

二维工区解释应用技术

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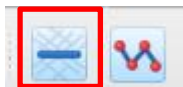
2026年8月25日

GeoFrac



Seismic--Select Seismic Data

➤ 选择单测线



Seismic Horizons Faults Wells T

Select Seismic Data

Select from Basemap

Reselect Vertical Range

Convert

Save Traverse

Volume Flattening

Adjust Floating Datum

Seismic Shift

Manage Seismic Shift

Parameters

Select 2D Seismic Data

☒ Single Line ☐ Traverse

Select Lines

Line List

- AL1
- AL2
- AL3
- AT1
- AT2
- AT3
- LA
- LB

Data List

- ly827_test.var
- ly827_wav_AppPolar.wav
- ly827_wav_RespBand.wav
- ly827_wav_RespFreq.wav
- ly827_wav_RespPhase.wav
- ly927_test.pwd
- mig
- zhu_AT1_convolution2d

Section Range

Start CMP: 1 1 664

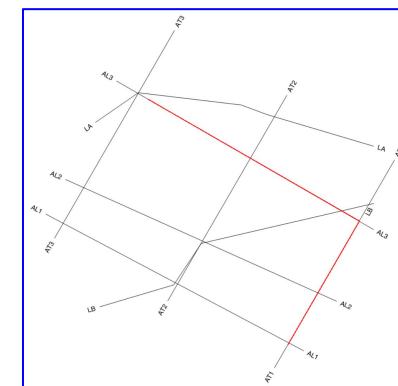
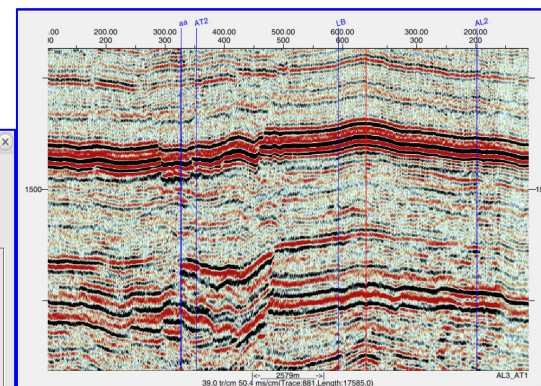
End CMP: 664 1 664

Start Time: 0 0 2480

End Time: 2480 0 2480

Display Data Parameters

OK Apply Cancel



定义地震数据体

➤ 选择任意线



Select 2D Seismic Data

☐ Single Line ☒ Traverse

Select Lines

Traverse List

- aaa
- AL2_AT2
- AL3_AT1

Data List

Section Range

Start CMP: 1 1 664

End CMP: 664 1 664

Start Time: 0 0 2480

End Time: 2480 0 2480

Display Data Parameters

OK Apply Cancel

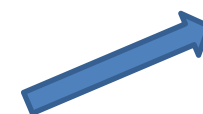
Set Default Seismic Data

Project: DQZJ_ly Survey: dqzj2d

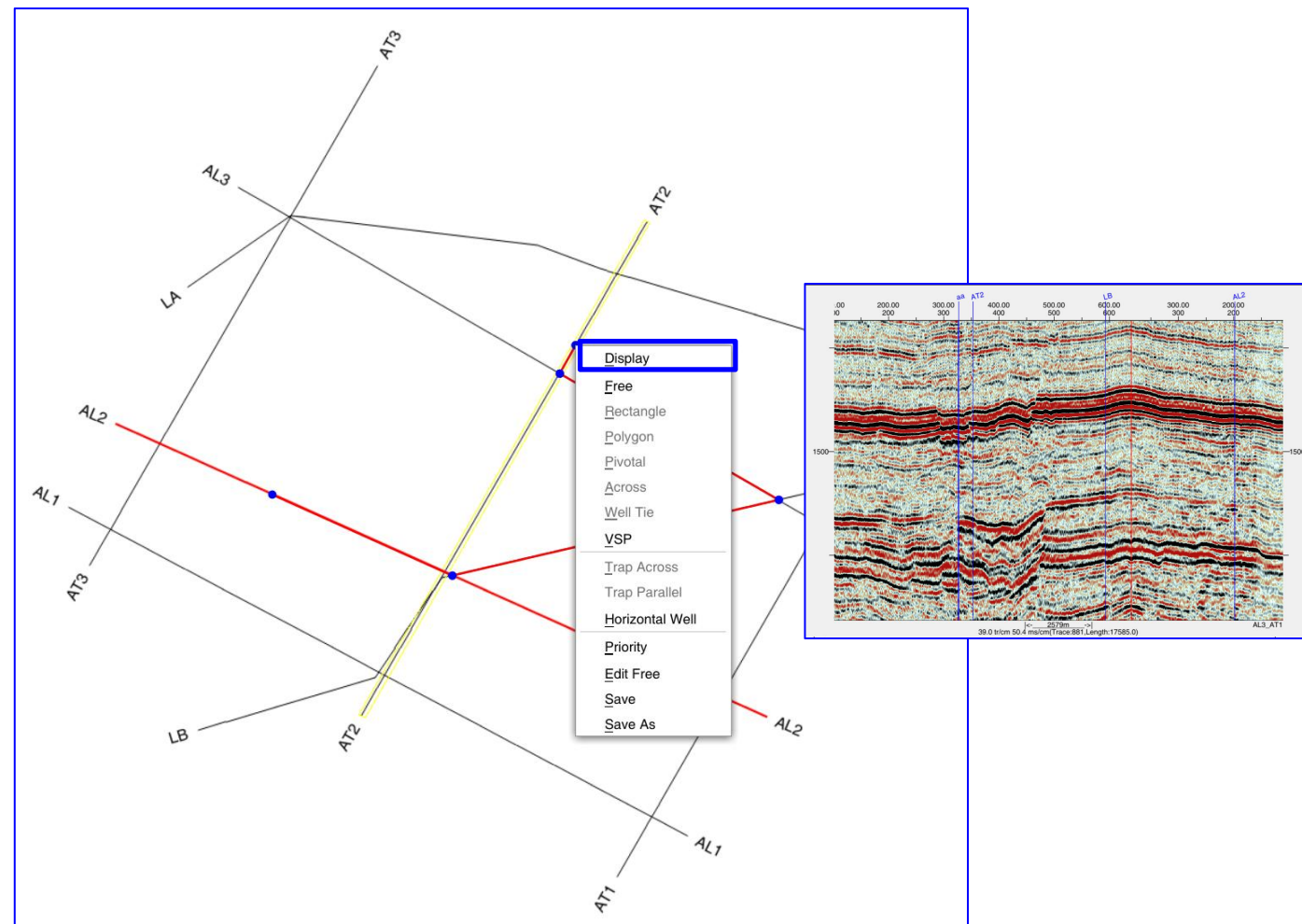
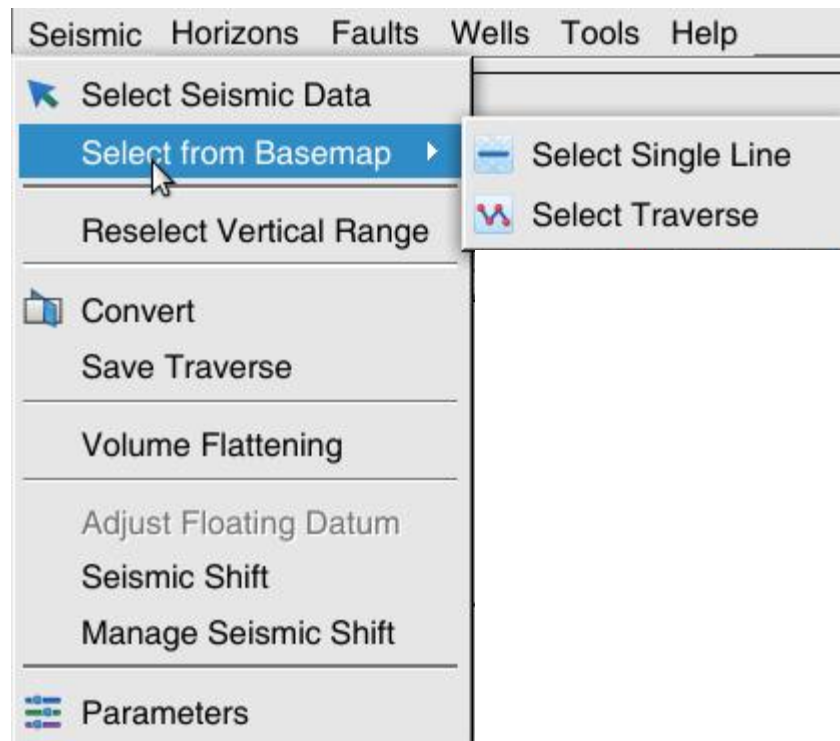
Select Lines

LineName	Seismic Data	Select	Set All
1 AL1	mig	...	Set
2 AL2	mig	...	Set
3 AL3	mig	...	Set
4 AT1	mig	...	Set
5 AT3	mig	...	Set
6 LA	mig	...	Set
7 LB	mig	...	Set

OK Apply Cancel

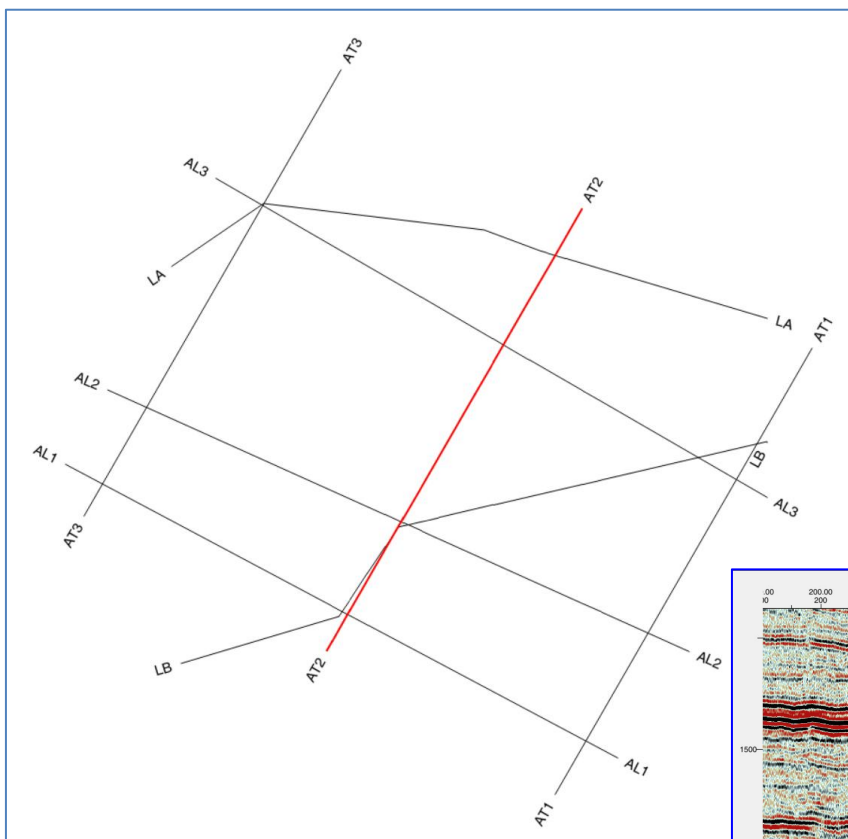


Seismic--Select from Basemap

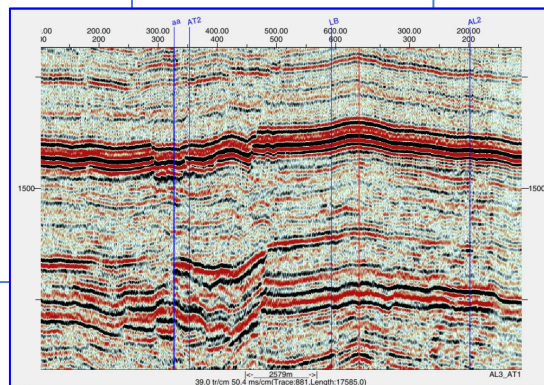
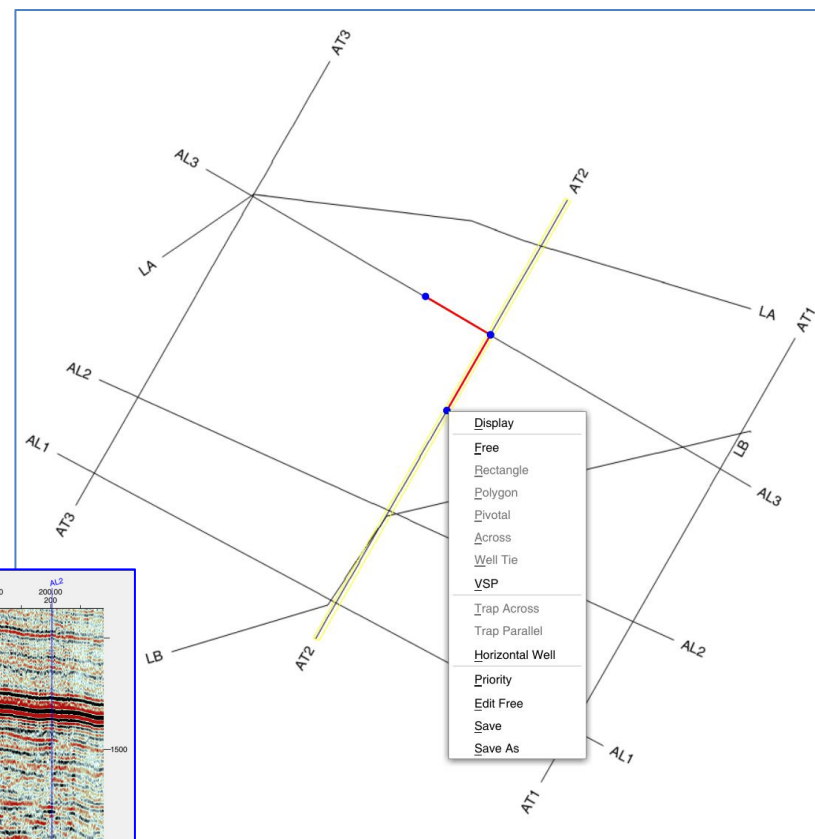


工区底图选择显示地震剖面

选择2D line按钮，点击测线，直接启动常规子系统及测线地震数据

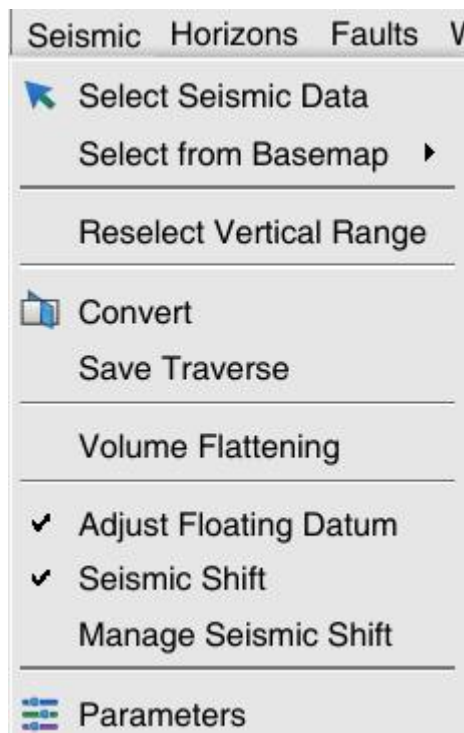
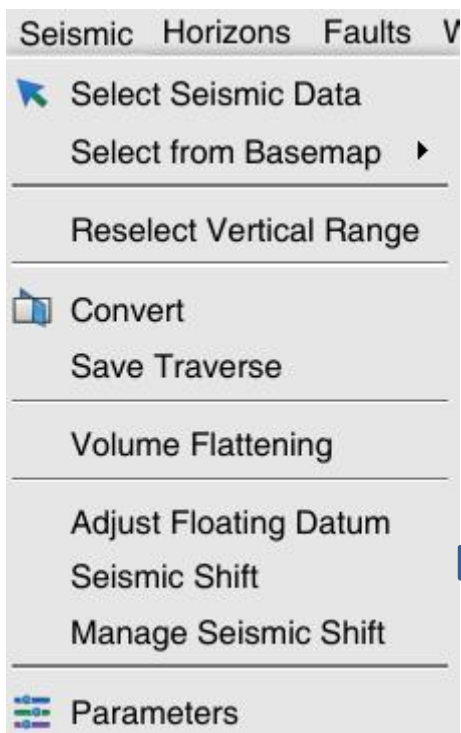


