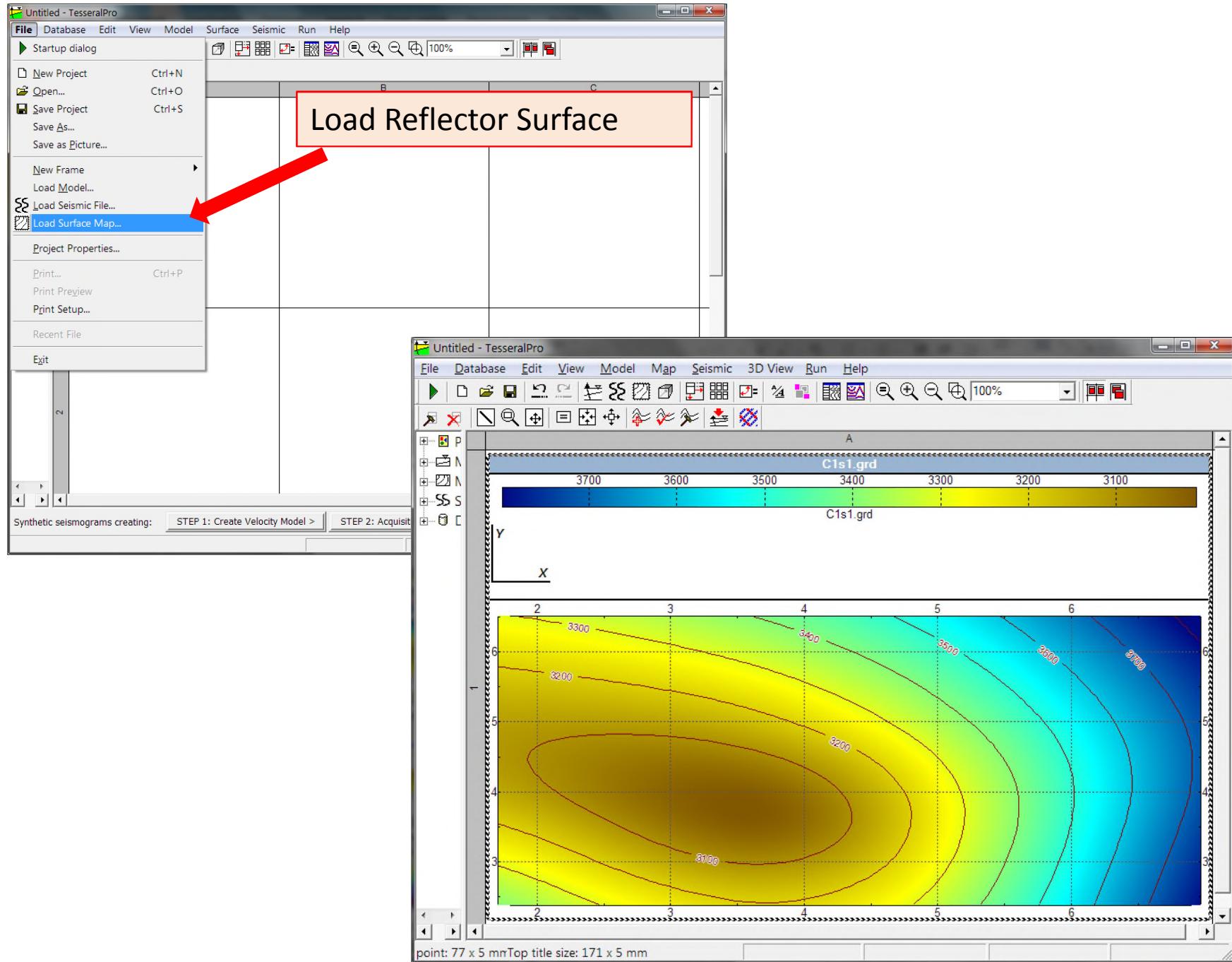
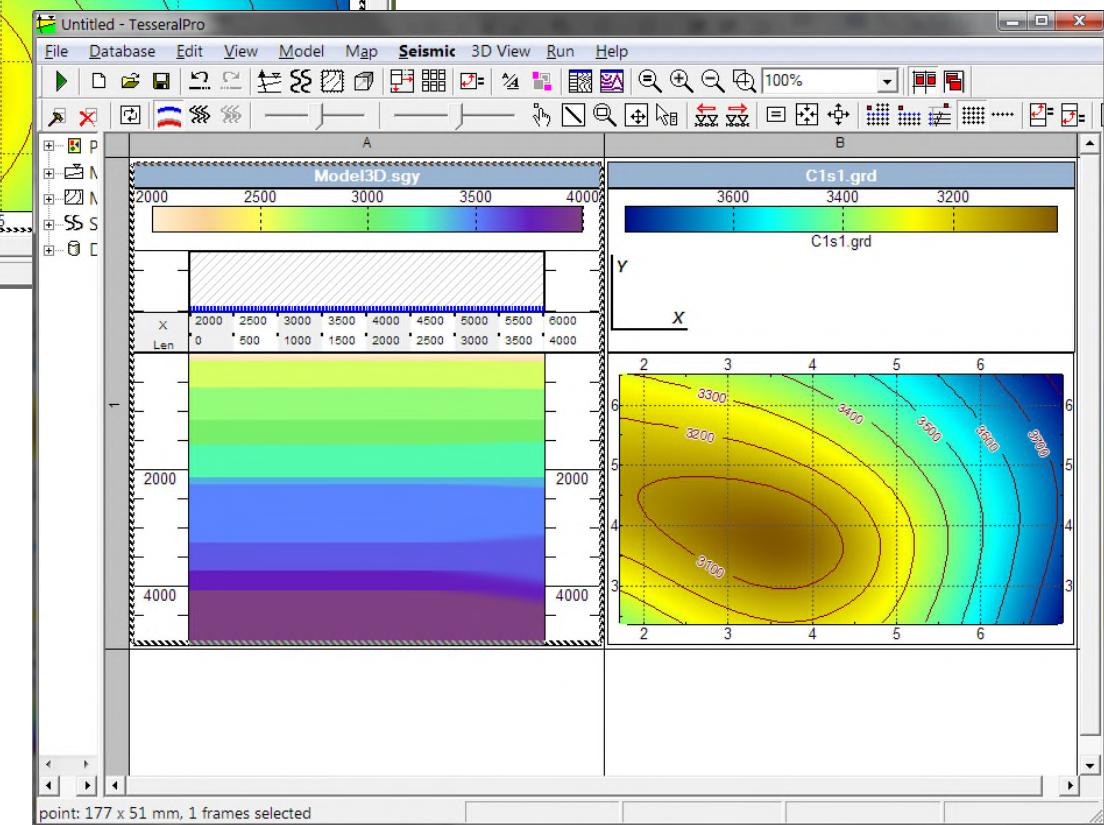
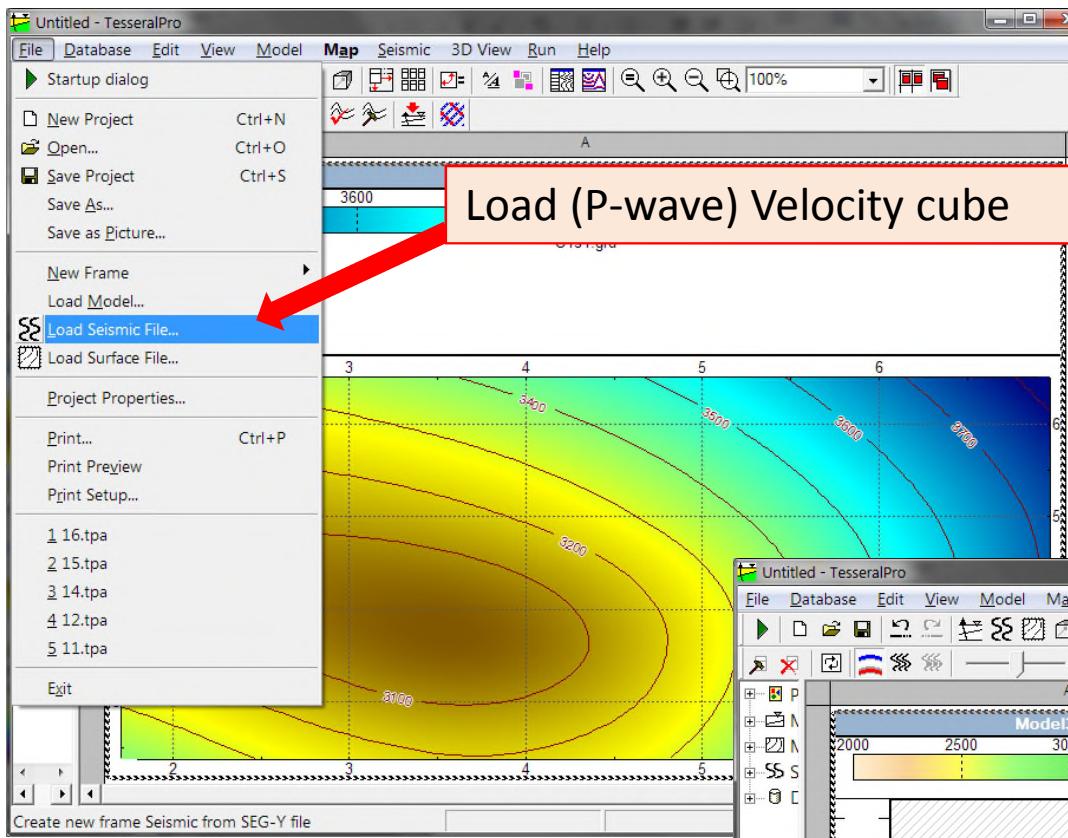


