

组合工区解释应用技术

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GeoFrac



组合工区解释应用场景：

- 场景1：研究区由多期、多块“碎片化三维工区”拼接组成

盆地级、区带级勘探项目，资料分期采集：不同年度、不同施工队伍完成多个独立三维区块（俗称“邮票式工区”），工区相互邻接、局部重叠。

- 场景2：研究区内同时存在三维地震 + 二维测线，需要二三维联合统层

老区滚动勘探、新区预探常存在：大面积三维工区 + 外围多条二维地震测线。

- 场景3：跨工区断裂系统、砂体、沉积相带连续追踪研究

开展区带成藏规律、河道砂体展布、断裂连通性分析：地质体横跨2个及以上独立三维工区。

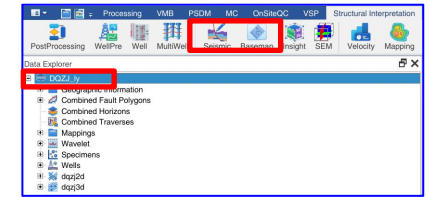
- 场景4：编制全区统一构造图、地层等厚图、储层平面分布图

勘探部署、储量评价、开发规划要求输出完整连片平面图件。

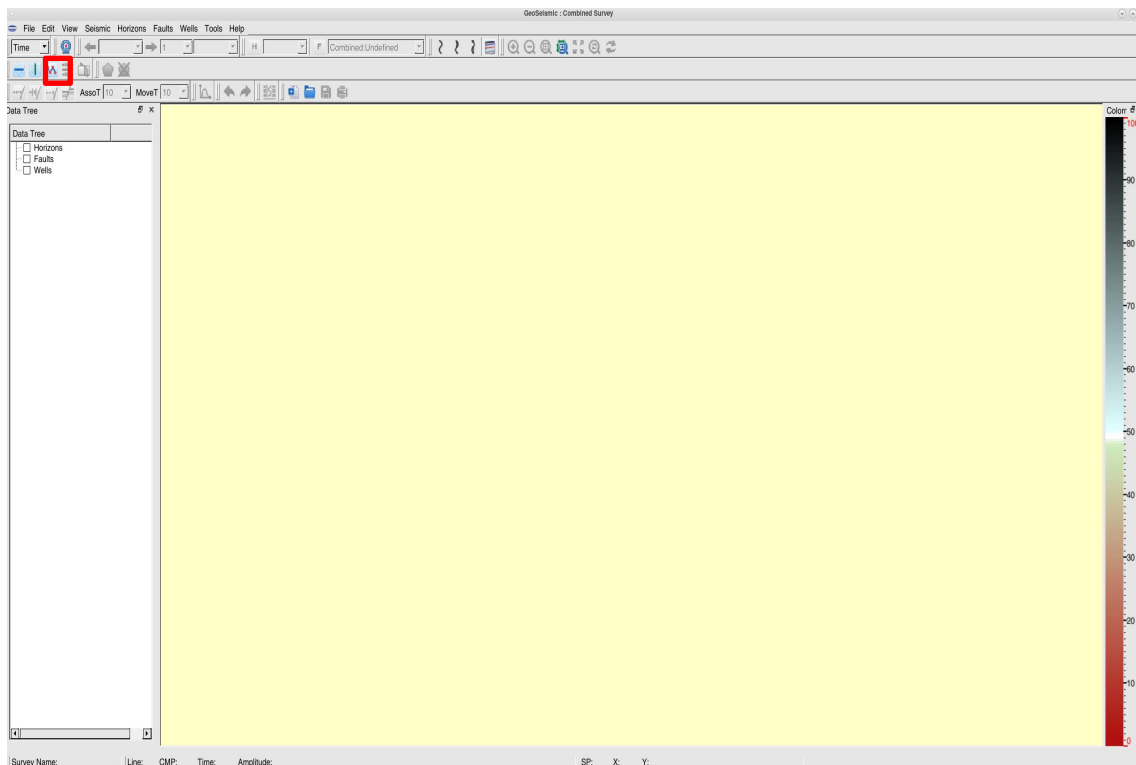
- 场景5：开展多工区速度场统一分析与时深关系校正

不同三维工区处理时采用独立速度场，相邻区块同一地层时深转换结果存在系统偏差。

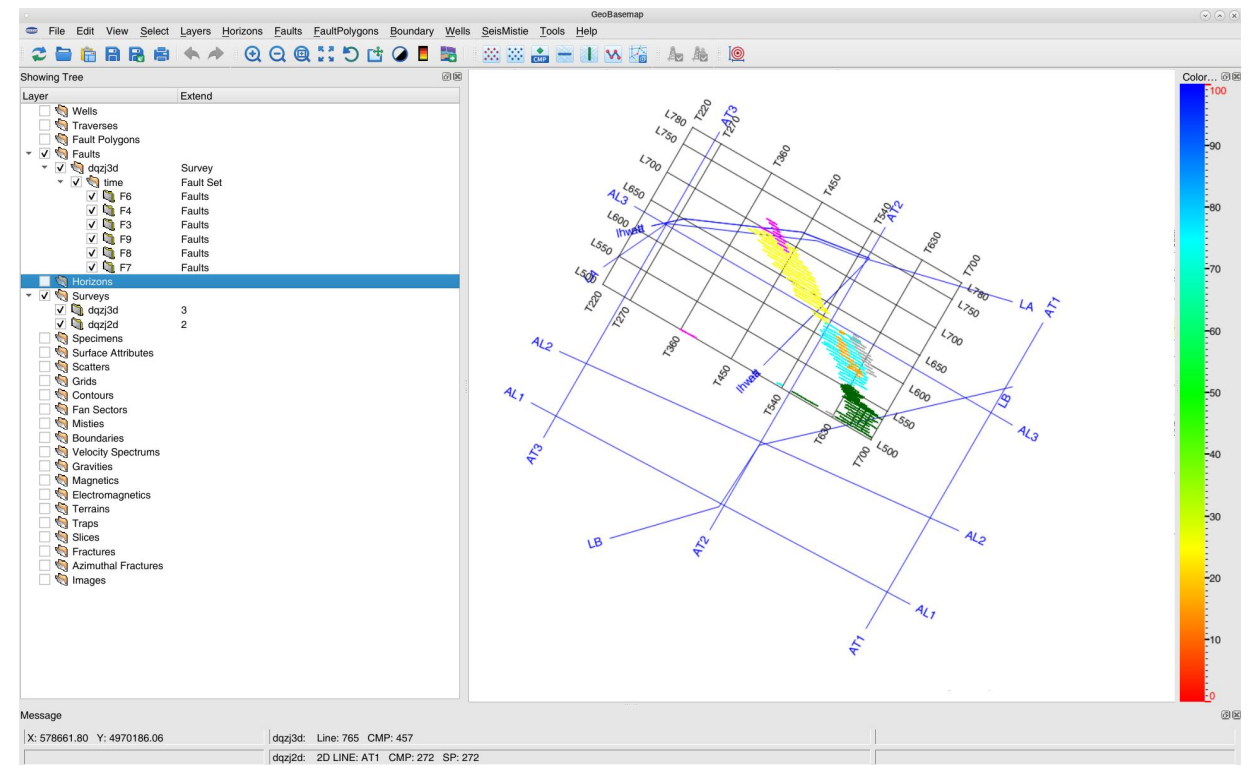
组合工区启动：数据树上选择工作项目（Project）节点，启动常规解释和底图子系统



