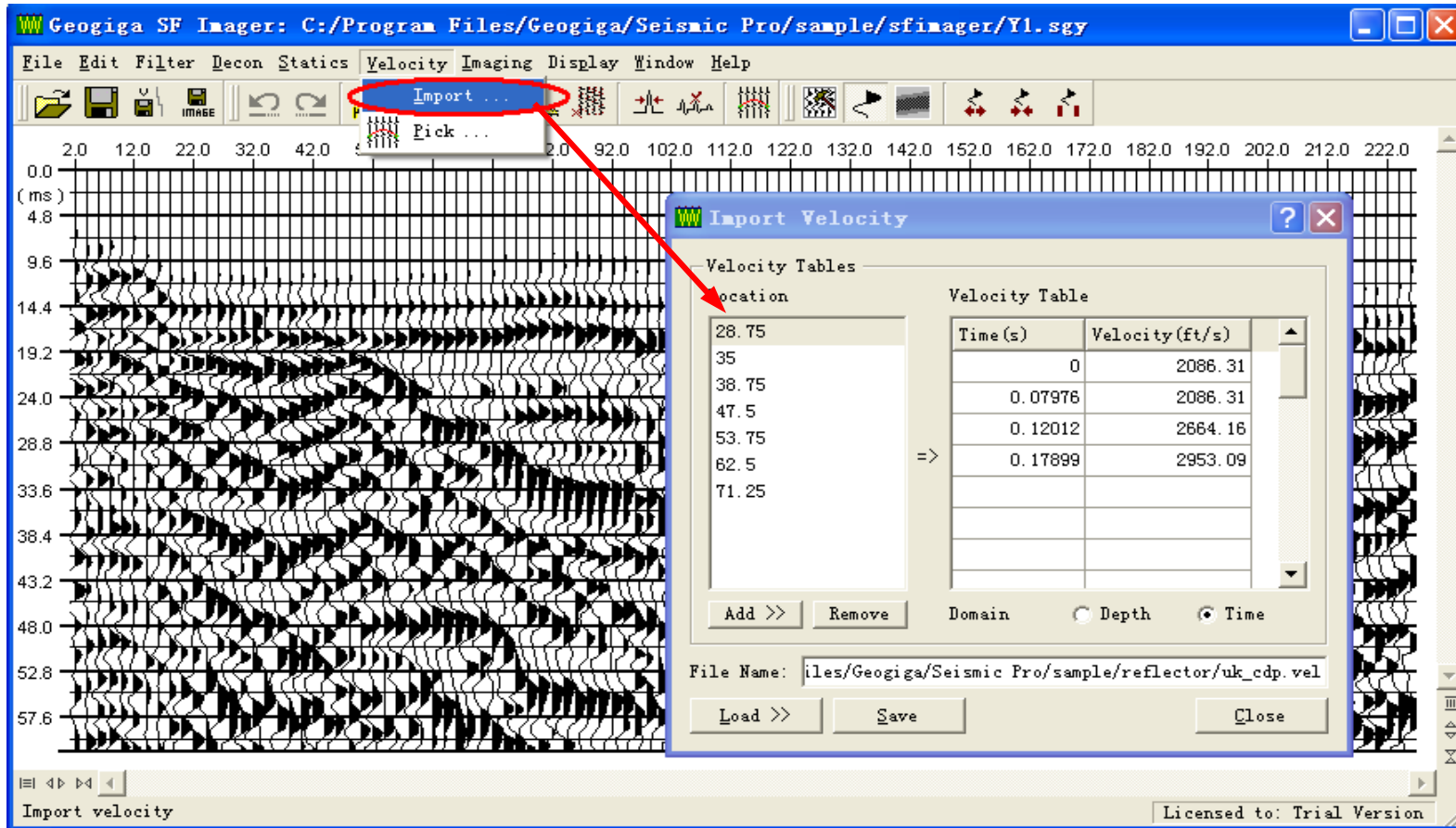
- Elevation Correction
- Import velocities
- Reorganize the Pick Diffraction Curve dialog box
- Migrate seismic data

SF Imager 2.0 – Elevation Correction



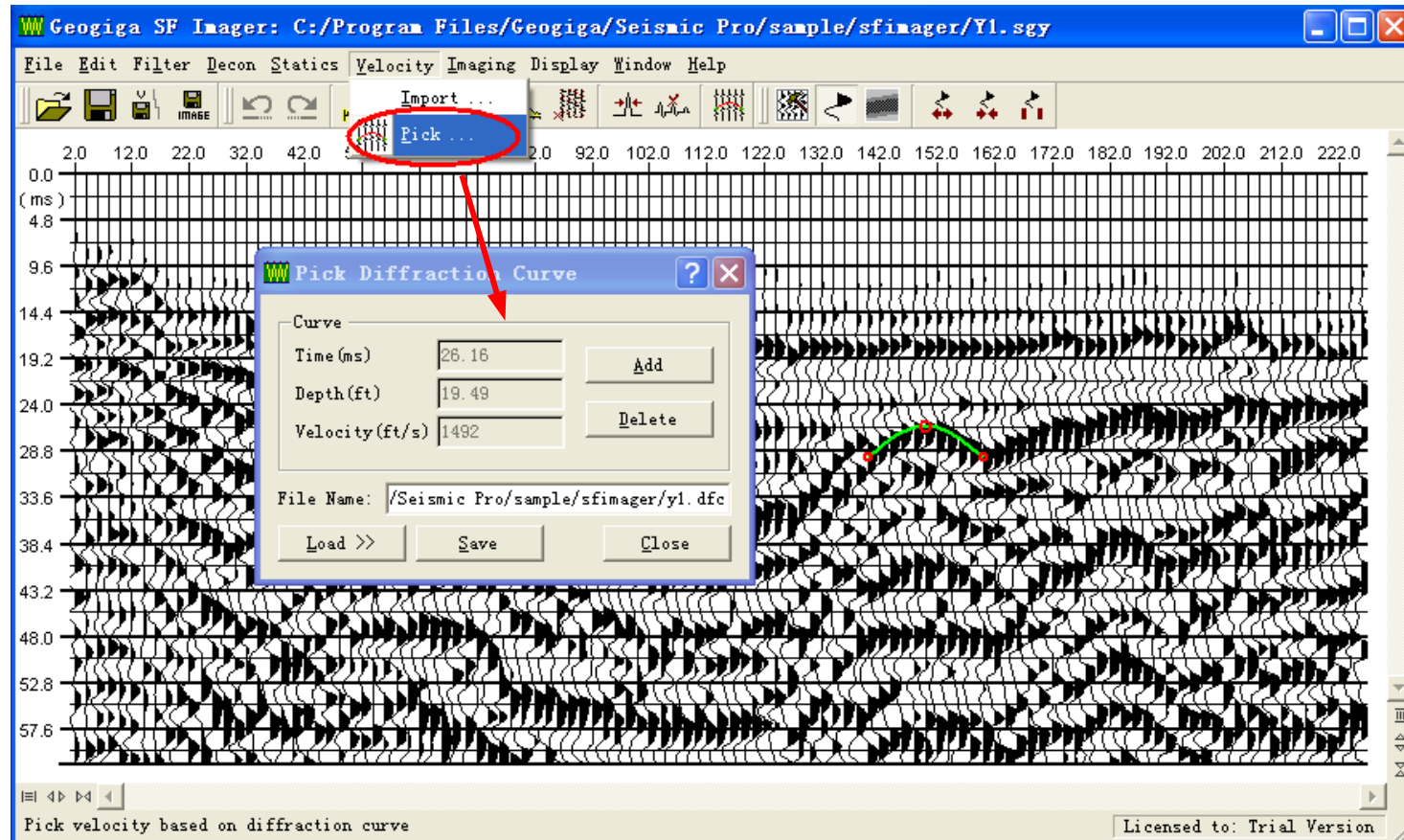
Elevation data can be loaded from an ASCII format.

SF Imager 2.0 – Import Velocities



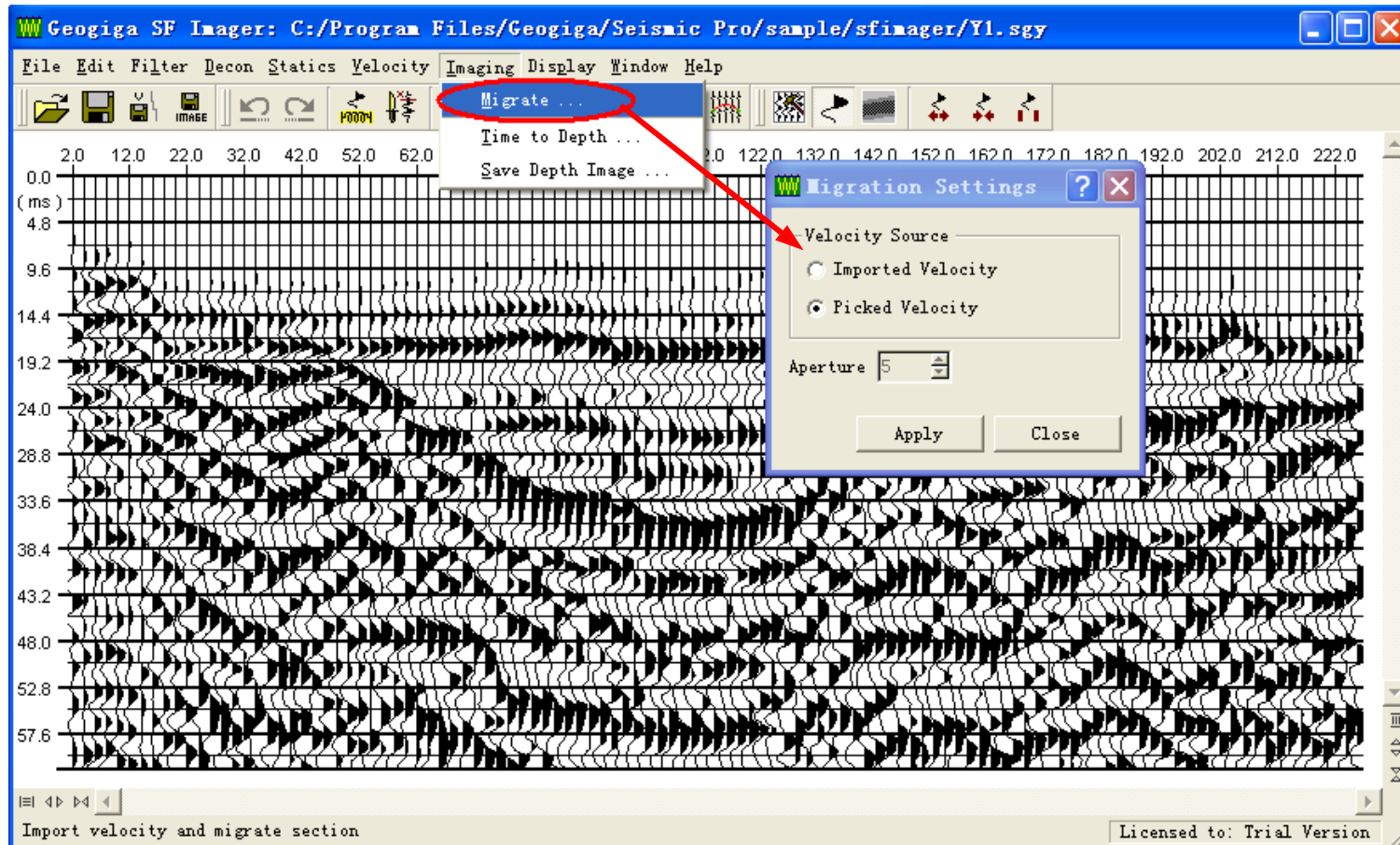
Manually input velocities or import velocity file generated from Reflector.

SF Imager 2.0 – Pick Diffraction Curves



Pick diffraction curves, then save the curve information in a file, and reload the file later.

SF Imager 2.0 – Migrate Data



Migrate seismic section based on Imported Velocity or Picked Velocity

Refractor 4.1

- Import seismic data
- Load elevation data from an ASCII file
- Support 3rd party picks format
- Select a trace with the [→] or [←] key in the picking window or in the trace magnifier
- Show the zero line and the trace amplitude value in the trace magnifier
- Shift all picks of a shot

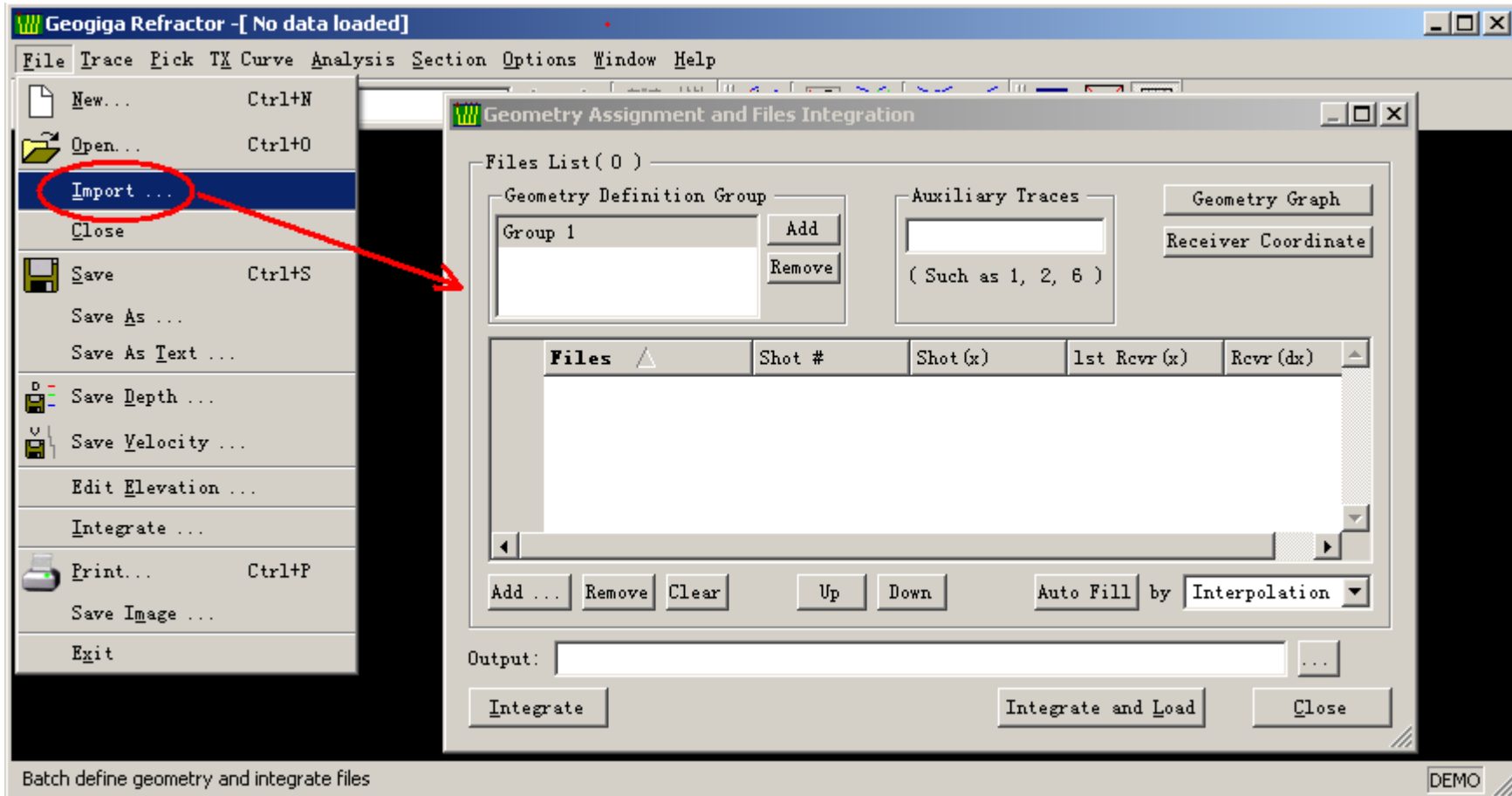
Refractor 4.1 – Continued

- Reorganize the Assign Layer and Phantom dialog box
- Change the mouse cursor with different states
- Make first arrivals invalid for calculation
- Specify reference curve by base shot location
- Automatically phantom with higher reliability
- Manually phantom with shortcut keys
- QC phantom