3D Ray Tracing in Tesseral Pro

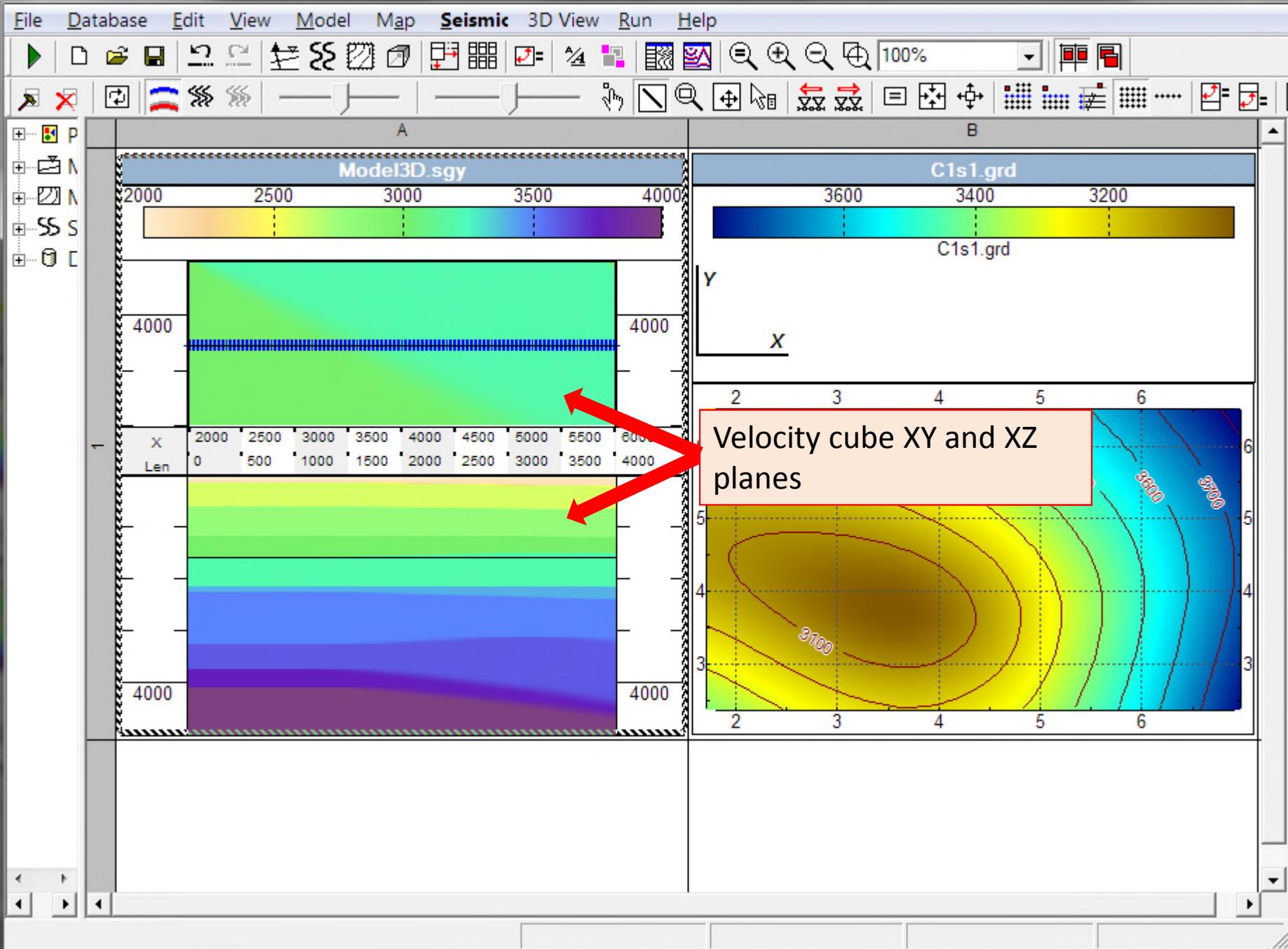


www.tesseral-geo.com

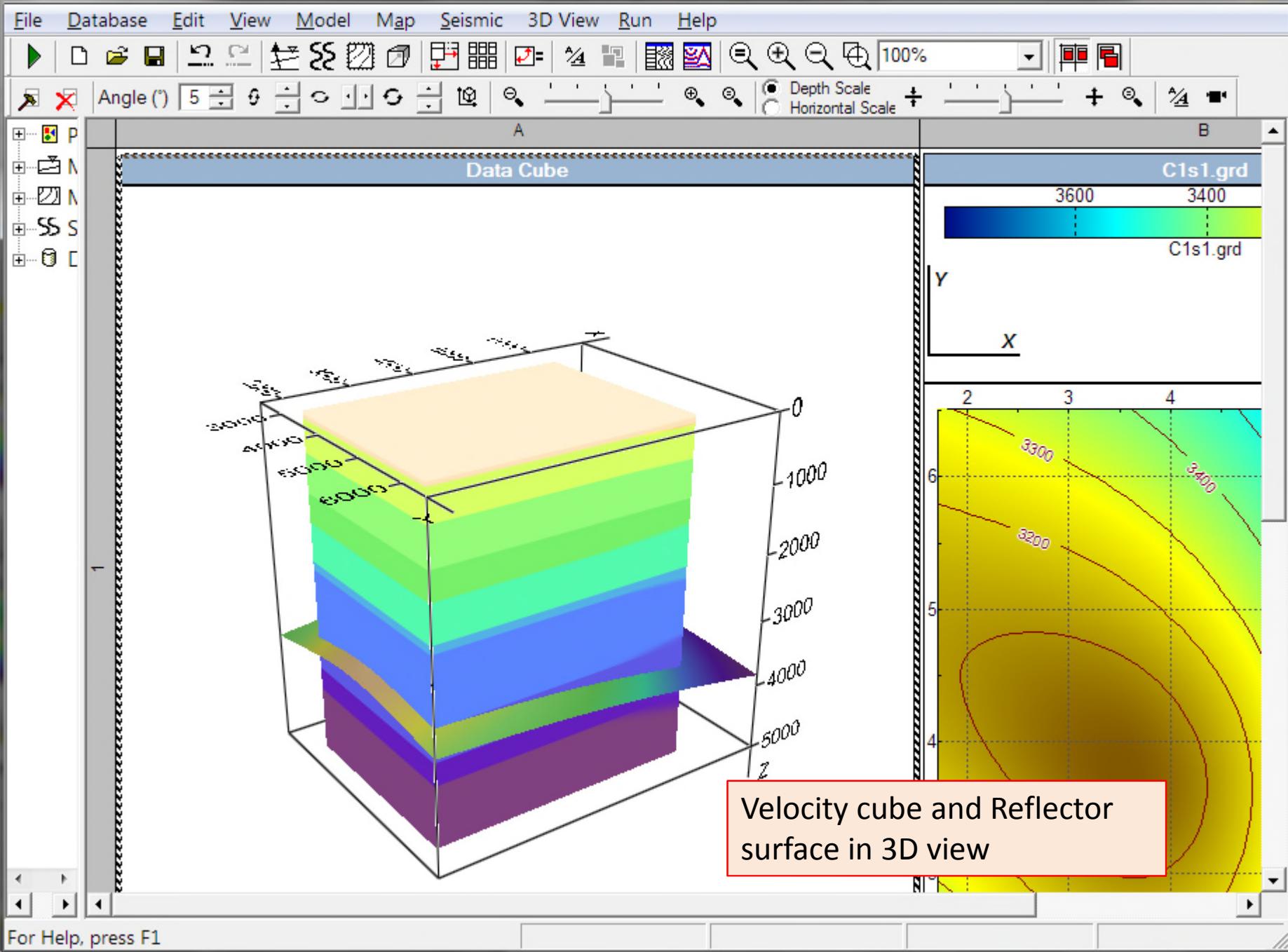


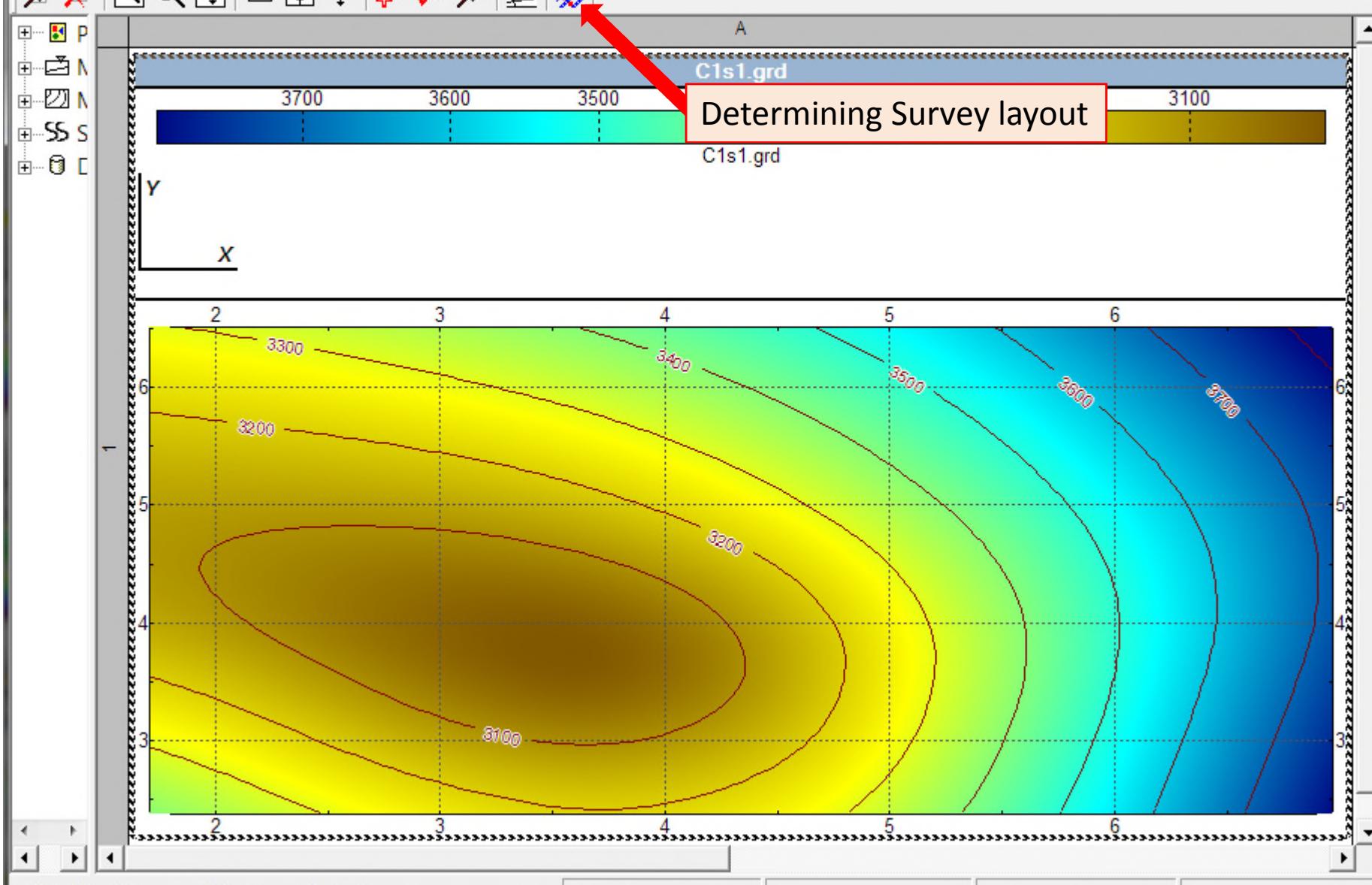


Untitled - TesseralPro

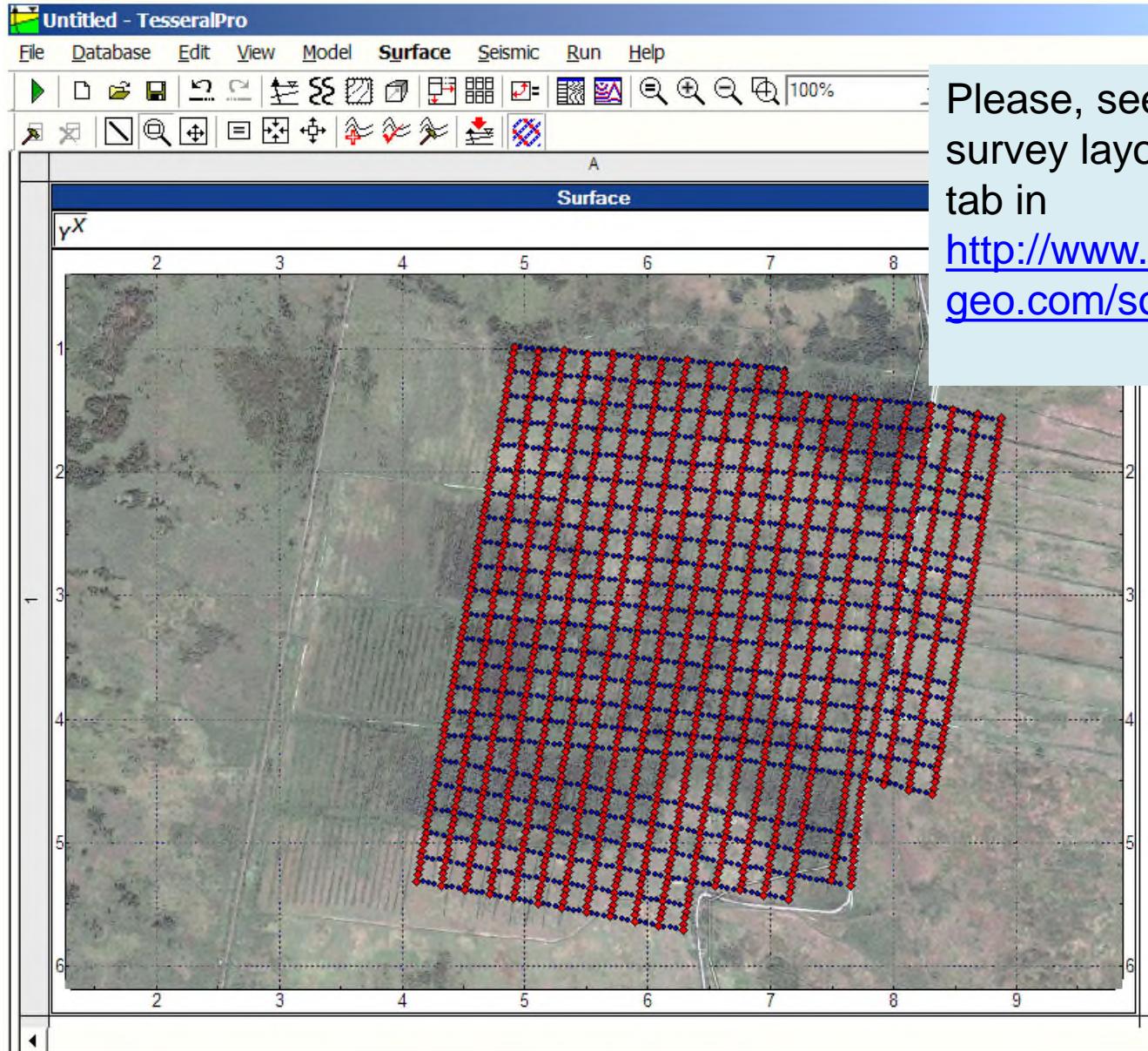


