

GeoEast软件主控介绍及应用技巧

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2026年3月24日

GeoEast



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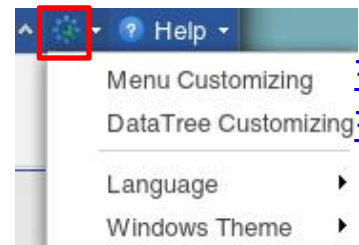
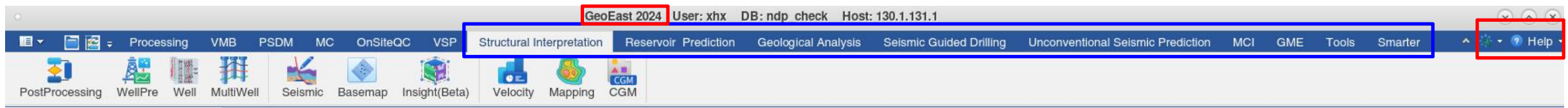
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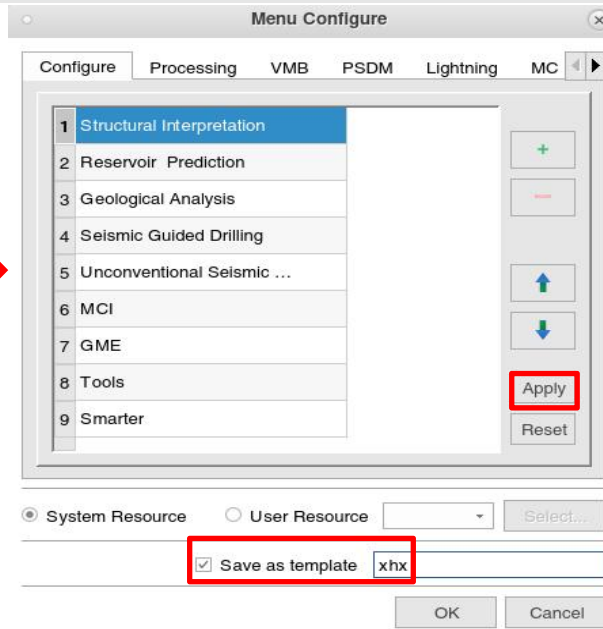
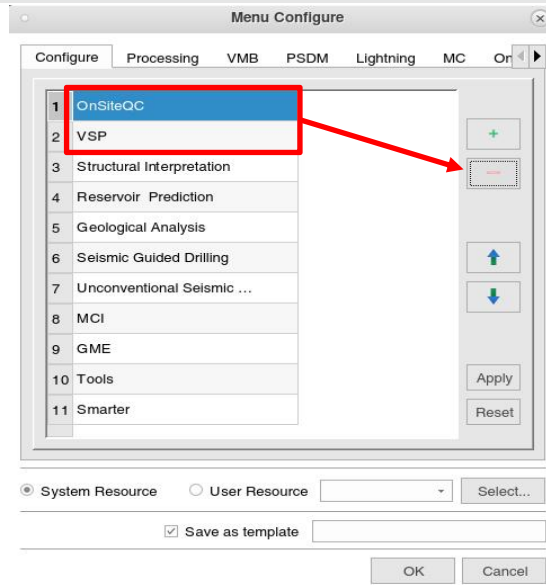
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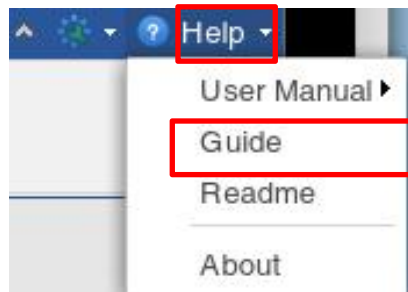
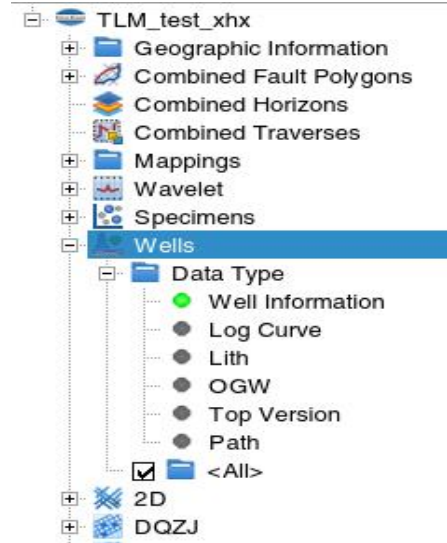
主控介绍



主控菜单定制
主控数据树定制

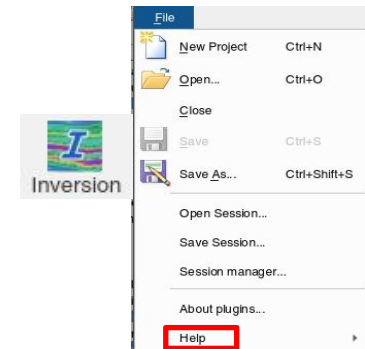
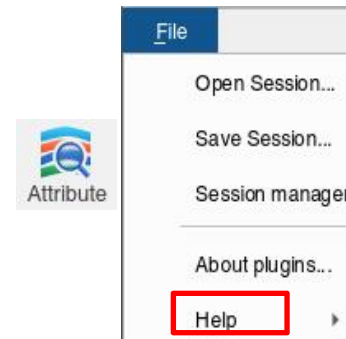


主控数据树定制



帮助手册
应用指南
软件版本号

大多数子系统的联机帮助都在主界面右上角，只有属性和反演子系统的帮助菜单在file下拉菜单





主控介绍



The screenshot displays the main toolbar of the GeoEast software, organized into several functional groups. Each group is highlighted with a red box and labeled with a blue text description:

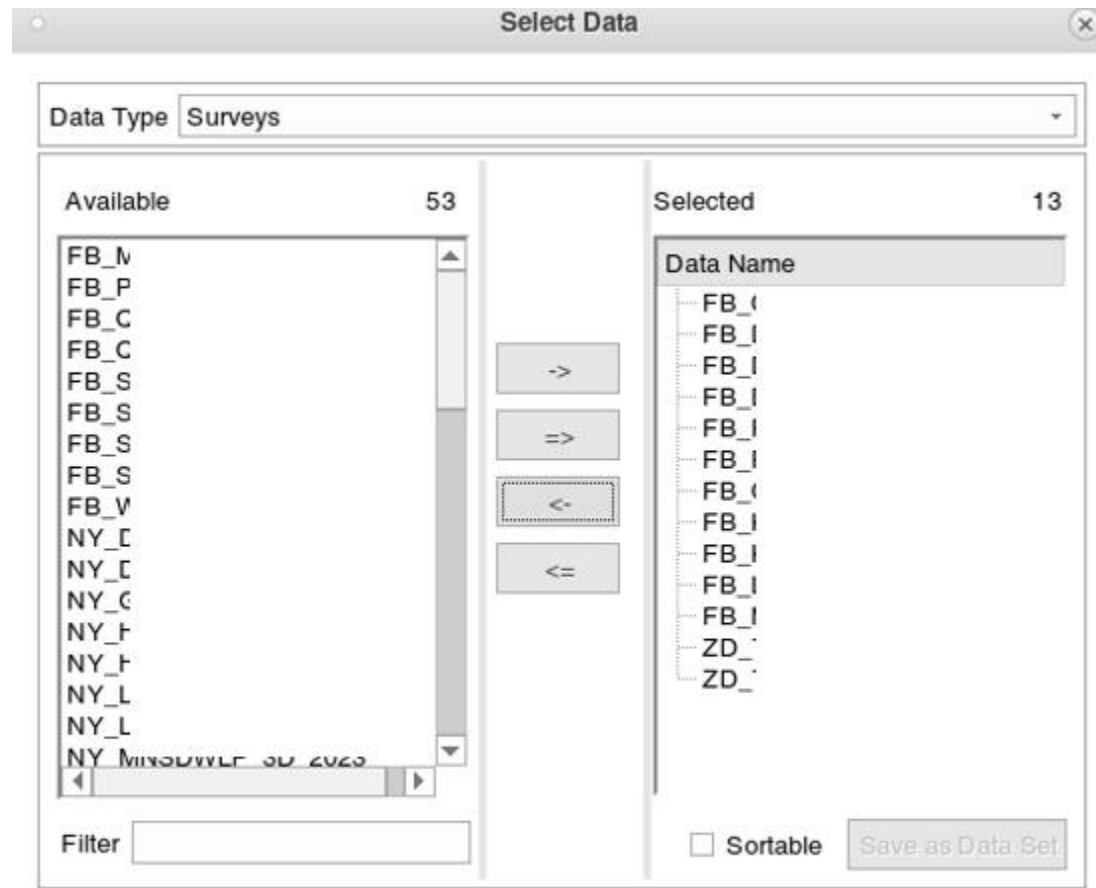
- Structural Interpretation** (构造解释): Includes tools like PostProcessing, WellPre, Well, MultiWell, Seismic, Basemap, Insight(Beta), Velocity, Mapping, and CGM.
- Reservoir Prediction** (储层预测): Includes tools like Well, MultiWell, Seismic, Basemap, GeoQC(Beta), Crossplot, PostProcessing, Insight(Beta), Rock, Attribute, Inversion, Frelntp, Interpretation5D, and AVO.
- Geological Analysis** (地质分析): Includes tools like Basemap, Rock, Guiding, Edge, Strata, Forward, and Insight(Beta).
- Seismic Guided Drilling** (水平井导向): Includes tools like SGD(Beta), Guiding, and SEM(Beta).
- Unconventional Seismic Prediction** (非常规地震预测): Includes tools like Seismic, Basemap, Mapping, Rock, Attribute, Inversion, Guiding, Insight(Beta), and Interpretation5D.
- MCI** (多波解释): Includes tools like Basemap, Well, Rock, Seismic, MultiWave, Attribute, Inversion, and MCStatics.
- Tools** (系统工具): Includes tools like CoordTool, Symbol, ReportAssistant, GeoTxtEditor, SEGDataTool, DataSet, Calculation, HorizonPicking, Conversion, GeoHat, and SeisMerge.
- Smarter** (人工智能): Includes tools like VeloPick, RNA, TimPik, Log, Horizon, Fault, Facies, GeoBody, and BGModel.