Refractor 4.1 – Continued

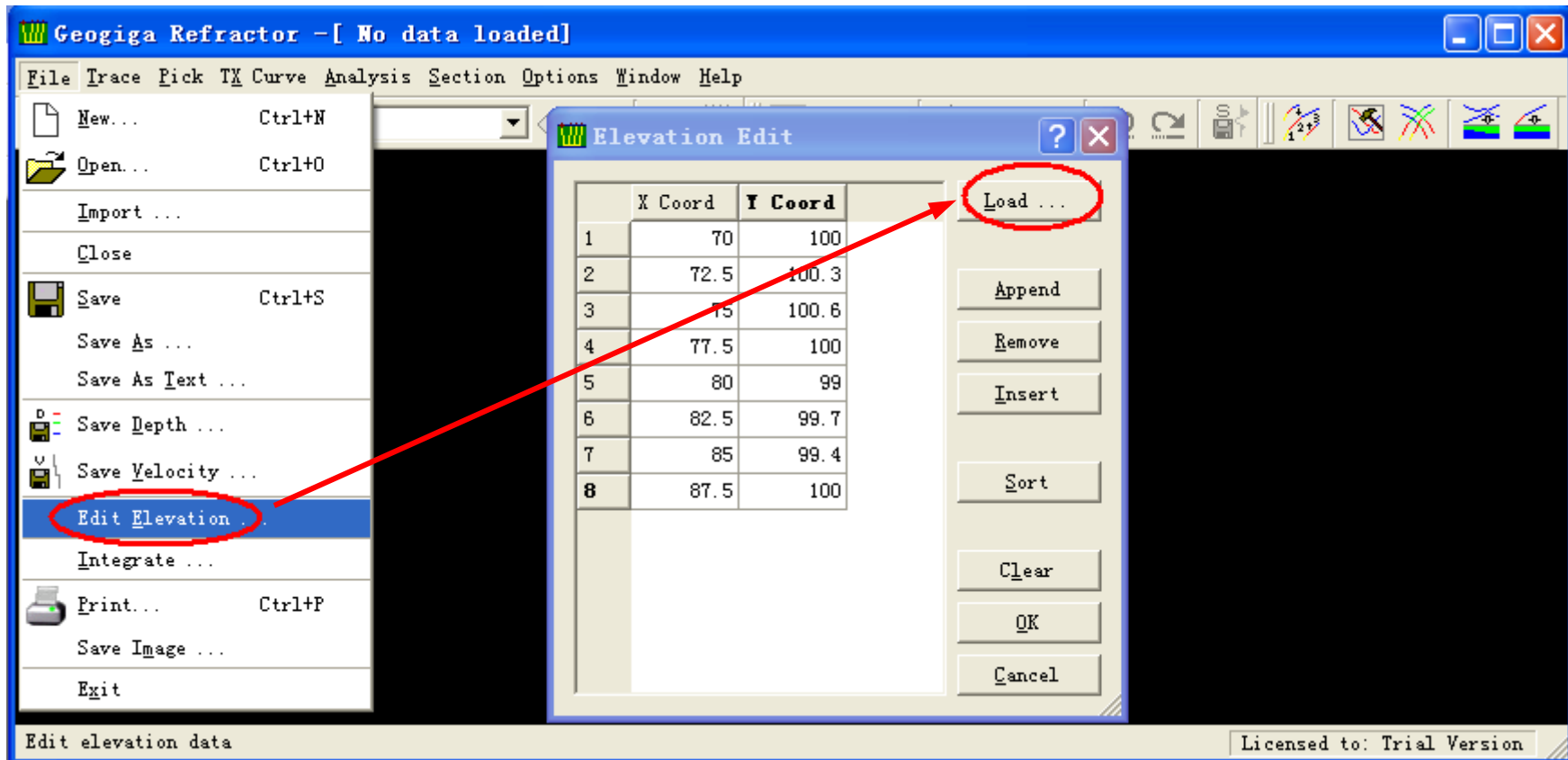
- Reorganize the Interpretation dialog box
- Include delay time method, ABC method
- Add an option to input surface velocity
- Build envelope more accurately
- Display curves in a vertical or horizontal view

Refractor 4.1 – Import Seismic Data



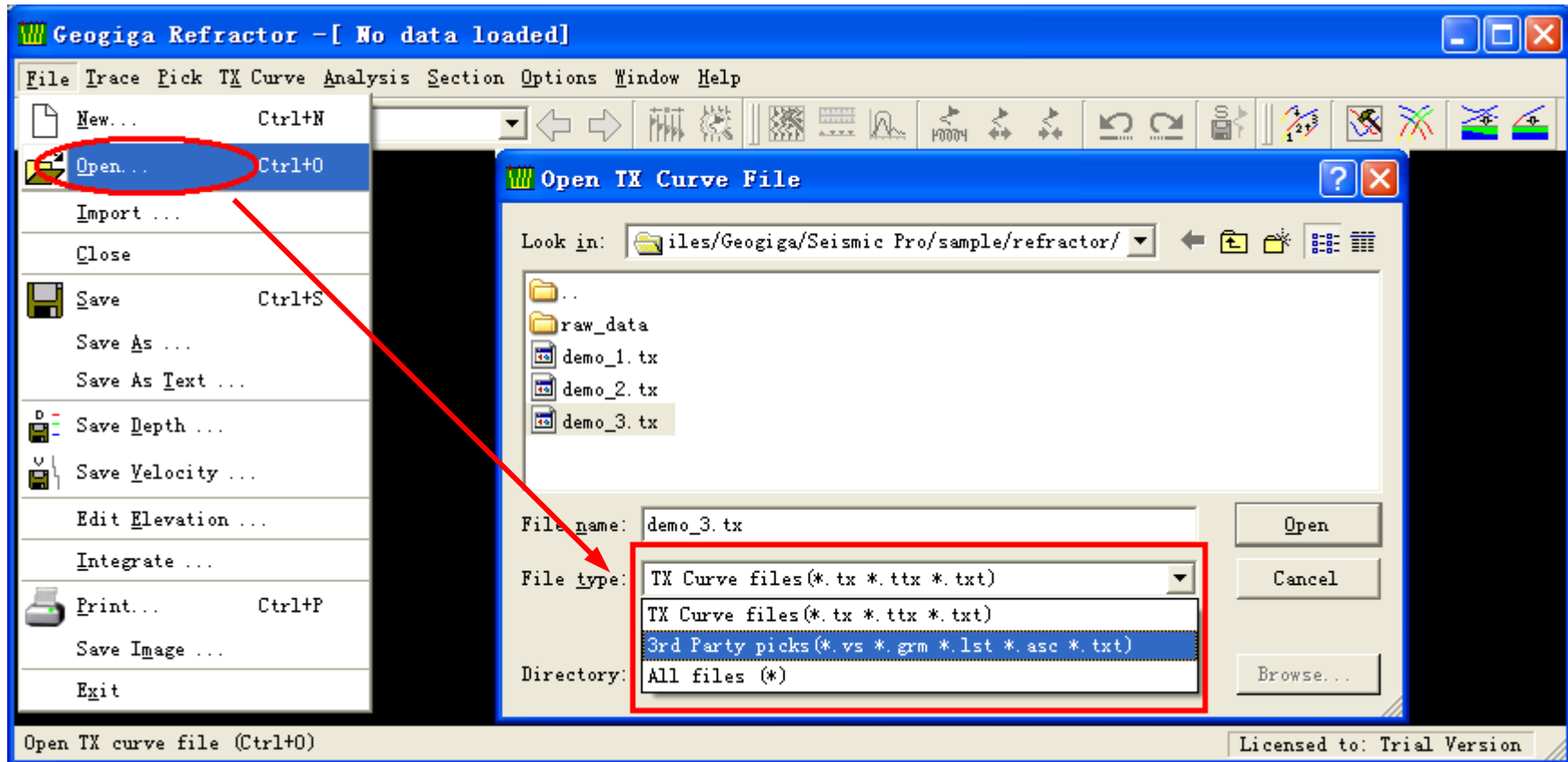
Assign geometry and integrate files

Refractor 4.1 – Load Elevation Data File



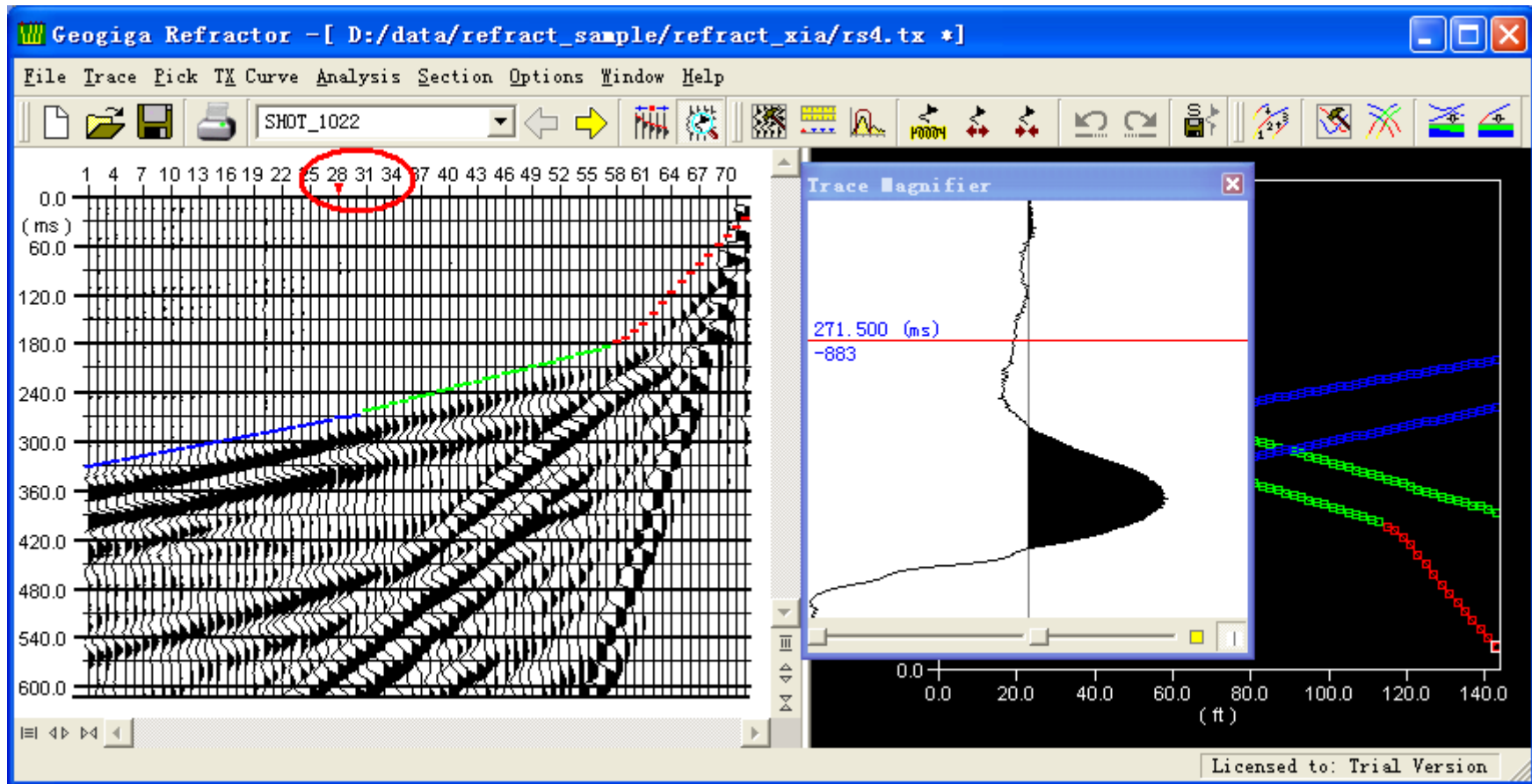
Load elevation data from an ASCII file.

Refractor 4.1 – Support 3rd Party Picks



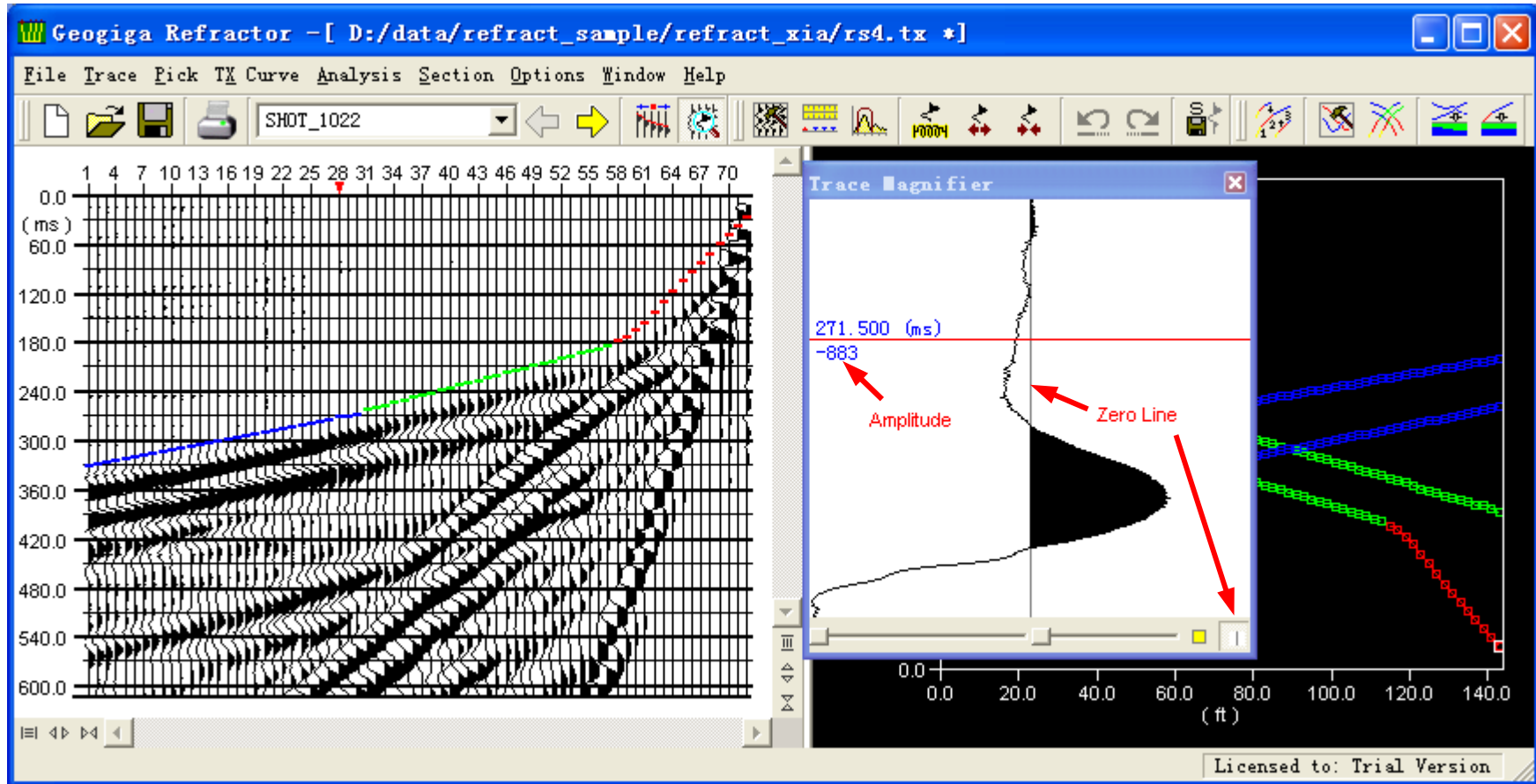
Automatically recognize the 3rd party picks format and load the picks file.

Refractor 4.1 – Select a Trace



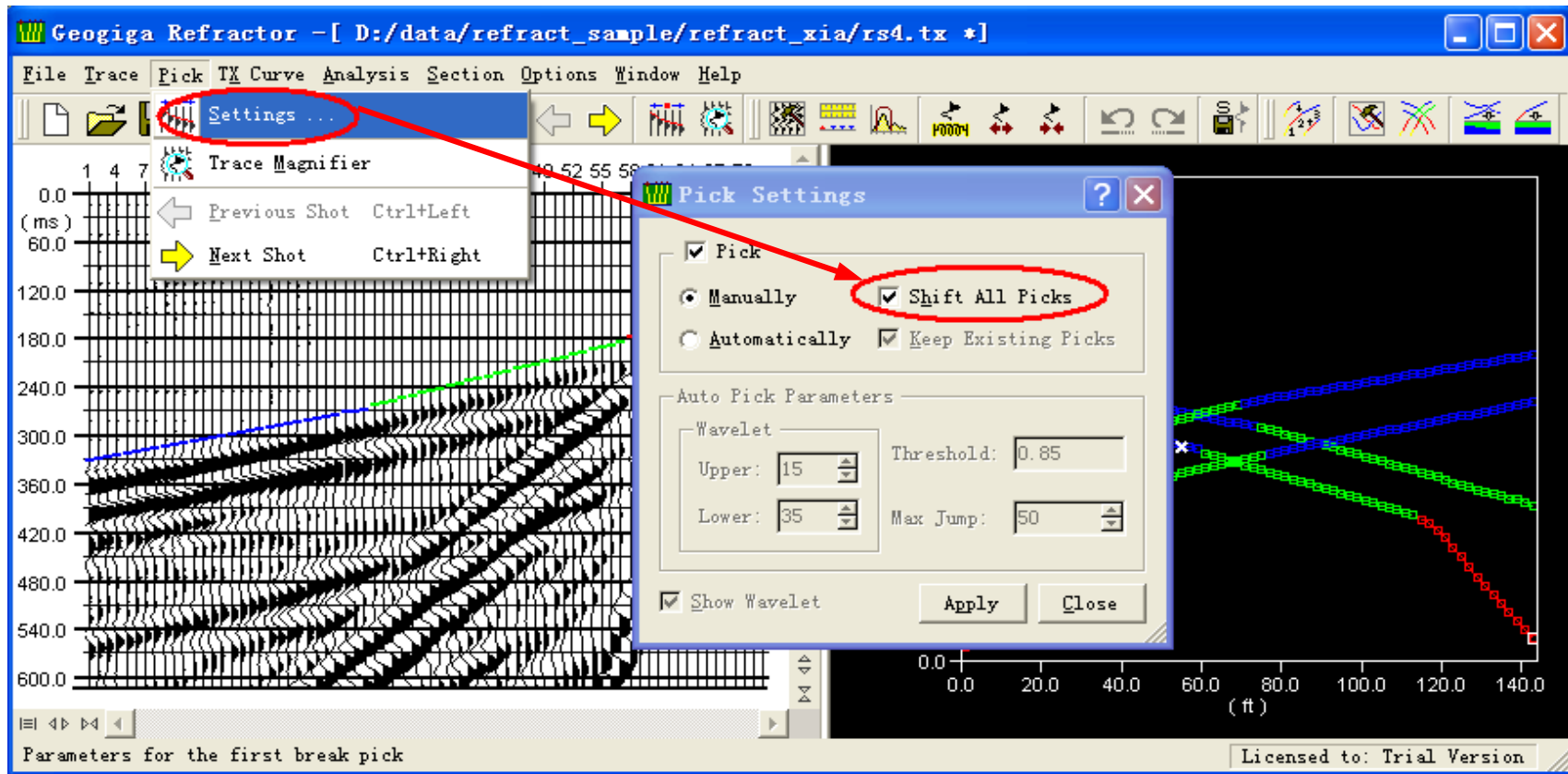
Select a trace with the [→] or [←] key in the picking window or in the trace magnifier.