选择任意线按钮，底图拾取位置后右键Display，显示地震数据

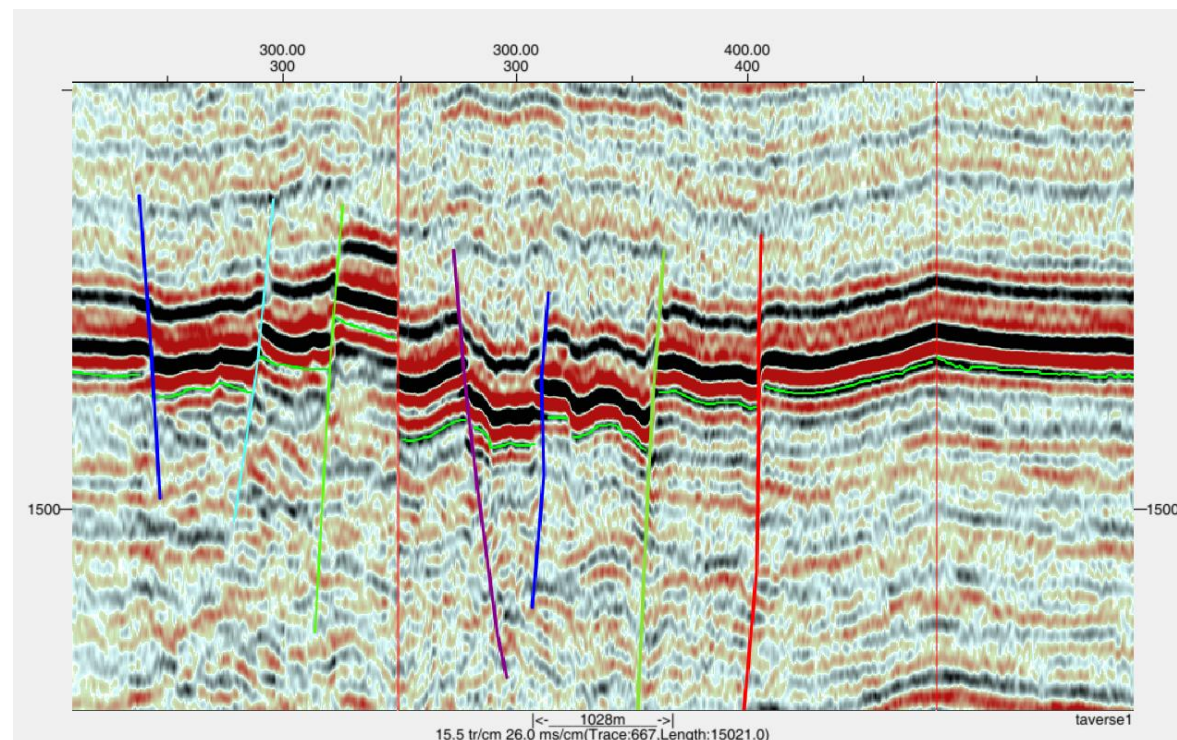




调节浮动基准面：针对不同测线二维地震数据的浮动基准面不同导致的同一波组在时间上有一定差异的情况，可以调节浮动基准面对窗口显示的任意线（**仅限任意线**）的某段做上下移动，进行波组对比，直到移动的剖面与两侧数据闭合为止，同时剖面上的层位和断层数据也同步时移。。



点击Adjust Floating Datum
Seismic Shift自动勾选上



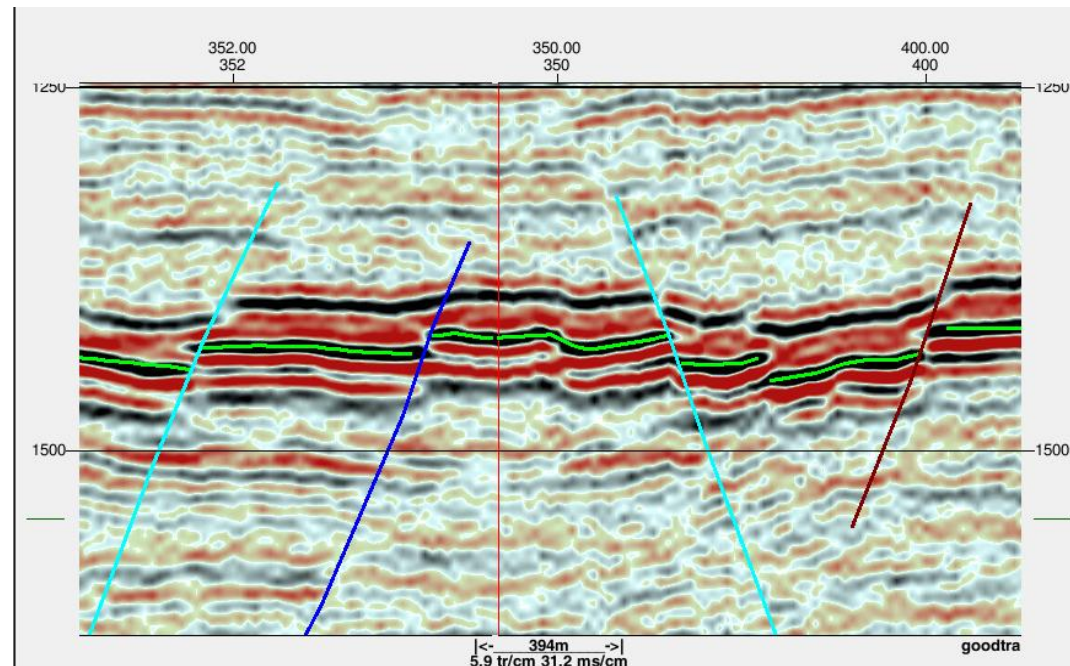
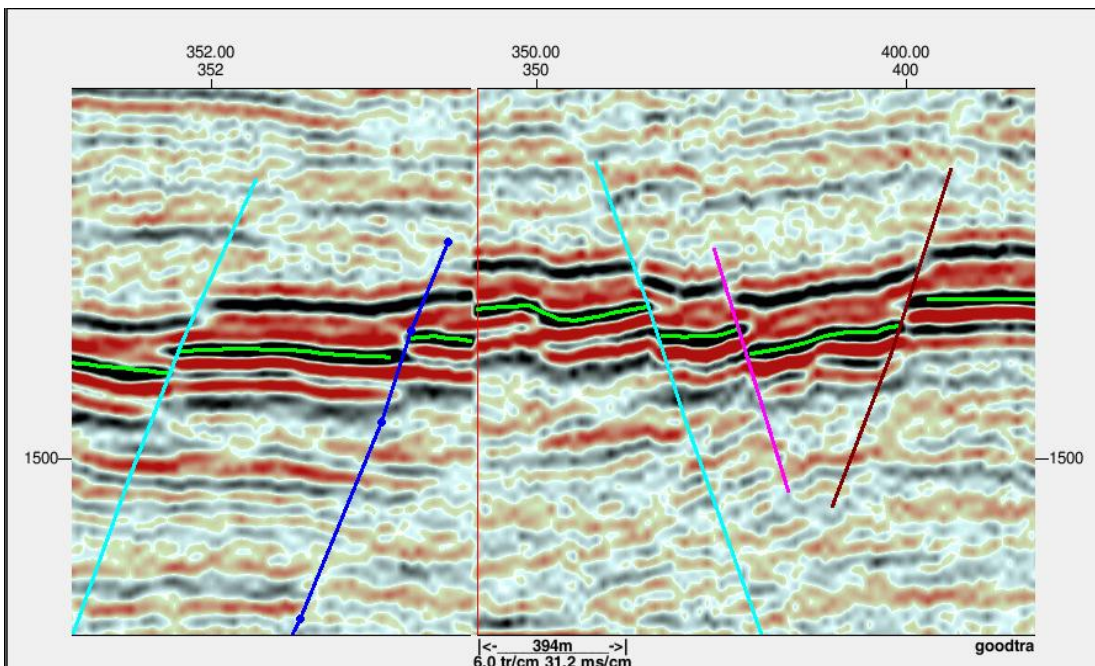
鼠标左键上下拖动剖面

调节浮动基准面

选择Adjust Floating Datum菜单，在需要移动的地震剖面上，按住鼠标左键，可以进行地震数据时移，选择Manage Sismic Shift 菜单，可以在出现的窗口中修改位移量，同时可以保存位移后地震数据及相应的层位和断层数据。

时移前

时移后



查看时移量

Shift Information Manage

Survey Type

☒ Single Survey ☐ Multiple Survey

dqzj2d Add 2D Lines Remove

	Survey	Line Name	Offset
2	dqzj2d	AL2	43
3	dqzj2d	LB	0
4	dqzj2d	AL3	0

时移信息保存成文件

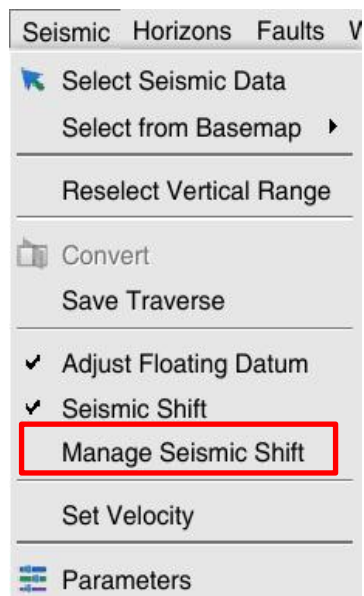
Manage Seismic Shift Project: DQZJ_ly Survey: dqzj2d

Shift File Manage

Current Shift Information shift_dqzj2d_85 Select...

Save Merge Export Import Old Shift Information Import Landmark Shift File

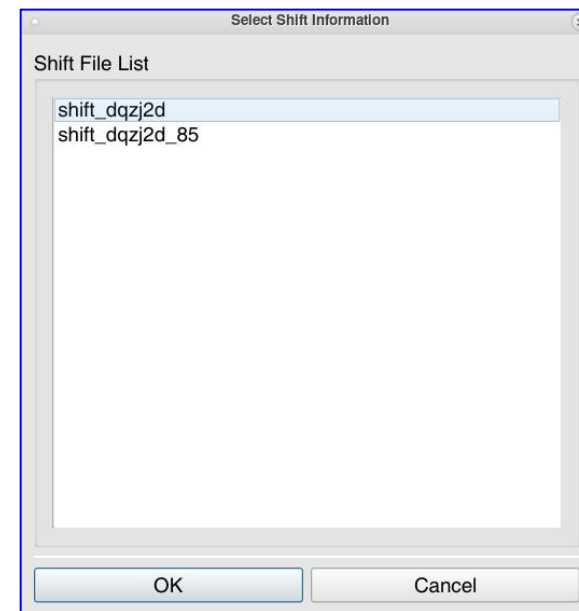
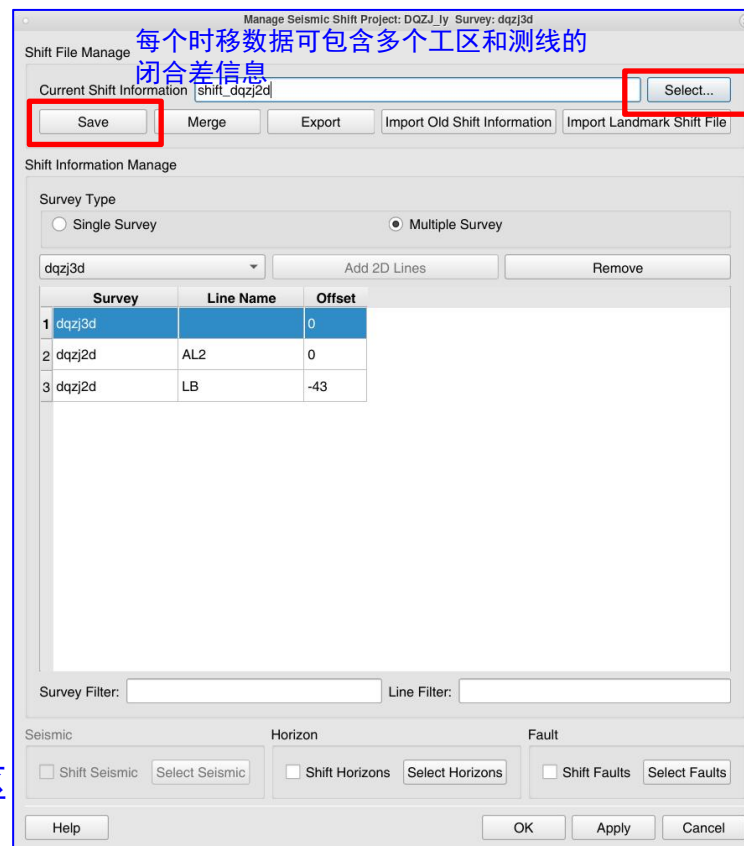
管理地震时移信息：负责地震数据闭合差信息的生成、编辑、合并、导入和导出，在显示地震剖面时可自动读取闭合差信息，并自动时移地震数据、层位和断层数据，使其显示在闭合状态。对不同任意线保存不同的时移信息，方便随意调用。