设置感兴趣工区

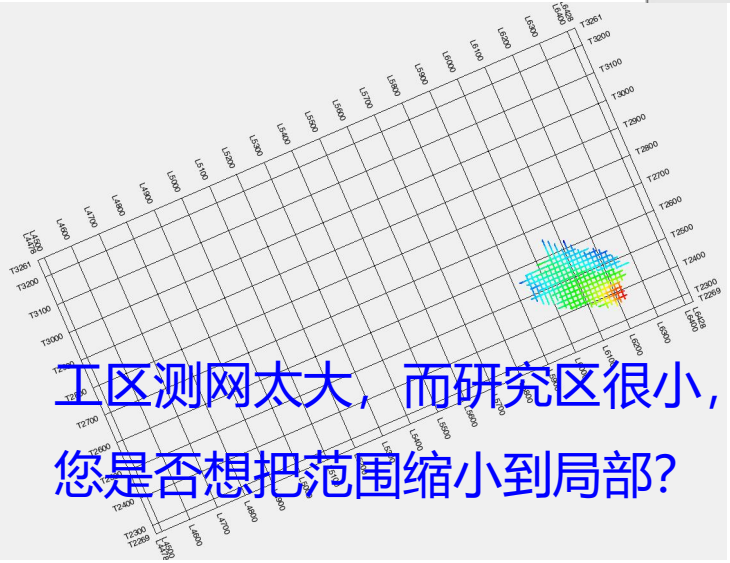
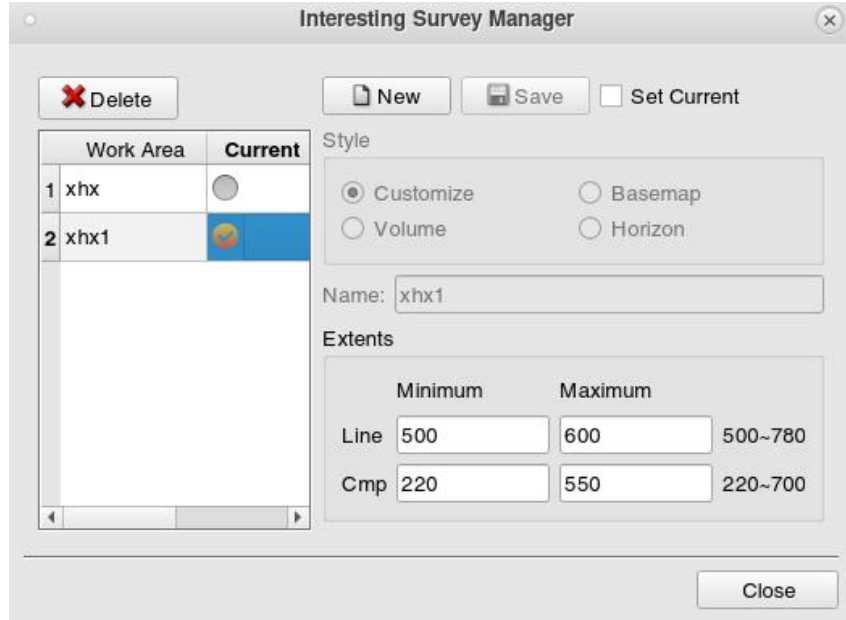
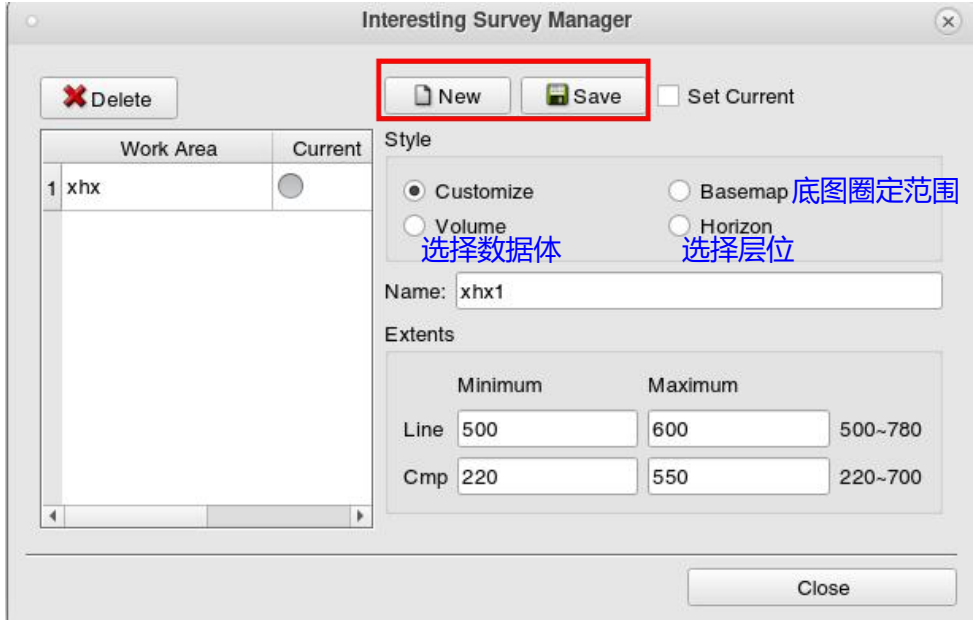
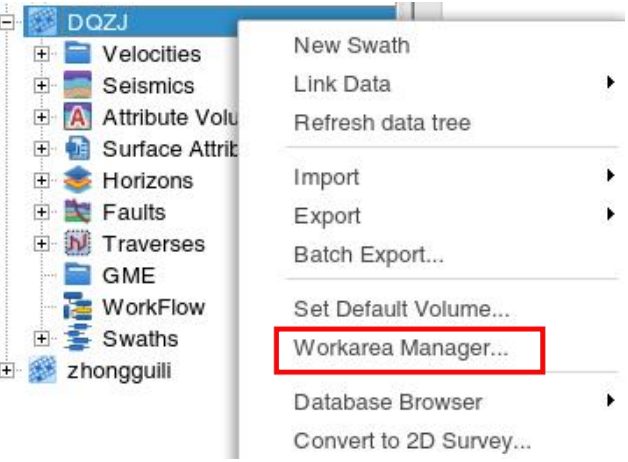