Refractor 4.1 – Trace Magnifier



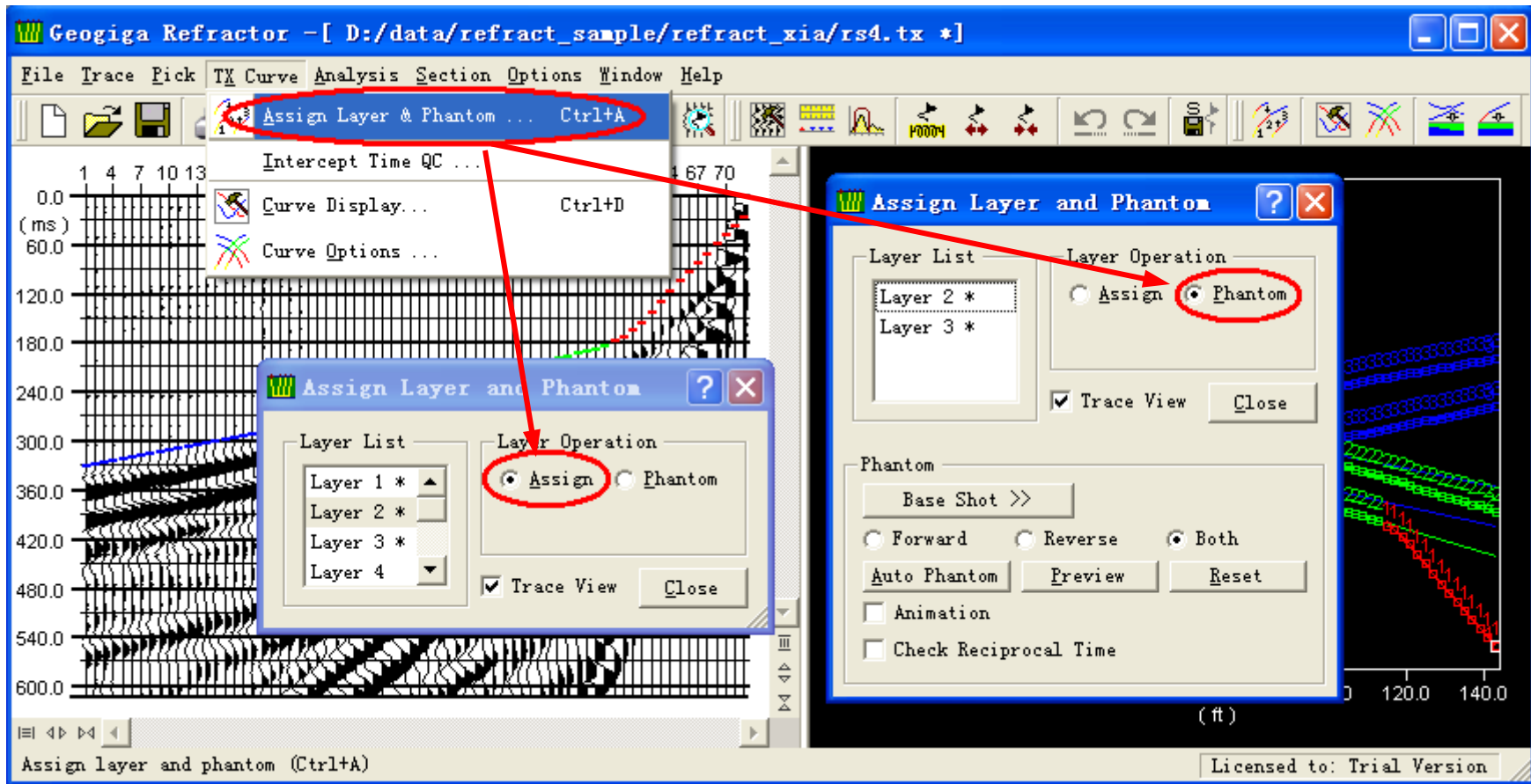
Show the amplitude and the zero line of trace to help picking.

Refractor 4.1 – Shift Picks



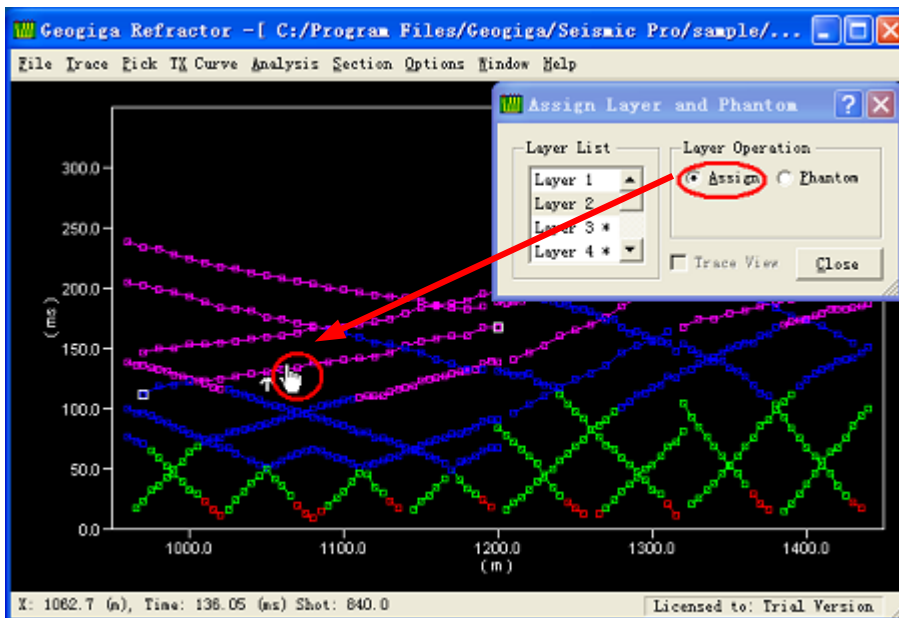
Shift all picks of a shot by dragging a pick in the picking window or in the trace magnifier.

Refractor 4.1 – The Assign Layer and Phantom Dialog Box

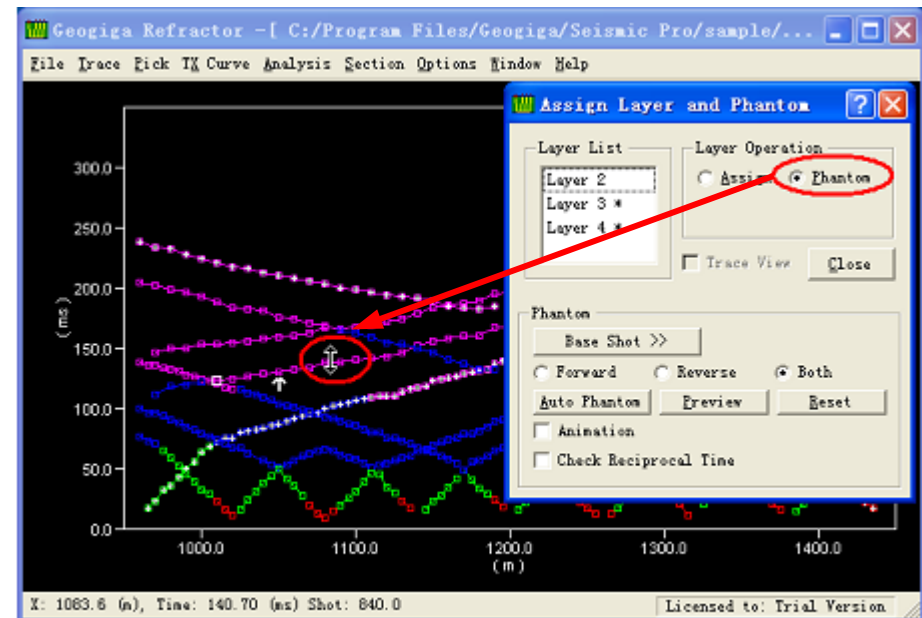


The dialog box dynamically changes with the different operations.

Refractor 4.1 – Mouse Cursor



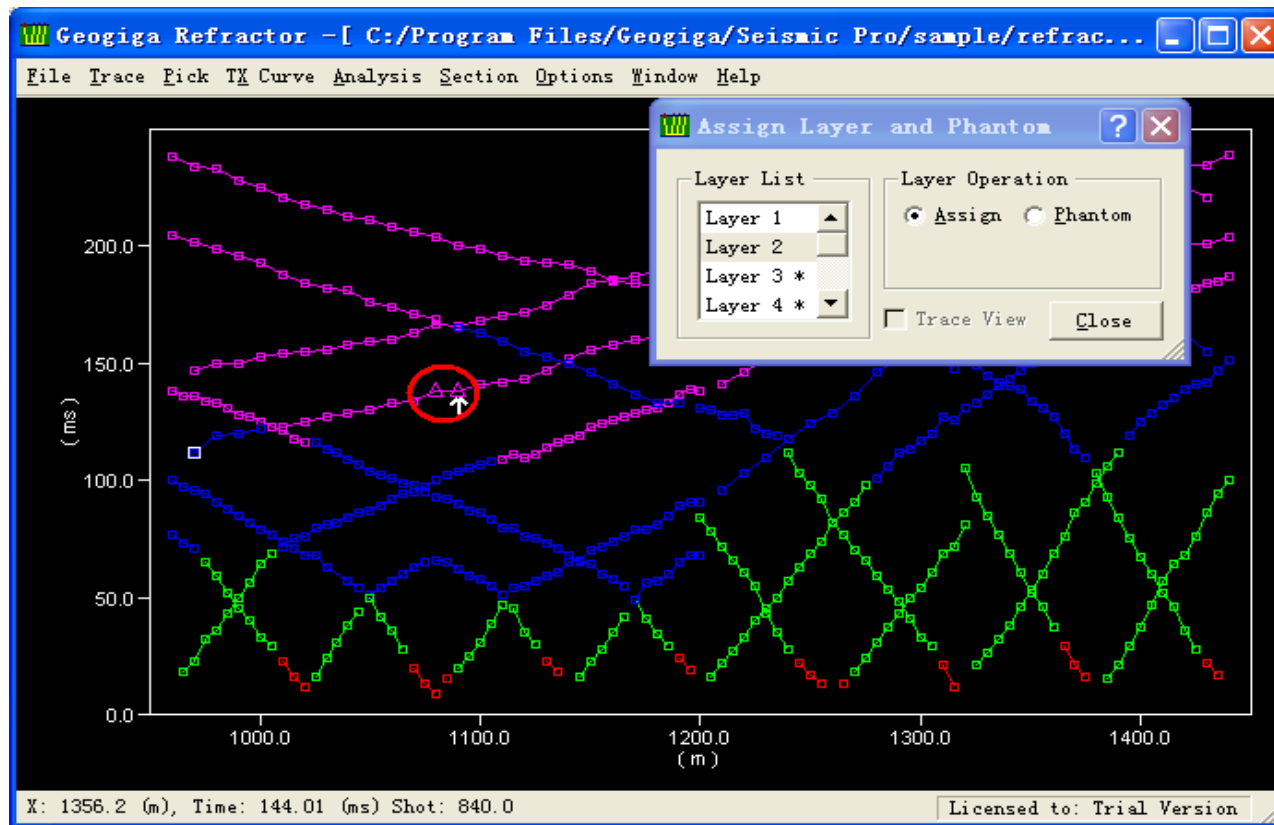
Assigning layers



Phantoming

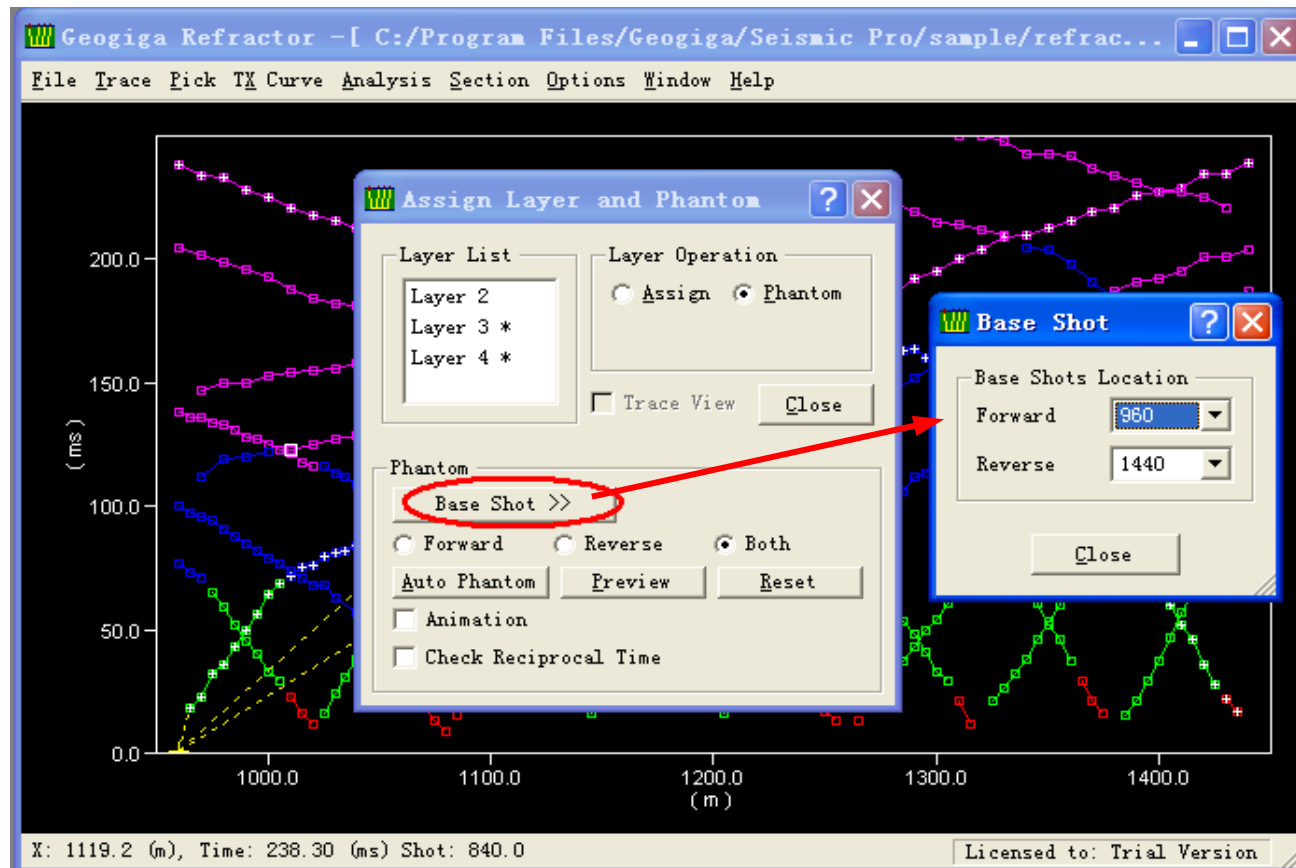
The shape of the mouse cursor changes with browsing, assigning, or phantoming state.