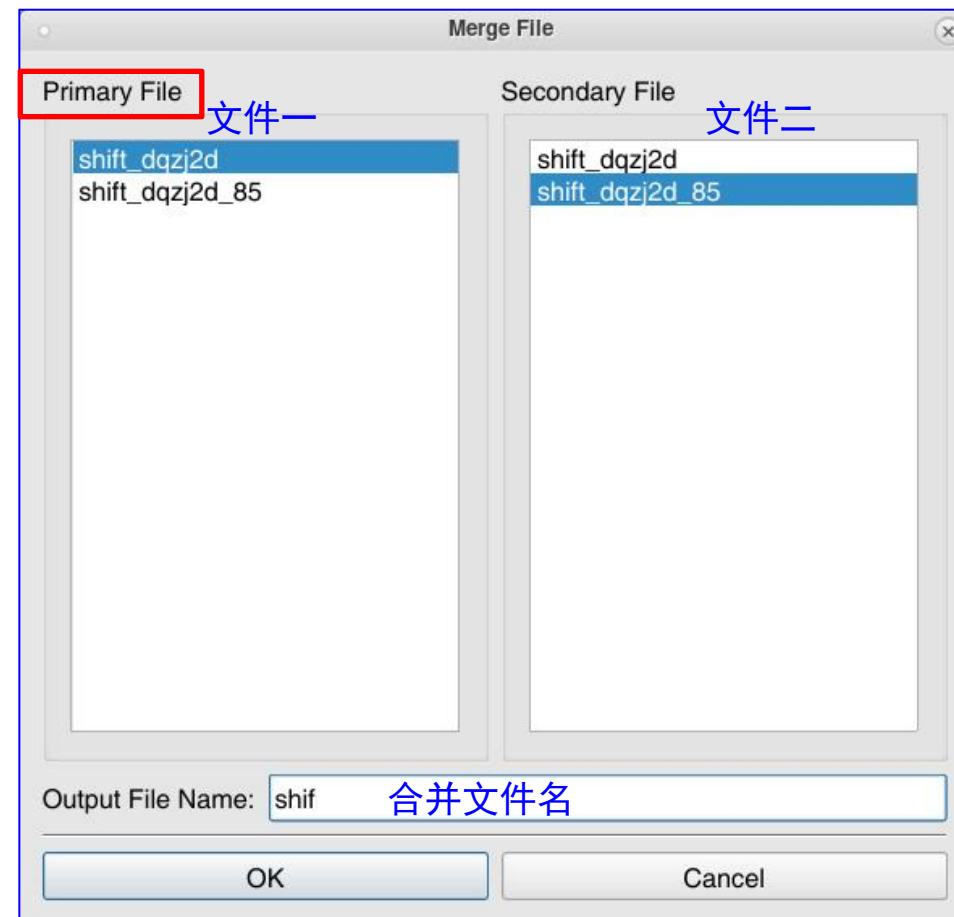
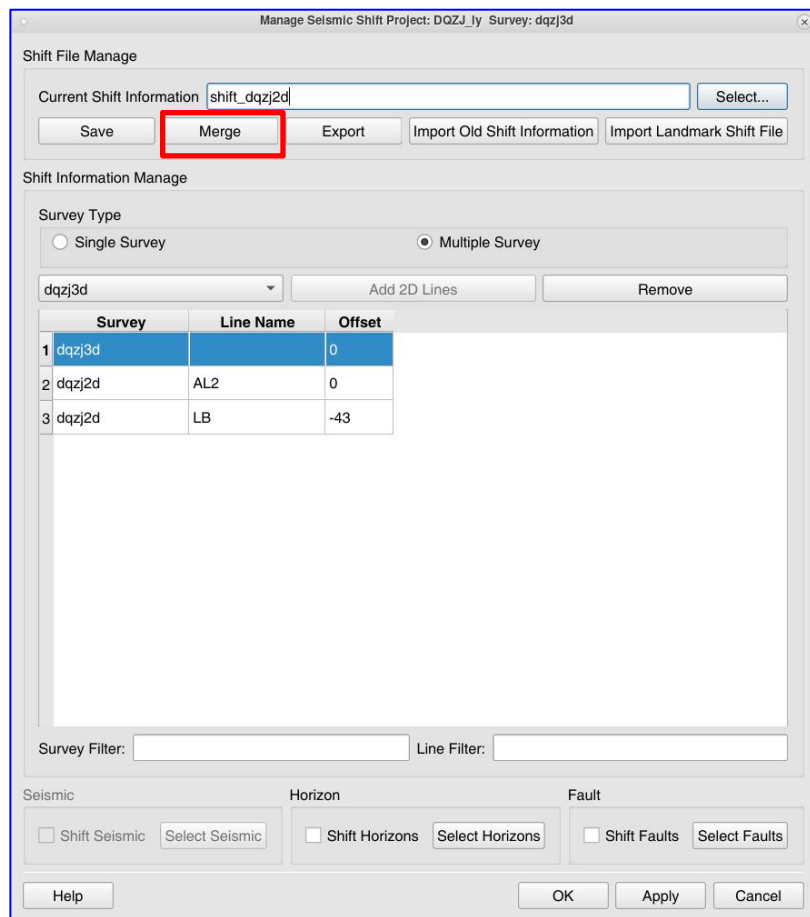
时移数据管理区

时移数据编辑区

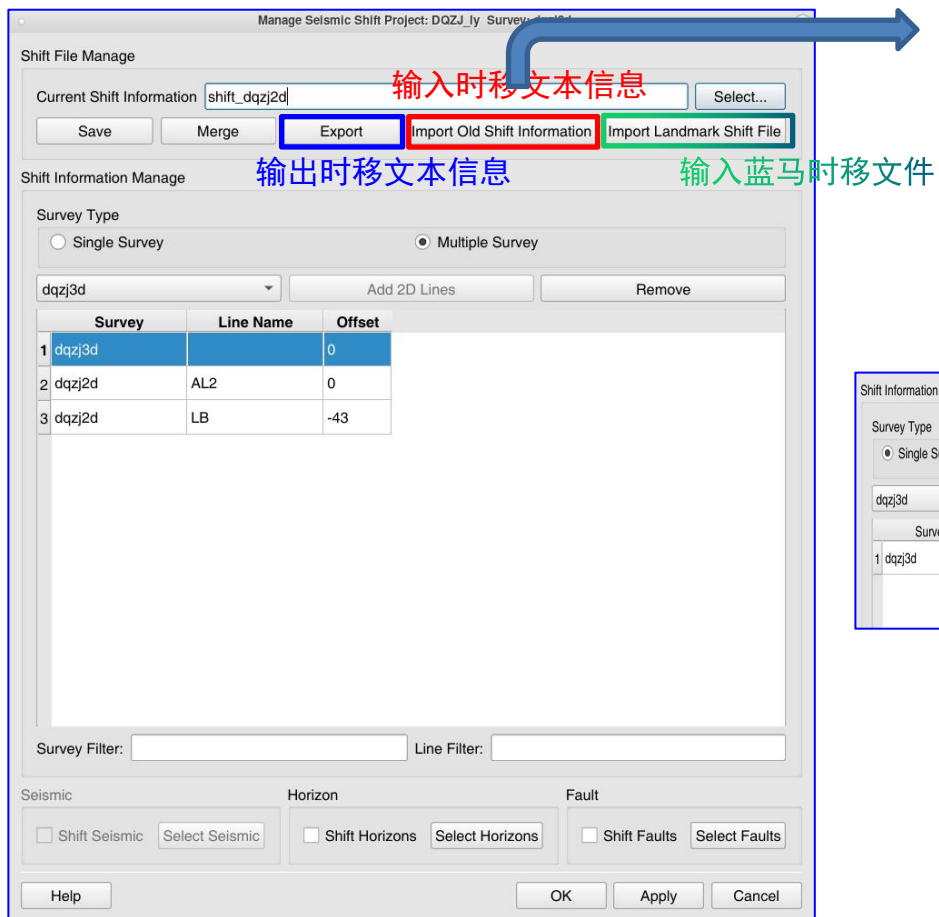
层位断层数据管理区



合并地震时移信息：执行数据的合并功能



时移数据管理：



Shift File Manage

Current Shift Information: shift_dqzj2d 输入时移文本信息 Select...

Save Merge Export Import Old Shift Information Import Landmark Shift File

Shift Information Manage 输出时移文本信息 输入蓝马时移文件

Survey Type

☐ Single Survey ☒ Multiple Survey

Survey: dqzj3d Add 2D Lines Remove

	Survey	Line Name	Offset
1	dqzj3d		0
2	dqzj2d	AL2	0
3	dqzj2d	LB	-43

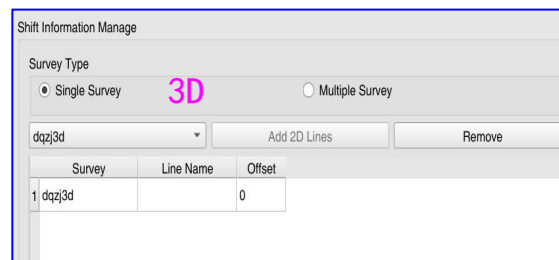
Survey Filter: Line Filter:

Seismic ☐ Shift Seismic Select Seismic Horizon ☐ Shift Horizons Select Horizons Fault ☐ Shift Faults Select Faults

Help OK Apply Cancel

导入原GeoEast老版本保存的各工区时移信息，调用之后需要save到当前GeoEast系统中，否则后续无法使用

Single Survey：时移信息列表中只列出当前所使用工区中的某一个工区的的时移信息



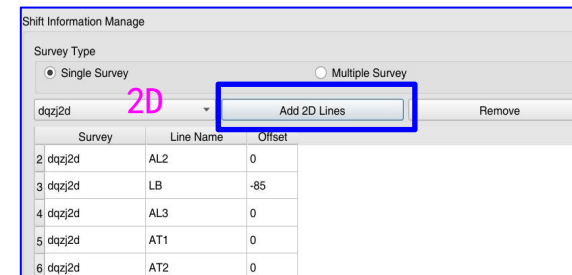
Shift Information Manage

Survey Type

☒ Single Survey 3D ☐ Multiple Survey

Survey: dqzj3d Add 2D Lines Remove

	Survey	Line Name	Offset
1	dqzj3d		0



Shift Information Manage

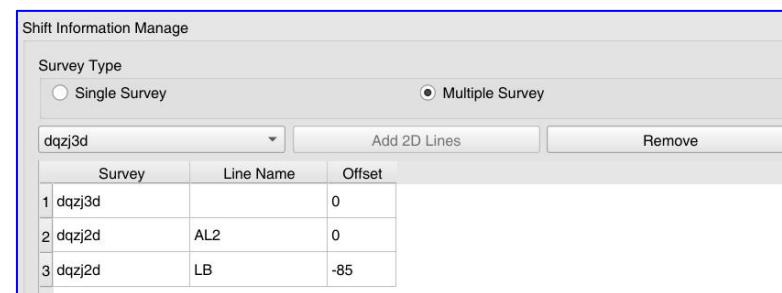
Survey Type

☐ Single Survey 2D ☒ Multiple Survey

Survey: dqzj2d Add 2D Lines Remove

	Survey	Line Name	Offset
2	dqzj2d	AL2	0
3	dqzj2d	LB	-85
4	dqzj2d	AL3	0
5	dqzj2d	AT1	0
6	dqzj2d	AT2	0

Multiple Survey：时移信息列表中列出当前项目下所有工区的时移信息



Shift Information Manage

Survey Type

☐ Single Survey ☒ Multiple Survey

Survey: dqzj3d Add 2D Lines Remove

	Survey	Line Name	Offset
1	dqzj3d		0
2	dqzj2d	AL2	0
3	dqzj2d	LB	-85

时移数据管理：是否输出时移地震、层位、断层数据

Seismic

☒ Shift Seismic

Horizon

☒ Shift Horizons

Fault

☒ Shift Faults

Shift Seismic Data

Project : DQZJ_ly Survey : dqzj2d

Select Lines Target Suffix Name .shift

Line Name	Input Seismic Data	Select	Set All	Output Seismic Data
1 AL2	mig	...	Set	mig.shift
2 LB	mig	...	Set	mig.shift
3 AL3	mig	...	Set	mig.shift
4 AT1	mig	...	Set	mig.shift

OK Cancel

Select Horizon Dialog

Horizon

Select Data Target Suffix Name .shift

	Survey	Source Horizon	Target Horizon
1	dqzj2d	wt1	wt1.shift
2	dqzj2d	wt2	wt2.shift
3	dqzj3d	wt1	wt1.shift
4	dqzj3d	wt2	wt2.shift

Remove

OK Apply Cancel

Select Fault Dialog

Fault

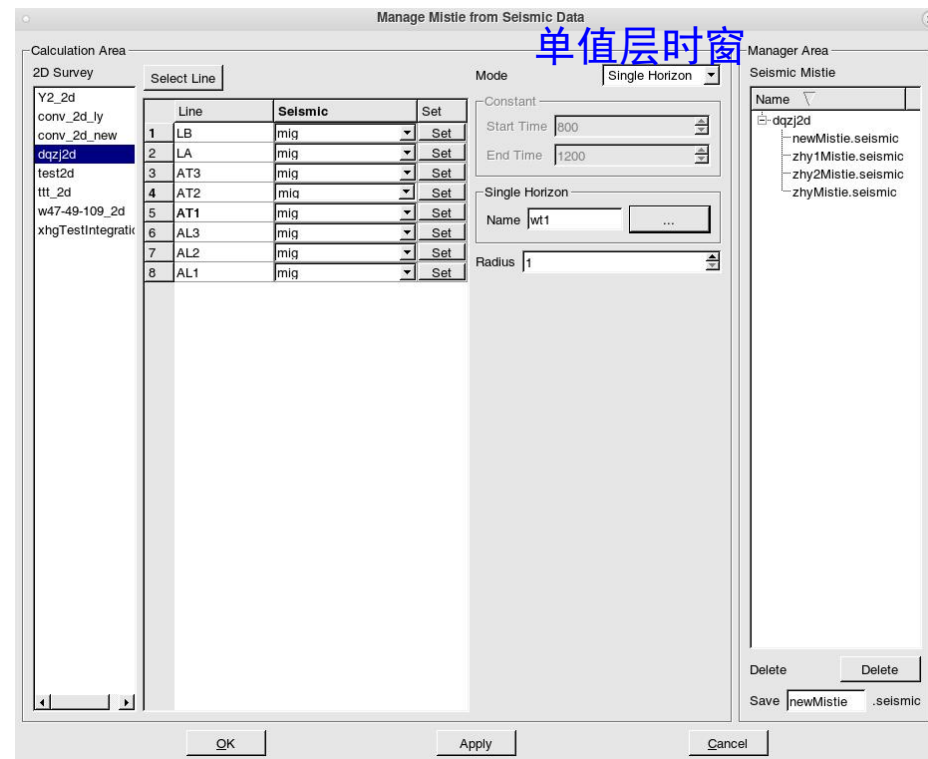
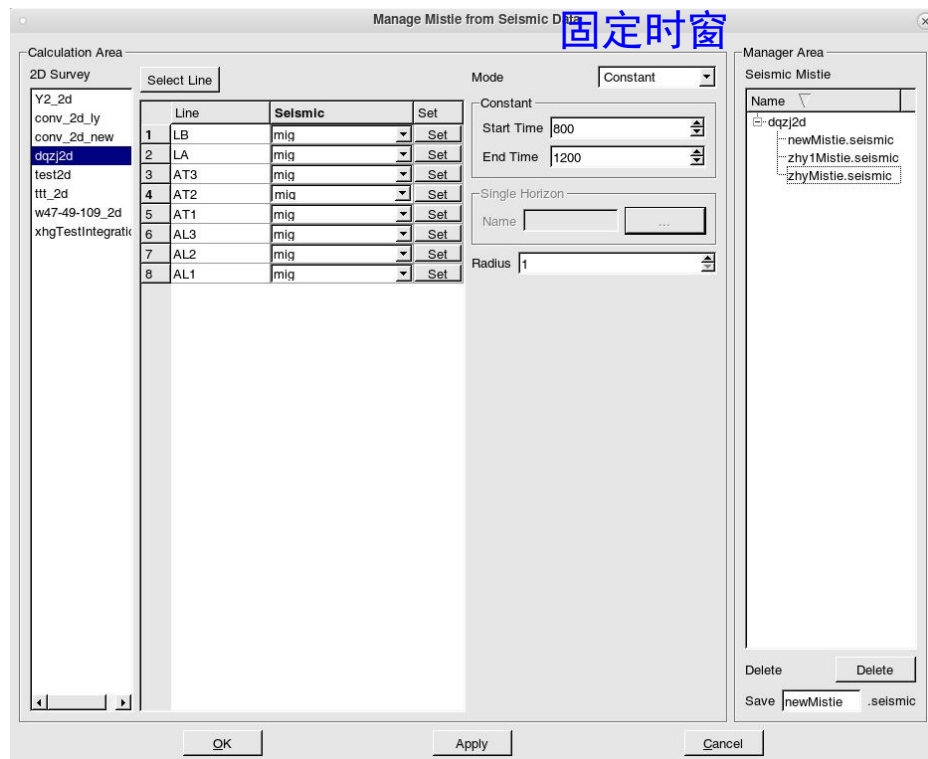
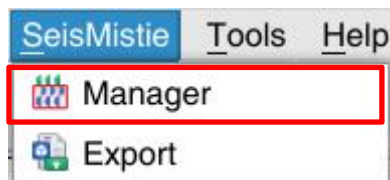
Select Data Target Suffix Name .shift