一个project下挂的survey太多，
每次进入系统找自己的工区要
找半天，您是否也有此困扰？





设置工区感兴趣范围

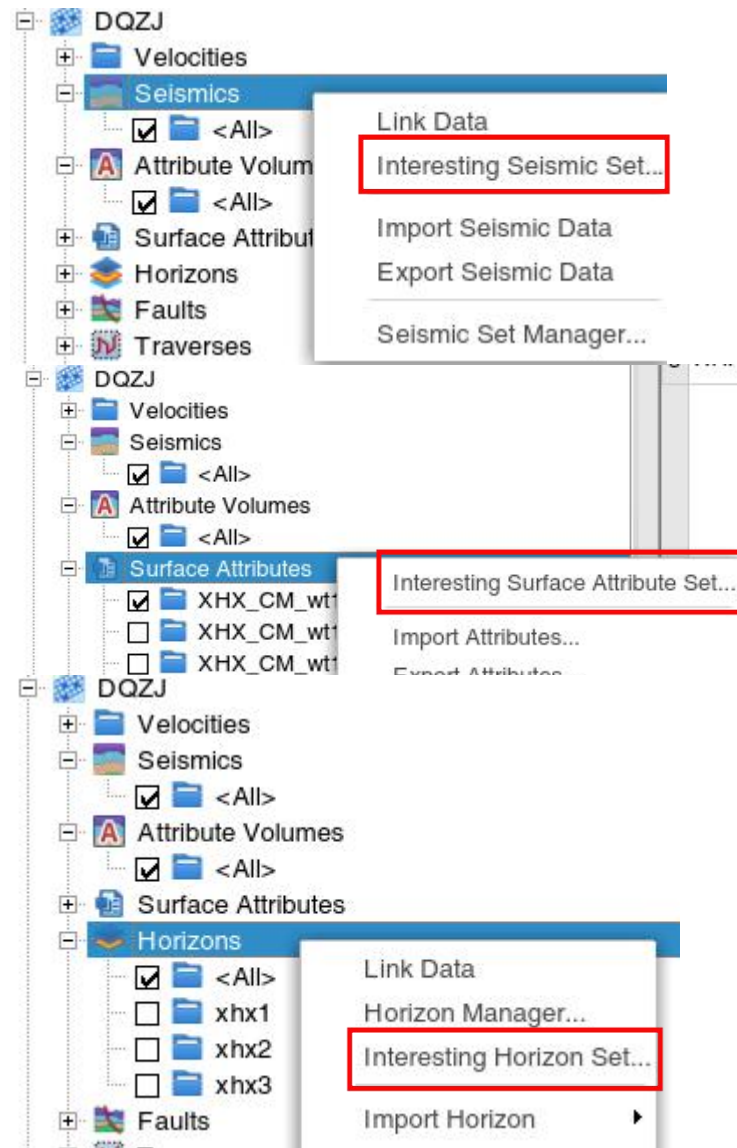
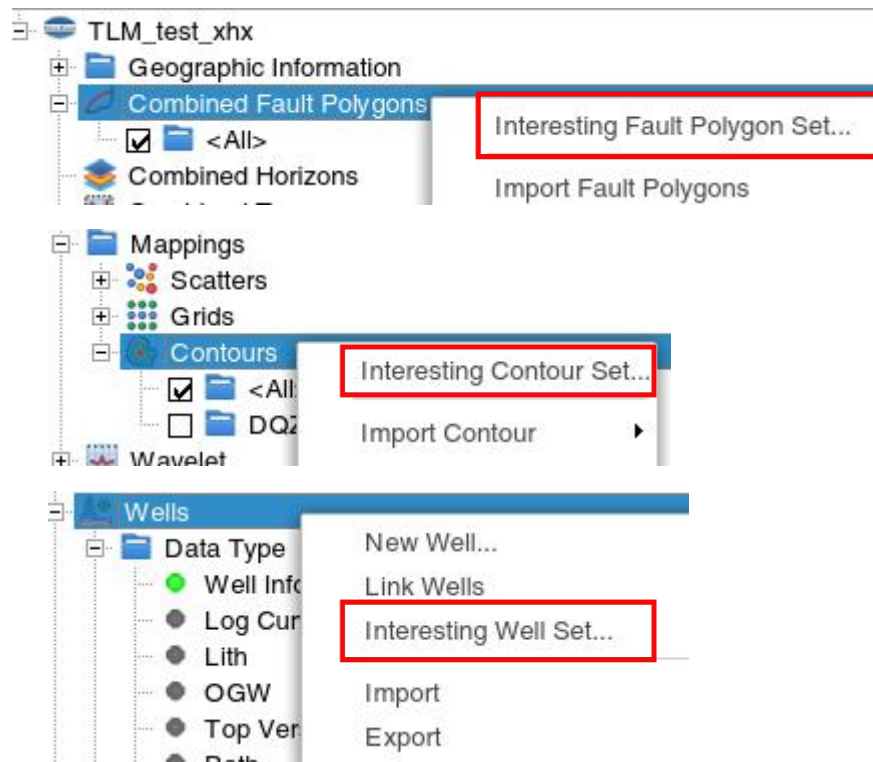


可通过设置线道范围、底图圈定、数据体范围以及层位范围四种方式设置工区感兴趣范围

主控选择好自己设置的范围后，重新打开底图和剖面，范围会自动缩小



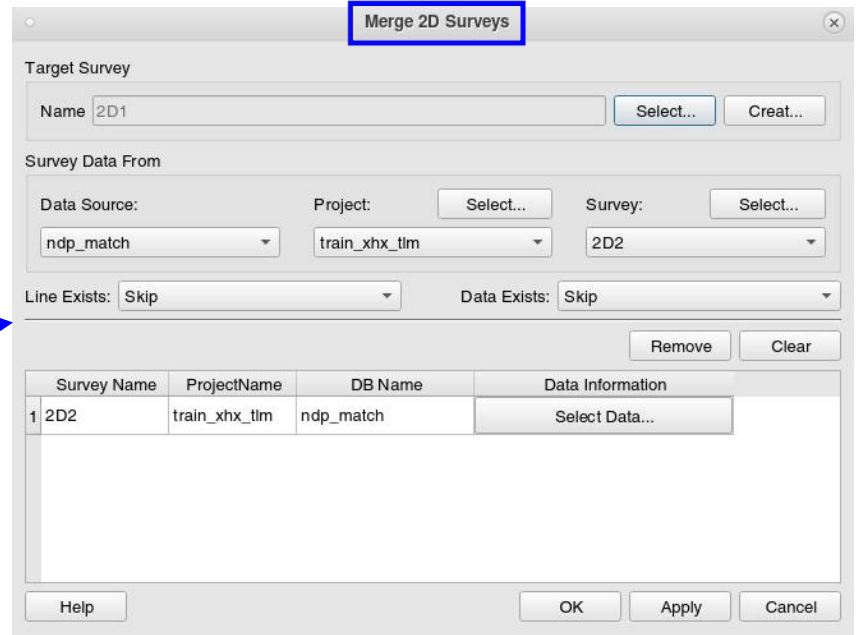
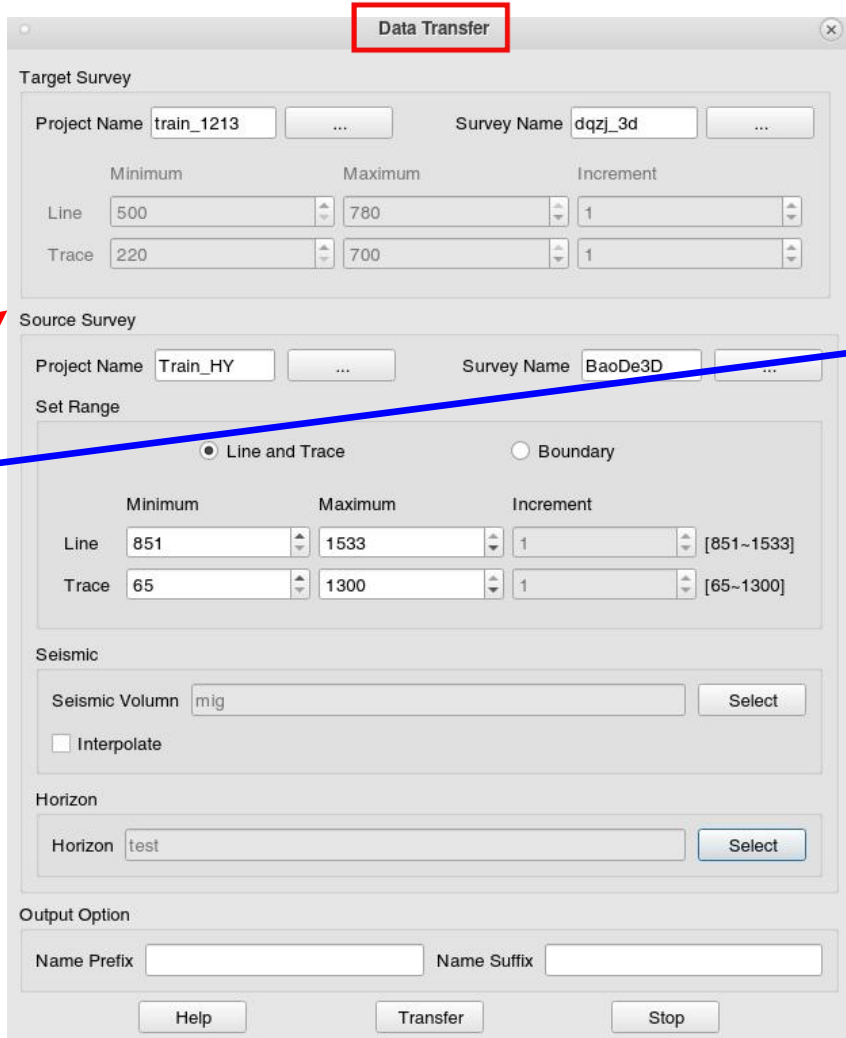
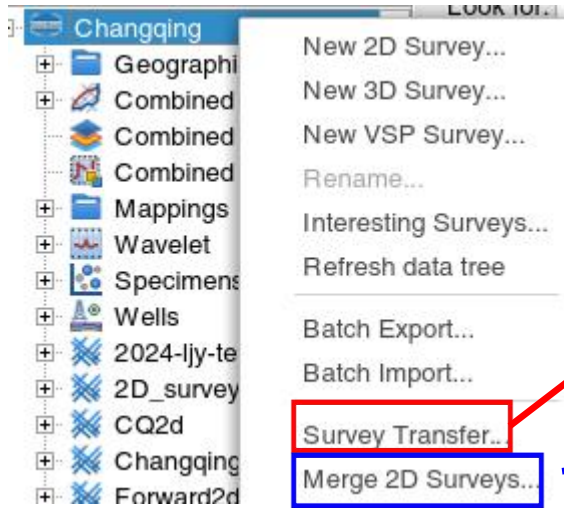
设置感兴趣数据集