Refractor 4.1 – Invalid First Arrivals



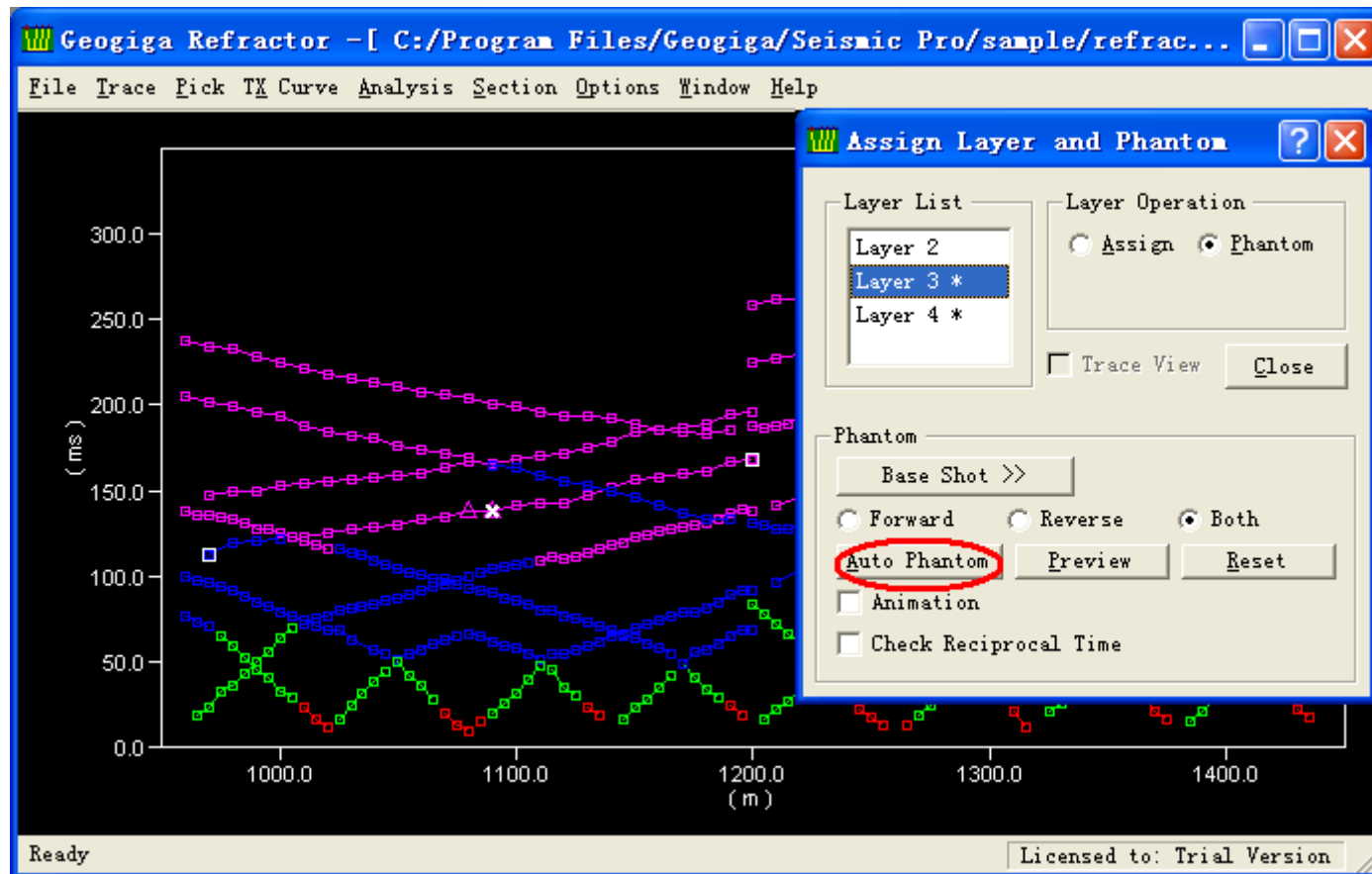
In the layer assignment state, make a pick invalid or valid by clicking the *right mouse* button at that pick while holding the *Ctrl* key. The invalid picks will not be involved in the calculation.

Refractor 4.1 – Reference Curve



When phantoming curves, specify the reference curve by selecting the *base shot location*.

Refractor 4.1 – Auto Phantom



Select a layer number in the Layer List, then click the Auto Phantom button to automatically phantom the curves.

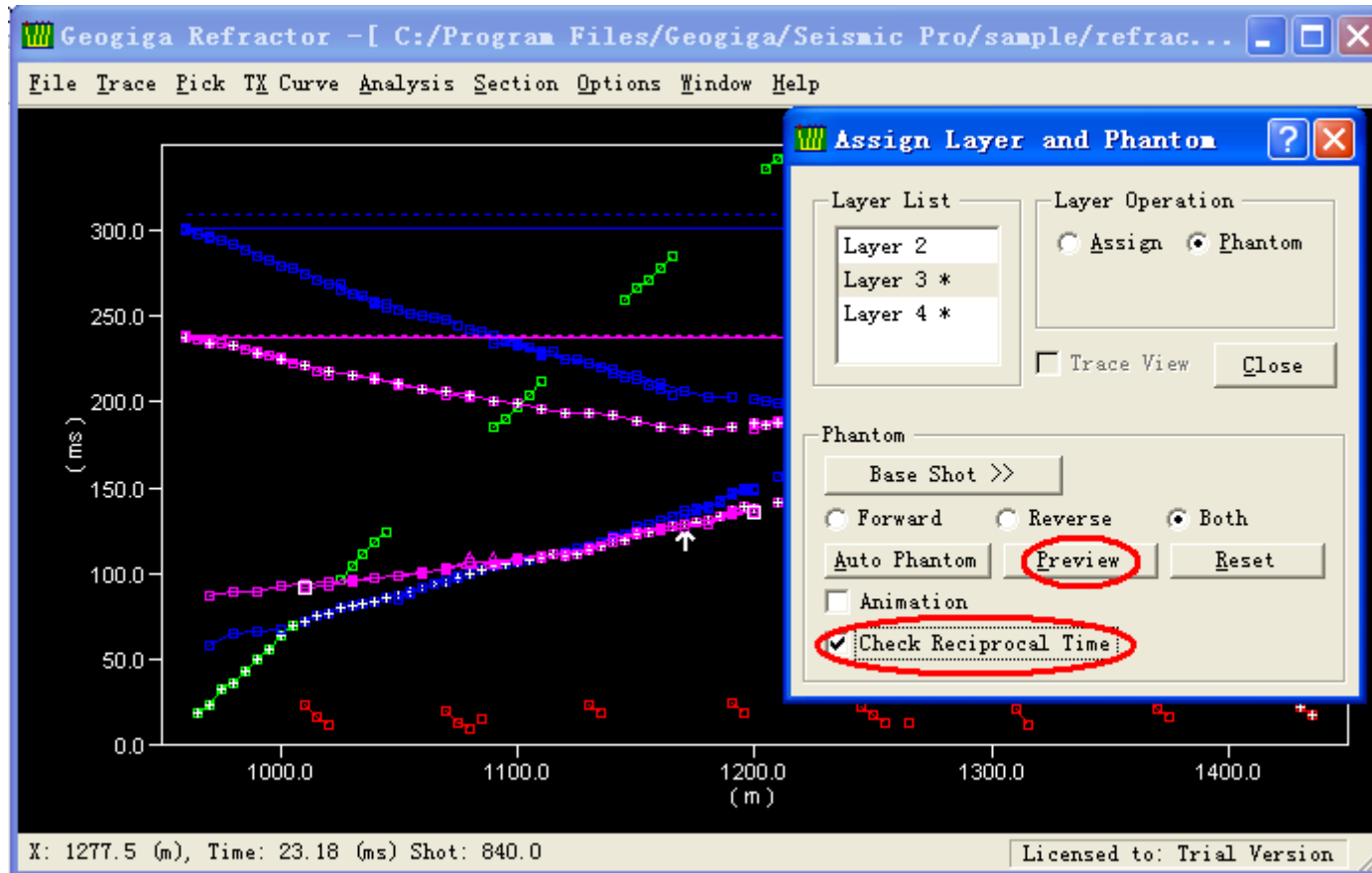
Refractor 4.1 – Manual Phantom

When phantoming curves manually, select a curve by moving the mouse cursor over a curve and clicking the left mouse button on it, then:

- Hold the *Ctrl* key while *dragging* the curve with the left mouse button
- Hold the *Ctrl* key while pressing the [↑] or [↓] key
- Press the [↑] or [↓] key to make minor adjustment

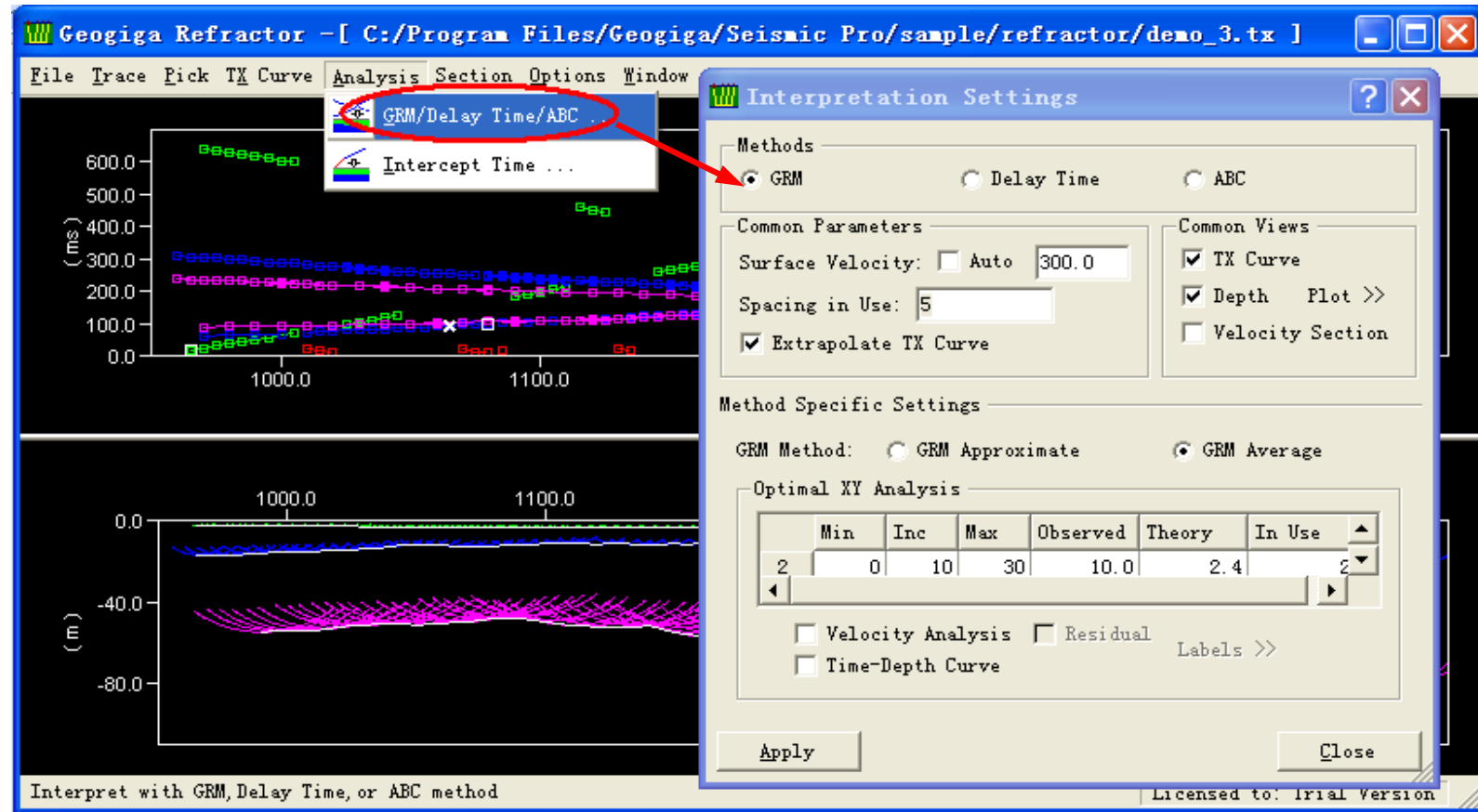
For manual phantom, no need to choose a layer number, just select a curve and move the curve with shortcut keys.

Refractor 4.1 – QC Phantom



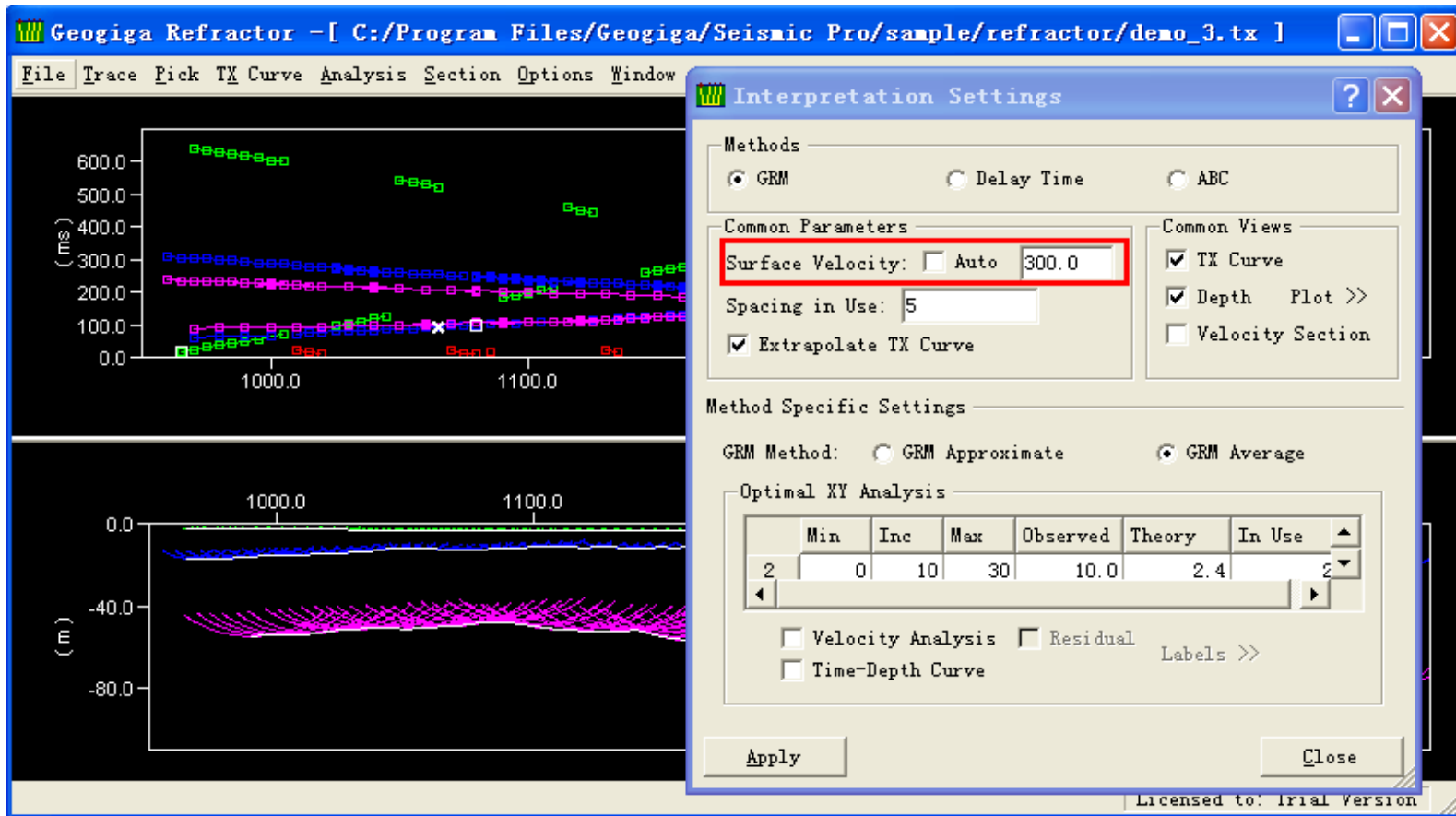
QC phantom by clicking the Preview button or checking reciprocal time

Refractor 4.1 – Interpretation Dialog Box



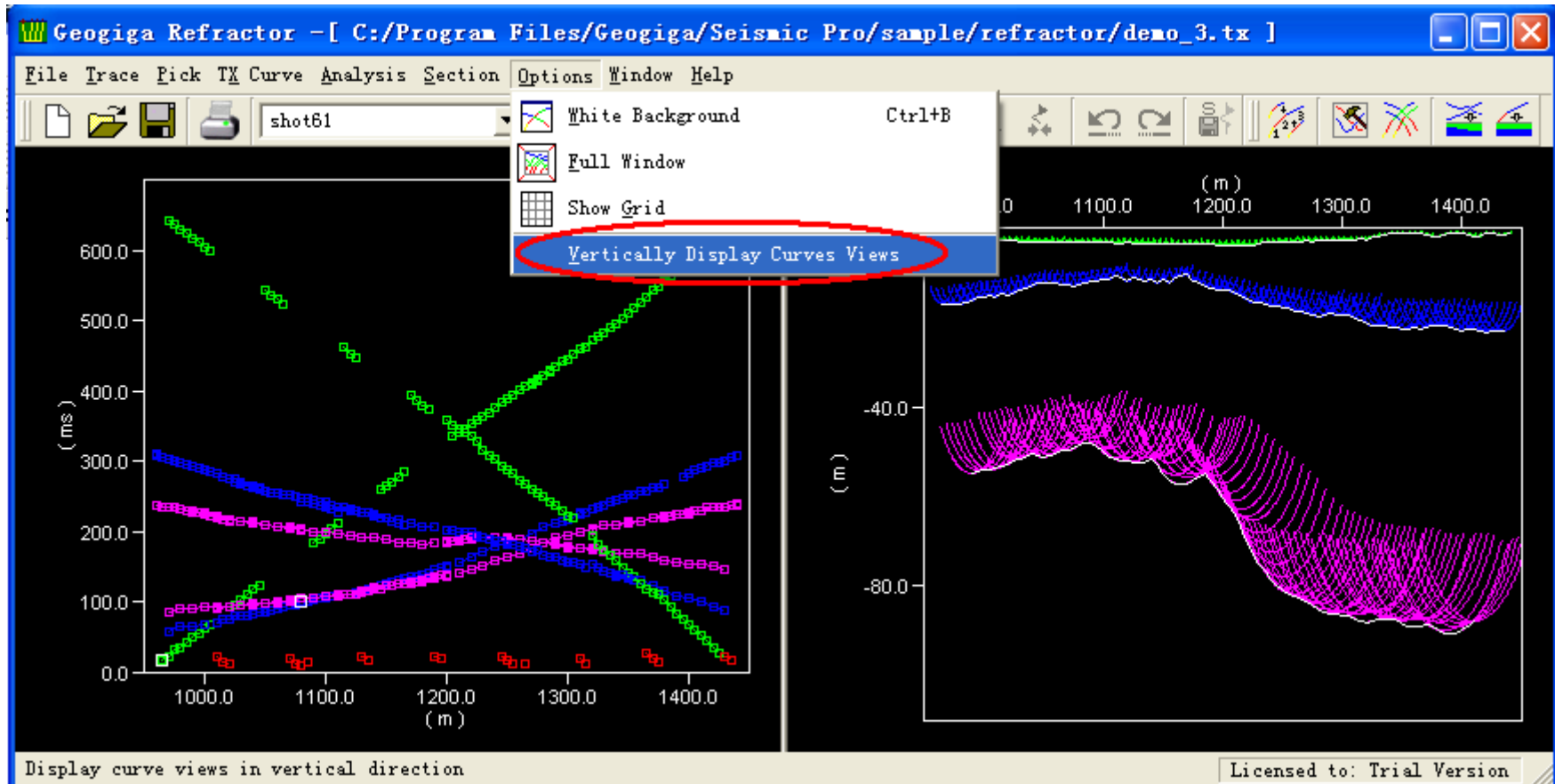
The Interpretation dialog box includes GRM, Delay Time, and ABC method.