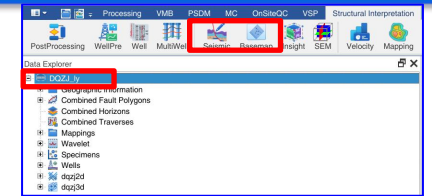
常规解释窗口空白显示



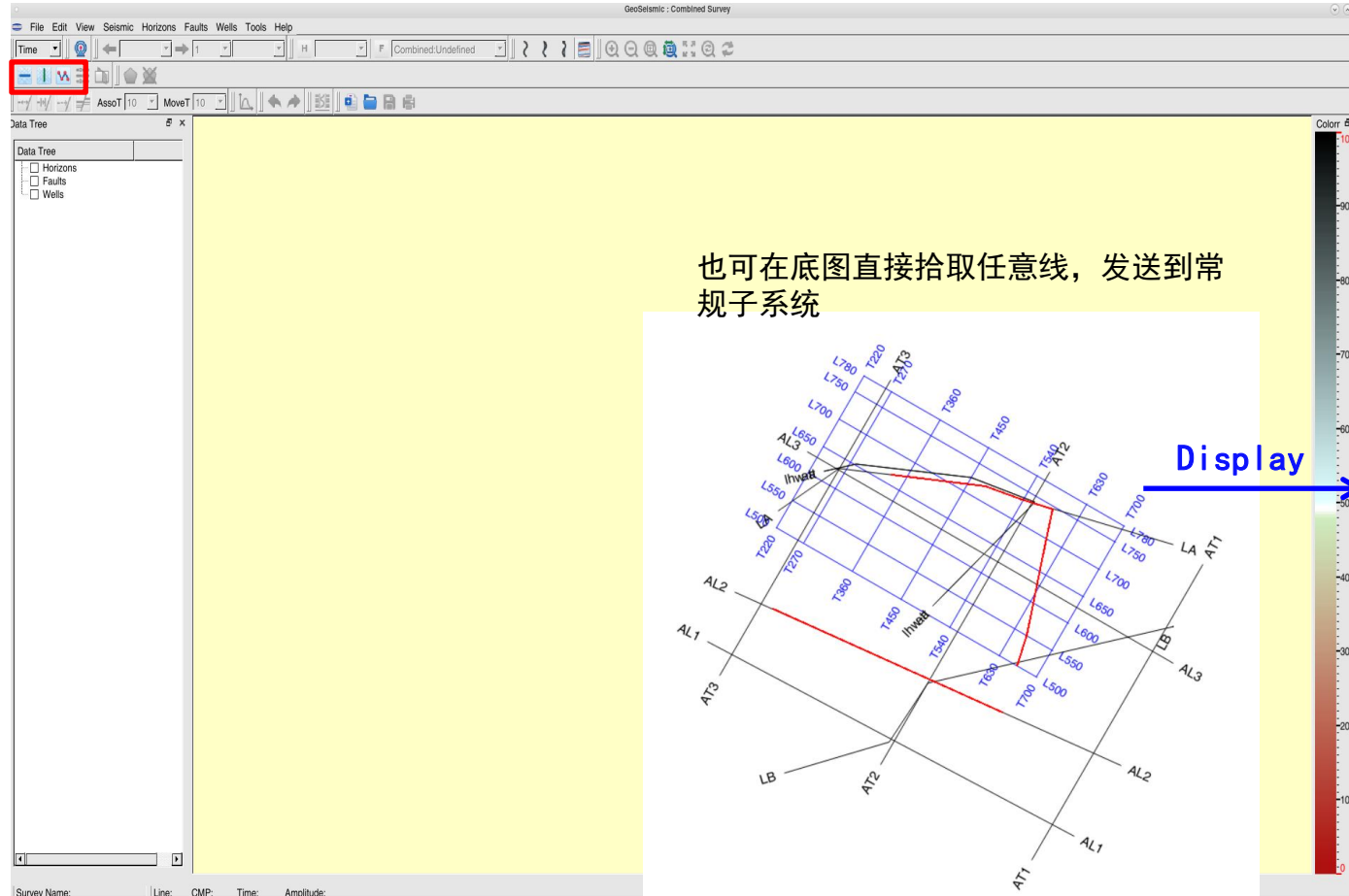
工区底图显示上一次打开显示的内容



组合工区启动：数据树上选择工作项目（Project）节点，启动常规解释和底图子系统



常规点击拾取任意线



Select Combined Traverse

Traverse List

UnNamedTra92777

Filter:

	Survey	Line	Volume	Select	Set to All
1	dqzj2d	AL2	mig	Select	Set
2	dqzj3d		mig	Select	Set
3	dqzj3d		mig	Select	Set
4	dqzj3d		mig	Select	Set
5	dqzj2d	LA	mig	Select	Set
6				Select	Set
7				Select	Set
8				Select	Set

Section Range

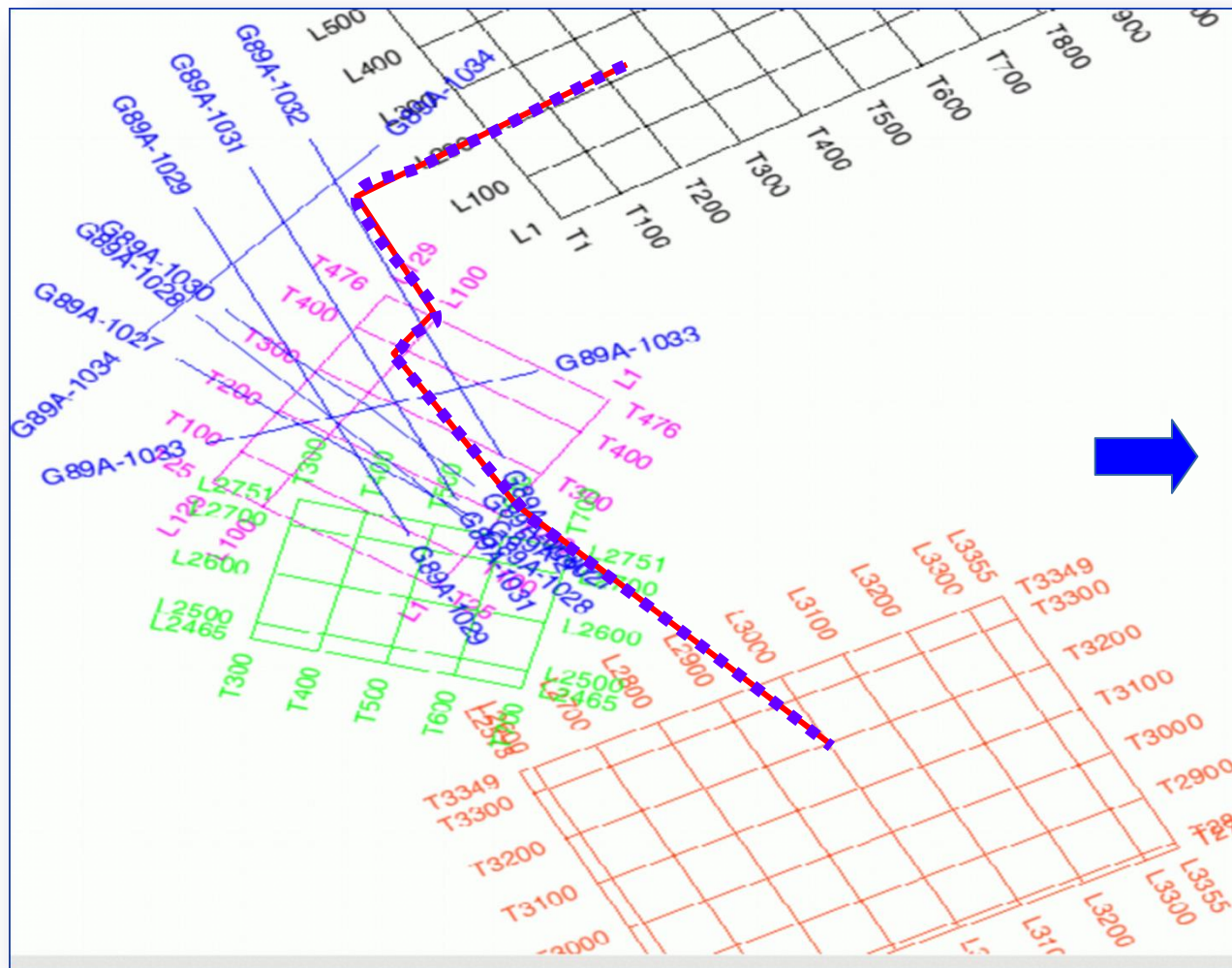
Start Time: 0 0 2500

End Time: 2500 0 2500

Parameters...