设置各类感兴趣数据集，让软件界面更加简洁，查找数据更便捷

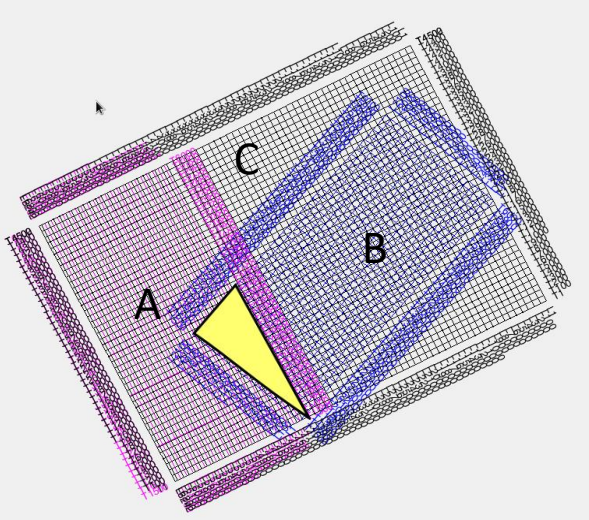


不同测网之间数据的传输



Merge Surveys... V4.3只有此功能, 并且指的是三维数据传输

将若干个二维工区合并为一个, 也可以将某些二维工区的部分测线转至另一个二维工区, 分别选择地震、层位、断层以及面属性。



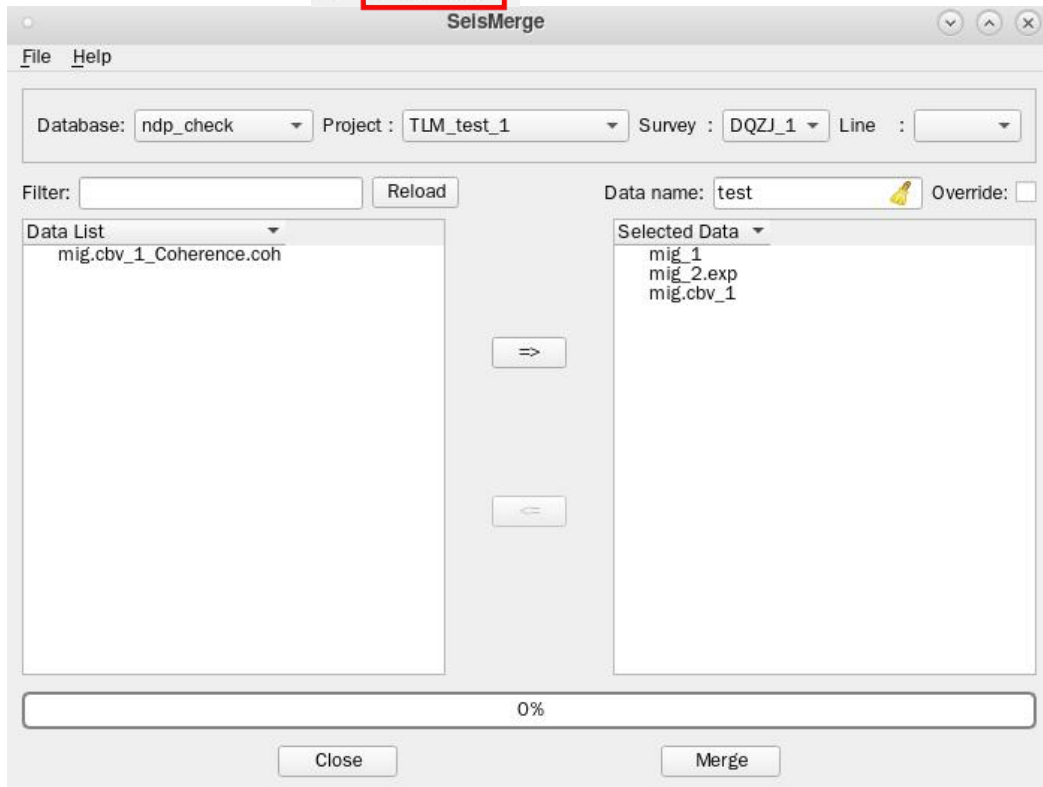
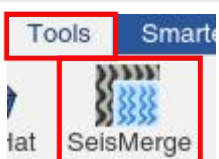
A和B的交集是黄色三角形, 可以通过此功能将A测网中数据体的三角形区域传输到B测网, 也可将A、B测网的数据体分别传至C测网。



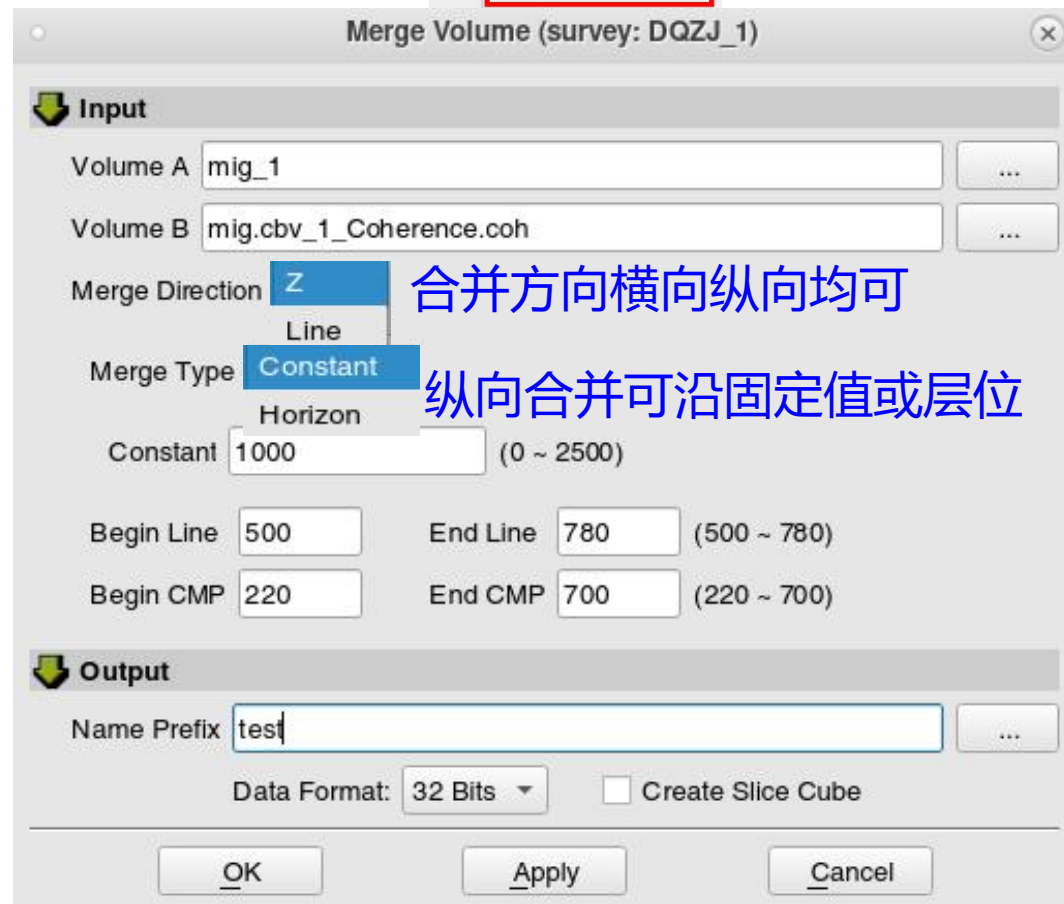
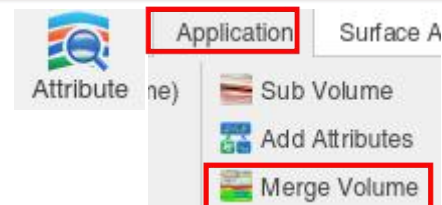
数据体合并