Refractor 4.1 – Surface Velocity



Choose to automatically calculate or input the Surface Velocity

Refractor 4.1 – Vertical or Horizontal View



Switch to the horizontal view

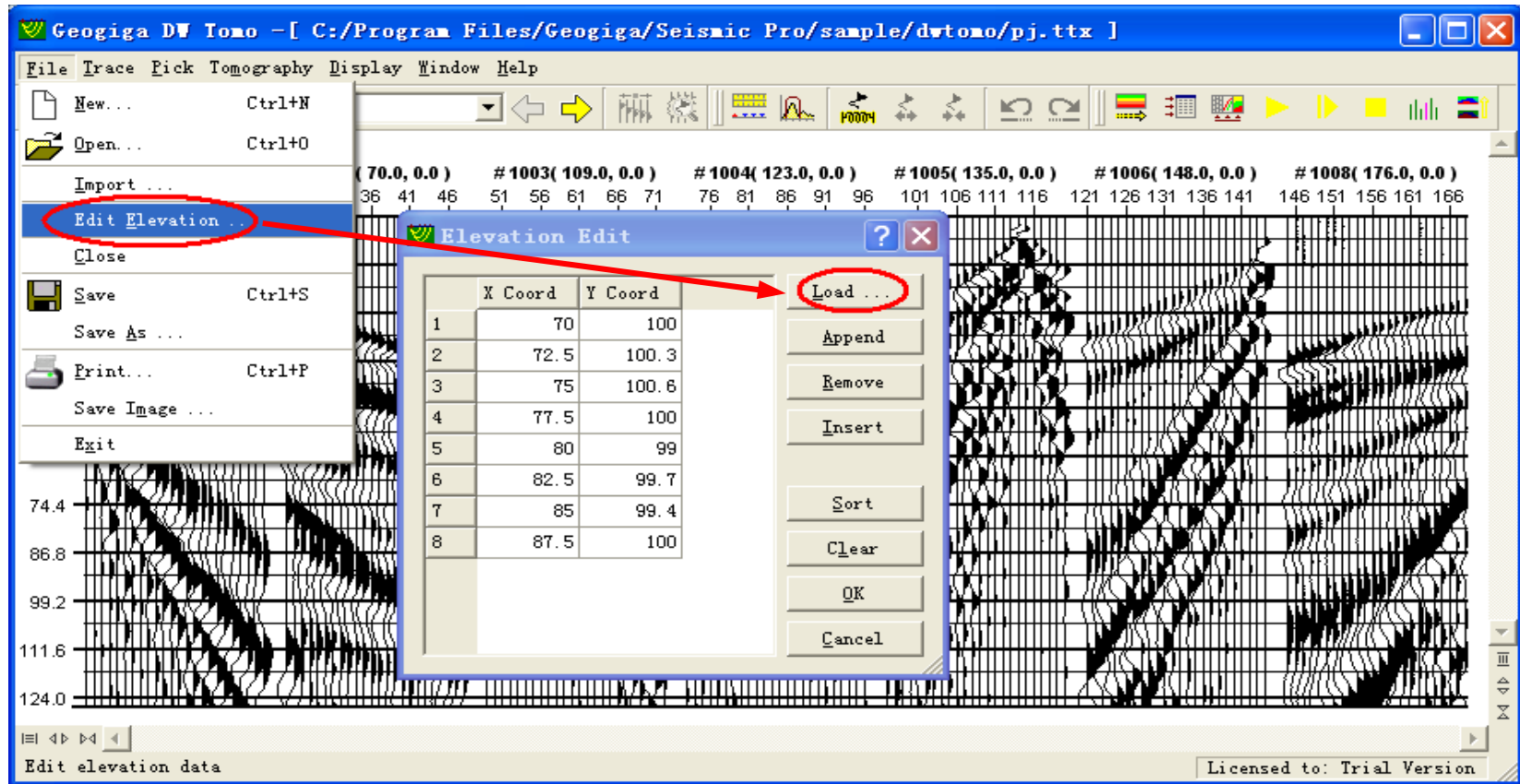
DW Tomo 1.1

- Load elevation data from an ASCII file
- Support 3rd party picks format
- Select a trace with the [→] or [←] key in the picking window or in the trace magnifier
- Show the zero line and the trace amplitude value in the trace magnifier

DW Tomo 1.1 – Continued

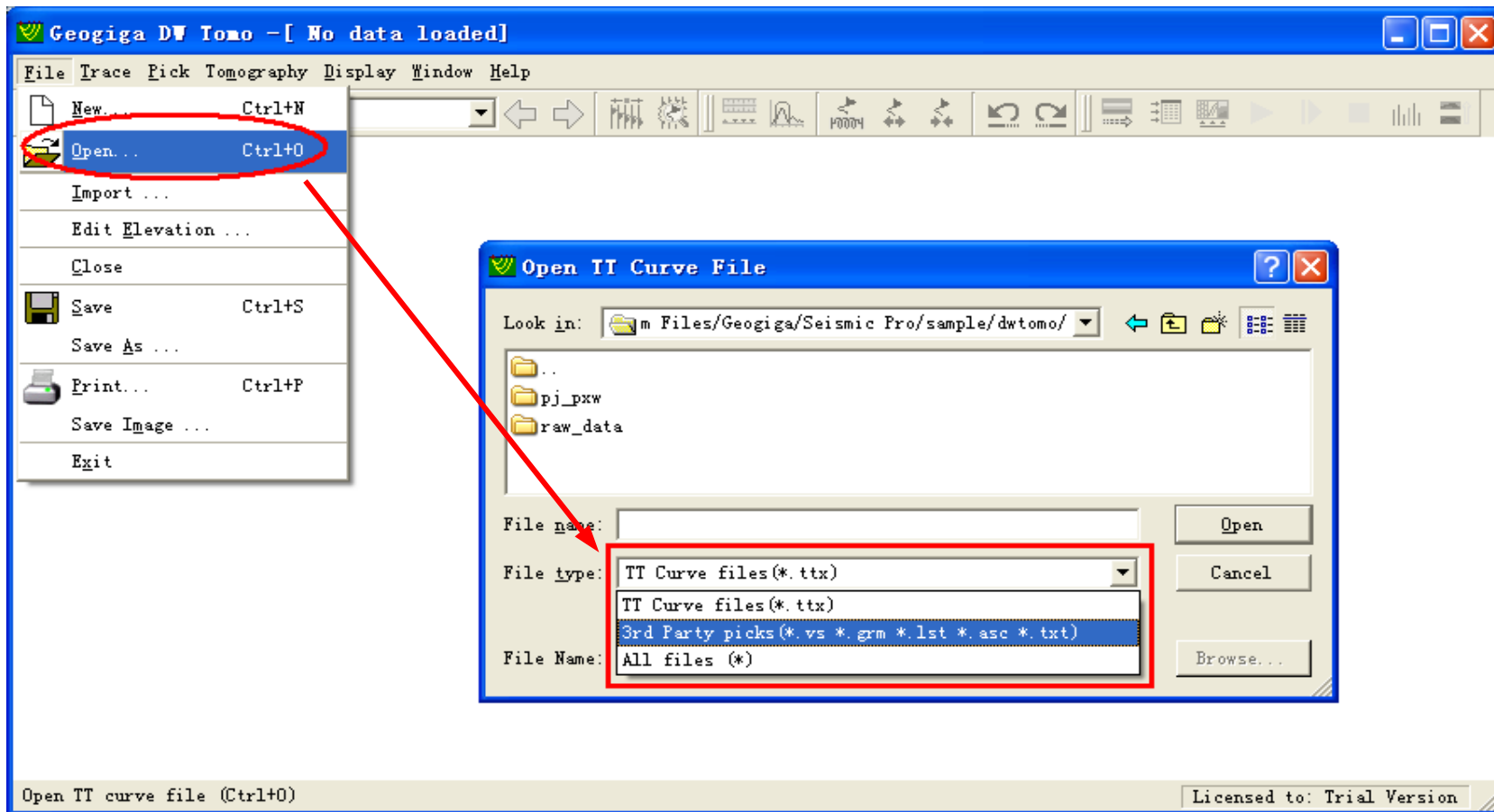
- Automatically set the default grid spacing according to the shot locations and the group interval
- Optimize the forward modeling for more accurate and faster calculation
- Fix bugs in matching seismic data with TX curves

DW Tomo 1.1 – Load Elevation Data File



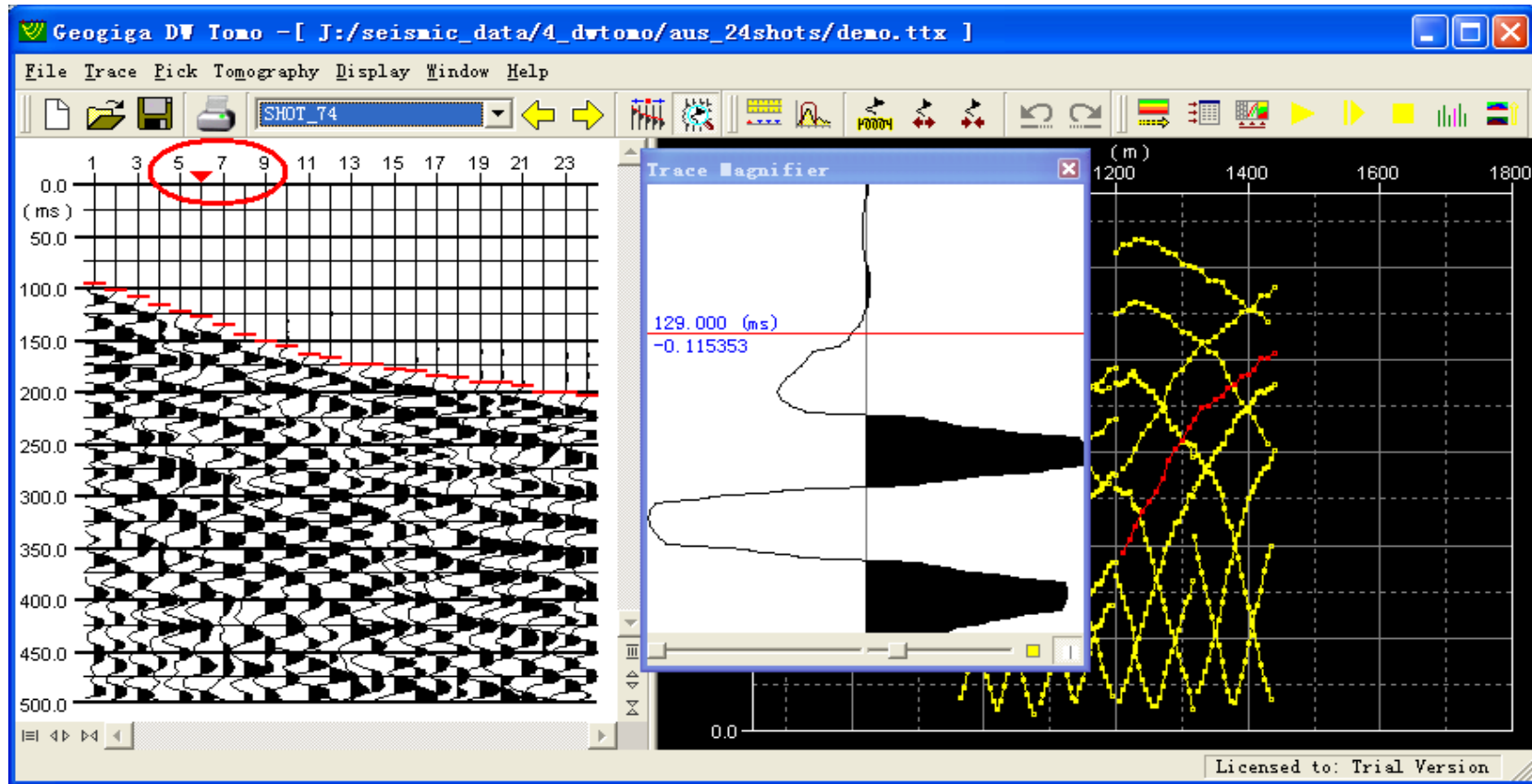
Load elevation data from an ASCII file.

DW Tomo 1.1 – Support 3rd Party Picks



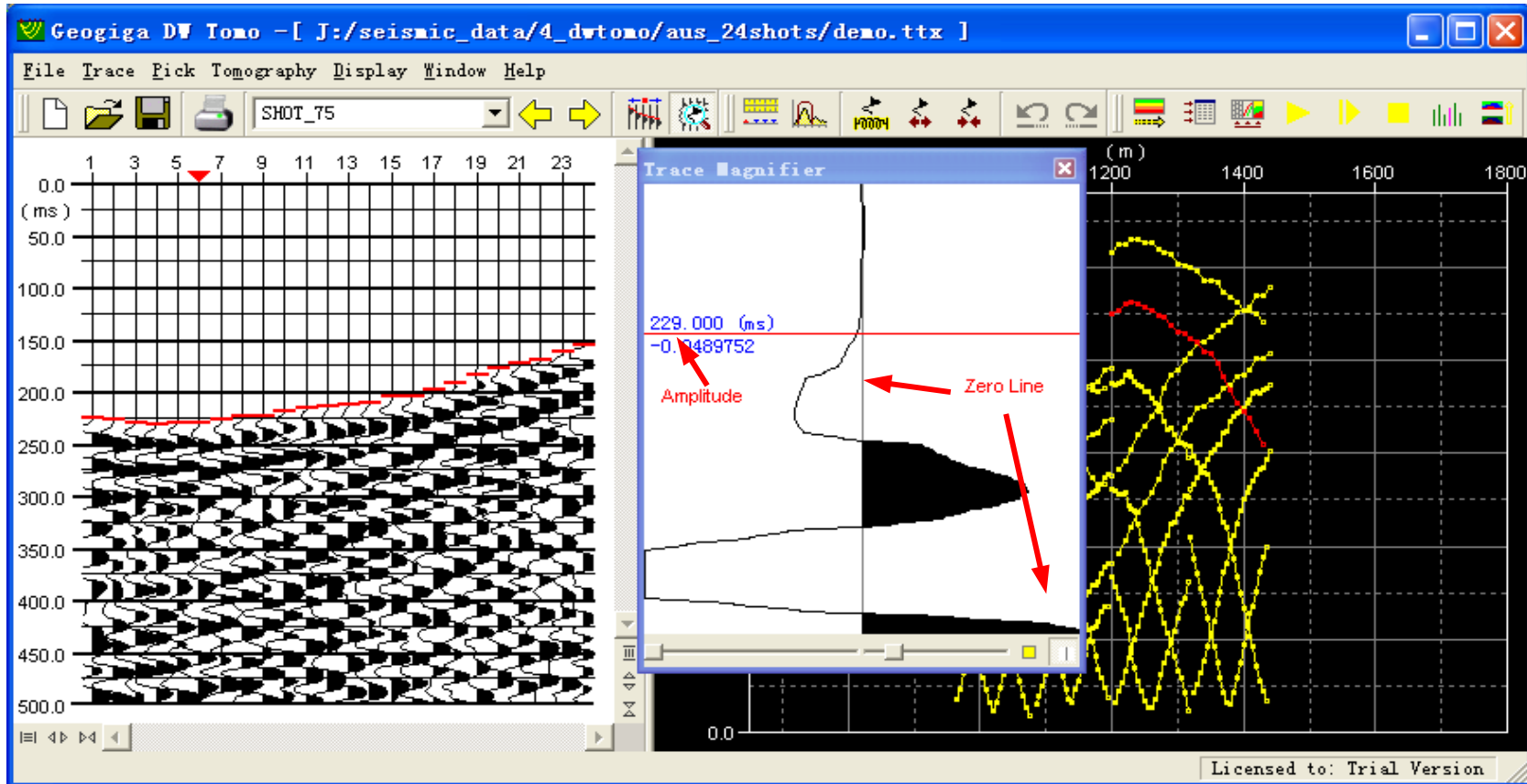
Automatically recognize the 3rd party picks format and load the picks file.