OK Apply Cancel

组合工区任意线拾取



- Free
- Rectangle
- Polygon
- Pivotal
- Across
- Well Tie
- VSP
- Trap Across
- Trap Parallel
- Horizontal Well
- Priority
- Edit Free
- Save
- Save As

Set Survey Priority

Select the top survey

TaLaHaNan
yyf_zw_fake
YongLe
JiLin_XinMin_3D

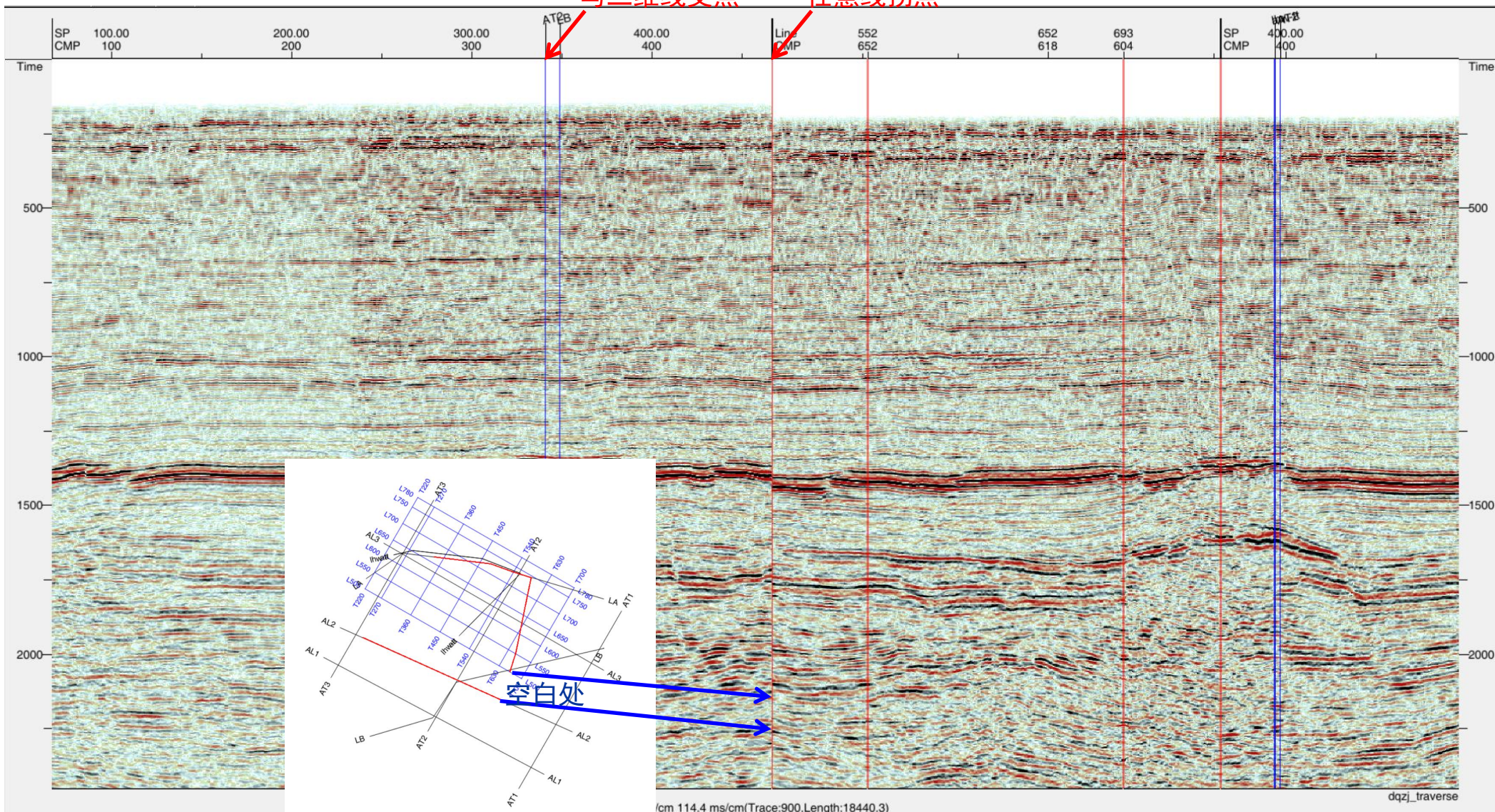
Filter

Close

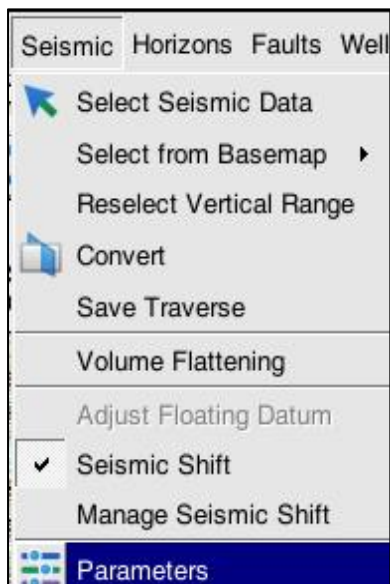