	Survey	Source Fault	Target Fault
15	dqzj2d	2d_f5	2d_f5.shift
16	dqzj2d	2d_f6	2d_f6.shift
17	dqzj2d	2d_f7	2d_f7.shift
18	dqzj2d	2d_f8	2d_f8.shift
19	dqzj2d	2d_f9	2d_f9.shift
20	dqzj2d	F5	F5.shift
21	dqzj3d	F9	F9.shift
22	dqzj3d	F8	F8.shift
23	dqzj3d	F7	F7.shift
24	dqzj3d	F6	F6.shift
25	dqzj3d	F4	F4.shift
26	dqzj3d	F3	F3.shift

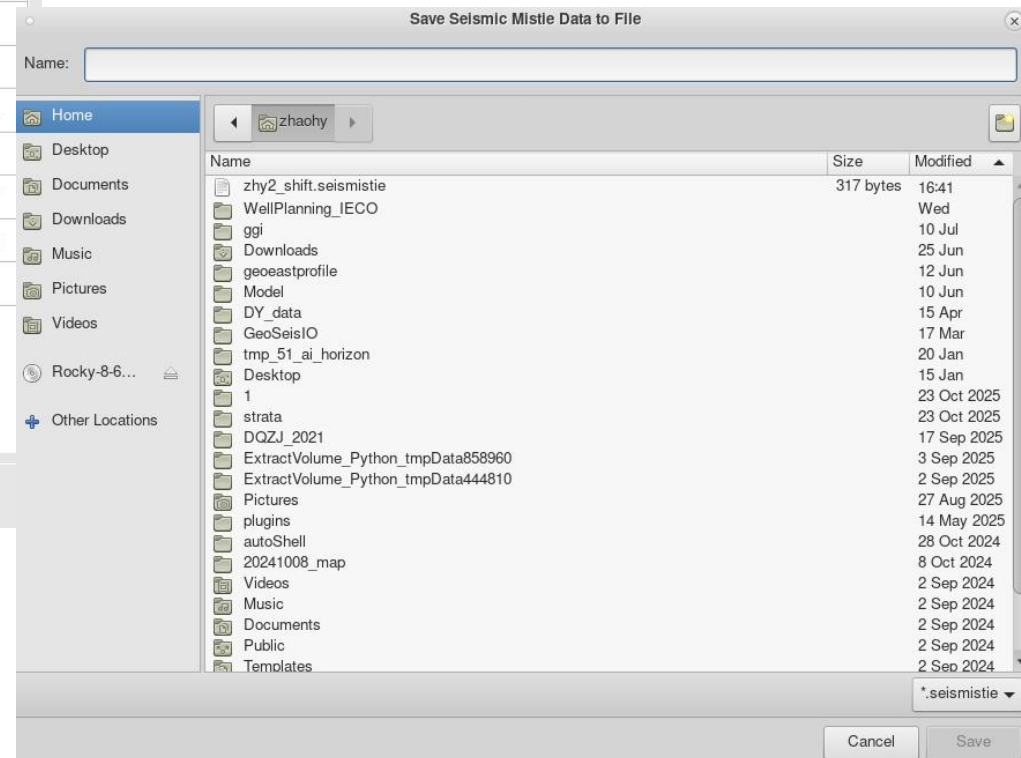
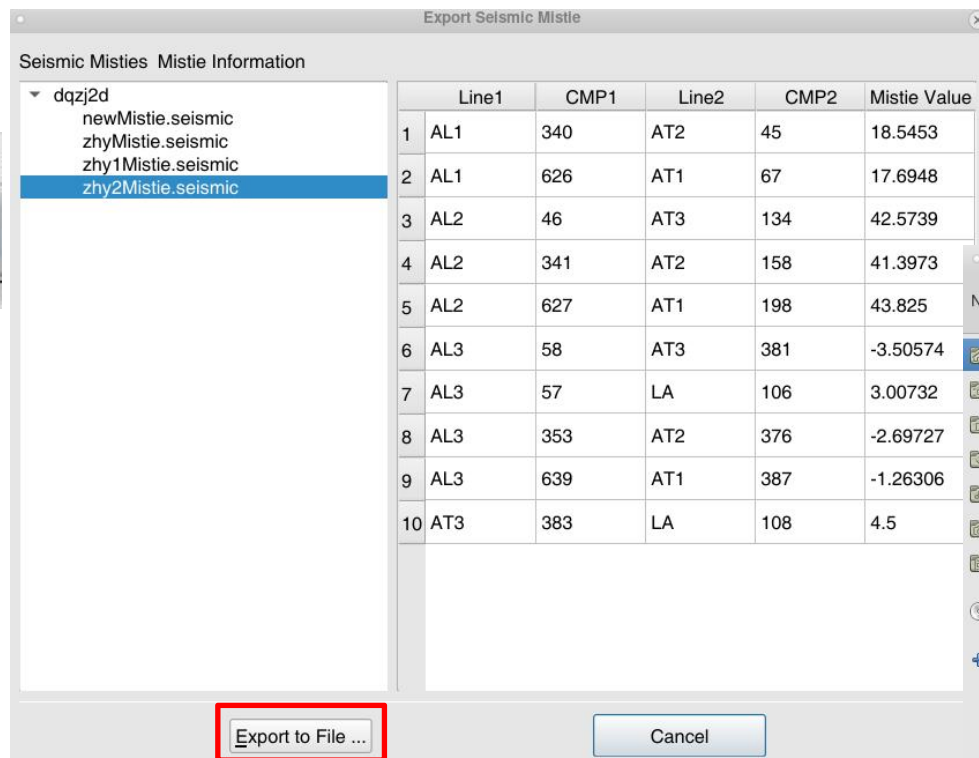
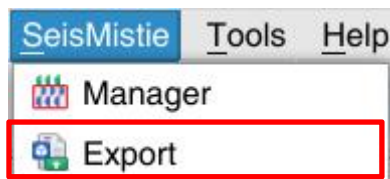
Remove

OK Apply Cancel

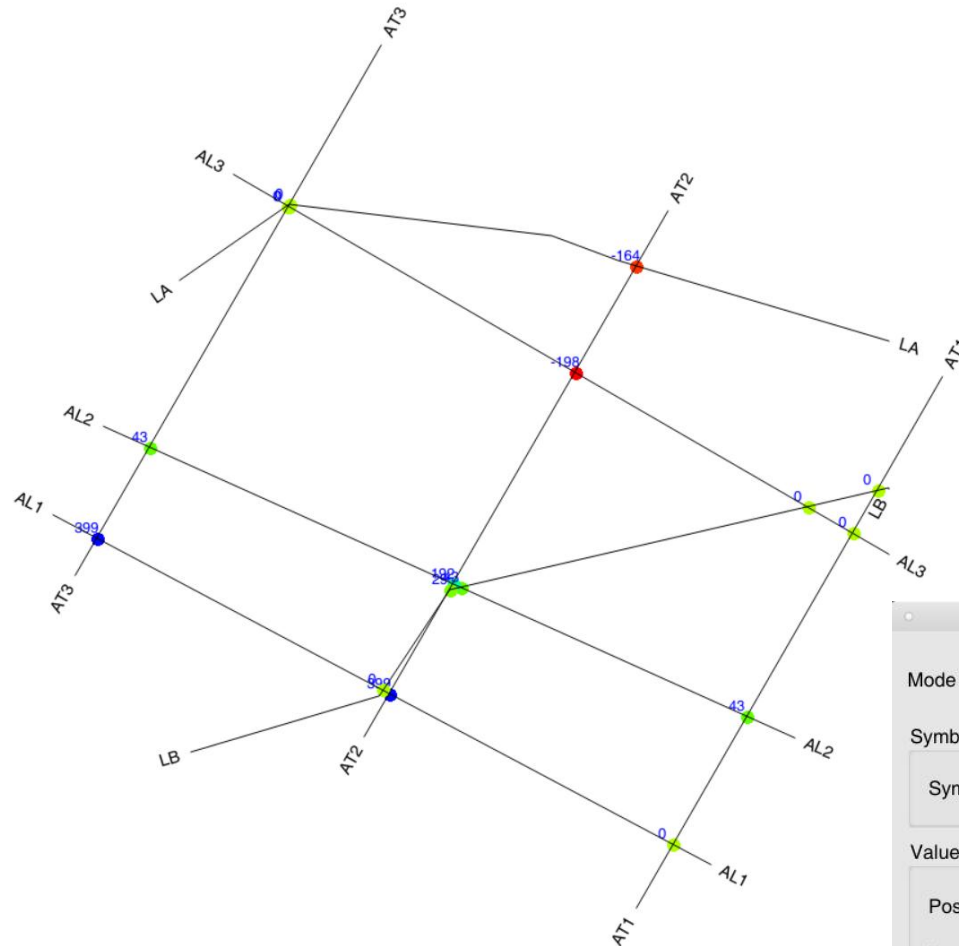
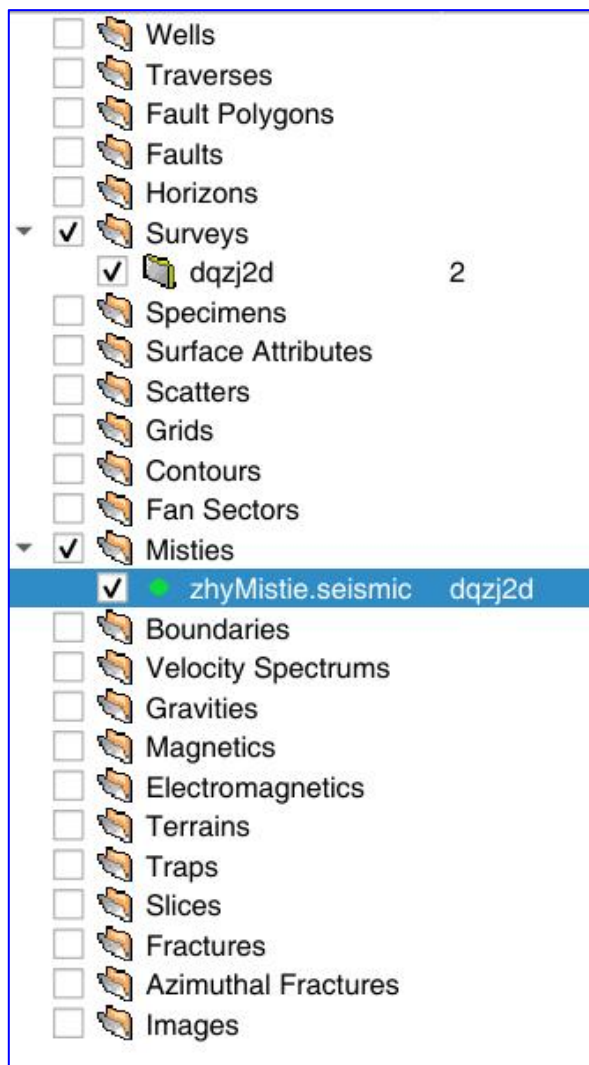
SeisMistie菜单提供在底图上计算、保存、删除二维测线交点闭合差功能。



计算得到的闭合差文件可以Export to File

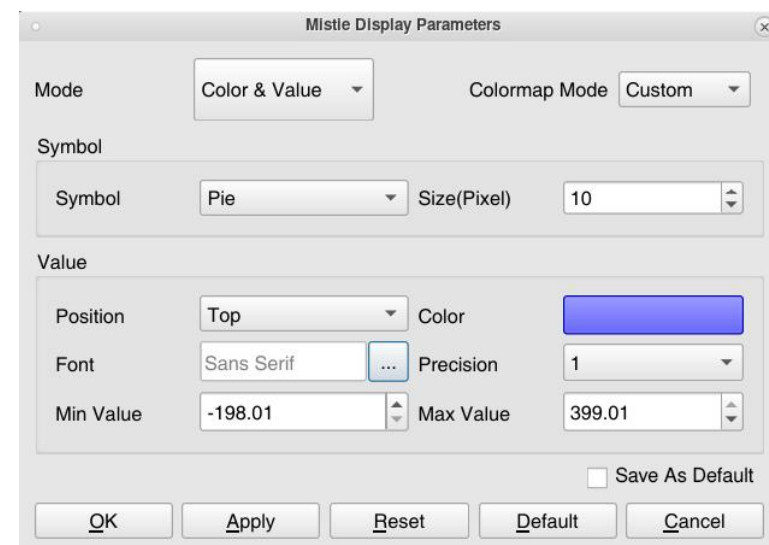


数据树显示节点



二维测线显示闭合差

显示参数设置

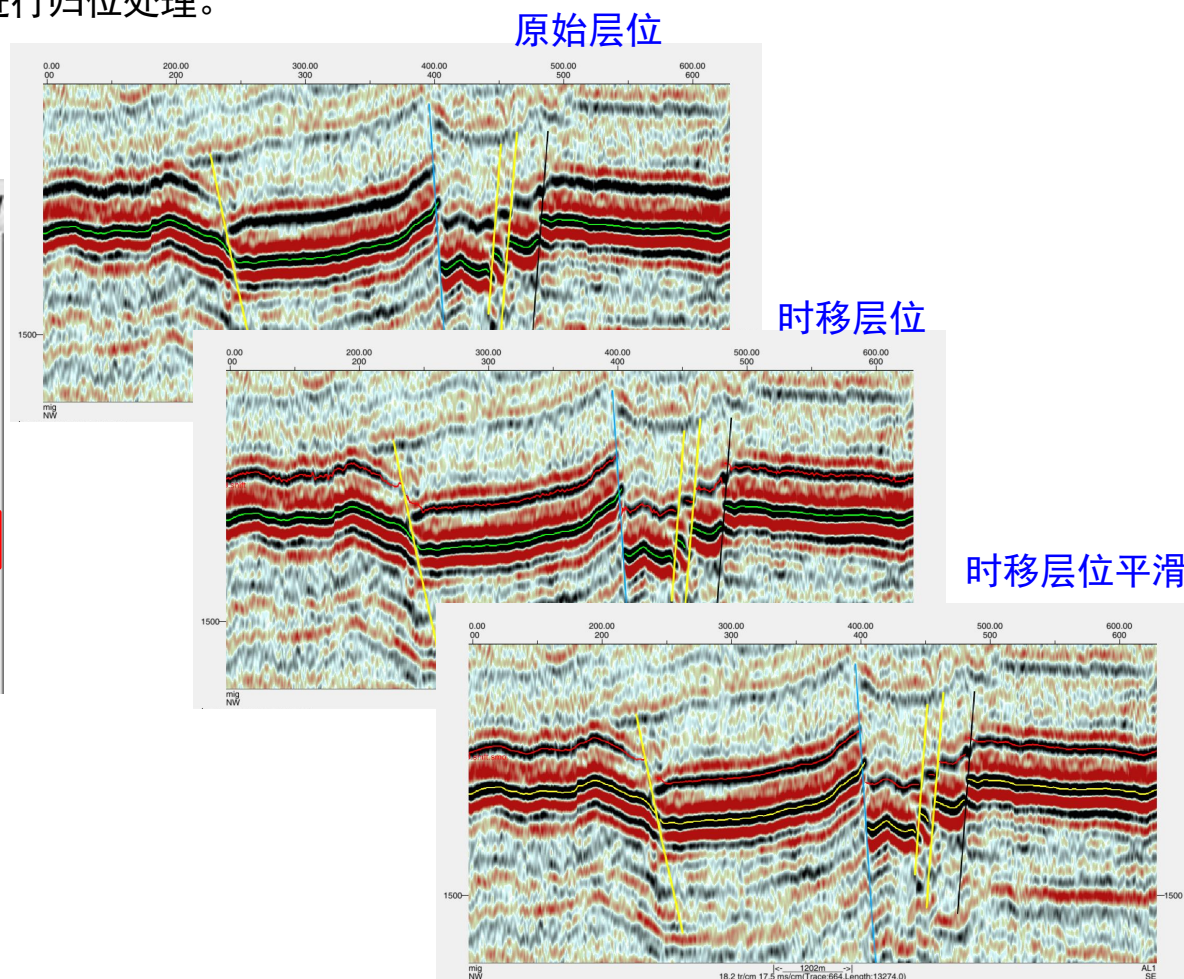
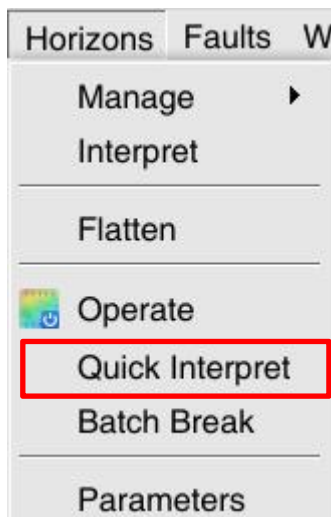
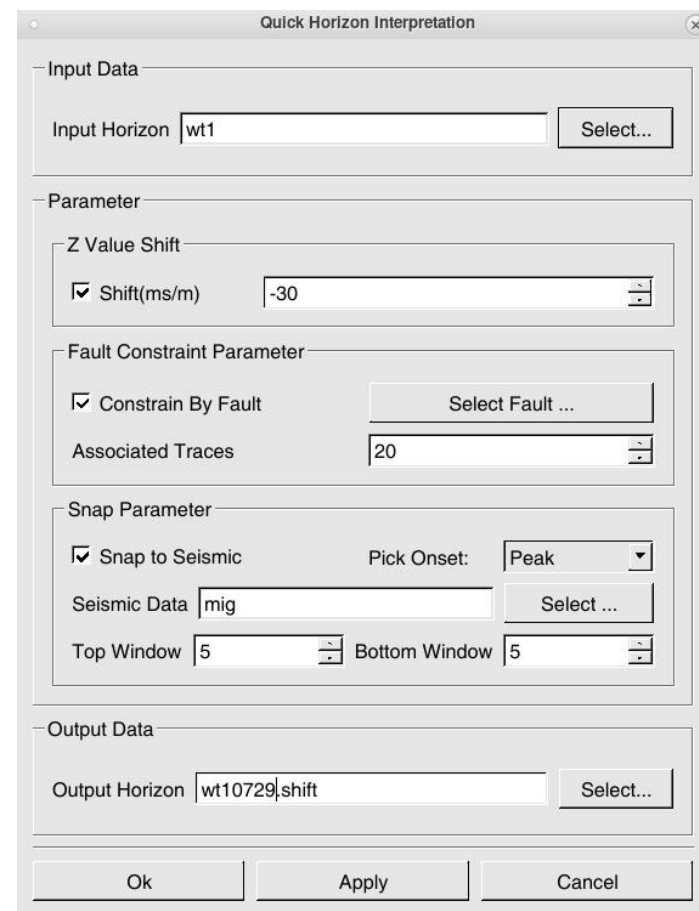