DW Tomo 1.1– Select a Trace



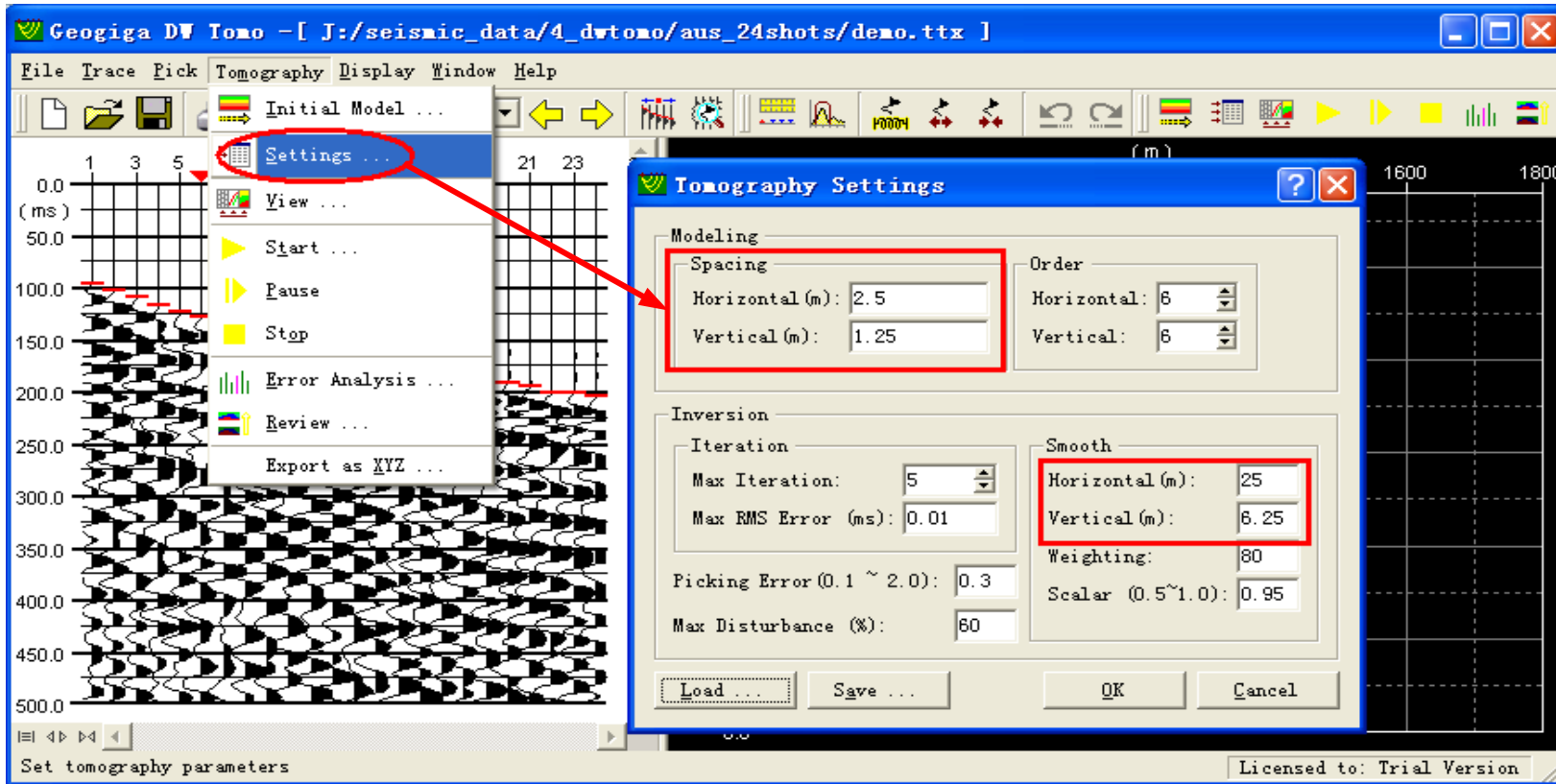
Select a trace with the [→] or [←] key in the picking window or in the trace magnifier.

DW Tomo 1.1 – Trace Magnifier



Show the amplitude and the zero line of trace to help picking.

DW Tomo 1.1 – Default Grid Spacing



Automatically determine the default grid spacing and the relevant parameters according to the shot locations and the group interval.

Surface / Surface Plus 5.1

- Import seismic data
- Load geometry from an ASCII file, and save out the geometry definition
- Apply the specified geometry to all records
- Define depth converting factor
- Stop inverse iterations by a given fitting error
- Annotate the curves in the inversion windows
- Calculate and label the depth weighted velocity

Surface / Surface Plus 5.1 – Import Seismic Data

Assign 1-D geometry and integrate files.

Geogiga Surface Plus - [No Data Loaded]

File Trace Dispersion Inversion Section Curve Window Help

New... Ctrl+N
Open... Ctrl+O
Import ...
Close
Save Ctrl+S
Save As...
Print... Ctrl+P
Save Image...
Merge FV Files...
Exit

Geometry Assignment and Files Integration

Files List (10)

Geometry Definition Group

Group 1 Add Remove

Auxiliary Traces

Geometry Graph
Receiver Coordinate

(Such as 1, 2, 6)

	Files	Shot #	Shot (x)	1st Rcvr (x)	Rcvr (dx)
3	lave2.dat	3	-9999	0	5
4	lave3.dat	4	-9999	0	5
5	lave4.dat	5	-9999	0	5
6	lave5.dat	6	-9999	0	5
7	lave6.dat	7	-9999	0	5
8	lave7.dat	8	-9999	0	5

Add ... Remove Clear Up Down Auto Fill by Interpolation

Output: _data/6_surfaceplus/roadside_passive_active_diffrec/raw_data/lave_all.sgy

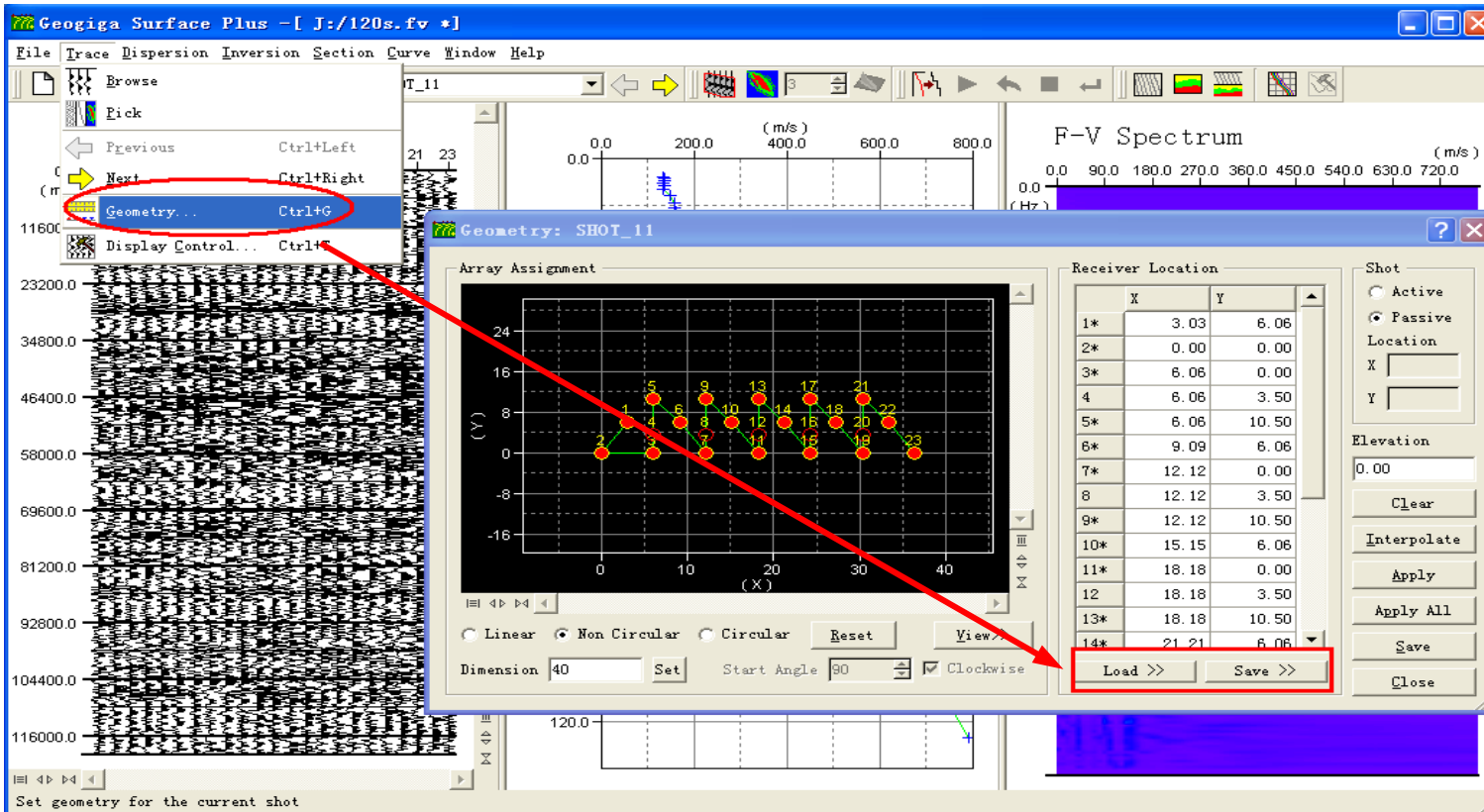
Integrate Integrate and Load Close

Batch define geometry and integrate fil Trial Version

For passive surface wave(available in Surface Plus), enter -9999 in the shot (x) field.

Surface / Surface Plus 5.1

– Load and Save Geometry File



Load the geometry from an ASCII file, and save out the geometry definition. This functionality is useful for 2d passive geometry definition in Surface Plus.

Surface / Surface Plus 5.1

– Apply Geometry to All Records

Geometry: SHOT_11

Array Assignment

Receiver Location

Shot

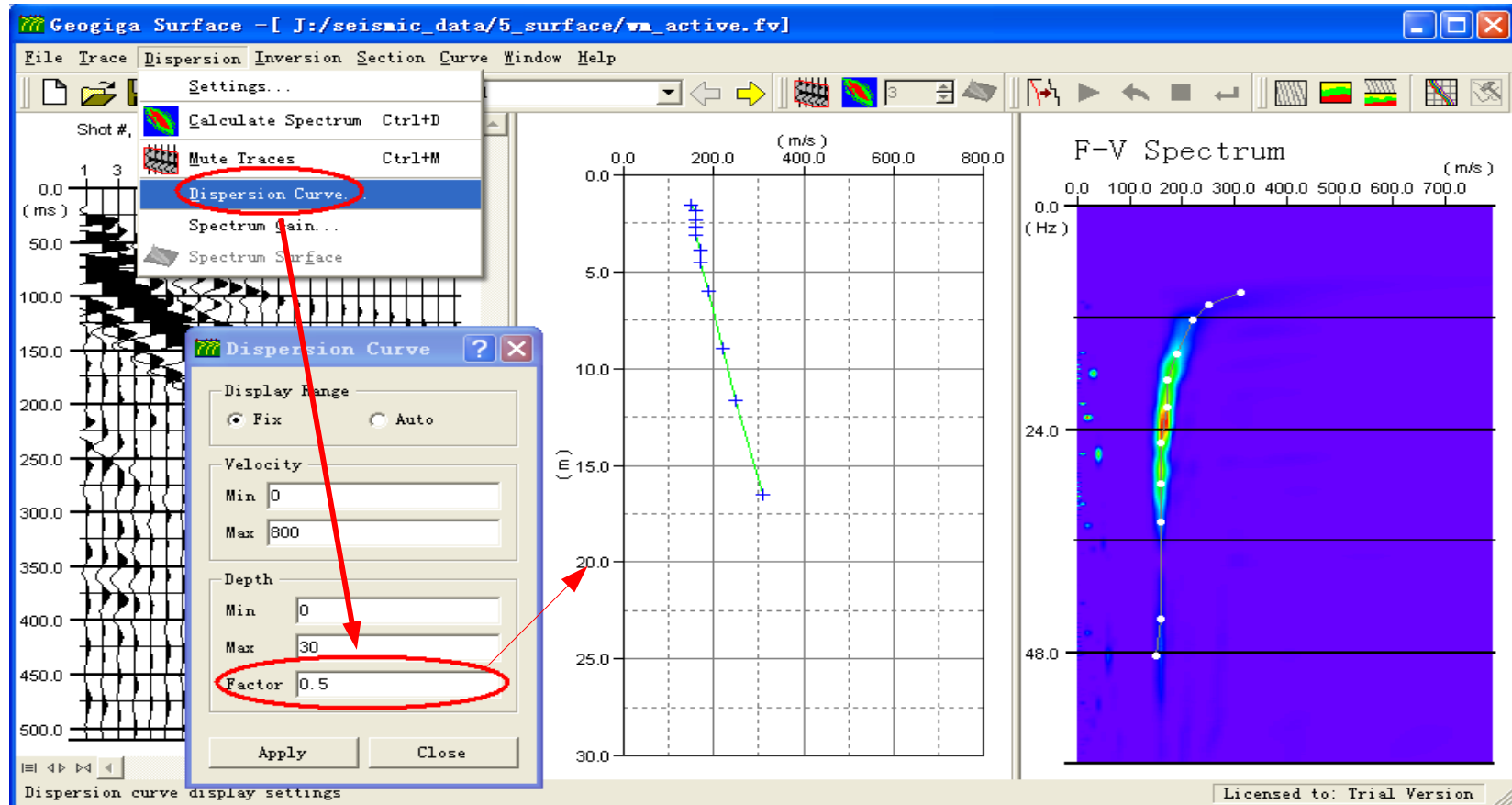
	X	Y
1*	3.03	6.06
2*	0.00	0.00
3*	6.06	0.00
4	6.06	3.50
5*	6.06	10.50
6*	9.09	6.06
7*	12.12	0.00
8	12.12	3.50
9*	12.12	10.50
10*	15.15	6.06
11*	18.18	0.00
12	18.18	3.50
13*	18.18	10.50
14*	21.21	6.06

Apply All

Apply the current geometry definition to all records.