组合工区任意线拾取

与二维线交点

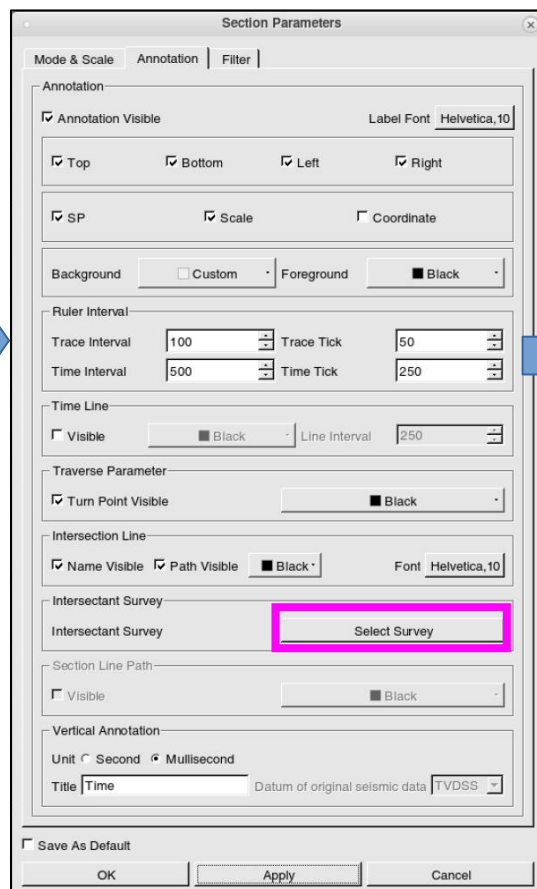
任意线拐点



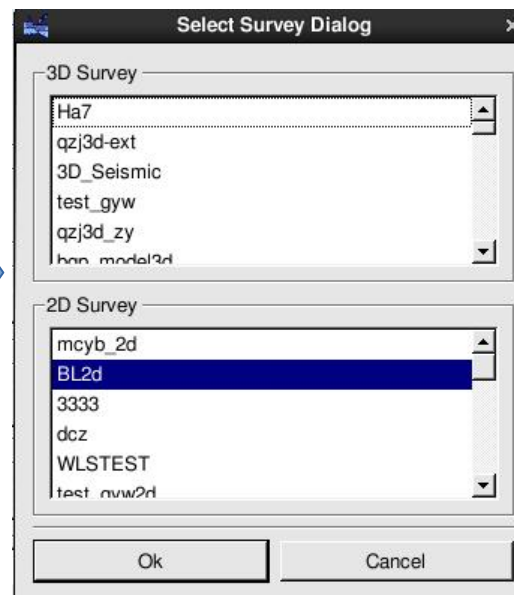
选择地震参数



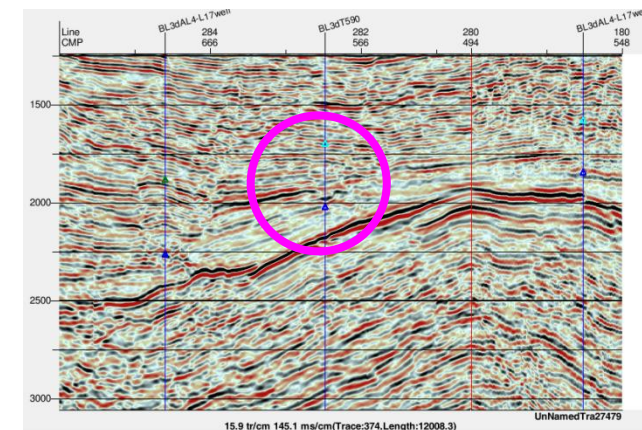
选择测区



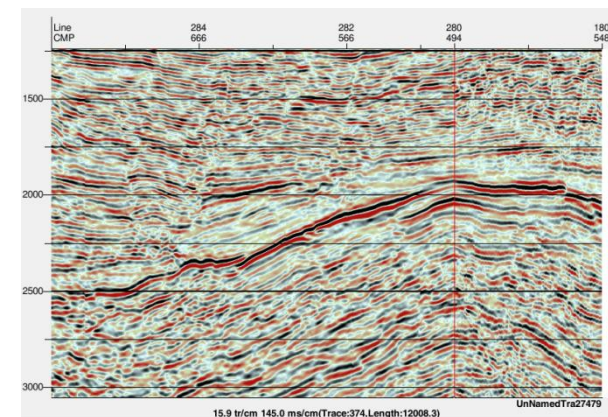
可选择多个survey，也可不选



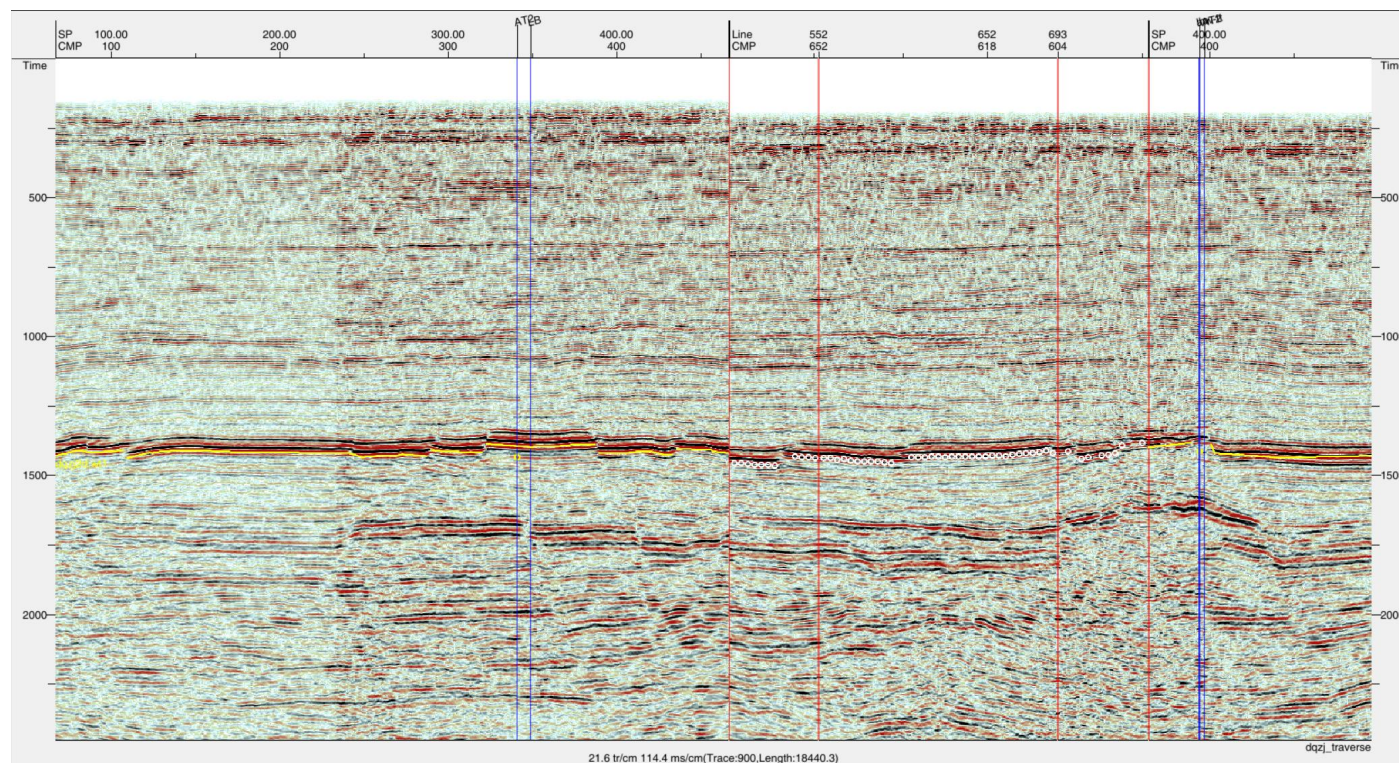
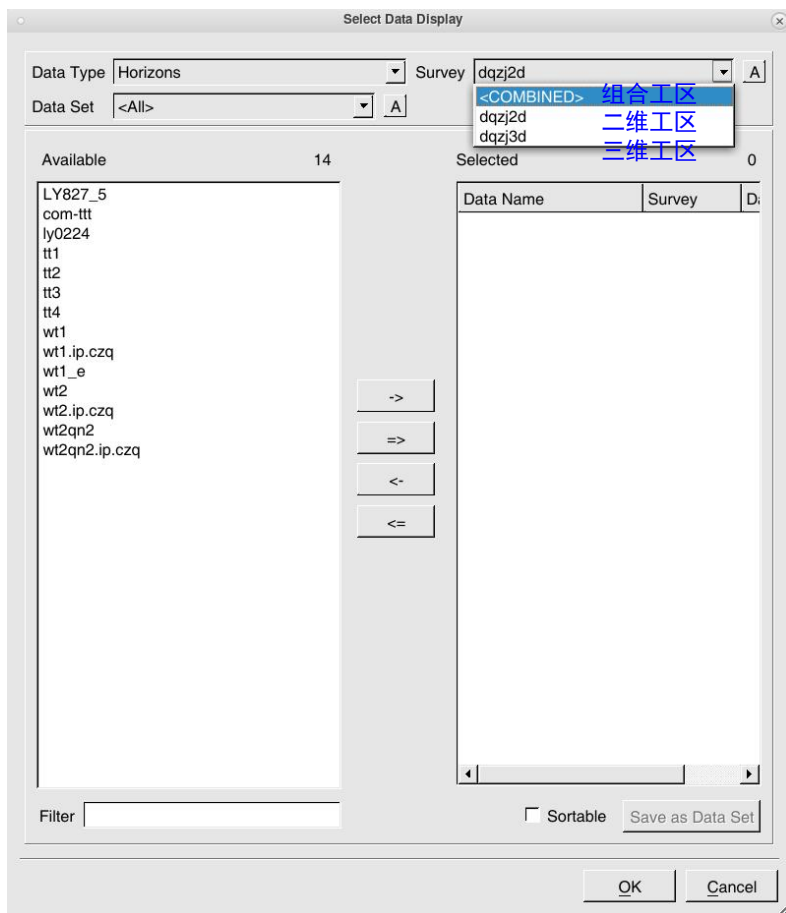
选择survey，二维线投影，并将二维线的层位以三角形式投影