Untitled - TesseralPro

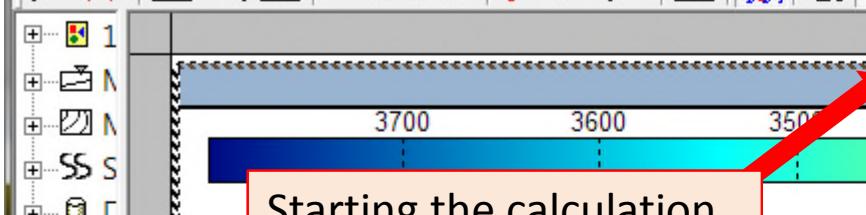




3D survey geometry layout



Please, see about setting 3D survey layout at /Survey Planning tab in
<http://www.tesserla-geo.com/solutions.en.php>



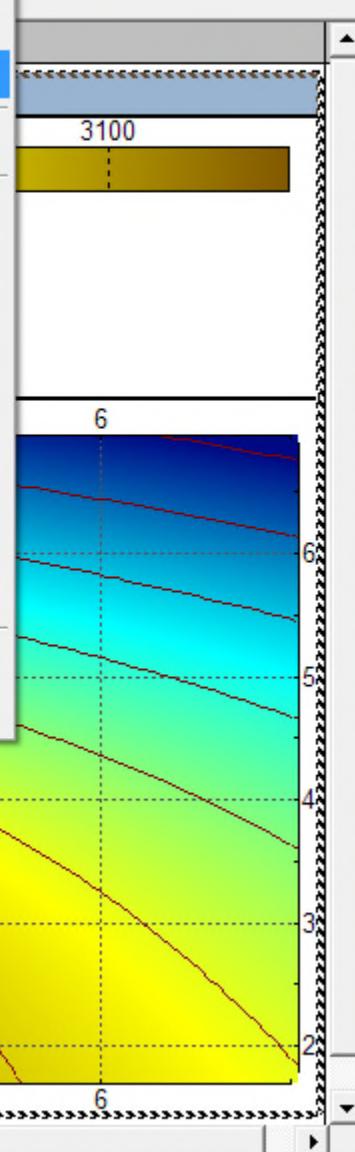
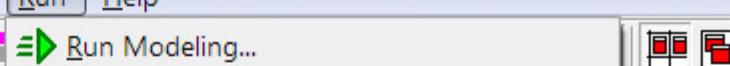
Starting the calculation

- Run Modeling...
- .NET: Run Modeling...
- CLUSTER: Create Task...
- 3D Ray Tracing Modeling... Selected
- 2D Model: Ray Tracing...