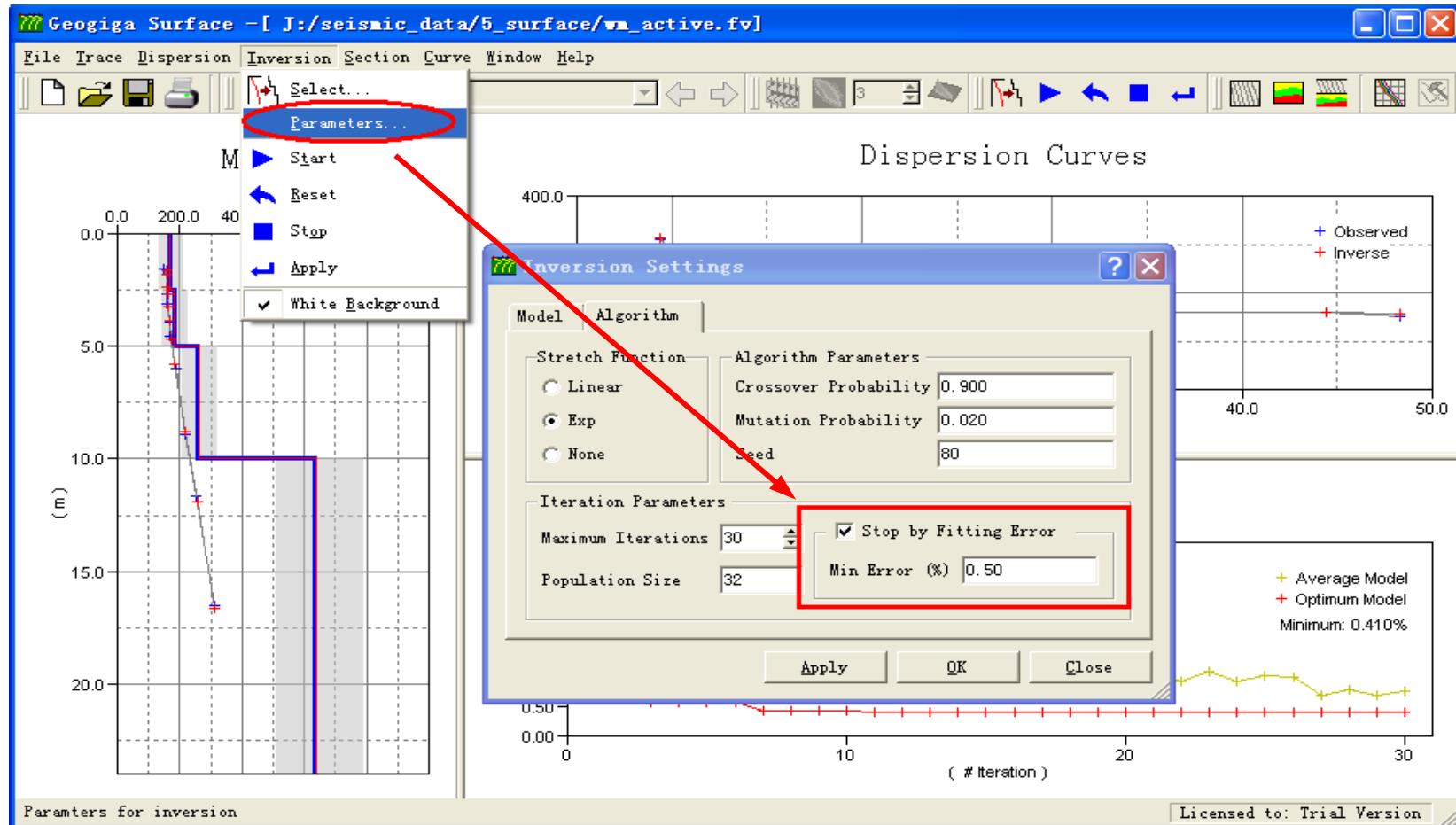
Surface / Surface Plus 5.1

– Define Depth Converting Factor



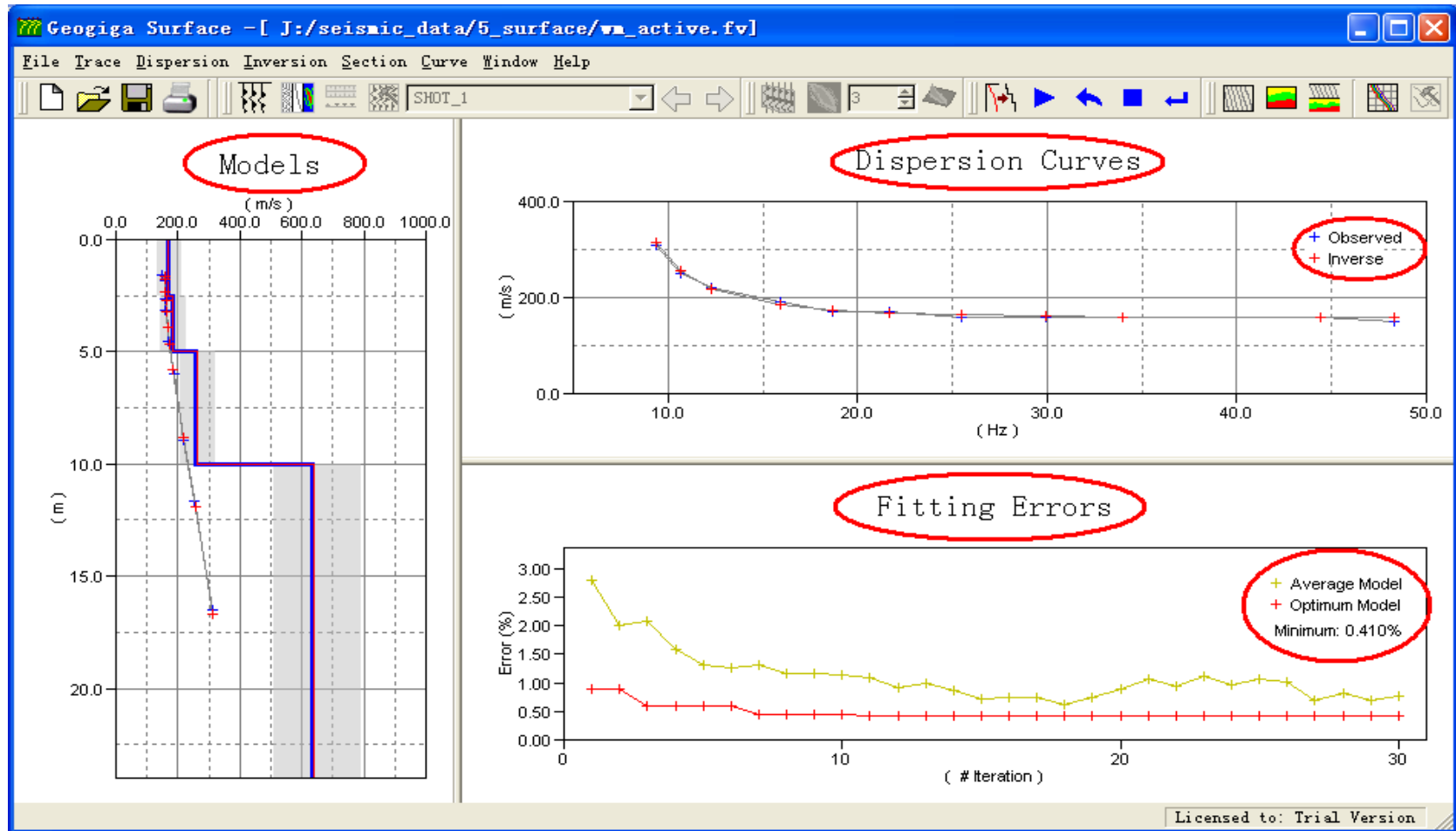
Surface / Surface Plus 5.1

- Stop Inverse Iterations by a Fitting Error



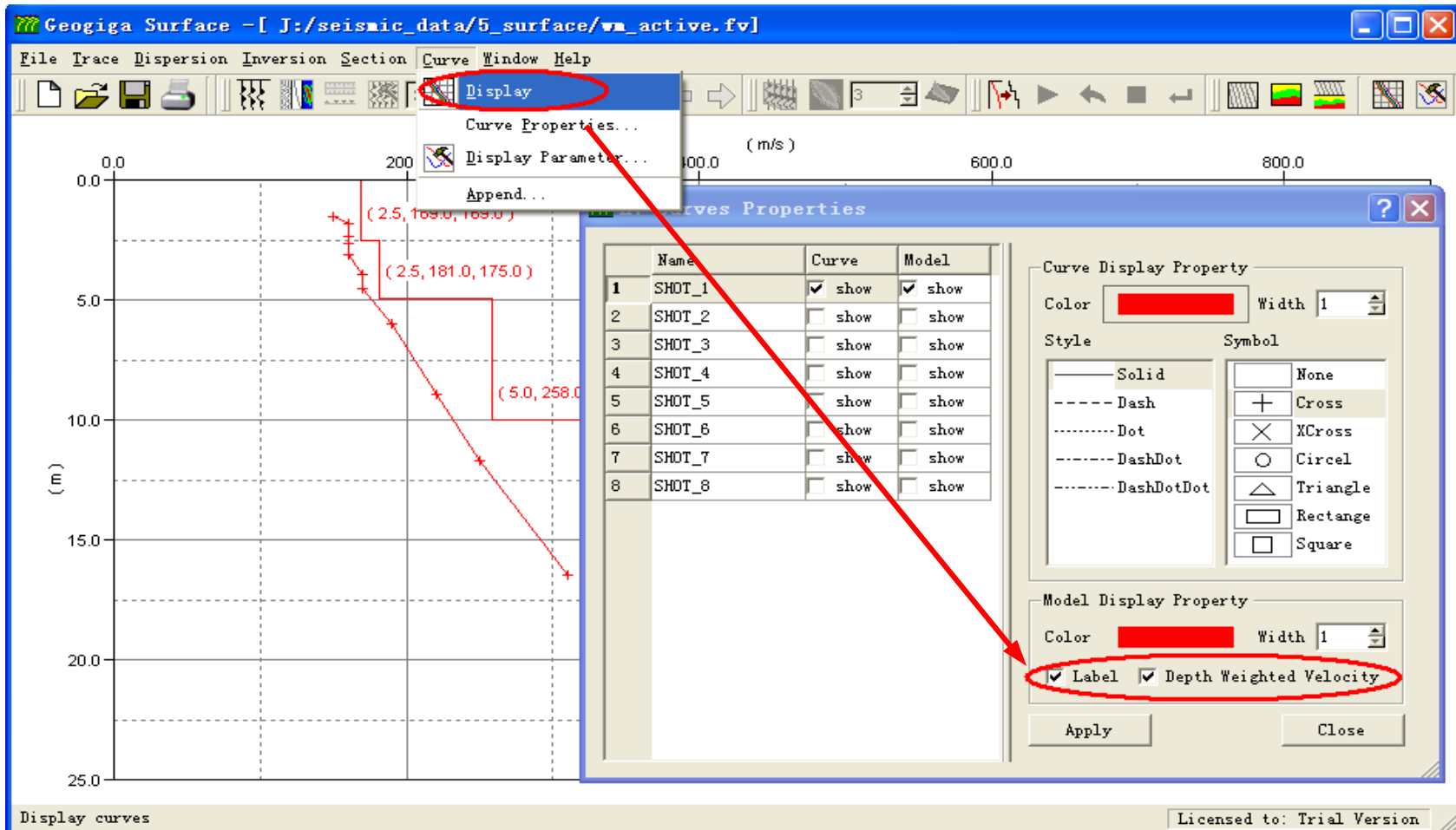
Surface / Surface Plus 5.1

– Annotate Curves in the Inversion Windows



Surface / Surface Plus 5.1

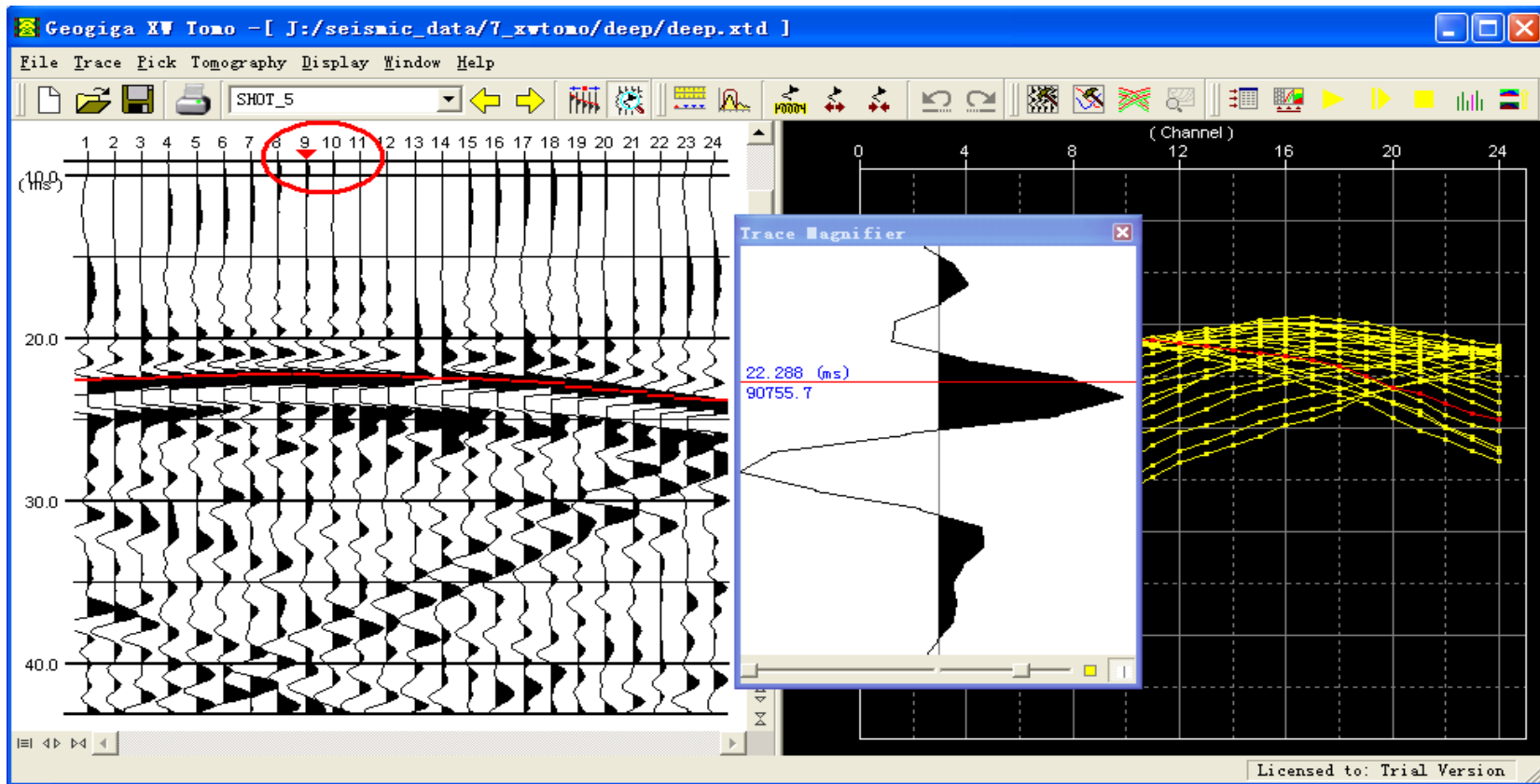
– Label Depth Weighted Velocity



XW Tomo 1.01

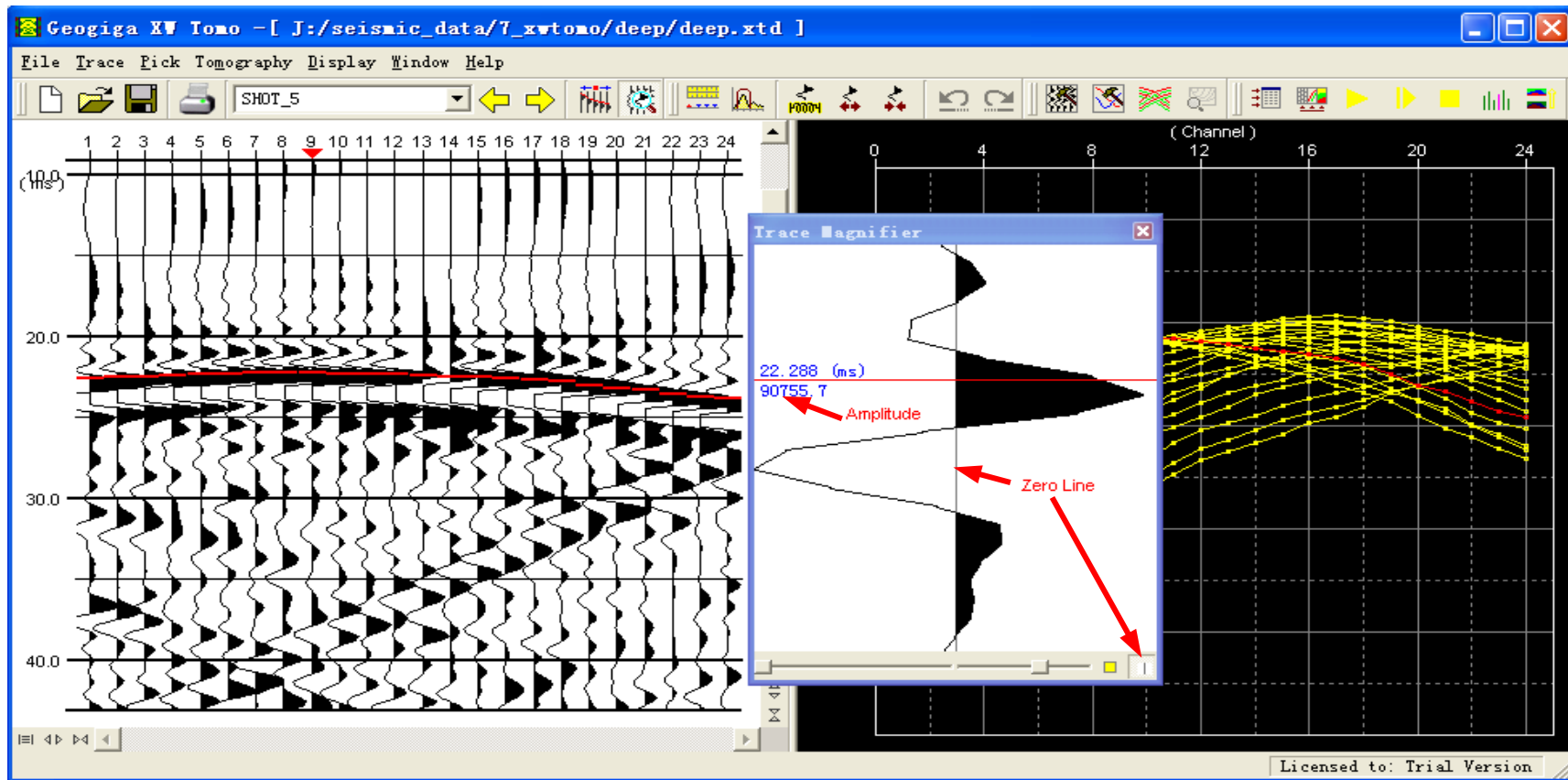
- Select a trace with the [→] or [←] key in the picking window or in the trace magnifier
- Show the zero line and the trace amplitude value in the trace magnifier
- Automatically set the default grid spacing according the group interval
- Optimize the forward modeling for more accurate and faster calculation

XW Tomo 1.01– Select a Trace



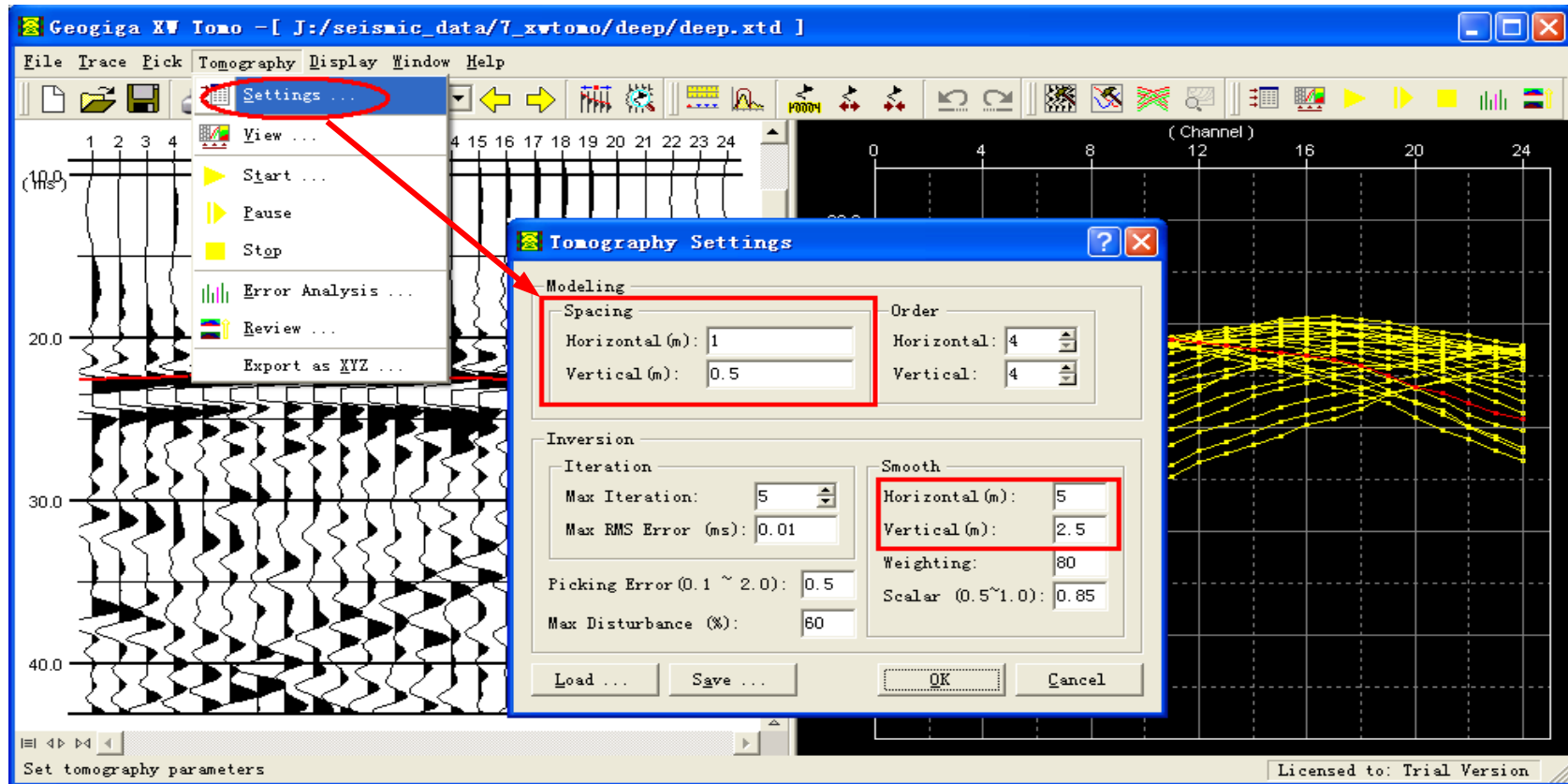
Select a trace with the [→] or [←] key in the picking window or in the trace magnifier.