未选择survey，剖面上无二维线投影



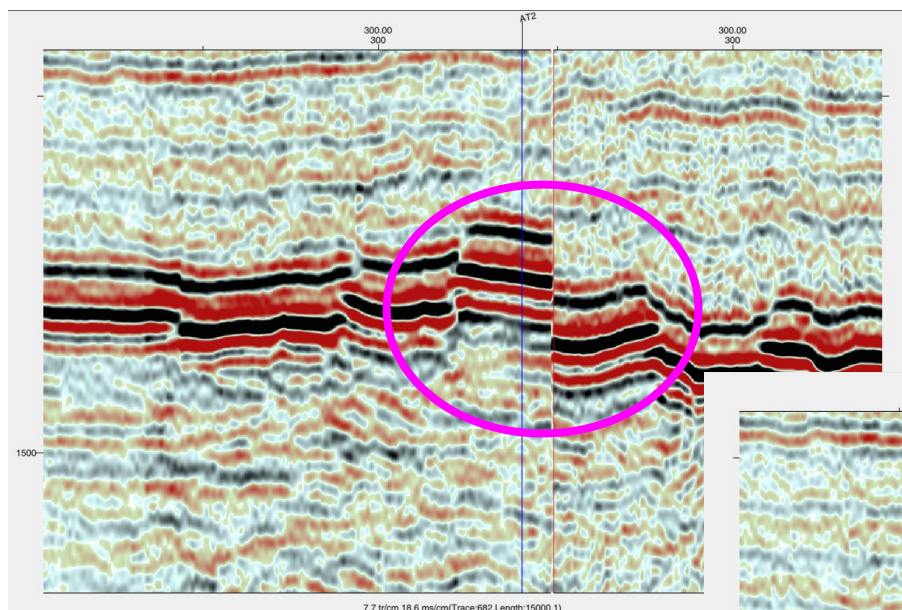
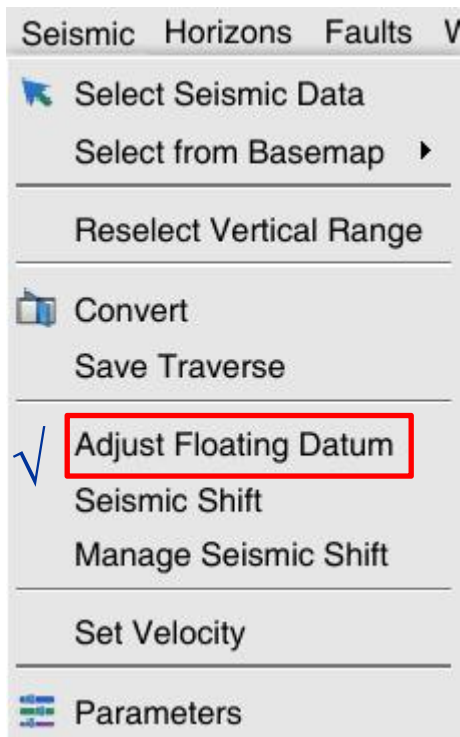
层位显示：survey列表除了二三维工区之外，还有COMBINED选项，用于显示组合层位



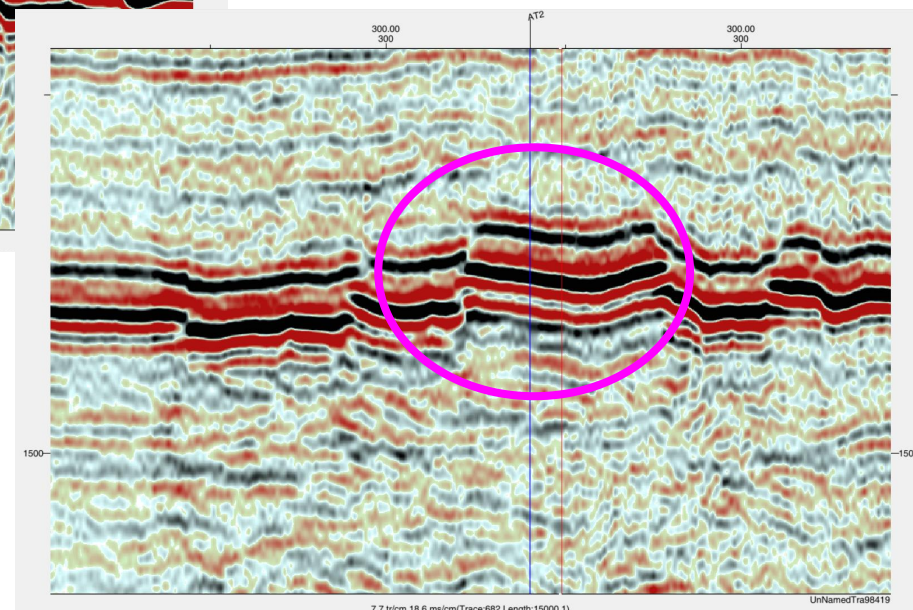


调节浮动基准面

调节浮动基准面：针对不同测线二三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。。

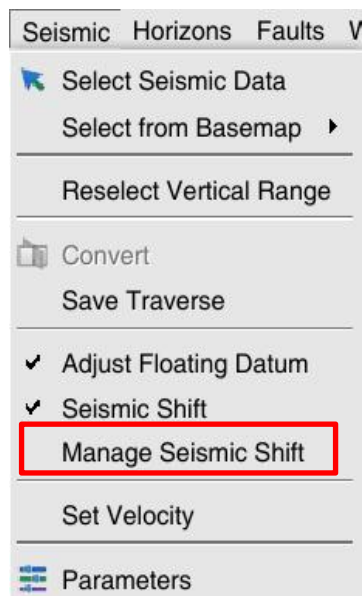


调节前



调节后

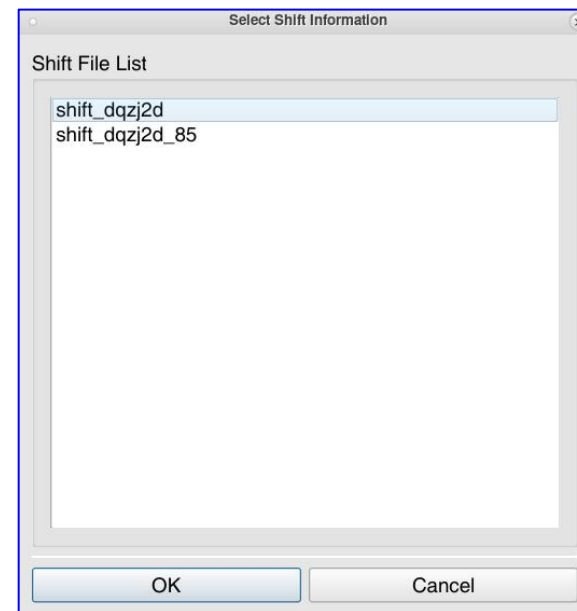
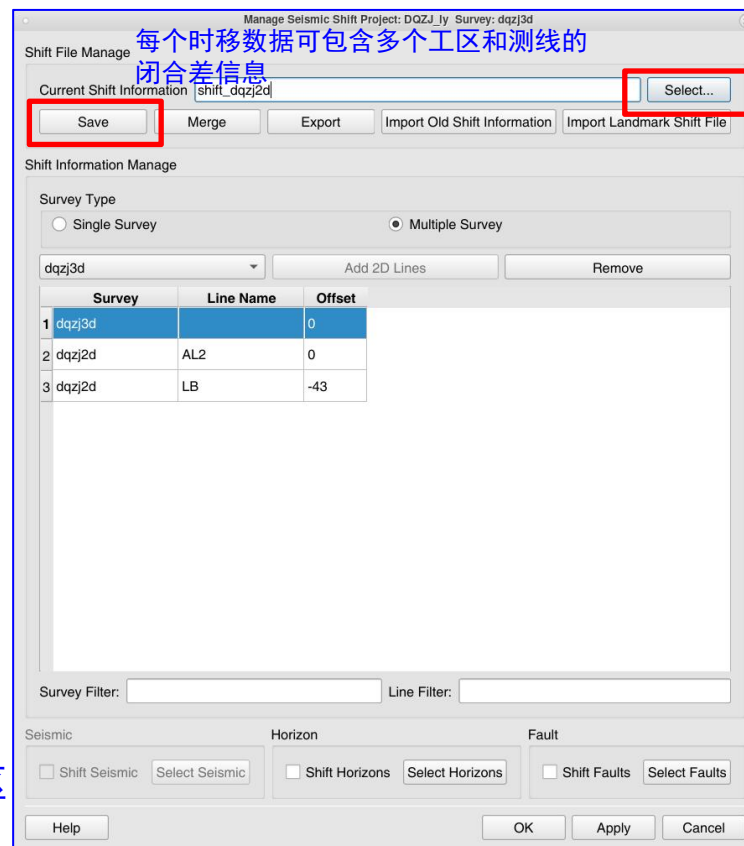
管理地震时移信息：针对不同任意线保存不同的时移信息，方便随意调用。