主控



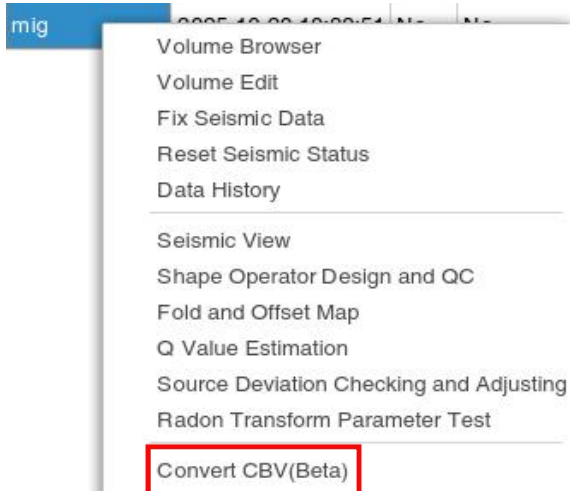
多个数据体一次性合并，合并产生新数据的同时，系统会自动删除多个单体数据。这种合并方式还适合叠前道集数据的合并。



只适合叠后地震数据两两合并

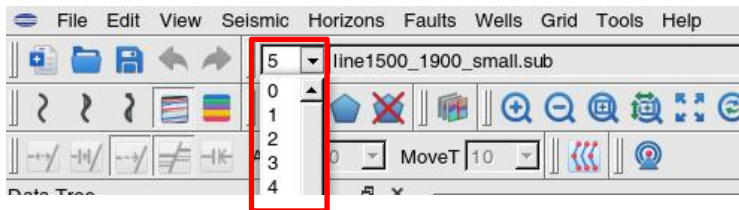


数据体压缩

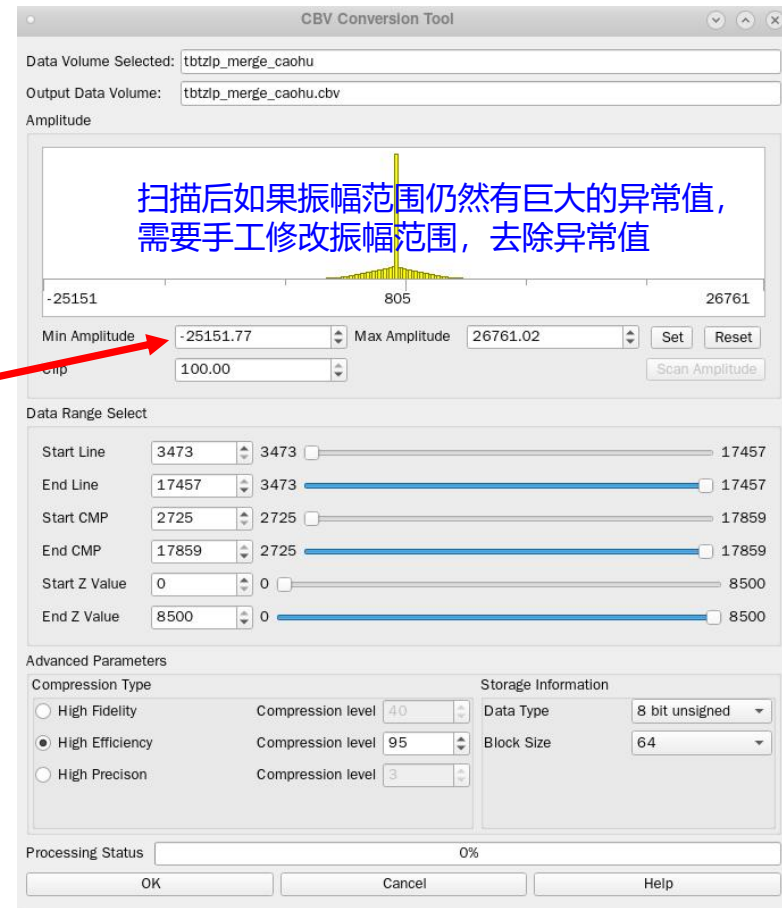
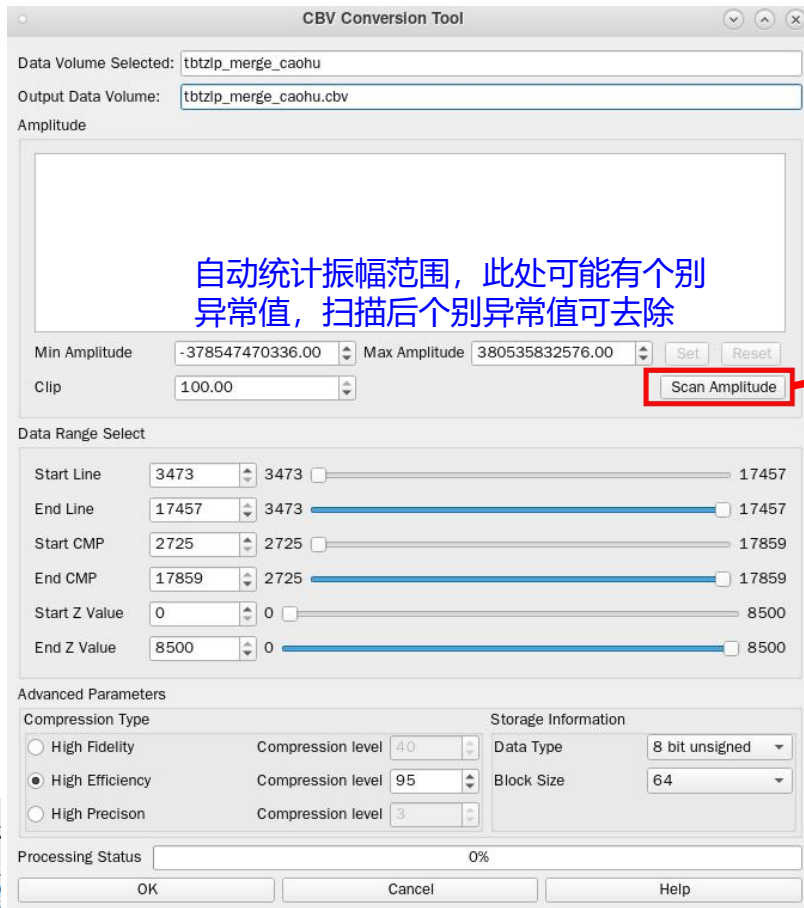


| Seismic Name | Data Size(M) |
|------------------------|--------------|
| tbtzlp_merge_caohu.cbv | 13720.39 |
| tbtzlp_merge_caohu | 1432956.50 |