- General Purpose Procedures
- Velocity Model
- Pre-Processing
- Stack (Time domain)
- 2D Migration (Time domain)
- 2D Migration (Depth domain)
- VSP procedures (Depth domain)
- Post-Processing
- Create Processing Queue

Show Progress Dialog

Monitoring Options...



3D Ray Tracing

X

Input

Folder for computation

rs\Sasz\Documents\Programming\Ray3D\sample_model\3\

...

Velocity Cube File

C:\Users\Sasz\Documents\Programming\Ray3D\sample_model\3\

...

Surface File

C:\Users\Sasz\Documents\Programming\Ray3D\sample_model\3\

...

Surface File Type

Grid format Surfer GRD

Sources to compute

From #:

1

To #:

6

All

Active

Region Cube

X min

2000

m

X max

6000

m

X step

1

m

Y min

3000

m

Y max

6000

m

Y step

1

m

Z min

0

m

Z max

5000

m

Z step

20

m

From Velocity File

From Surface

Output

Illumination File Name

OutputIlnn.grd

Rays File Name

OutputRays.txt

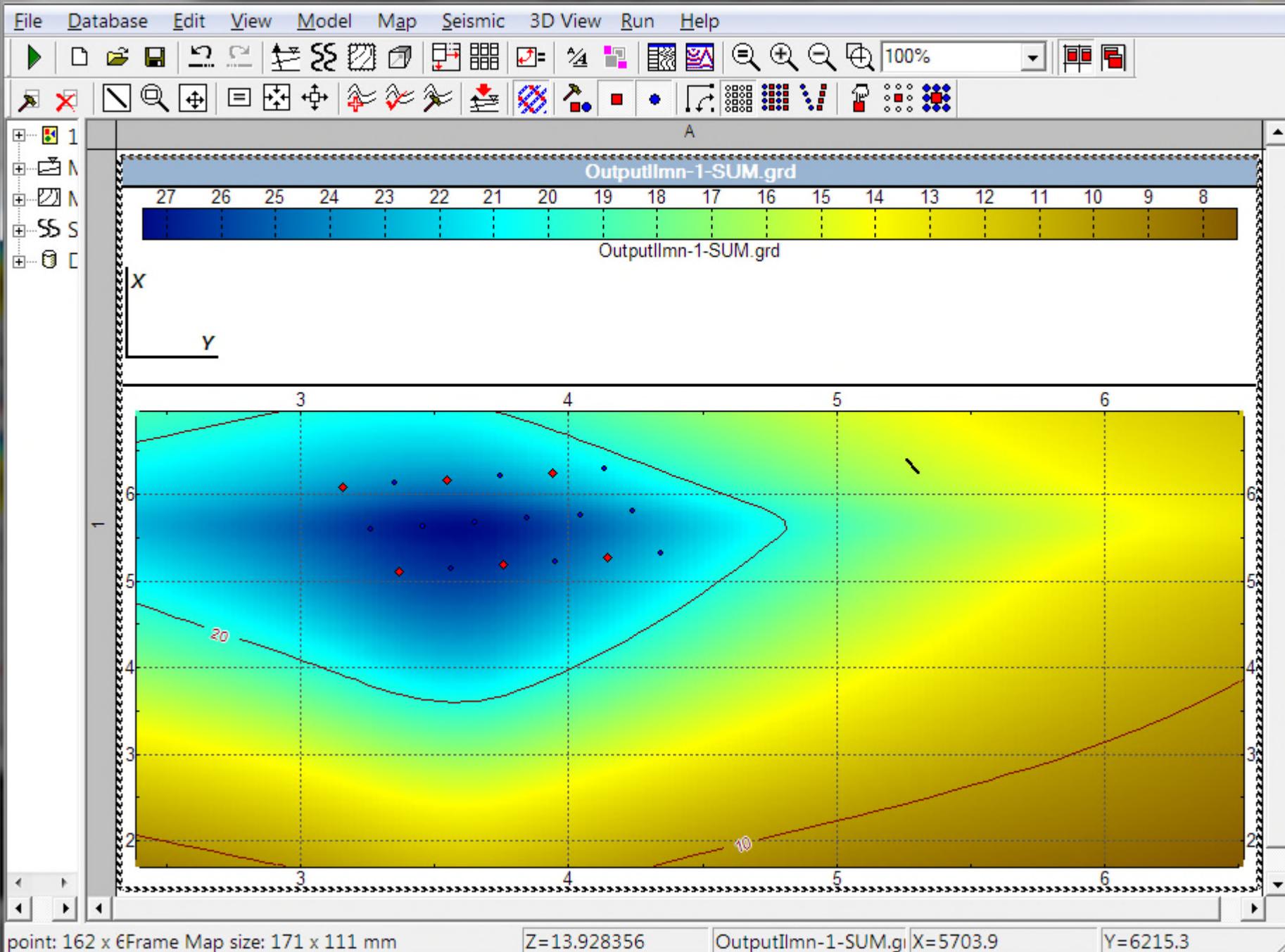
RUN

Cancel

3D Ray Tracing Computational Engine

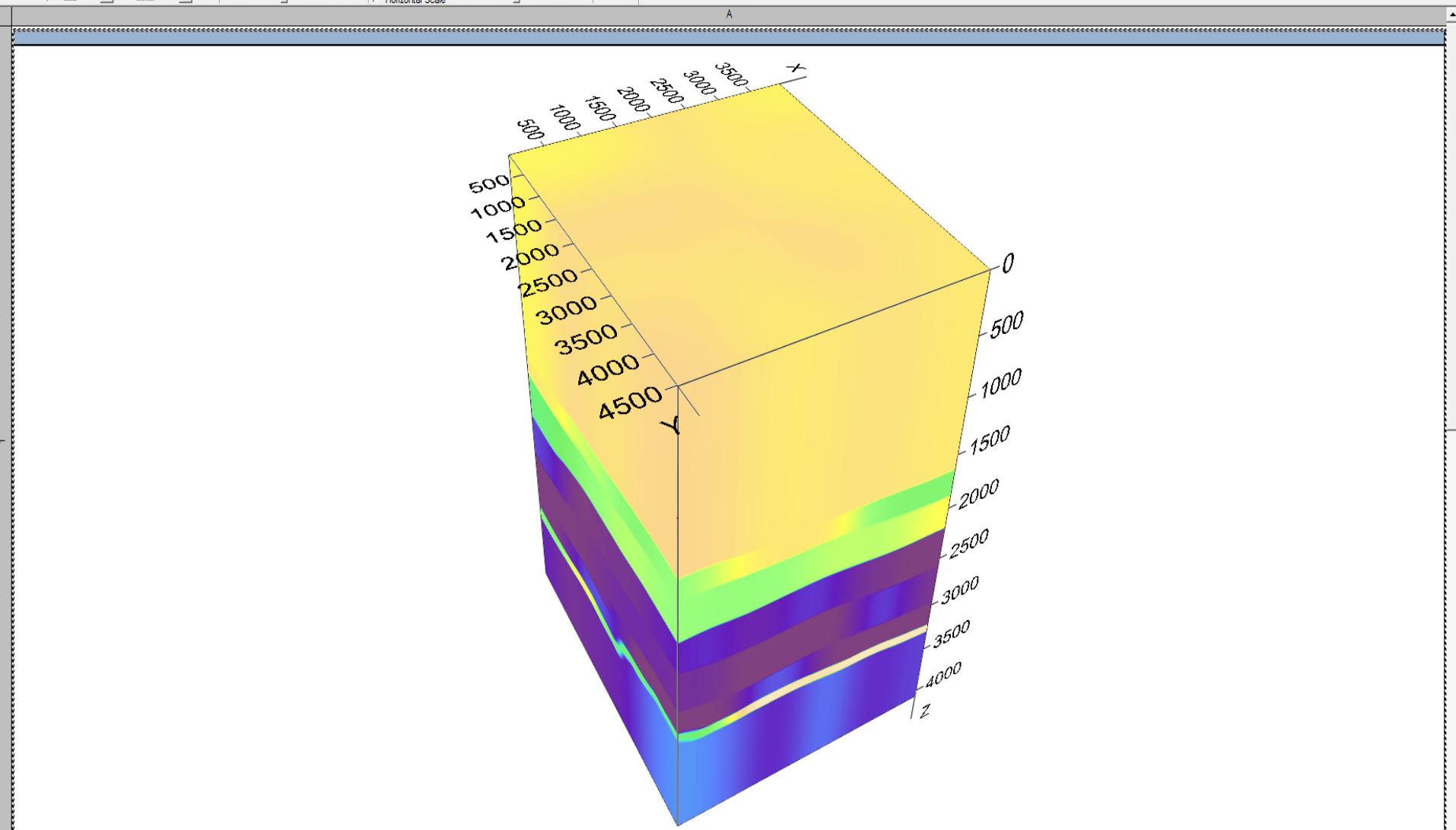
```
psed time      0 seconds (30351 traces, 37 MB).

Parameter 'Tstep' isn't found in the 'Task.ini' file.
Parameter 'ThDensity' isn't found in the 'Task.ini' file.
Parameter 'PhDensity' isn't found in the 'Task.ini' file.