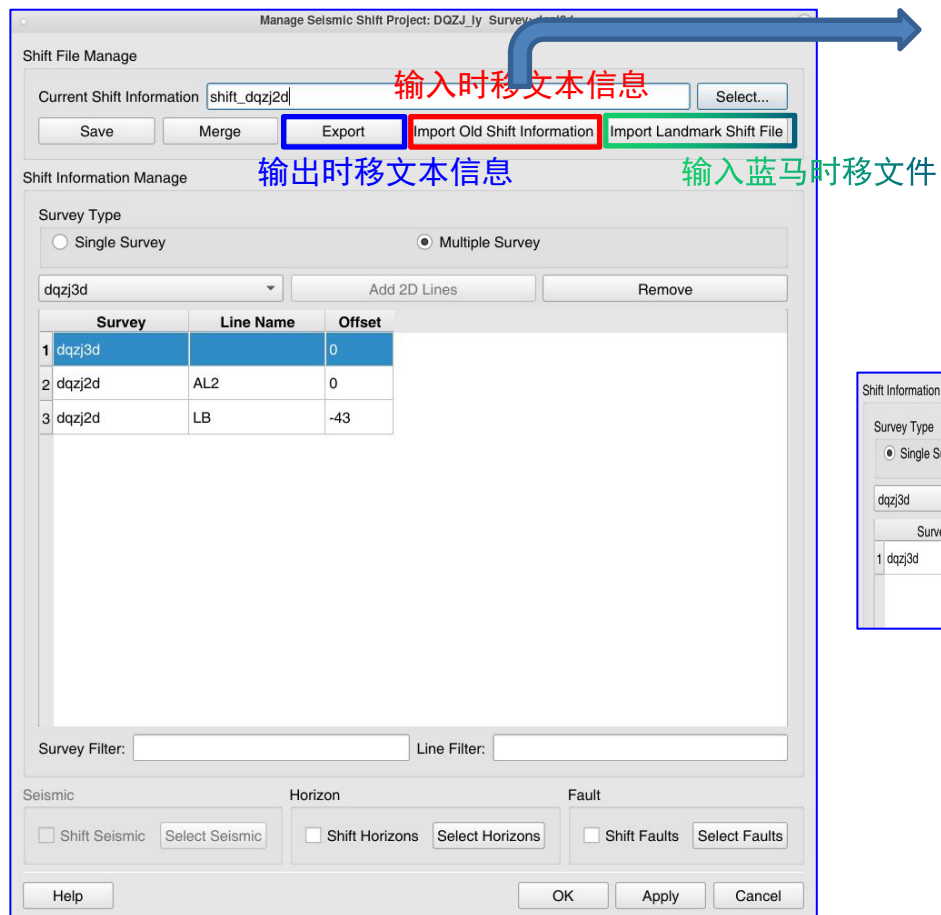
时移数据管理区

时移数据编辑区

层位断层数据管理区



时移数据管理：



Shift File Manage

Current Shift Information: 输入时移文本信息

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

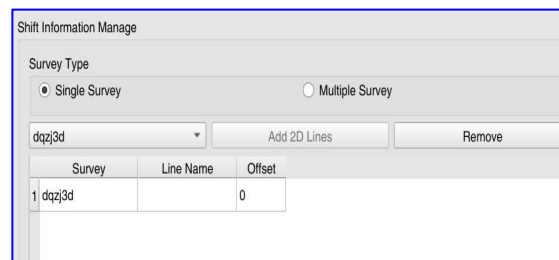
	Survey	Line Name	Offset
1	dqzj3d		0
2	dqzj2d	AL2	0
3	dqzj2d	LB	-43

Survey Filter: Line Filter:

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

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

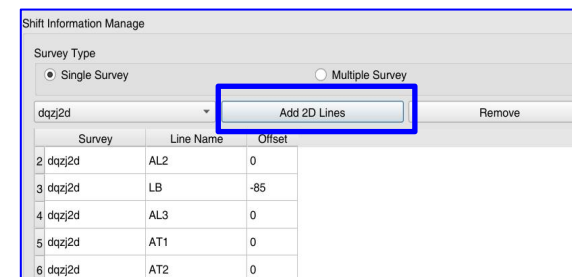


Shift Information Manage

Survey Type

☒ Single Survey ☐ Multiple Survey

	Survey	Line Name	Offset
1	dqzj3d		0



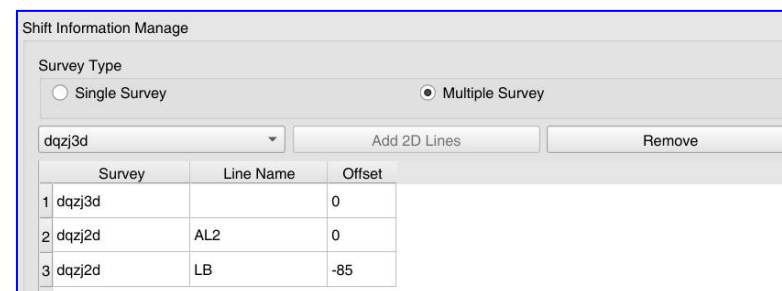
Shift Information Manage

Survey Type

☐ Single Survey ☒ Multiple Survey

	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



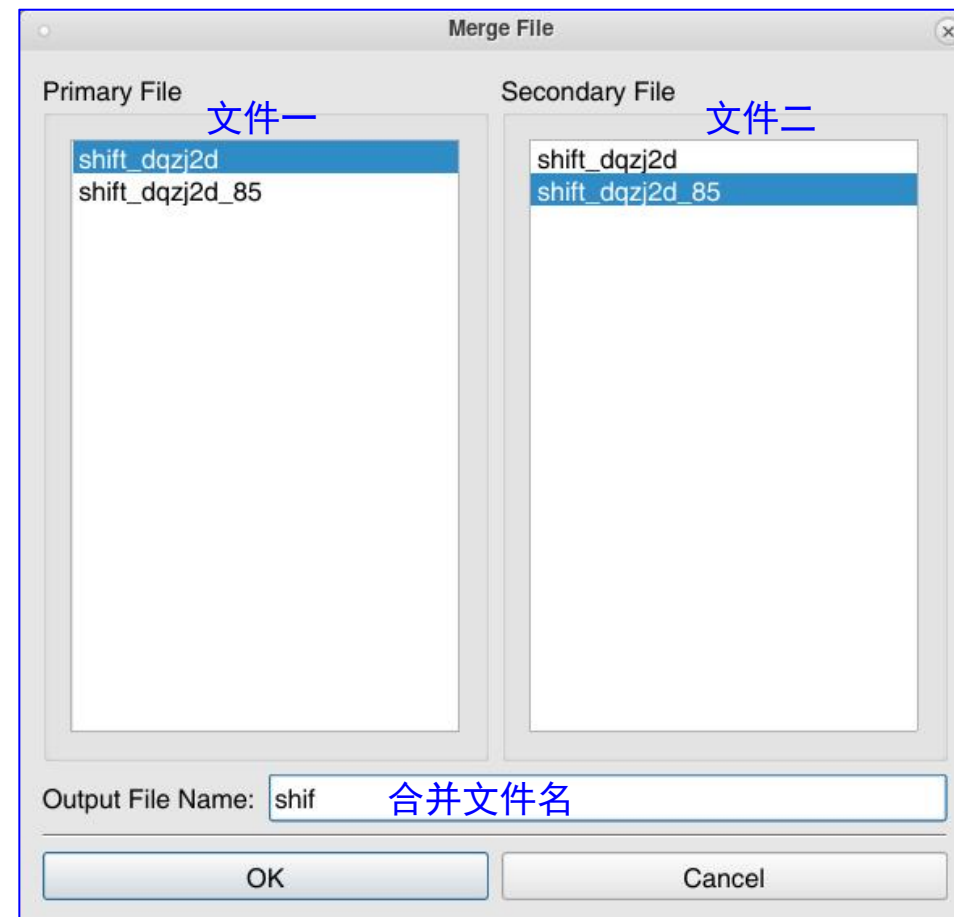
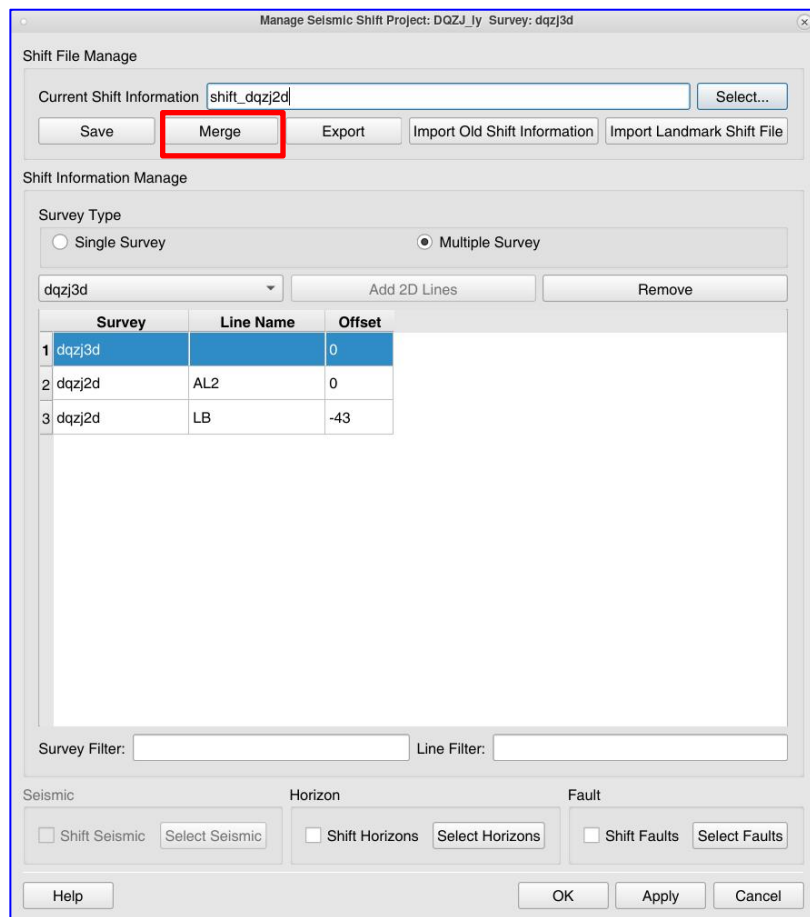
Shift Information Manage

Survey Type

☐ Single Survey ☒ Multiple Survey

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

合并地震时移信息：执行数据的合并功能



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

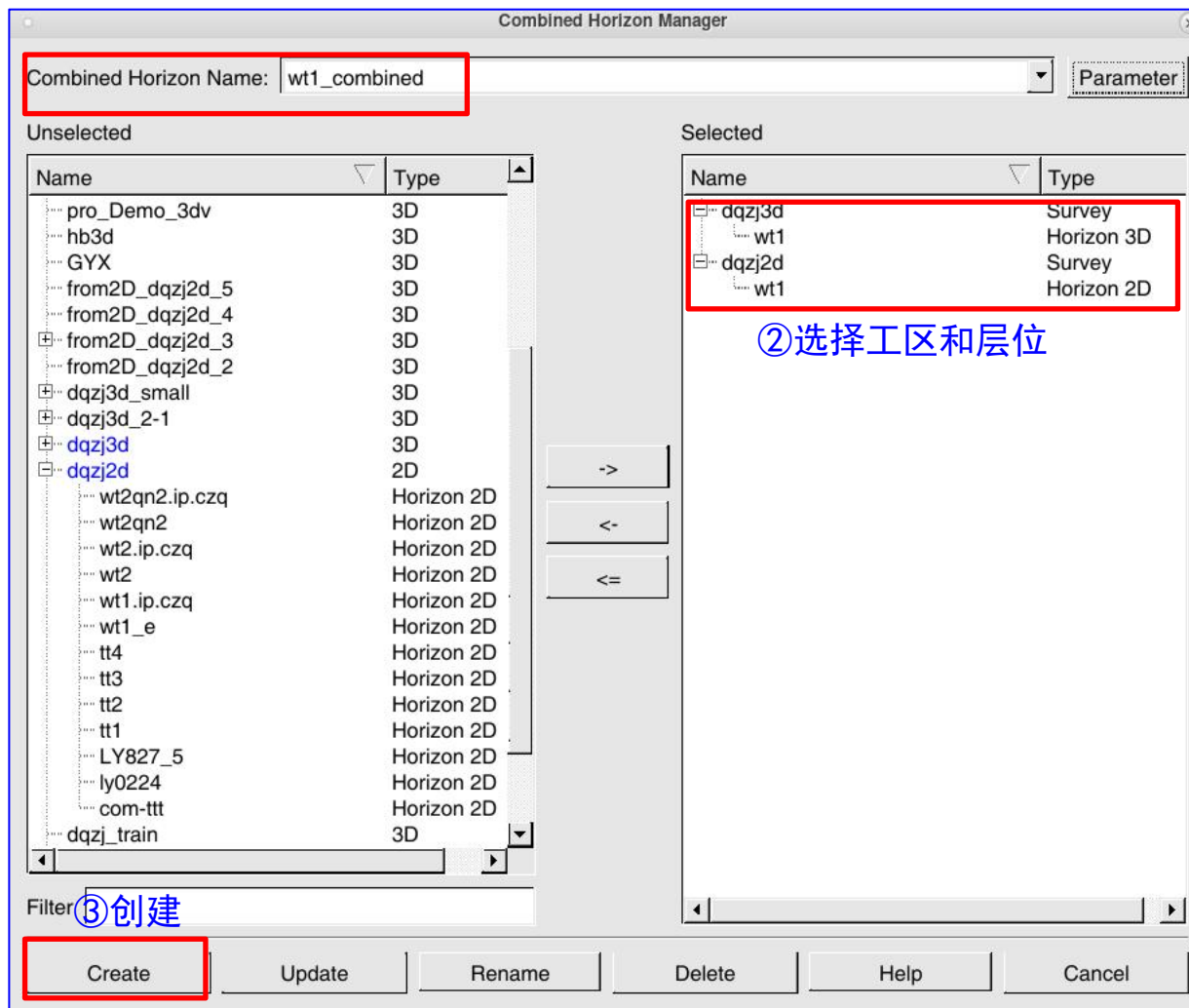
Remove

OK Apply Cancel

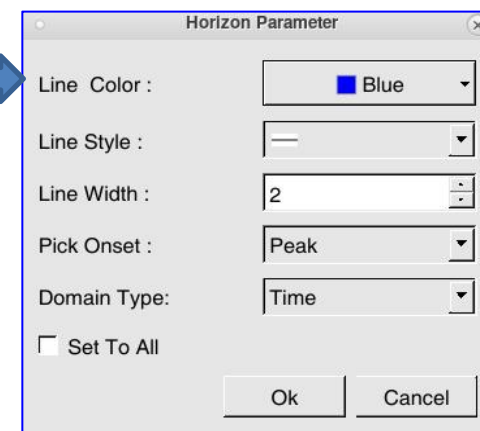


建立组合工区层位

① 给定组合层位名称



② 选择工区和层位



③ 创建

组合工区层位解释

组合工区层位应用

常规解释

Select Data Display

Data Type: Horizons Survey: **<COMBINED>**

Data Set: <All>

Available	Selected						
Dqzj01710 com-ttt xhx	<table border="1"> <thead> <tr> <th>Data Name</th> <th>Survey</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>wt1_combined</td> <td><COMBIN...</td> <td></</td> </tr> </tbody> </table>	Data Name	Survey	D	wt1_combined	<COMBIN...	</
Data Name	Survey	D					
wt1_combined	<COMBIN...	</					