数据量显著缩小



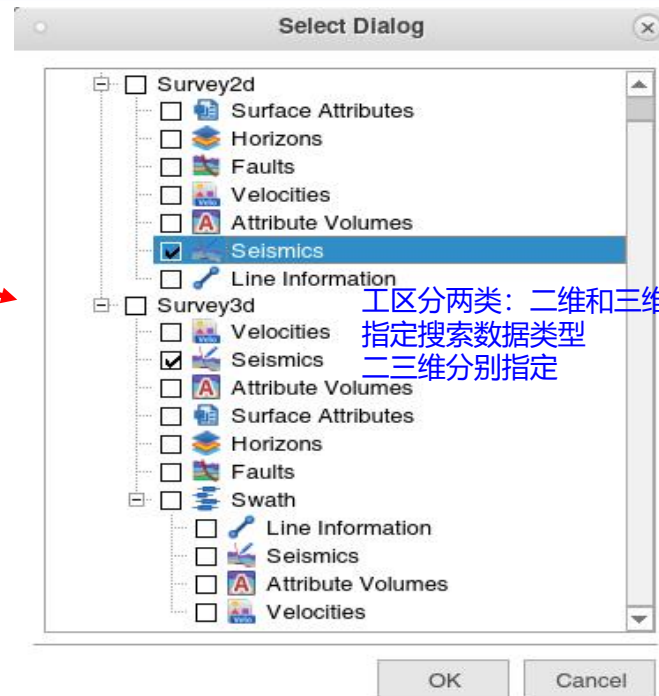
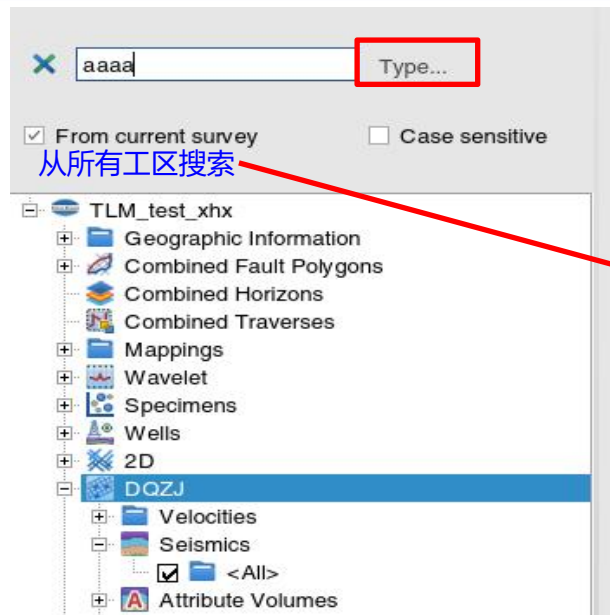
cvb数据体在剖面中通过设置该选项可以提高剖面翻页显示速度
(V4.4.1)



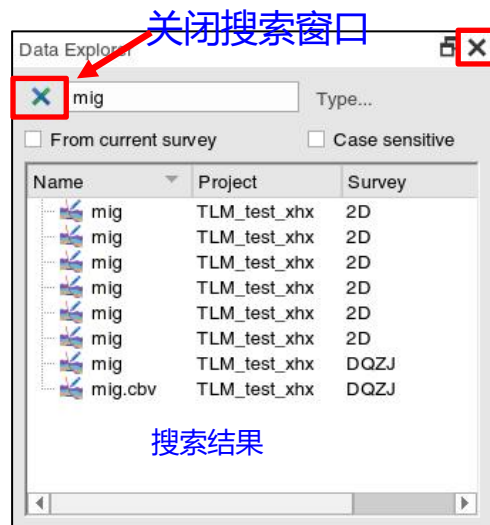
用cbv体打开剖面，单工区或组合工区均可，剖面翻页速度明显变快，后续产生的属性数据体数据量也小很多，节省磁盘空间。



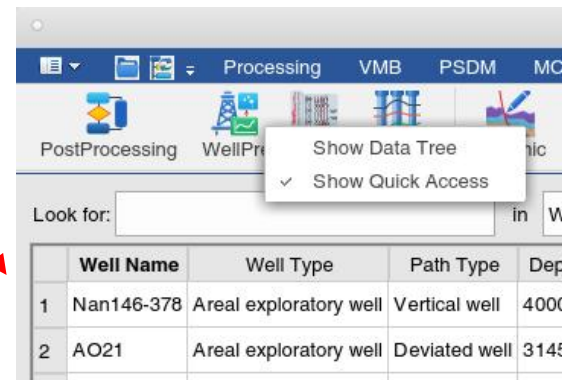
当前project数据搜索



鼠标点中主控数据树任一位置
输入Ctrl+F,弹出上方搜索框

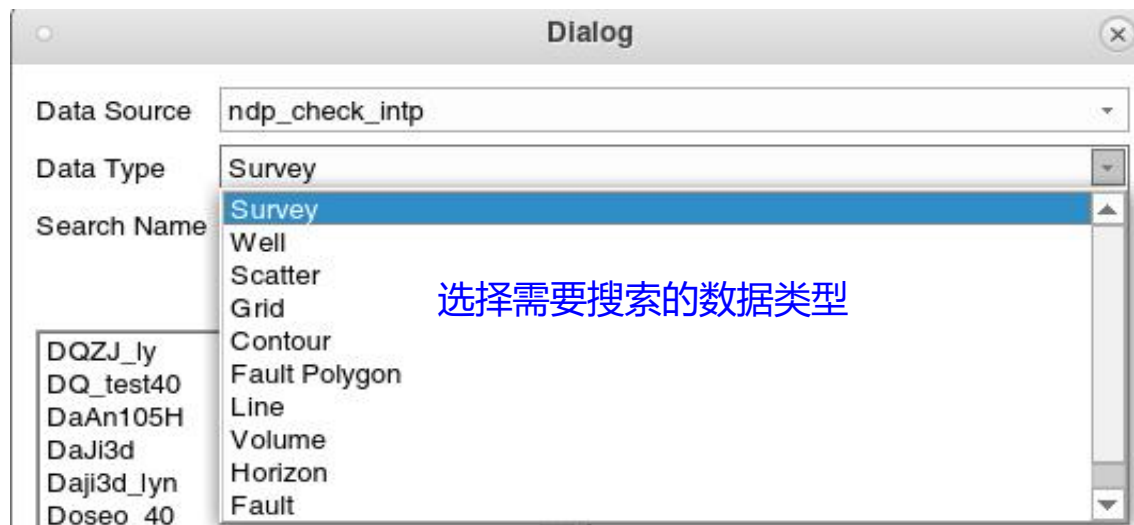
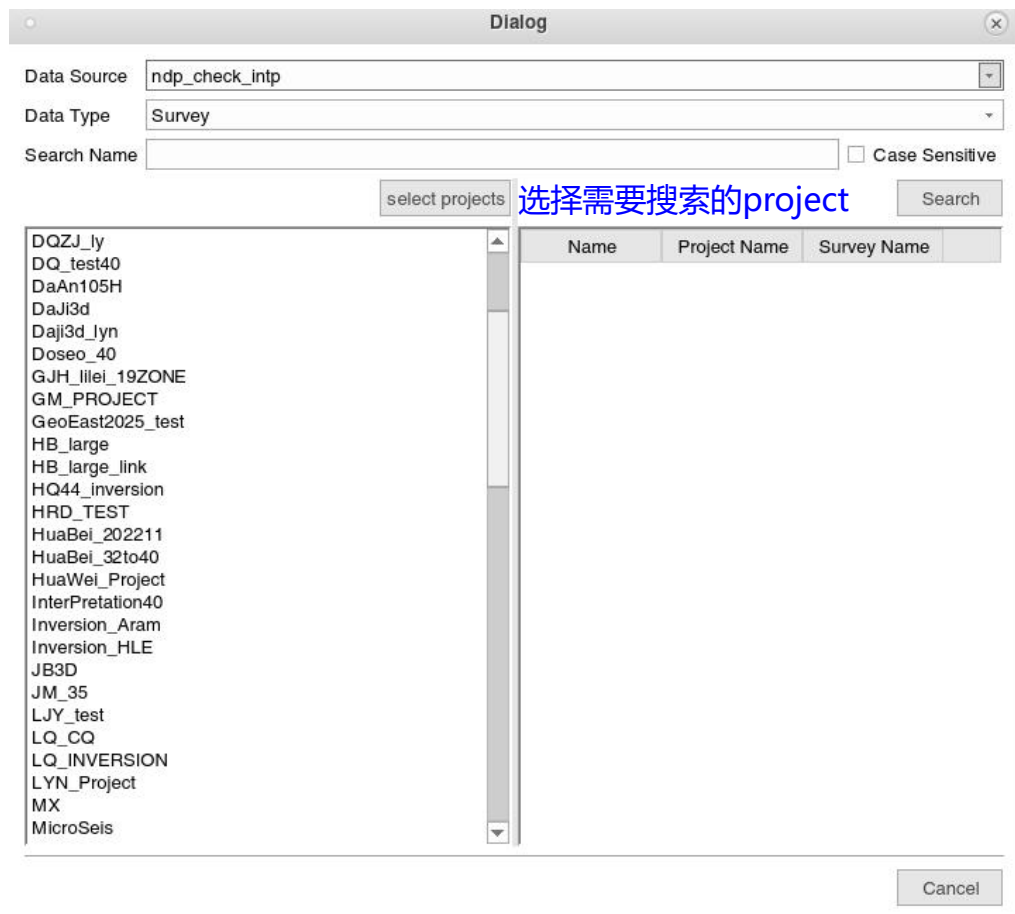