XW Tomo 1.01 – Trace Magnifier



Show the amplitude and the zero line of trace to help picking.

XW Tomo 1.01 – Default Grid Spacing



Automatically determine the default grid spacing and the relevant parameters according to the group interval.

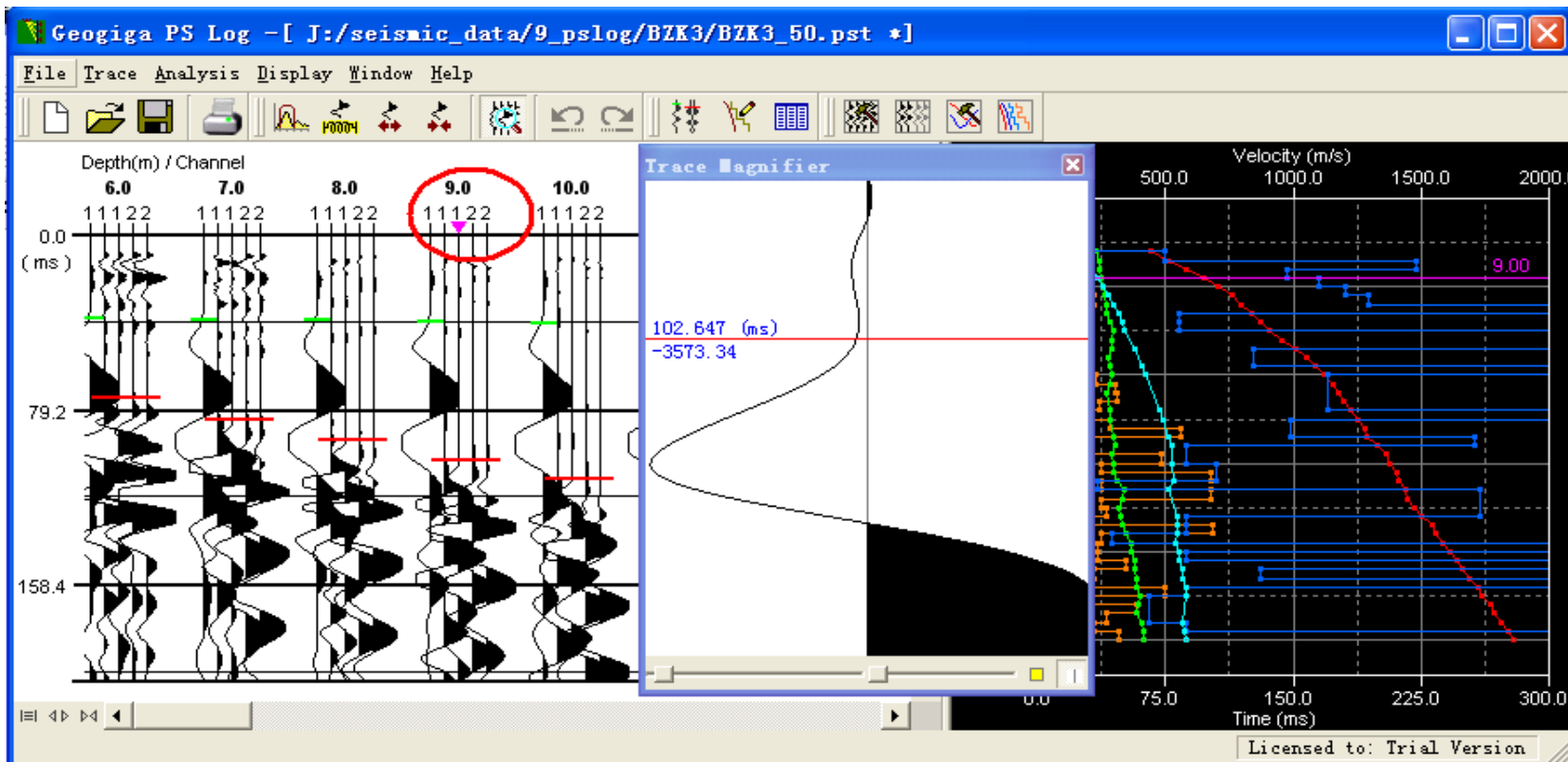
VSP 1.01

- Select a trace with the [→] or [←] key in the picking window or in the trace magnifier
- Show the zero line and the trace amplitude value in the trace magnifier

PS Log 1.01

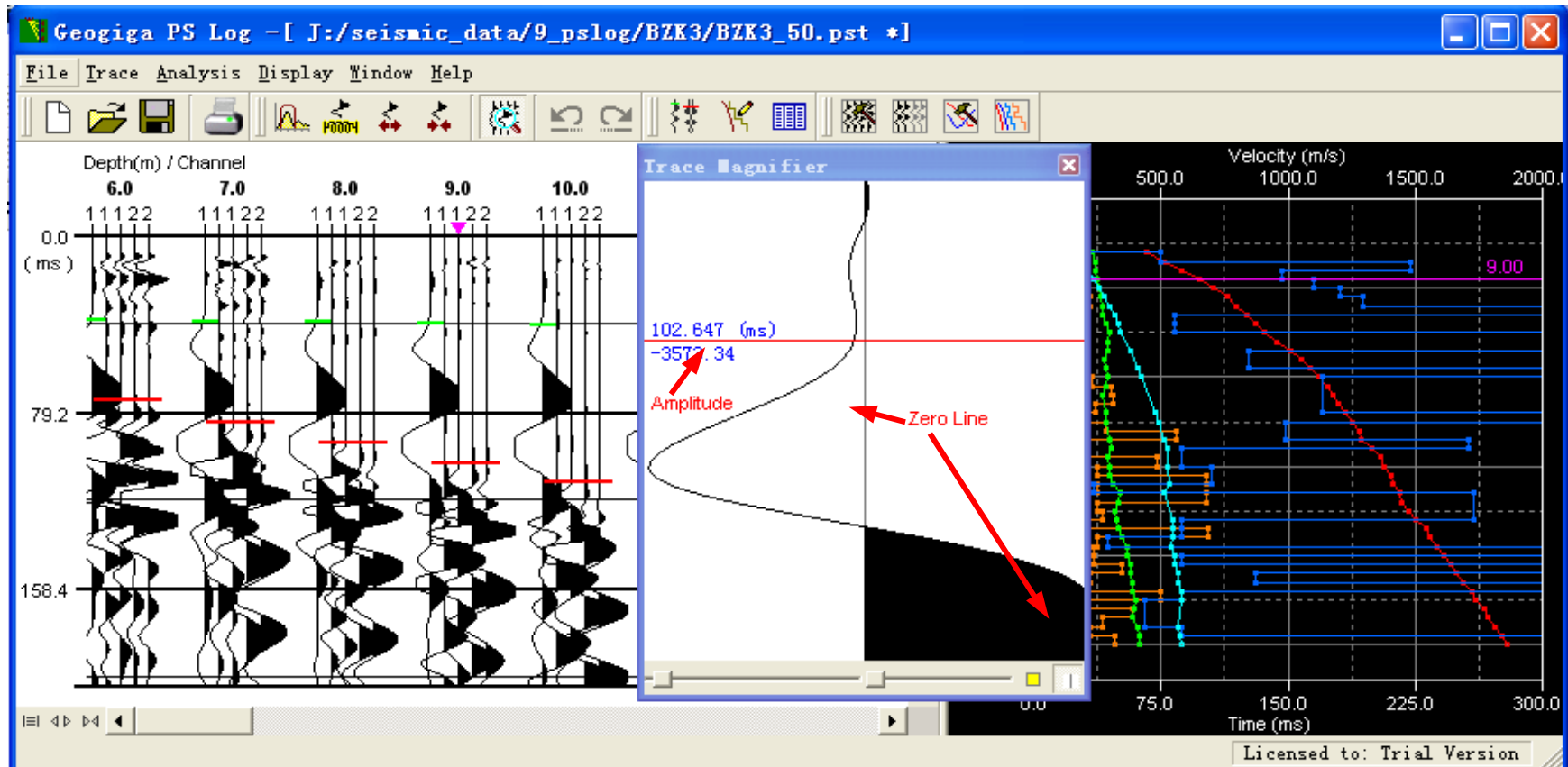
- Select a trace with the [→] or [←] key in the picking window or in the trace magnifier
- Show the zero line and the trace amplitude value in the trace magnifier
- Add an option to display TD curve with true vertical time or pick time
- Output true vertical time and pick time

PS Log 1.01– Select a Trace



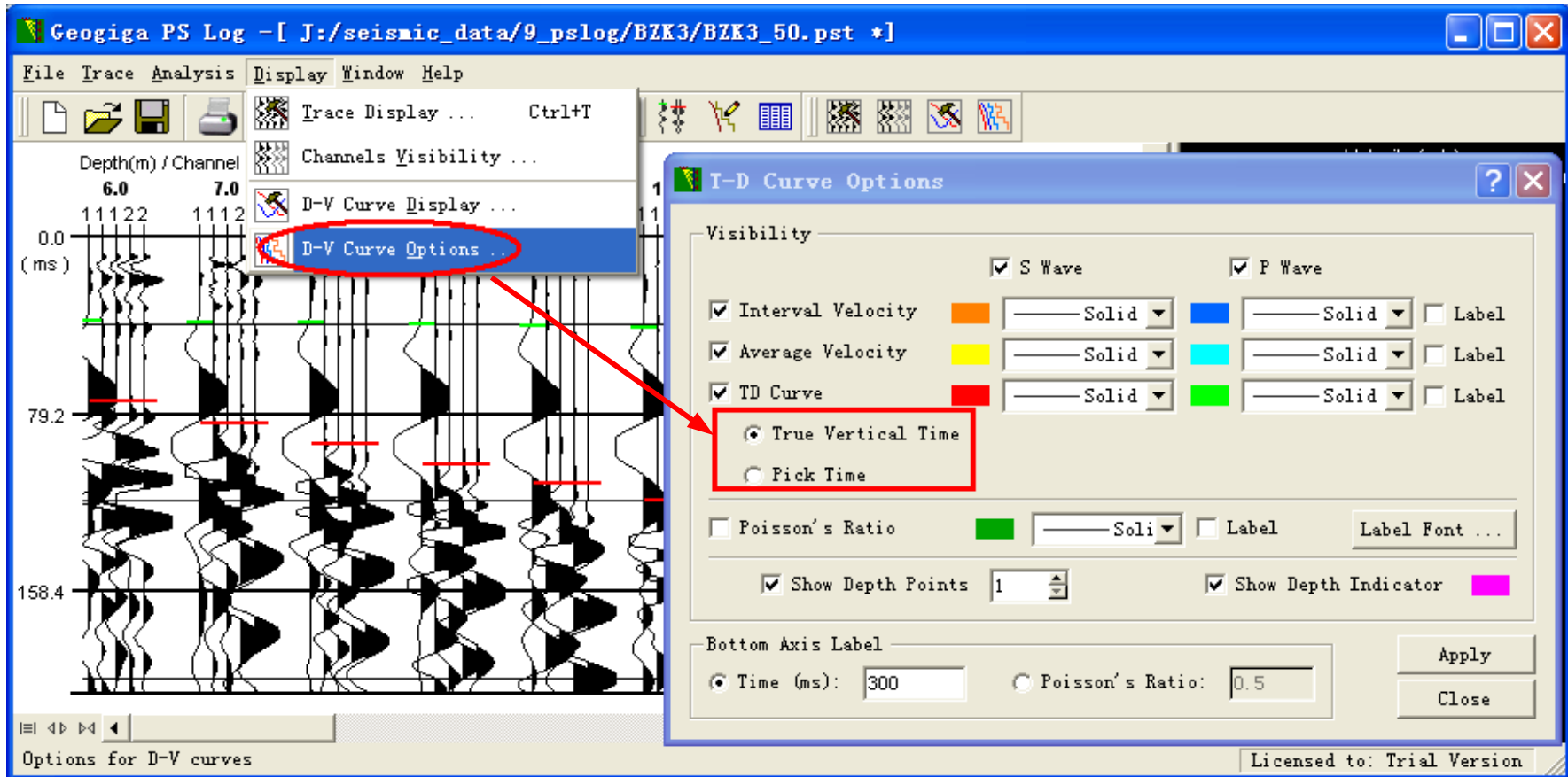
Select a trace with the [→] or [←] key in the picking window or in the trace magnifier.

PS Log 1.01 – Trace Magnifier



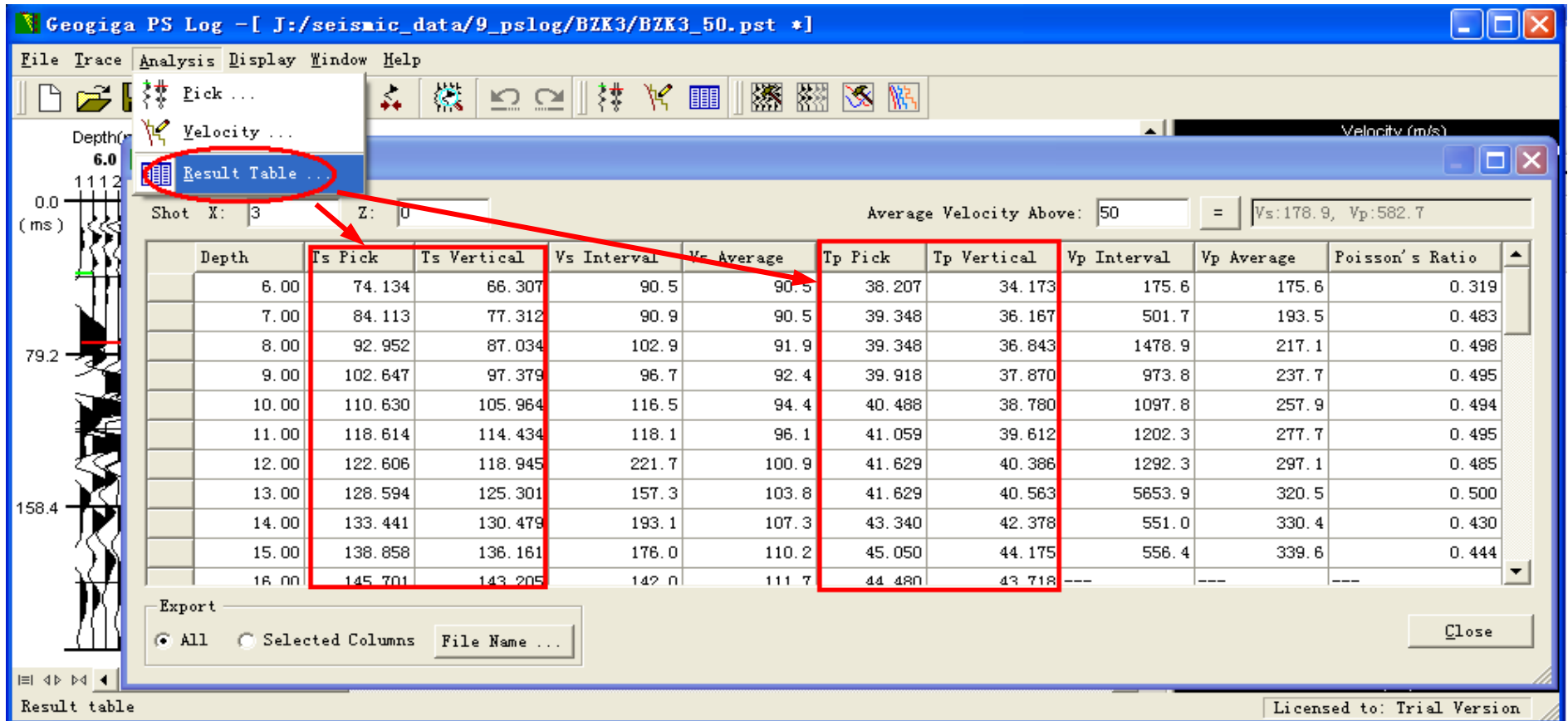
Show the amplitude and the zero line of trace to help picking.

PS Log 1.01 – Option to Display TD Curve



Display TD curve with true vertical time or pick time.

PS Log 1.01 – Output Results



Output true vertical time and pick time