.. 10% (Overall: 28%) - 214 of 1920. 378586:30:19 elapsed.
.. 20% (Overall: 36%) - 427 of 1920. 378586:30:19 elapsed.
.. 30% (Overall: 44%) - 640 of 1920. 378586:30:19 elapsed.
.. 40% (Overall: 52%) - 854 of 1920. 378586:30:20 elapsed.
.. 50% (Overall: 60%) - 1067 of 1920. 378586:30:20 elapsed.
.. 60% (Overall: 68%) - 1280 of 1920. 378586:30:21 elapsed.
.. 70% (Overall: 76%) - 1494 of 1920. 378586:30:21 elapsed.
.. 80% (Overall: 84%) - 1707 of 1920. 378586:30:22 elapsed.
.. 90% (Overall: 92%) - 1920 of 1920. 378586:30:22 elapsed.
.. 10% (Overall: 2%) - 1 of 2. 378586:30:22 elapsed.
.. 20% (Overall: 4%) - 1 of 2. 378586:30:22 elapsed.
.. 30% (Overall: 6%) - 1 of 2. 378586:30:22 elapsed.
.. 40% (Overall: 8%) - 1 of 2. 378586:30:22 elapsed.
.. 50% (Overall: 10%) - 1 of 2. 378586:30:22 elapsed.
.. 60% (Overall: 12%) - 1 of 2. 378586:30:22 elapsed.
.. 70% (Overall: 14%) - 1 of 2. 378586:30:23 elapsed.
.. 80% (Overall: 16%) - 1 of 2. 378586:30:23 elapsed.
.. 90% (Overall: 18%) - 1 of 2. 378586:30:23 elapsed.
.. 100% (Overall: 20%) - 1 of 2. 378586:30:23 elapsed.
```



base Edit View Model Seismic 3D View Run Help

Angle (°) 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99 100% Depth Scale Horizontal Scale