如果不小心点错, 导致主控数据树关闭





全域数据搜索(4.4版本)



鼠标放在主控任意位置输入
Ctrl+S



快速搜索底图中井位



主控通过搜索栏快速搜索井名，底图中相应井位会变为红色高亮，如果之前该井未显示在底图中，此操作会让该井自动显示在底图中并呈现红色。

底图中密集的井点难以搜寻目标井

The screenshot shows the GeoEast software interface. The top menu bar includes options like 'PostProcessing', 'WellPre', 'Well', 'MultiWell', 'Seismic', 'Basemap', 'Insight(Beta)', 'Velocity', 'Mapping', and 'CGM'. The 'Data Explorer' panel on the left shows a tree view with 'Wells' selected, and 'Well Information' highlighted under 'Data Type'. The search bar at the top right contains 'Look for: H' and 'Well Name' as the search criteria. The 'Communication' checkbox is checked. Below the search bar is a table of well data.

| Well Name | Well Type | Path Type | Depth | KB | Elevation | Coordinate System | Top X | Top Y | Bottom X | Bottom Y |
|-----------|------------------------|---------------|-------|----|-----------|-------------------|---------|-----------|-----------|-----------|
| 1 H43lqq | Areal exploratory well | Vertical well | 2600 | 0 | 0 | gxd_BJ54_18N | 5702... | 4956936 | 570207... | 4956936 |
| 2 H45 | Areal exploratory well | Vertical well | 2500 | 0 | 0 | gxd_BJ54_18N | 5701... | 4960058 | 570151... | 4960058 |
| 3 H47 | | | | | | 3J54_18N | 5672... | 4966908.5 | 567291... | 4966908.5 |
| 4 H48 | | | | | | 3J54_18N | 568960 | 4958170 | 568960 | 4958170 |
| 5 H49 | | | | | | T16J54_18N | 5705... | 4962741.5 | 570521... | 4962741.5 |
| 6 H52 | | | | | | T15J54_18N | 5655... | 4962108.5 | 565539.5 | 4962108.5 |



数据计算器 (一)



The screenshot shows a software interface with a tree view on the left and a list of wells in the center. The tree view includes 'Wells', 'Data Type', '2D', 'DQZJ', and 'zhongguili_1'. The list of wells includes H45, H47, H48, H49, H52, H43lqq, Q104, Q109, Q124, and xj1. A context menu is open over well H47, with 'Custom Calculation...' highlighted in red. Below the list, another context menu is open over well wt1, also with 'Custom Calculation' highlighted in red.

The 'Expressions Calculator' dialog box is shown. It has a 'Type' dropdown set to 'well log', a 'Survey' dropdown, and a 'Set Input & Output Data ...' button. The 'Data' section has a 'Remark' field. The 'Public Parameters' section is empty. The 'Result Name' and 'Result Remark' fields are also empty. The 'Define Expressions' table has one row with 'Type' 'y =' and 'Expressions' empty. The 'Signs & Functions' list includes '+', '-', '*', '/', '^', and '>'. The 'Import Expressions ...' button is present. The 'Null Value Flag of Result: Y_NULL=' dropdown is set to 'Y_NULL='. The 'Save Expressions' checkbox is unchecked. The 'Thread Number' is set to 12 (1 ~ 24). The dialog has 'OK', 'Apply', 'Cancel', and 'Help' buttons.



数据计算器 (一) 应用



Expressions Calculator

Type: well log

Survey: []

Set Input & Output Data ...

Data: horizon, scatter, surface attributes, volume, well log

Public Parameters: Remark

Result Name: []

Result Remark: []

Define Expressions:

| Type | Expressions |
|------|-------------|
| 1 | y = |

Signs & Functions:

Import Expressions ... Null Value Flag of Result: Y_NULL= []

Save Expressions []

Thread Number: 12 (1 ~ 24)

Buttons: OK, Apply, Cancel, Help

Set Input & Output Well Log Curve Data 可选择多条曲线计算

Well Set: []

Wells & Curves

| Well | Curve 1 | Start Z | End Z | Validity |
|------|---------|---------|-------|-------------|
| 1 | H49 | | | Invalid ... |

Curves Count: 1

Output Data

Name: [] Resampling Interval of Selected Curves in Individual Well: User Define 0.125

Nature: Log Curve Curve Type: UNKNOWN Version: auto set

Buttons: OK, Cancel

Set Well Log Data

Setting for Well H49, Curve 1

Available Curve List

Curve Type Filter: ***All***

| Name | Type | Source | Version | Domain | Start | End | Interval | Sampling | |
|------|------|--------|----------|--------|-------|---------|----------|----------|-------|
| 1 | SP | SP | Original | 1 | Depth | 303.125 | 2525.25 | 0.125 | 17778 |
| 2 | DEN | DEN | Original | 1 | Depth | 1115.88 | 2521.88 | 0.125 | 11249 |
| 3 | GR | GR | Original | 1 | Depth | 305.125 | 2518.12 | 0.125 | 17705 |
| 4 | P_AC | P_AC | Original | 1 | Depth | 317.375 | 2523 | 0.125 | 17646 |

Selected Curve

| Curve 1 | Name | Type | Source | Version | Domain | Start | End | Interval | Sampli |
|---------|------|------|----------|---------|--------|---------|---------|----------|--------|
| Curve 1 | GR | GR | Original | 1 | Depth | 305.125 | 2518.12 | 0.125 | 17705 |

Buttons: Apply, Curve 1, Curve(s) to, Current, Well(s), Close

Set Input & Output Well Log Curve Data

Well Set: []

Wells & Curves

| Well | Curve 1 | Start Z | End Z | |
|------|---------|---------|---------|-----|
| 1 | H47 | GR(V1) | 219.625 | 242 |

Curves Count: 1

Output Data

Name: [] Resampling Interval of Selected Curves in Individual Well: User Define 0.125

Nature: Lith

Curve Type: [] Version: []

Buttons: OK, Cancel

Expressions Calculator

Type: well log

Survey: []

Set Input & Output Data ...

Data & Alias:

| Alias | Remark |
|-------|--|
| 1 | C1 |
| | Data of Curve 1 column in table of Wells & Curves within the windows of Set Input & Output Well Log Curve Data |

Public Parameters: Input Curves Count: 1

Result Name: Lith(Depth)/Lith(Time)

Result Remark: Nature:Lith, Curve Type:, Version:

Define Expressions:

| Type | Expressions |
|------|-------------|
| 1 | if C1 > 90 |
| 2 | y = |
| 3 | else y = |

Signs & Functions:

Import Expressions ... Null Value Flag of Result: Y_NULL= -9999

Save Expressions []

Thread Number: 12 (1 ~ 24)

Buttons: OK, Apply, Cancel, Help



数据计算器 (二)



mig

- Volume Browser
- Volume Edit
- Fix Seismic Data
- Reset Seismic Status
- Data History

- Seismic View
- Shape Operator Design and QC
- Fold and Offset Map
- Q Value Estimation
- Source Deviation Checking and Adjusting
- Radon Transform Parameter Test

- Convert CBV(Beta)
- Convert 8/16bit Cube
- Create Slice Cube
- Delete Slice Cube
- CMP-Line Volume Conversion
- Delete CMP Volume
- Custom Calculation**

3D Volume Custom Calculation (survey: DQZJ)

Input

Select Volumes ...

| | Alias | Name | BeginLine | End Line | Line Inc | Begin CMP | End CMP | CMP Inc | Begin Z | End Z | Z Inc | Nature | Form | Domain |
|---|-------|-------------------|-----------|----------|----------|-----------|---------|---------|---------|-------|-------|----------------|------------|--------|
| 1 | A | mig | 500 | 780 | 1 | 220 | 700 | 1 | 0 | 2500 | 1 | Seismic record | Post-stack | Time |
| 2 | B | xhx_Amplitude.sts | 500 | 780 | 1 | 220 | 700 | 1 | 1 | 12 | 1 | Coherence | Post-stack | Time |

一次可选择一个或多个数据体进行计算

Process Range

Begin Line: 500 End Line: 780 (500~780)
Begin CMP: 220 End CMP: 700 (220~700)
Begin Z: 1 End Z: 12 (1~12)

Expression

Define Expressions: (Note: Y_NULL refers to the null value in the output data.)

| Type | Expressions |
|---------|-------------|
| if | |
| y = | |
| else if | |
| y = | |

计算语句可串联使用

Thread Number: 12 (1 ~ 24)

Save Expressions to File

Output

Name Prefix: _____

Data Format: 32 Bits Create Slice Cube

Ok Apply Cancel



数据计算器 (二) 应用



Define Expressions: (Note: Y_NULL refers to the null value in the output data.)

| Type | Expressions |
|----------|----------------------------------|
| if | isNull(A) 将剖面上的空值设置为常数 1000 |
| y = | 1000 |
| else y = | A |

Signs & Functions:

- i ceil(r)
- i cmpNo()
- r cos(r)
- r exp(r)
- i floor(r)
- b isInf(r)
- b isNan(r)
- b isNull(A)**
- i lineNo()

Define Expressions: (Note: Y_NULL refers to the null value in the output data.)