层位快速解释

层位快速解释功能对用户选定的层位同时进行时移、断层约束和归位功能，计算生成新的层位并保存。

首先对已有层位进行时移，然后用断层对其进行约束，对越过断层的部分裁剪，对未搭接到断层的层位自动延拓到断层上，最后用地震数据对层位进行归位处理。

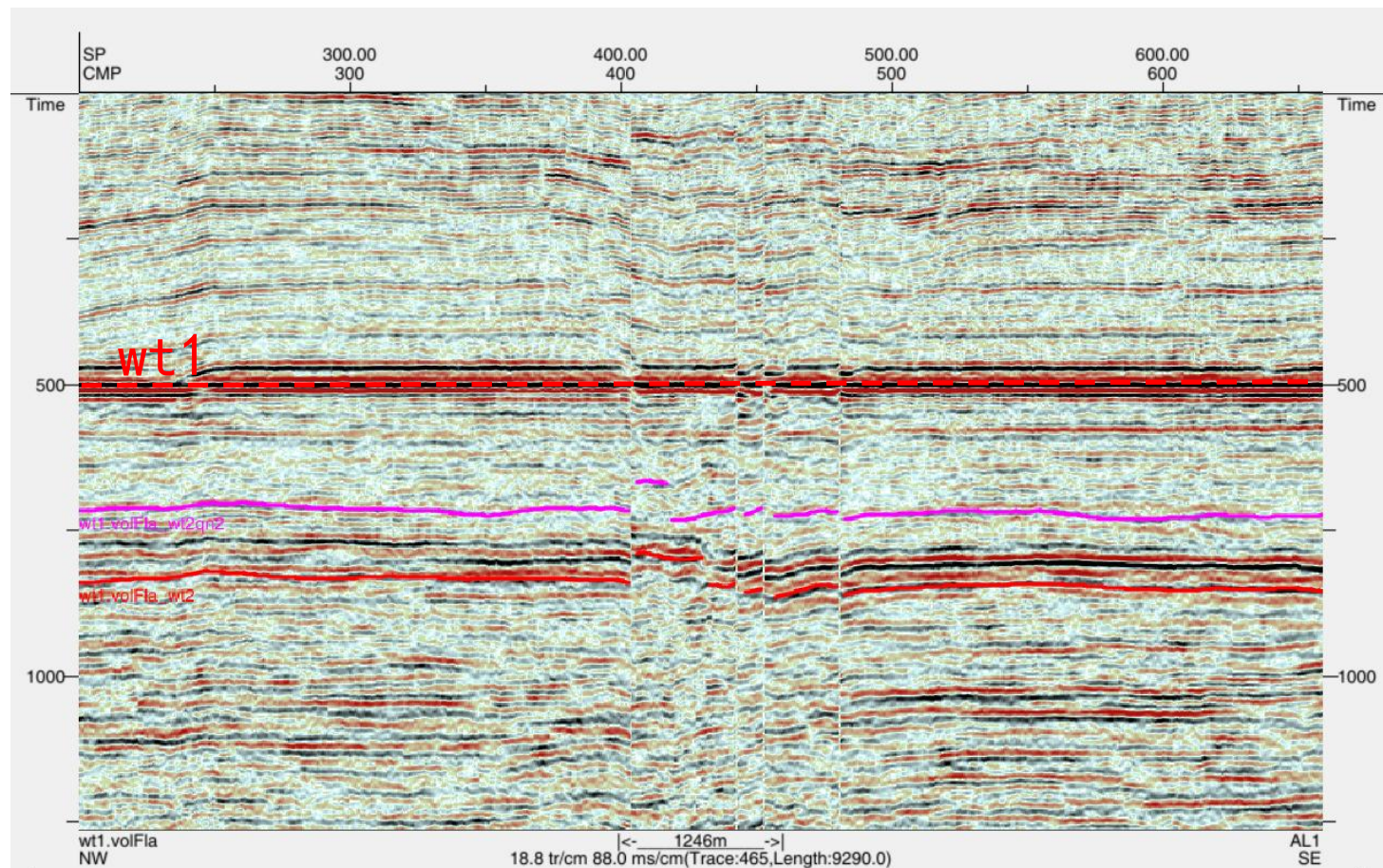
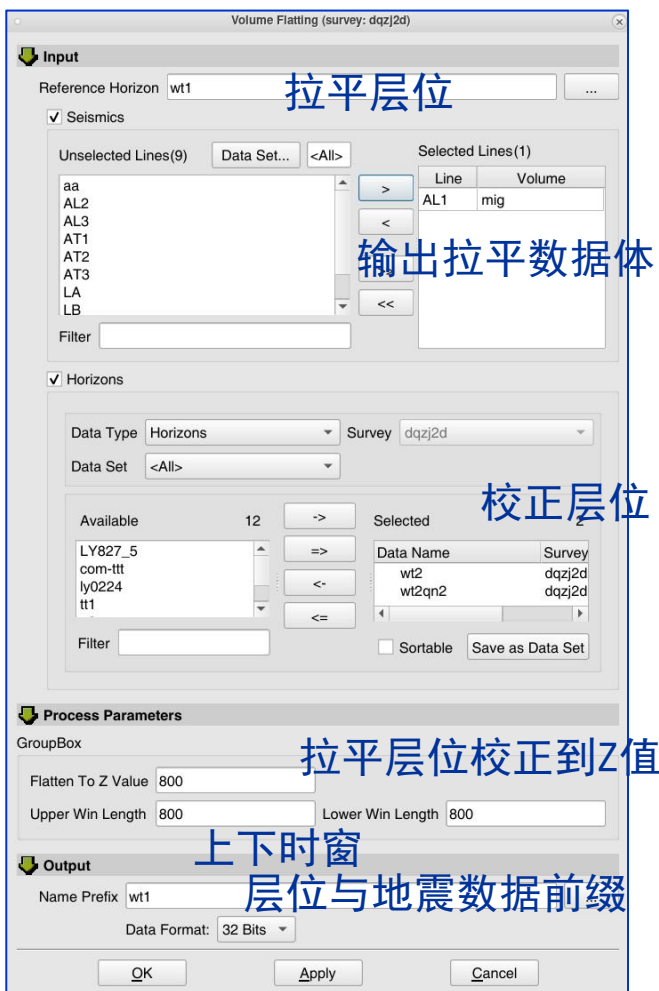
The image shows the 'Quick Horizon Interpretation' dialog box. It contains the following sections and parameters:

- Input Data:** Input Horizon: wt1
- Parameter:**
 - Z Value Shift:** Shift(ms/m): -30
 - Fault Constraint Parameter:**
 - Constrain By Fault: [checked]
 - Associated Traces: 20
 - Snap Parameter:**
 - Snap to Seismic: [checked]
 - Pick Onset: Peak
 - Seismic Data: mig
 - Top Window: 5, Bottom Window: 5
- Output Data:** Output Horizon: wt10729.shift

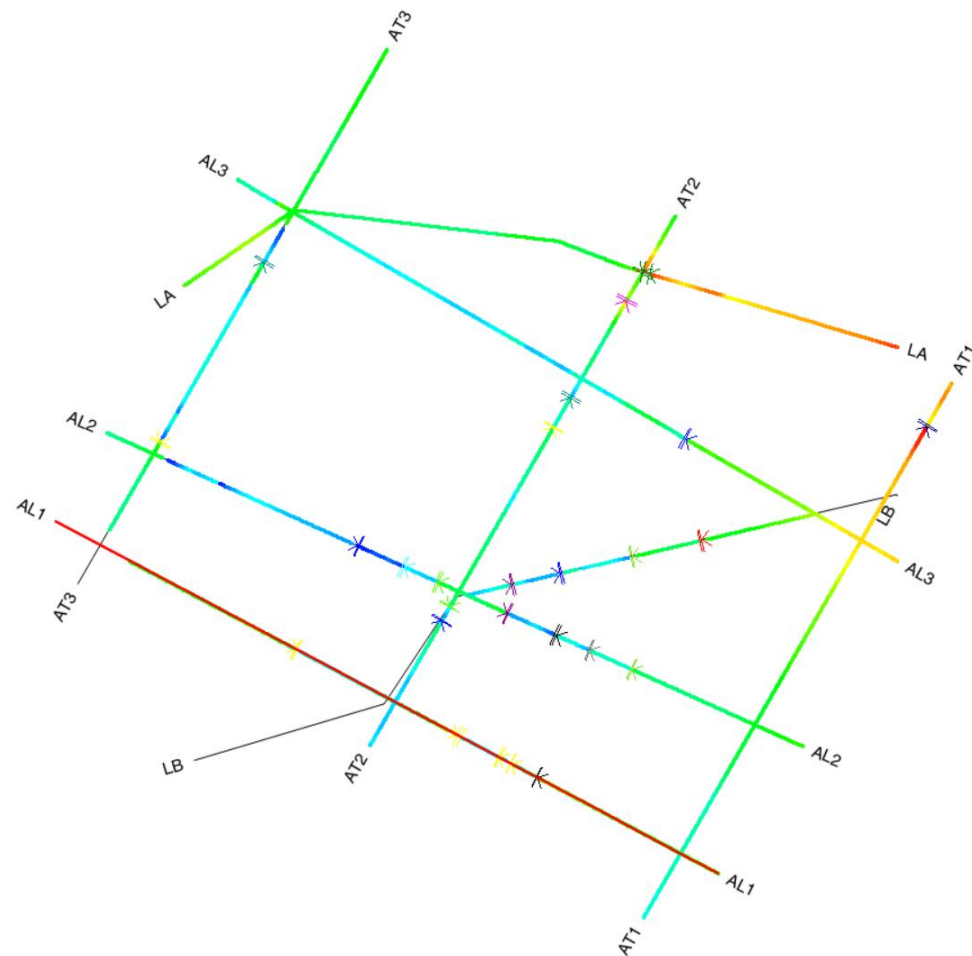
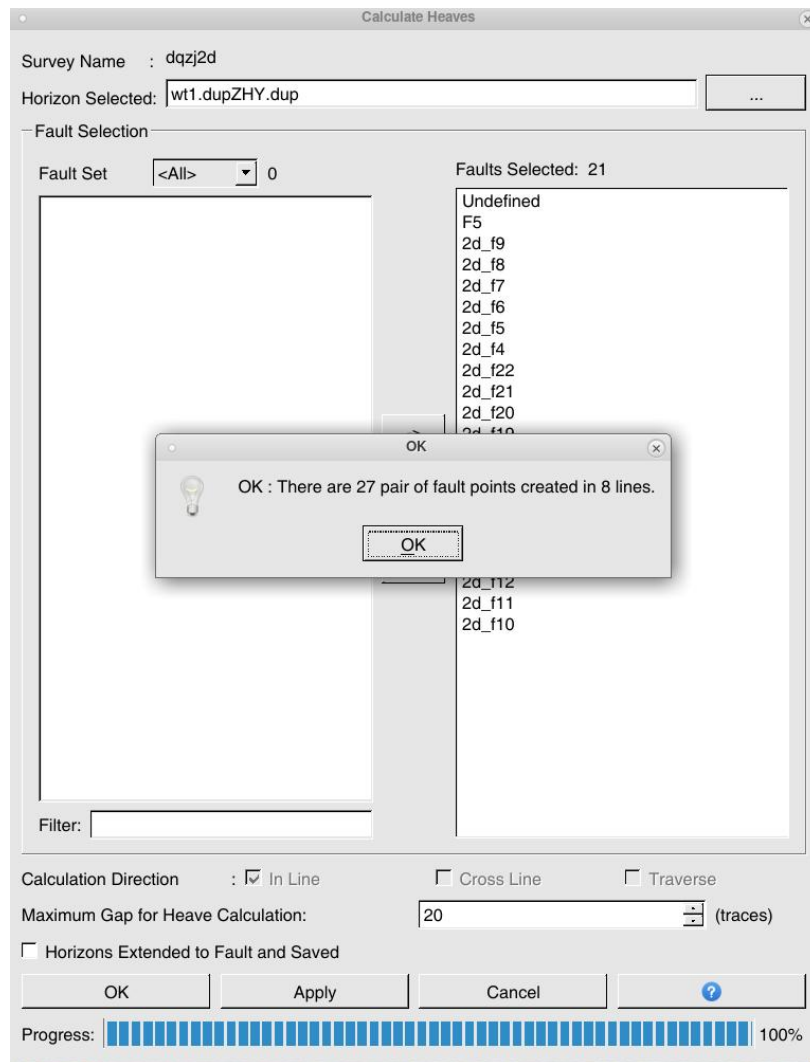
Buttons: Ok, Apply, Cancel