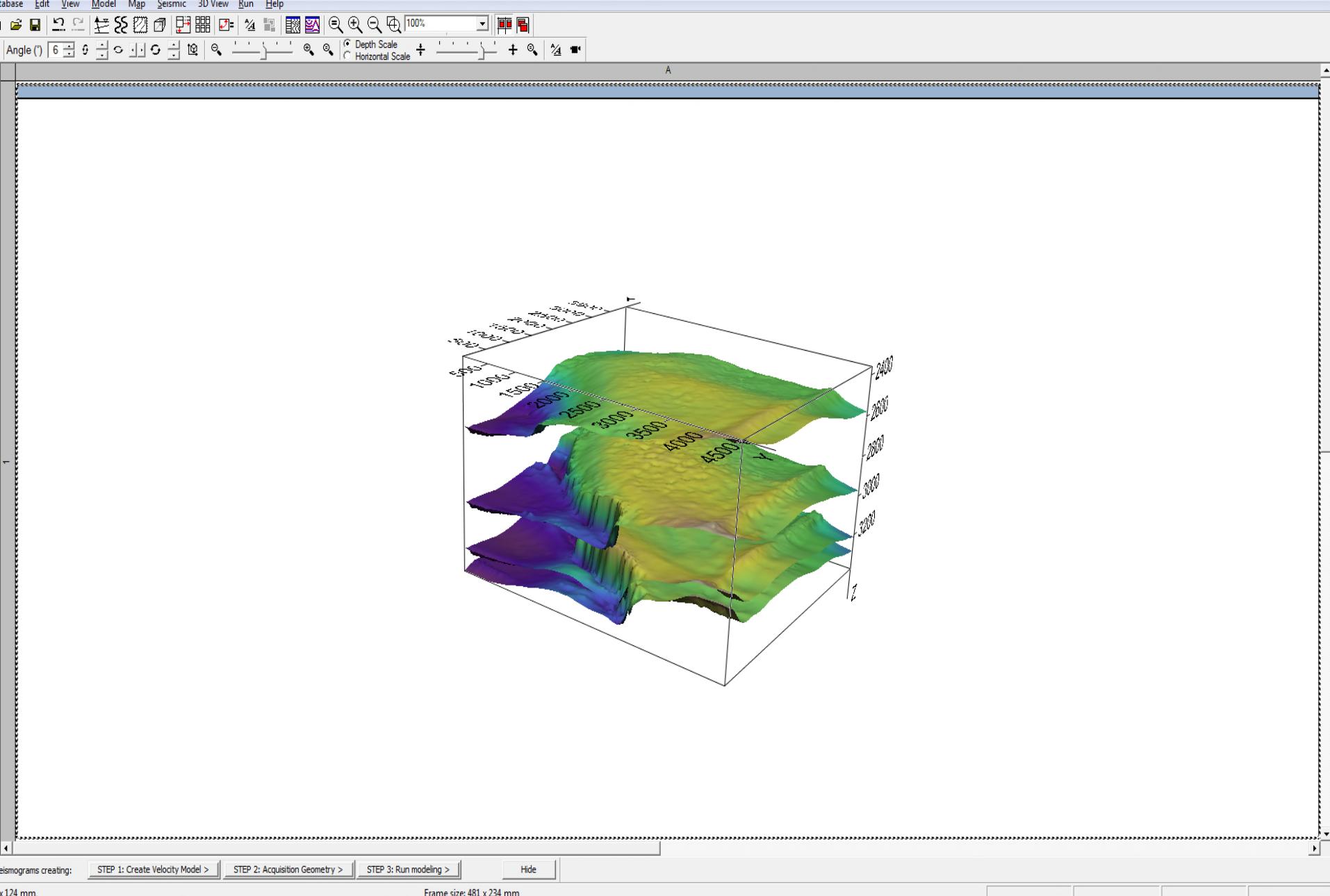


seograms creating: STEP 1: Create Velocity Model > STEP 2: Acquisition Geometry > STEP 3: Run modeling > Hide

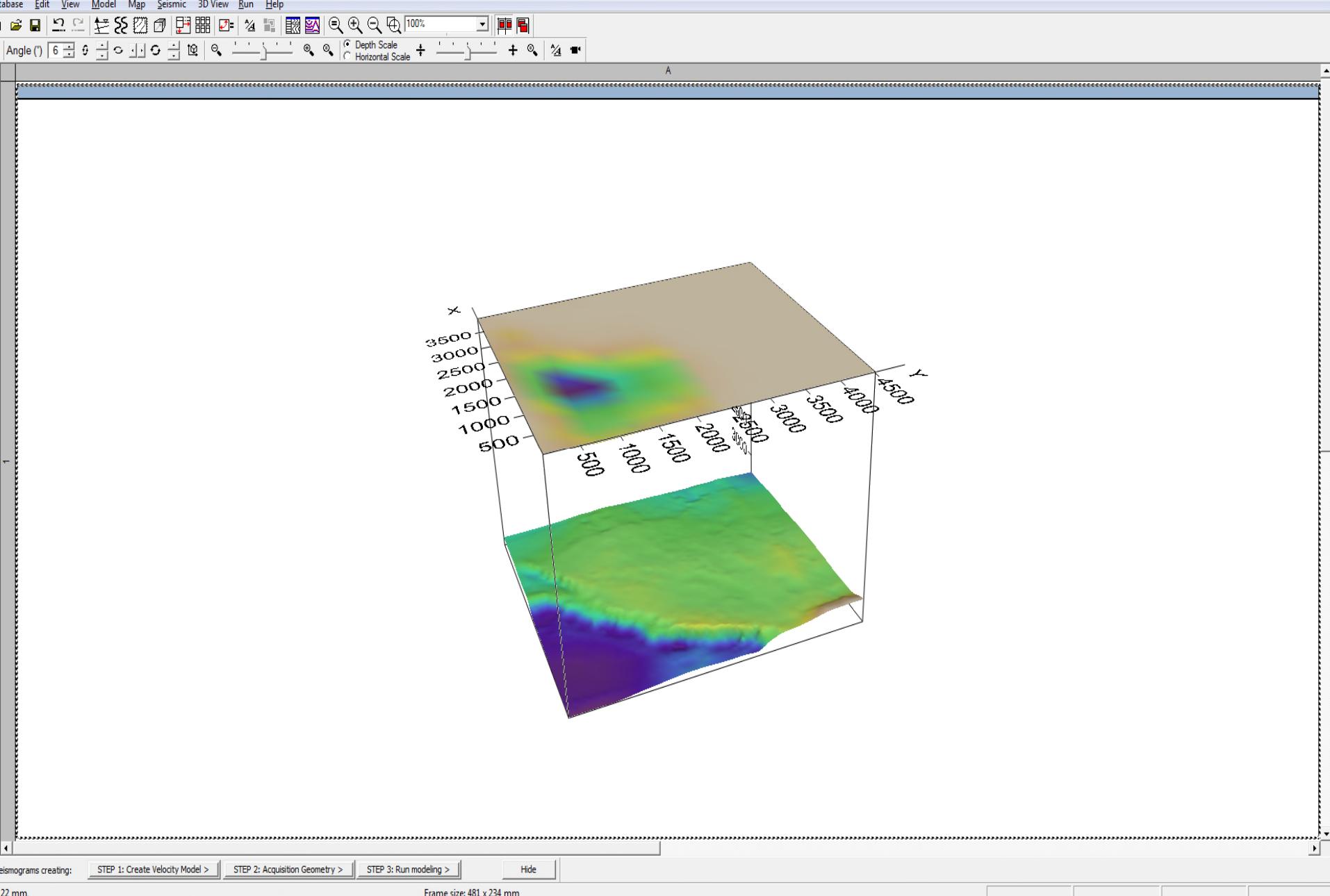
117 mm,

Frame size: 481 x 234 mm

Interval Velocity 3D Cube.