Filter: Sortable: ☐ Save as Data Set:

OK Cancel

工区底图

Layer Manager

Data Type: Horizons Survey: **<COMBINED>**

Data Set: <All>

Available	Selected				
Dqzj01710 com-ttt xhx	<table border="1"> <thead> <tr> <th>Data Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>wt1_combined</td> <td><All></td> </tr> </tbody> </table>	Data Name	Data Set	wt1_combined	<All>
Data Name	Data Set				
wt1_combined	<All>				

Filter: Sortable: ☐ Save as Data Set: Calculate New Scale: ☐

OK Apply Cancel

平面成图网格化

Select Data

Data Type: Horizons Survey: xhgTestIntegration

Data Set: **Combined Horizons**

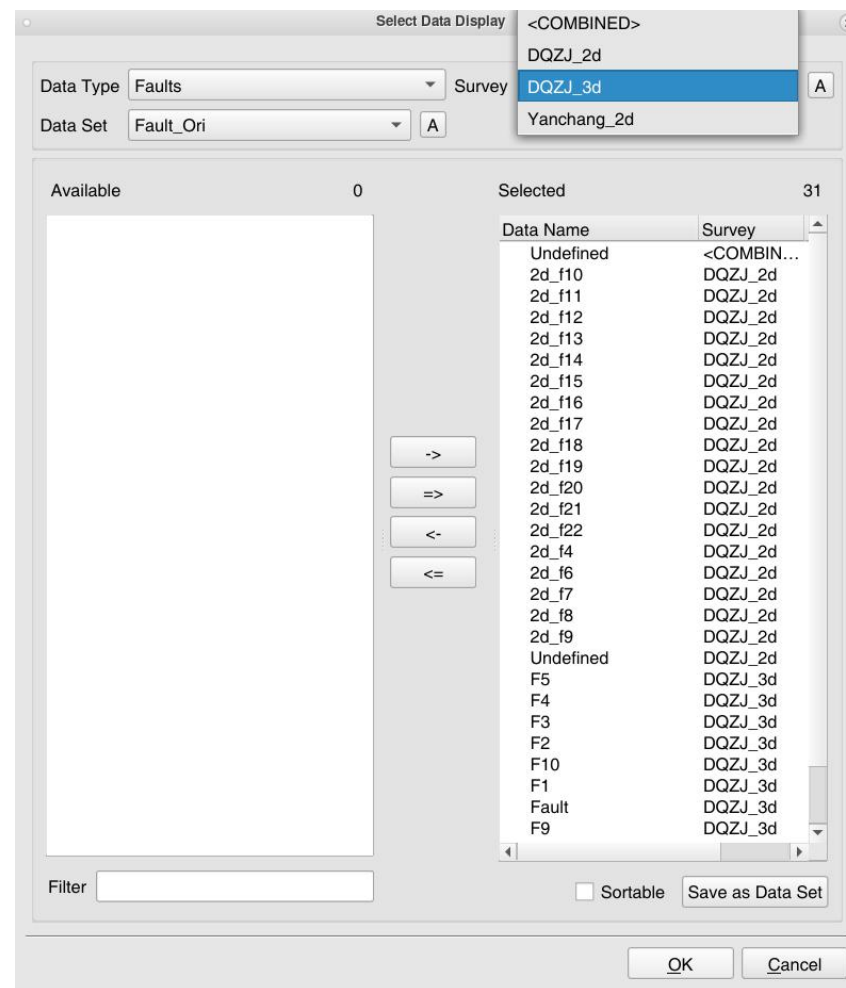
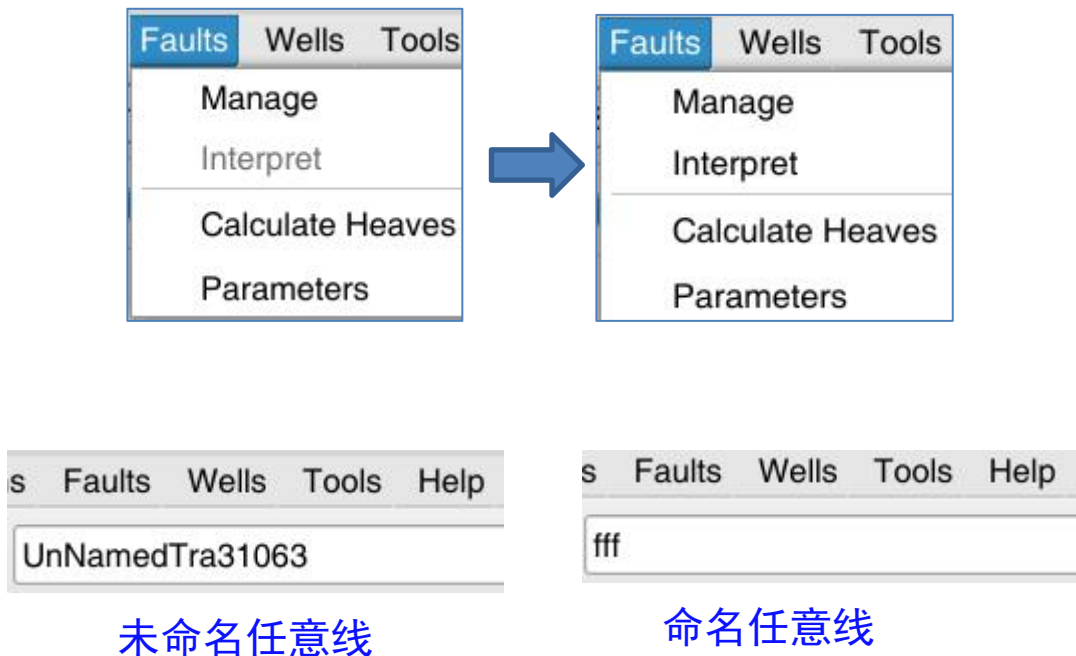
Available	Selected		
	<table border="1"> <thead> <tr> <th>Data Name</th> </tr> </thead> <tbody> <tr> <td></td> </tr> </tbody> </table>	Data Name	
Data Name			

Filter: Sortable: ☐ Save as Data Set:

OK Cancel

注意：组合工区断层解释菜单灰化，说明该任意线未命名，必须先对任意线命名保存，断层解释菜单方可用

断层与层位不同，组合工区断层只有Undefined一种，其他直接用各个二三维工区断层



感谢大家对GeoEast软件的 信任和支持!

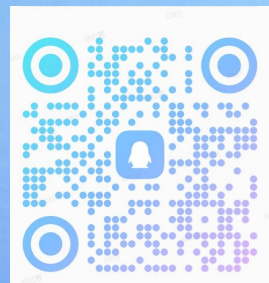
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解释技术支持QQ1群



解释技术支持QQ2群



Bilibili视频教程

技术支持热线电话: 18233420979

服务邮箱: geoeast@cnpc.com.cn

问题管理系统: <https://wt.gs.com.cn>

QQ交流群: 196011710、340847471

官网网址: <http://www.gs.com.cn>

销售热线: 0312-3736073