数据体拉平

数据体拉平功能可以把整个地震数据体沿某一层位做拉平处理，与剖面上层拉平不同的是，数据体拉平是对整个数据体的操作，同时可以对多个层位进行拉平。



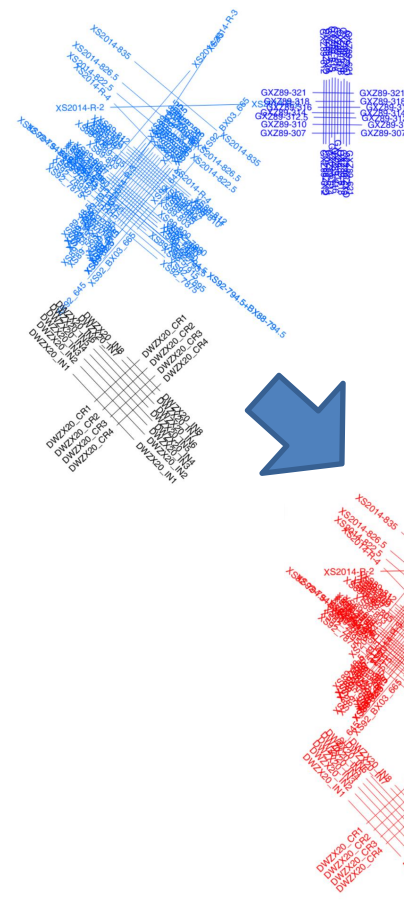
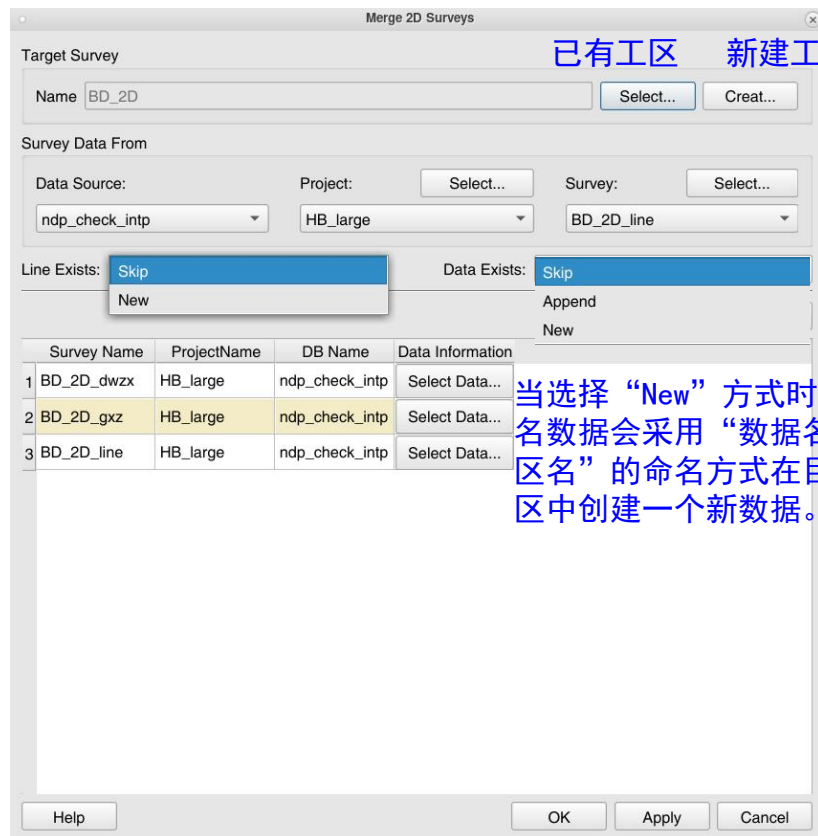
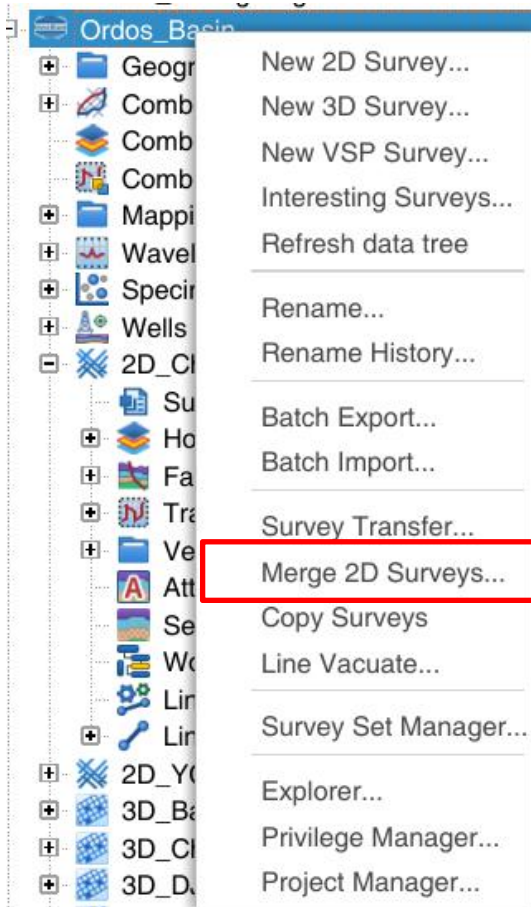
计算断距分为计算当前剖面断距和计算工区断距，计算完成后提示计算断点数，底图上相应层位会显示断点。





二维工区合并

通过整合多个二维工区，实现多套二维工区资料的统一管理，减少后续构造解释中数据切换、选择操作，可提高构造解释、储层预测整体效率。

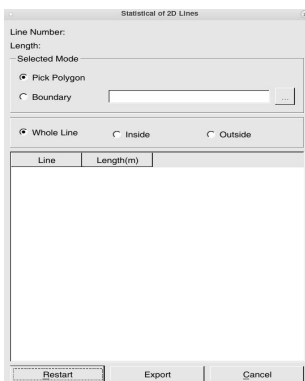
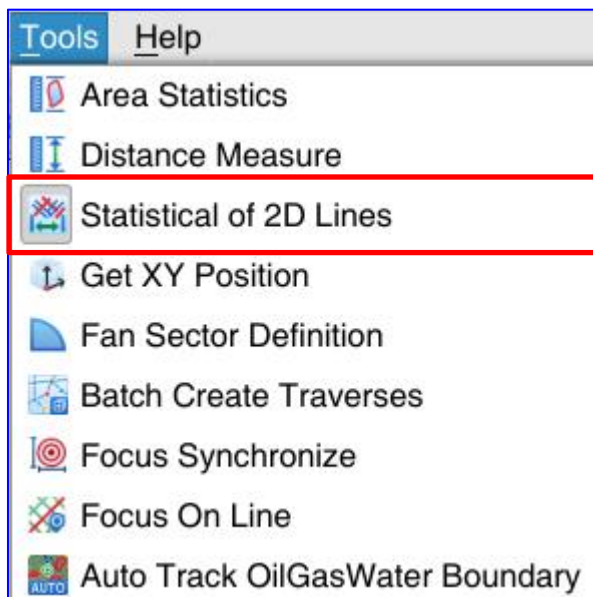


二维工区合并优势:

- 单工区测线信息浏览更方便
- 单工区属性提取更快捷
- 单工区任意线拾取效率更高效

二维测线统计可以按照拾取Polygon和选取Boundary两种方式，每种方式可以统计范围内、范围外、范围内的测线长度。

工区底图Tools下拉菜单



范围内

Statistical of 2D Lines

Line Number: 7

Length: 89257.61(m) 72173.08(m)

Selected Mode

☒ Pick Polygon

☐ Boundary

☐ Whole Line ☒ Inside ☐ Outside

Line Name	Inside(m)
1 dqzj2d / 7	72173.08
AL1	9925.23
AL2	10018.17
AL3	9306.83
AT1	10920.00
AT2	10820.00
LA	7354.10
LB	13828.74

Restart Export Cancel

范围外

Statistical of 2D Lines

Line Number: 7

Length: 89257.61(m) 17084.52(m)

Selected Mode

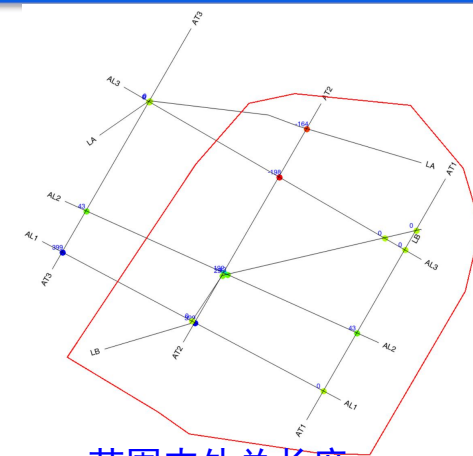
☒ Pick Polygon

☐ Boundary

☐ Whole Line ☐ Inside ☒ Outside

Line Name	Outside(m)
1 dqzj2d / 7	17084.52
AL1	3349.51
AL2	3516.13
AL3	4199.54
AT1	0.00
AT2	0.00
LA	6019.35
LB	0.00

Restart Export Cancel



范围内外总长度

Statistical of 2D Lines

Line Number: 7

Length: 89257.61(m)

Selected Mode

☒ Pick Polygon

☐ Boundary

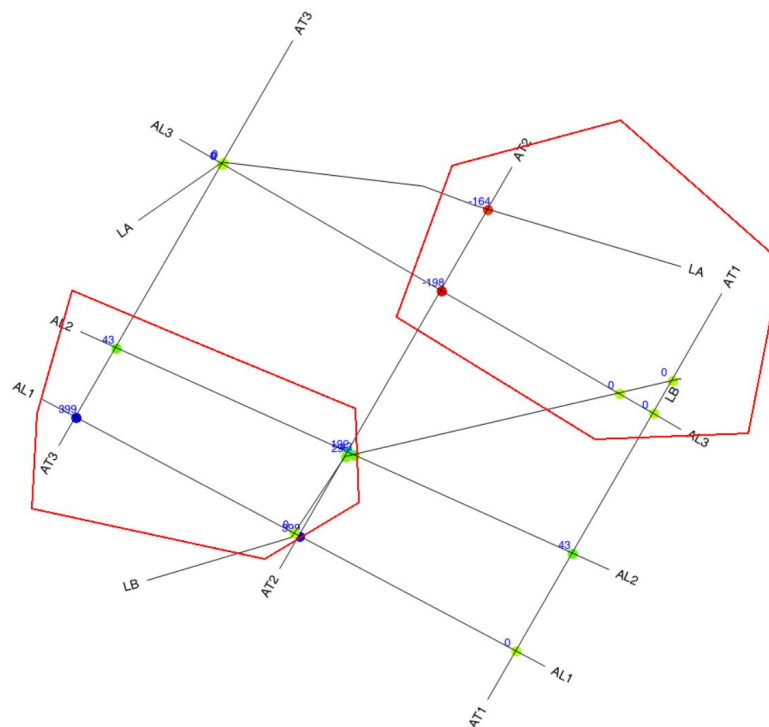
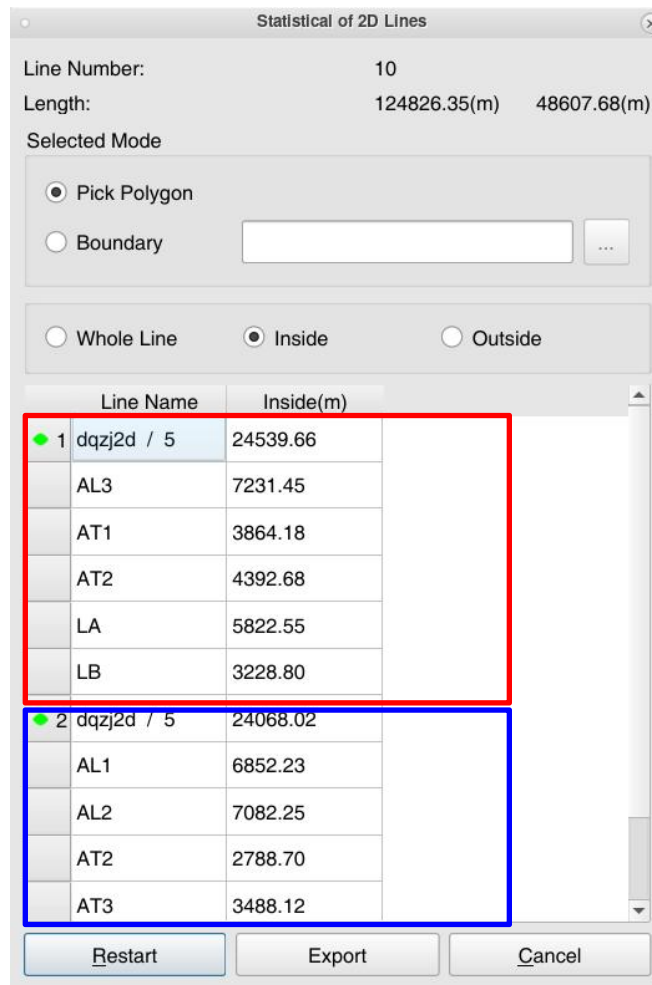
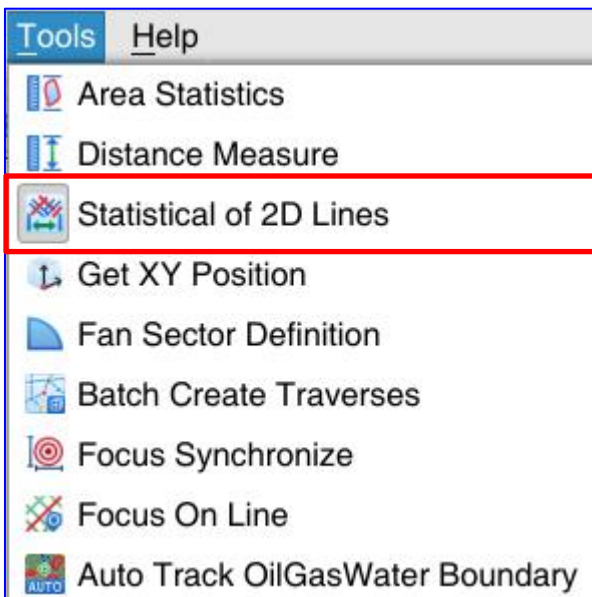
☒ Whole Line ☐ Inside ☐ Outside

Line Name	Length(m)
1 dqzj2d / 7	89257.61
AL1	13274.74
AL2	13534.30
AL3	13506.37
AT1	10920.00
AT2	10820.00
LA	13373.45
LB	13828.74

Restart Export Cancel

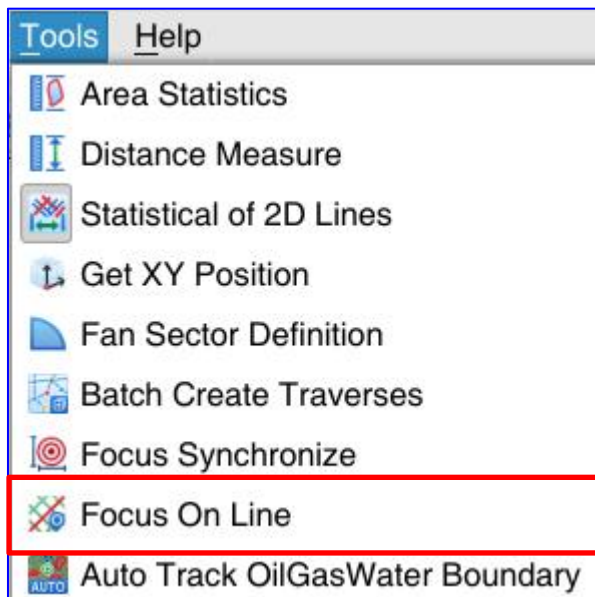
二维测线统计按照拾取Polygon方式，支持多个polygon综合统计二维测线长度