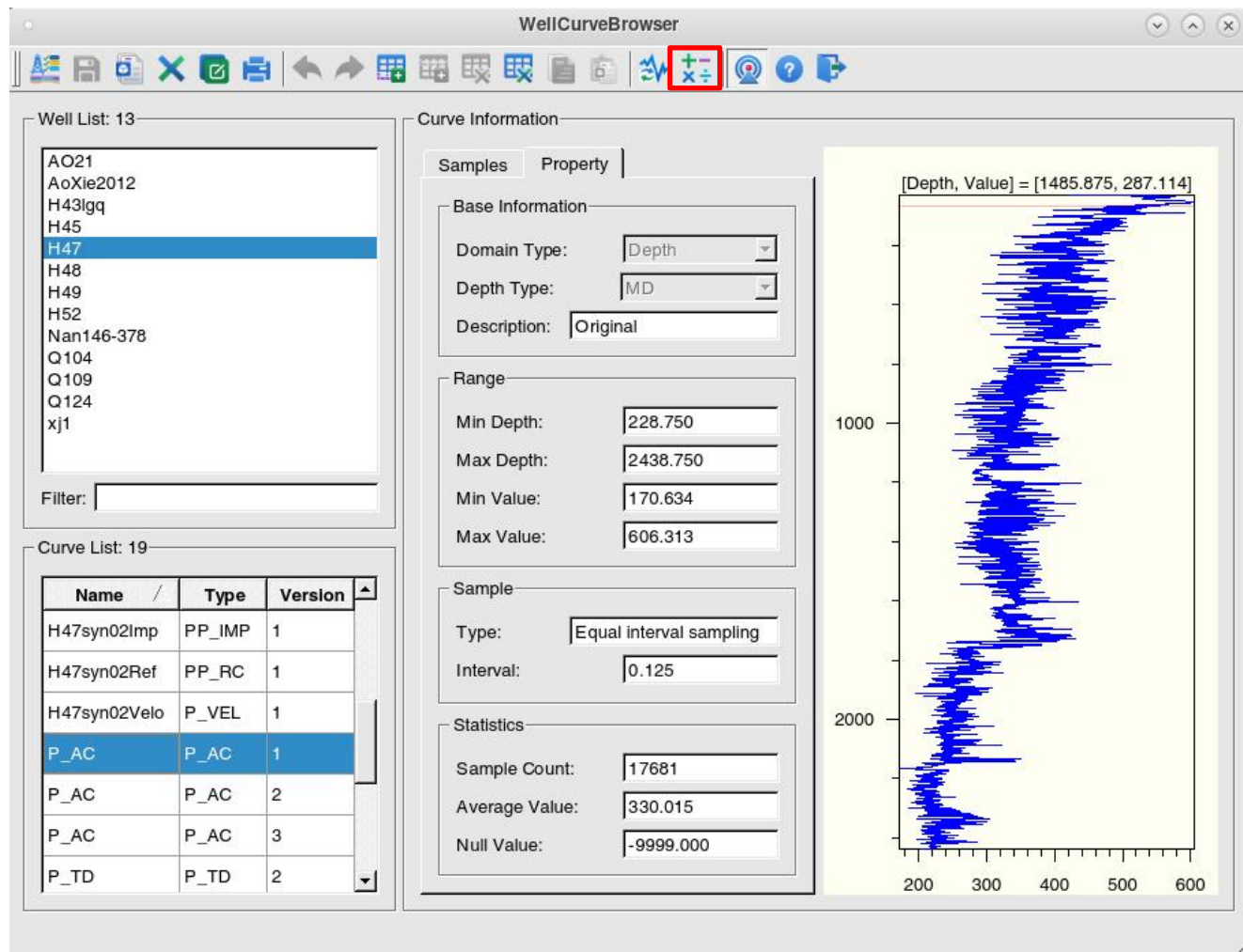
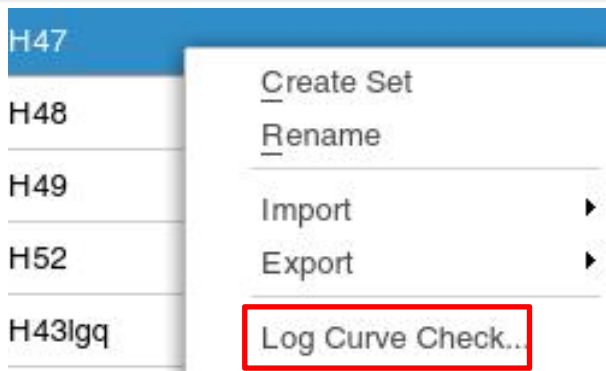
| Type | Expressions |
|----------|--|
| if | A > 500000 将剖面上的振幅值大于500000的值设置 为空值 |
| y = | Y_NULL |
| else y = | A |

Signs & Functions:

- +
-
- *
- /
- ^
- >**
- >=
- <
- <=



数据计算器 (三)



A screenshot of the 'Curve Transformation' dialog box. It has three sections: 'Transformation parameter', 'Output Curve', and 'Formula'. The 'Transformation parameter' section has 'Input Curve' (Name: P_AC, Type: P_AC, Version: 1) and 'Output Curve' (Name: P_AC_tf, Type: P_AC, Version: New Max Version). The 'Formula' section contains two formulas: 'New Depth = ((Depth + 0.000) * 1.000 - 0.000) / 1.000' and 'New Value = ((Value + 0.000) * 3.280 - 0.000) / 1.000'. The second formula is highlighted with a red box. A blue text annotation '可变换输出曲线类型' is placed over the 'Type' dropdown in the 'Output Curve' section. At the bottom, there are 'OK' and 'Cancel' buttons.

可分别对深度及振幅值计算

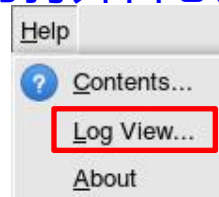
如果误将us/ft单位的声波加载为us/m, 通过幅值乘3.28可直接修改曲线



软件报错或模块闪退原因查找





GeoEast系统运行过程中，如果某个模块运行时出错或者闪退，用户如果无法判别出错原因，可打开日志文件并联系研发人员协助查看。大多数子系统的日志文件都在该子系统的帮助下拉菜单中，软件报错时直接点开Log View查看。




如果该子系统闪退，导致页面关闭，可以打开一个terminal，进入/tmp目录查看.log结尾的日志文件。日志文件名会以子系统缩写名.用户名.log命名，以下列出了一些常用子系统的日志文件名：

```
$ cd /tmp  
$ ls -ltr
```

bmap.xuhongx_gs.log  Basemap


ggi3d.xuhongx_gs.log  Seismic

GeoAttribute3d.xuhongx_gs.log  Attribute

GeoDataExport.xuhongx_gs.log
数据输出

processing.xuhongx_gs.log  PostProcessing

GeoRock.xuhongx_gs.log  Rock

qci.xuhongx_gs.log  GeoQCI(Beta)

geoinversion.xuhongx_gs.log  Inversion

感谢大家对GeoEast软件的 信任和支持!

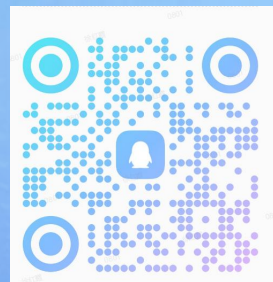
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解释技术支持QQ1群



解释技术支持QQ2群



Bilibili视频教程

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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>

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