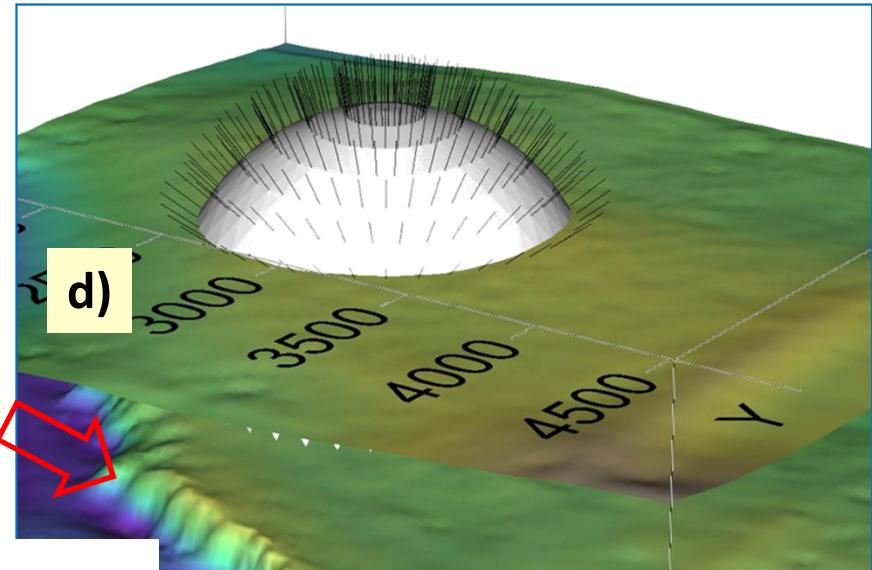
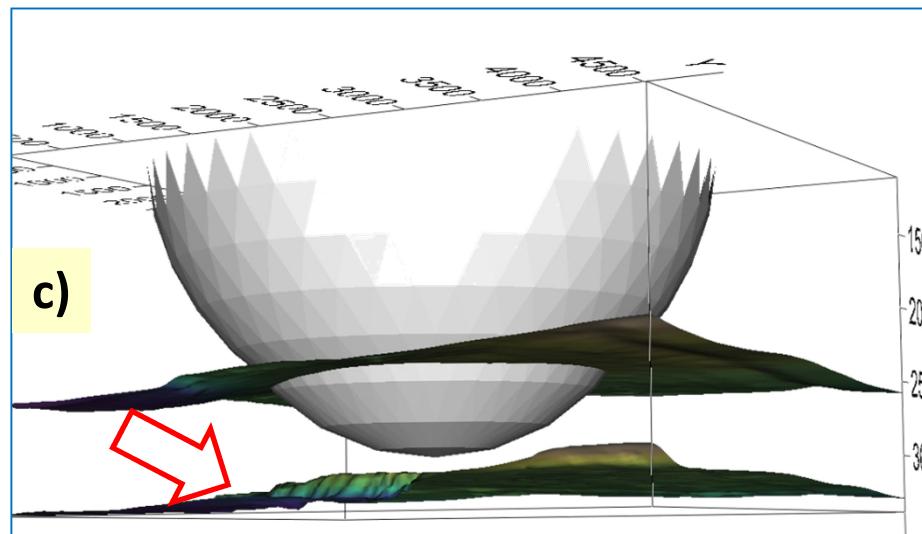
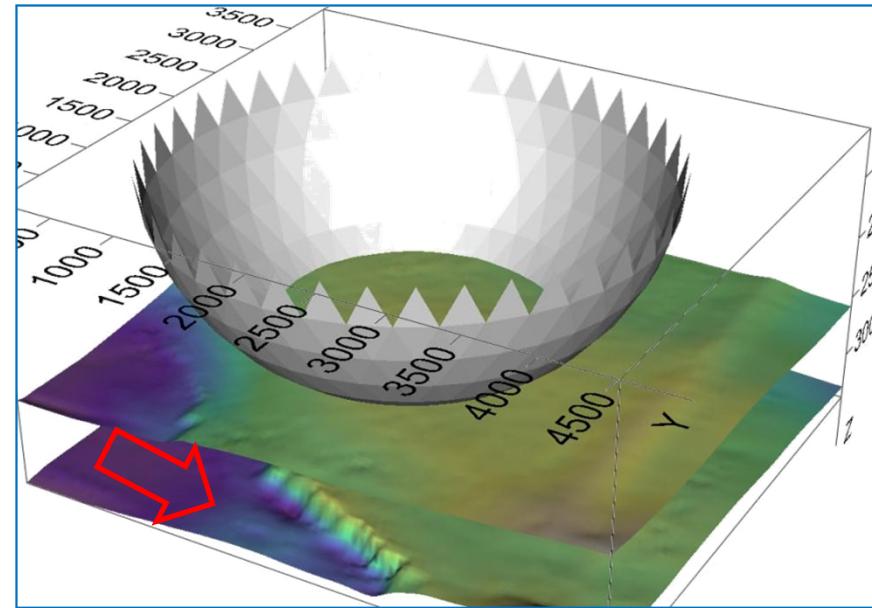
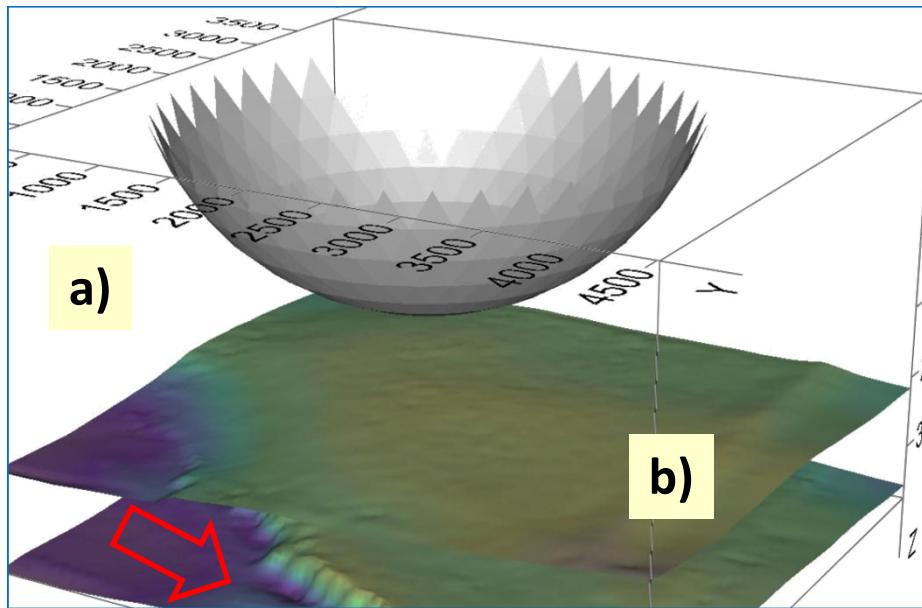


Defined geological surfaces.



Example of 3D surface illumination for picked shot and geological surface using 3D Ray-Tracing calculations.

3D Ray-tracing Wavefront Reconstruction



With arrow is shown reflecting horizon;

a), b) c) incoming wavefront; **d)** reflected wavefront