Tools下拉菜单

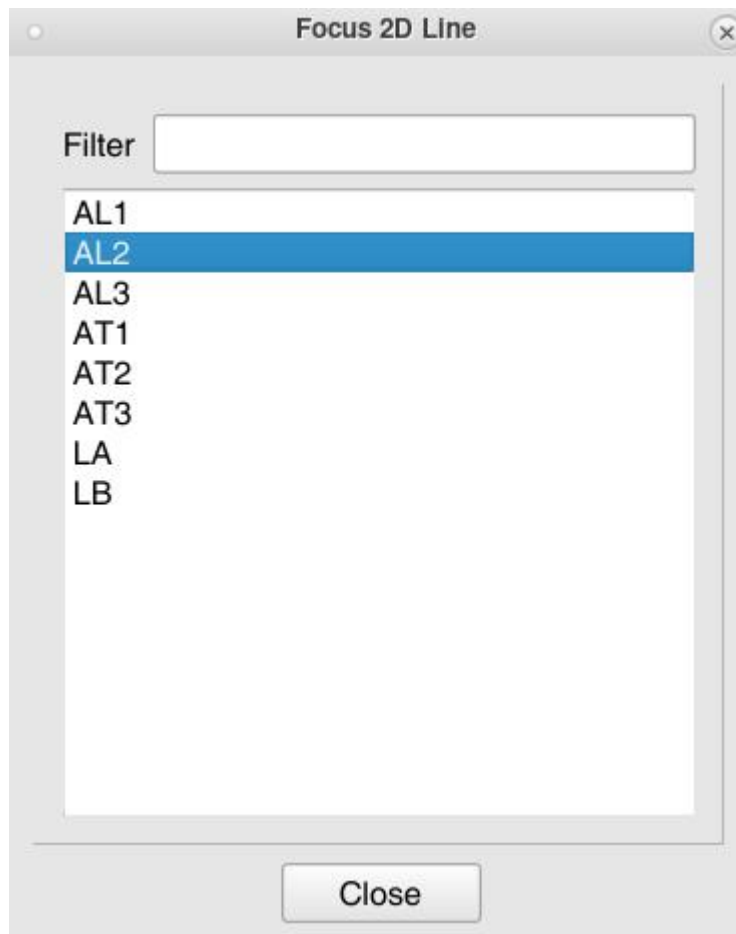


底图主窗口菜单条选择Tools菜单条Focus On Line，或者快捷键 L 进入二维工区测线定位功能。

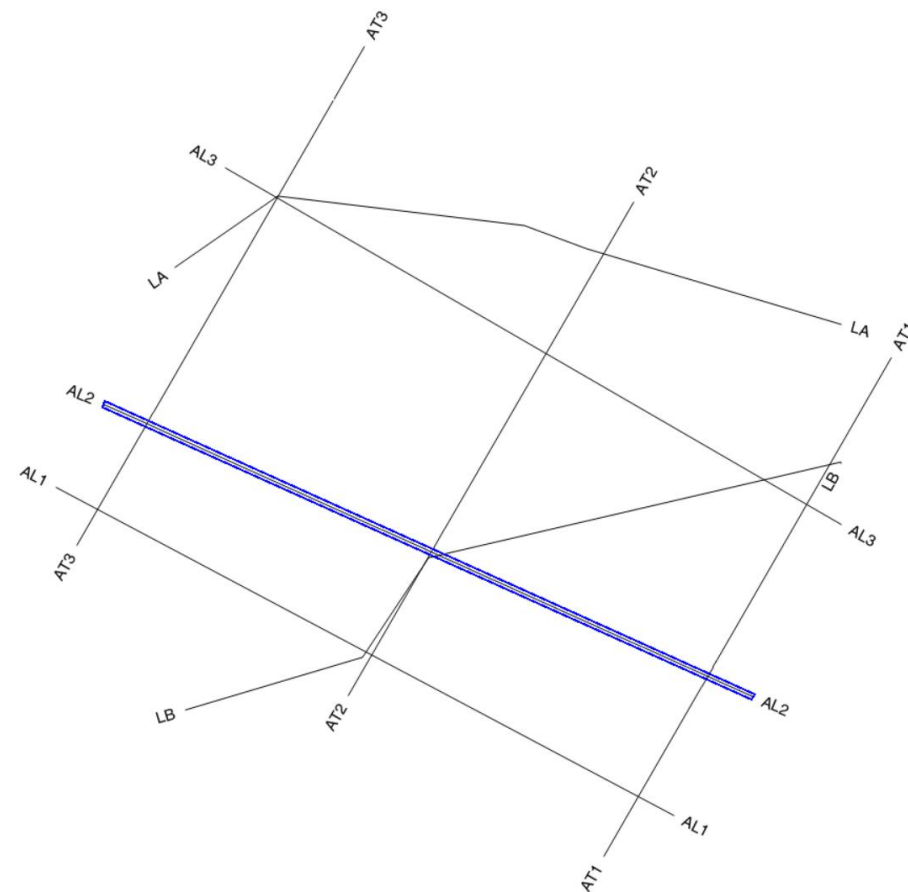
Tools下拉菜单



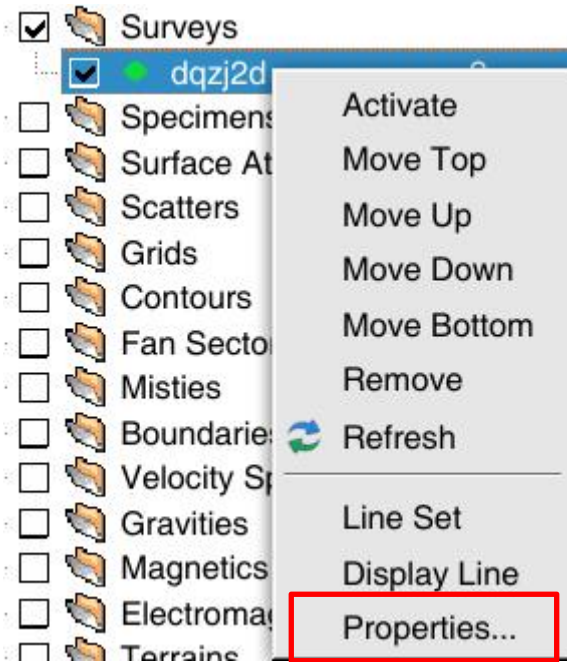
选择测线



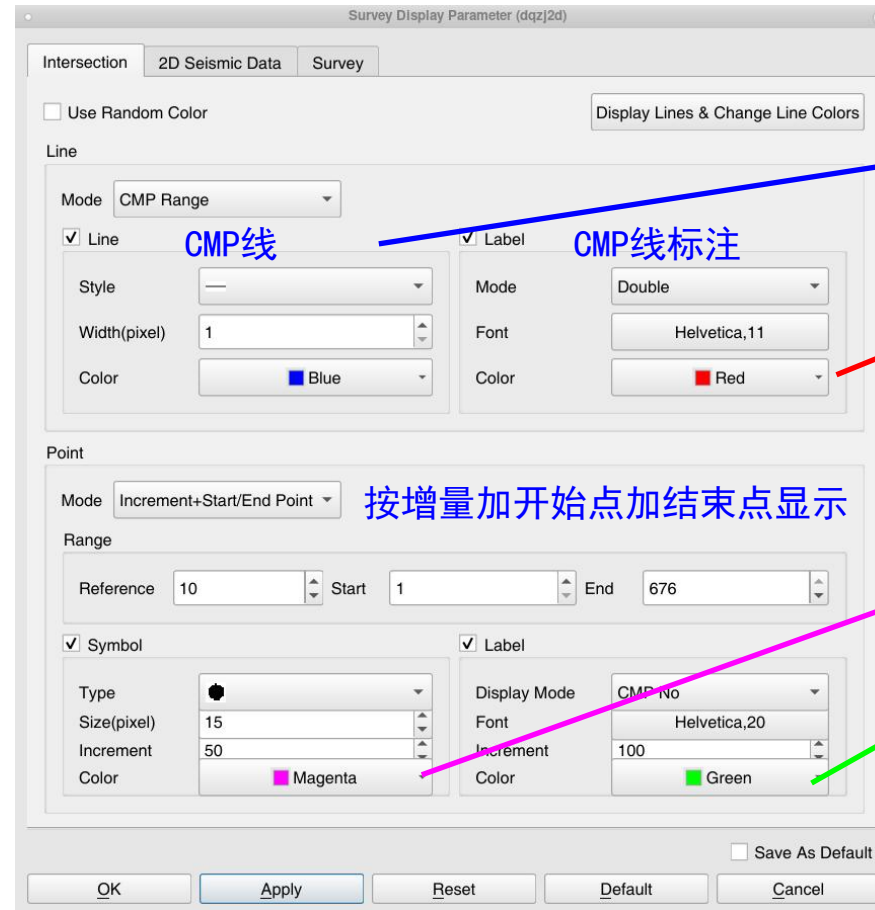
测线高亮显示



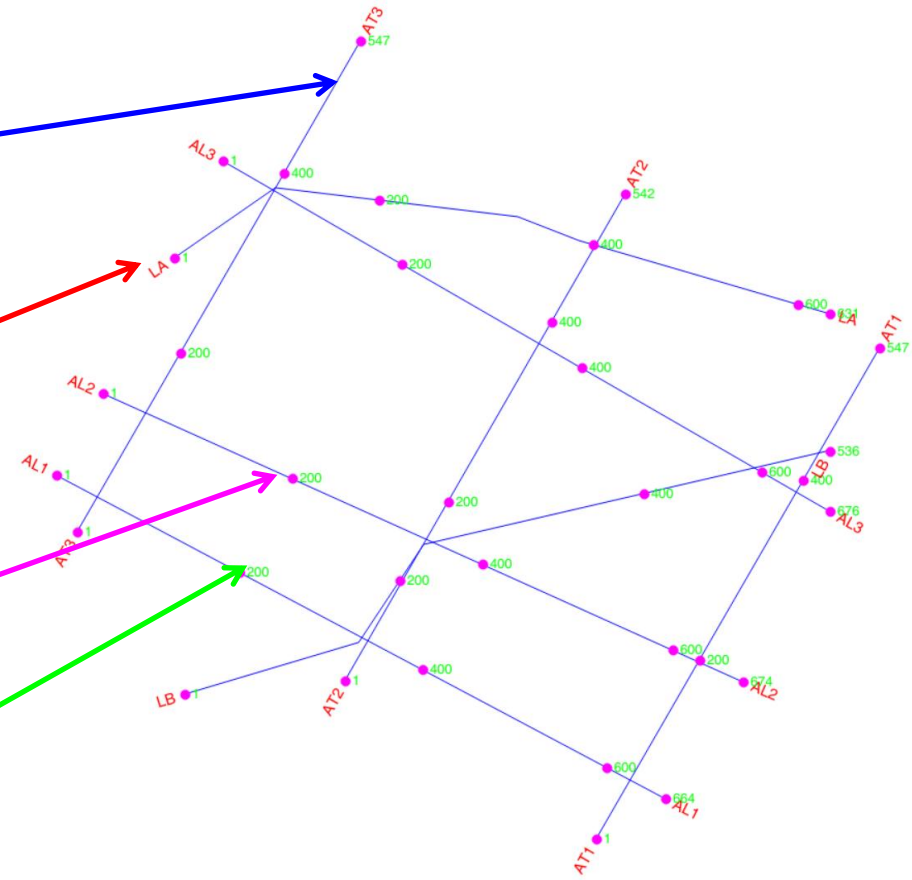
数据树列表



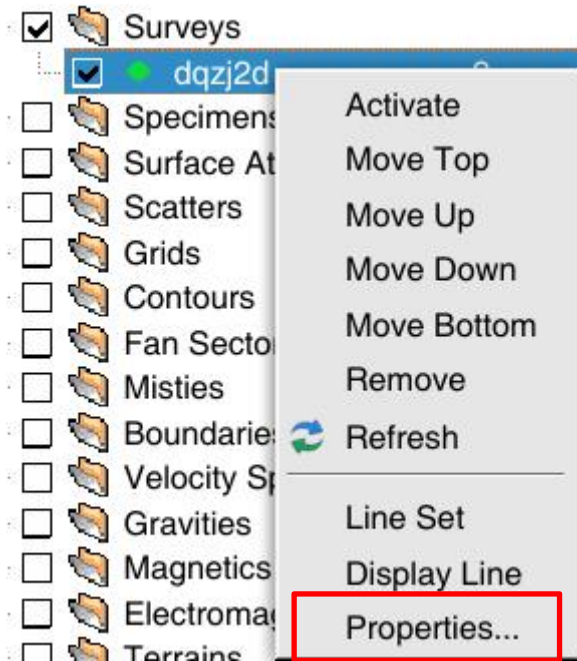
拐点线页



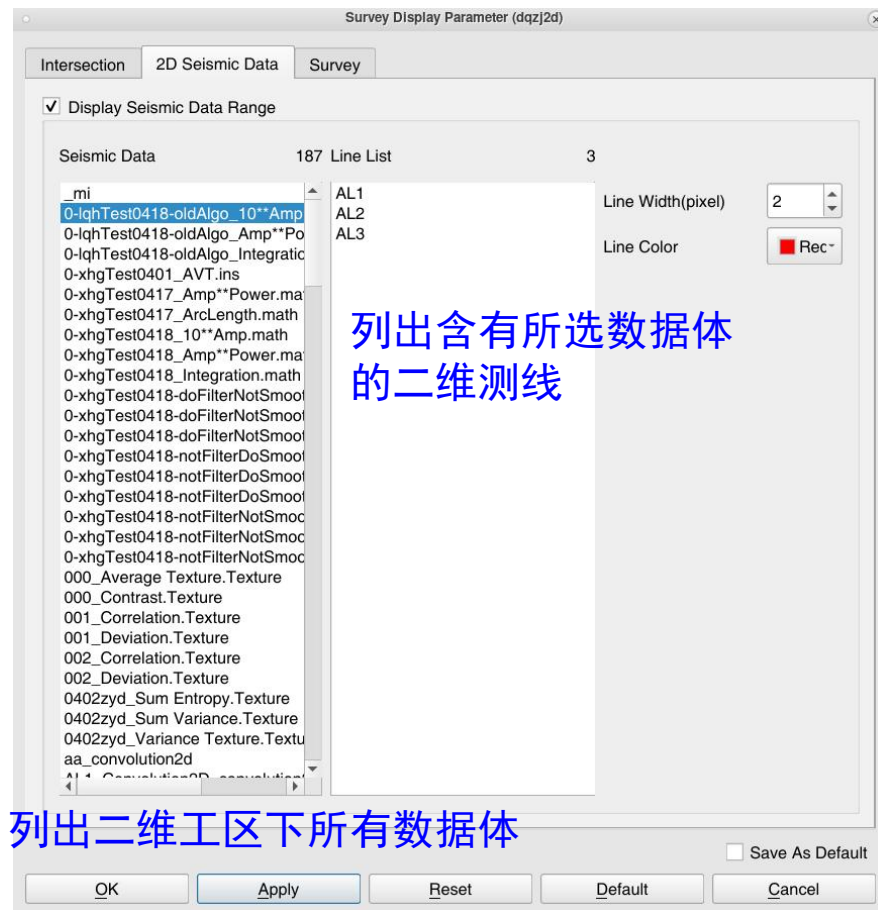
二维测网



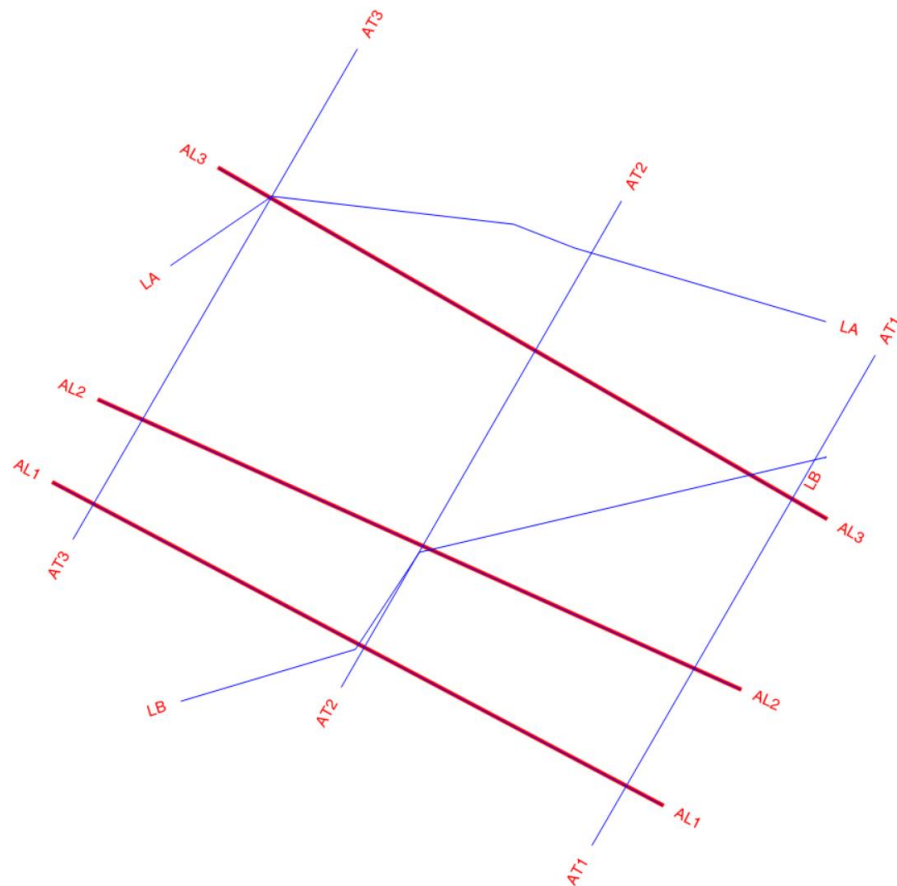
数据树列表



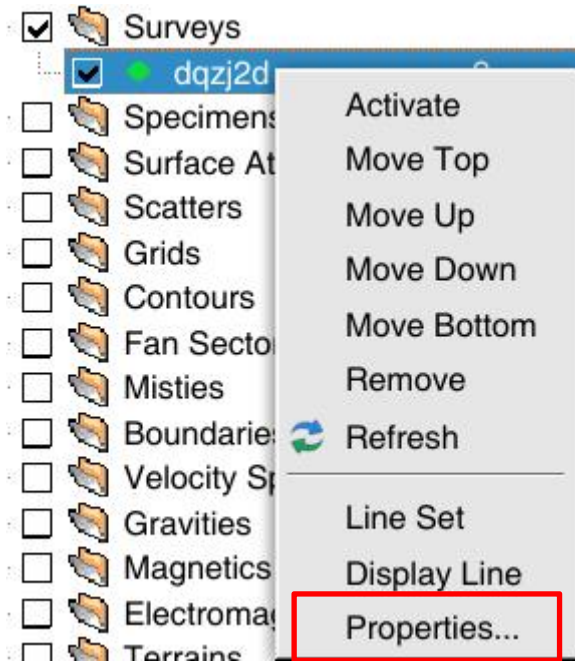
地震数据页



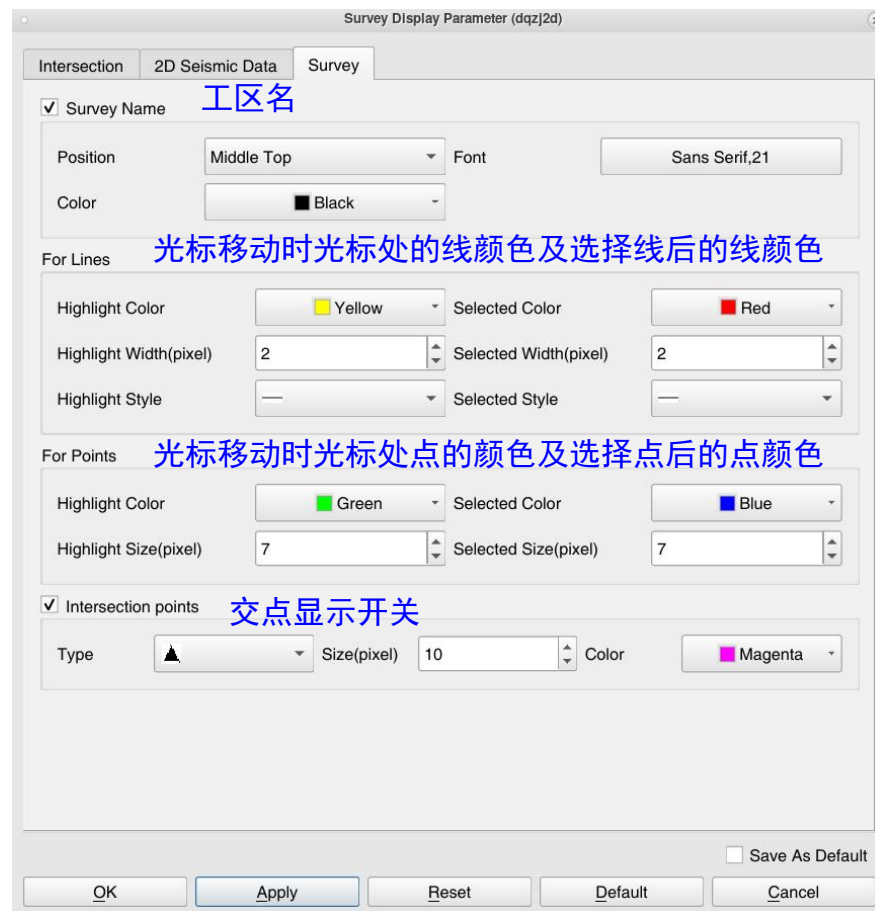
二维测网



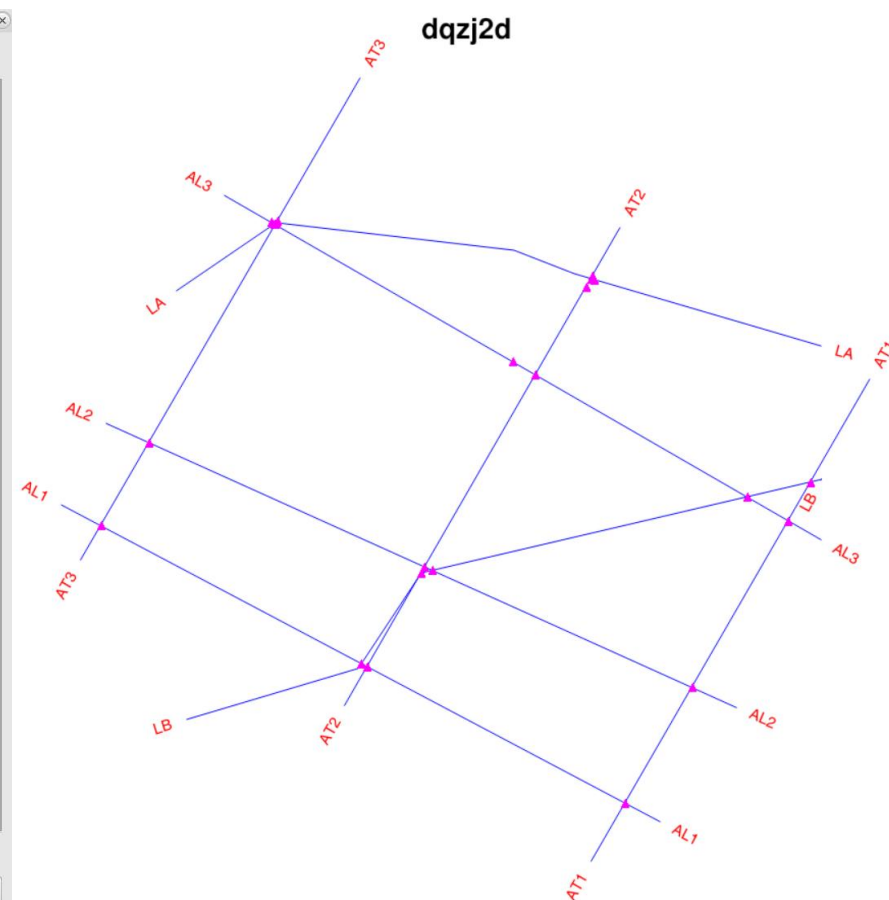
数据树列表



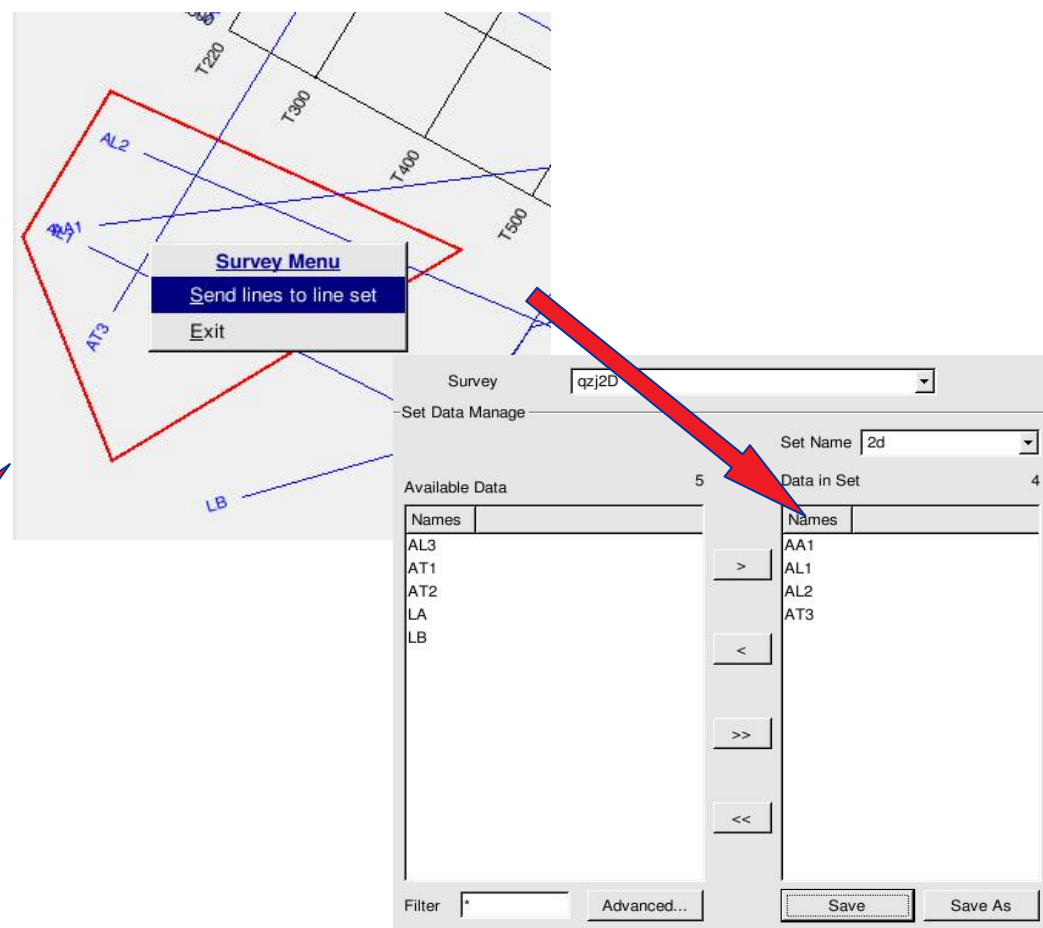
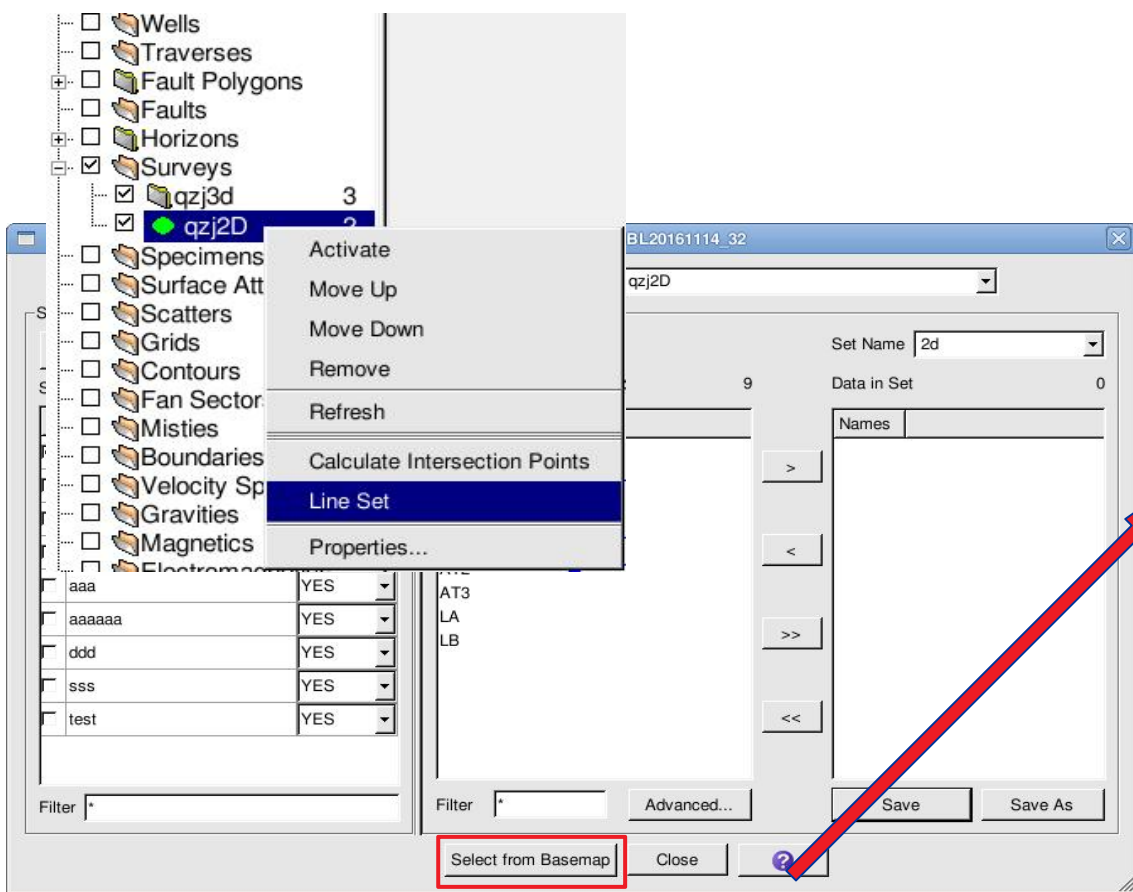
地震数据页



二维测网



1. 在底图子系统，选择二维工区节点右键菜单Line Set。
2. 在数据集定义对话框点按Select from Basemap。
3. 在底图中拾取多边形选择要建线集的测线，再选择右键菜单Send lines to line set, 选择的测线列在线集列表中。



感谢大家对GeoEast软件的 信任和支持！

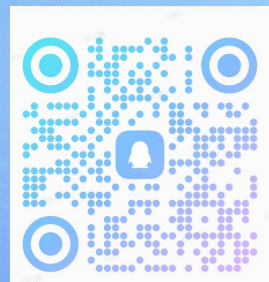
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