

# UOBR017-SCAN018 Refraction Statics Report Update

GTO-19-C031-02 SCAN Acquisition Seismic Processing Order #2

24 DECEMBER 2020

Energie Beheer Nederland B.V.

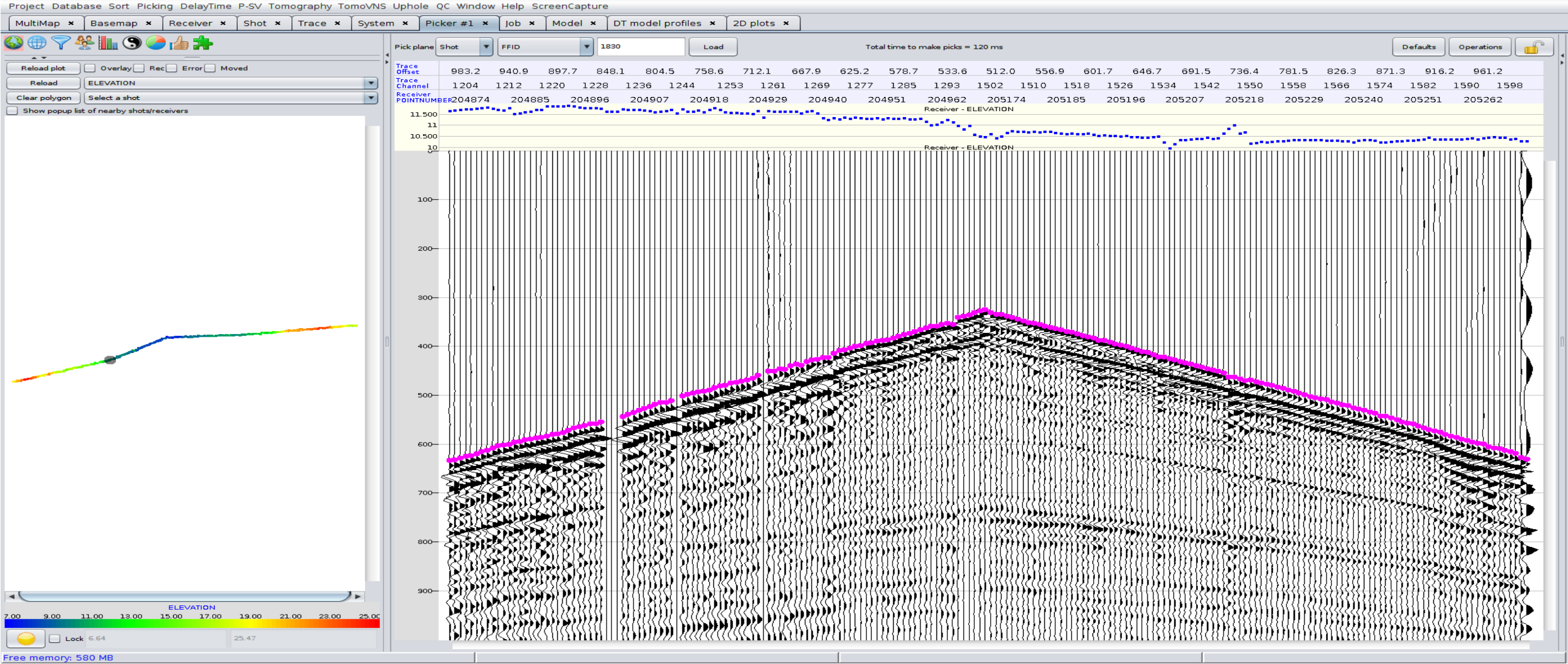
2D Seismic PreSTM Processing, Onshore Netherlands

- This report shows examples for the refraction statics on the combined line UOBR017-SCAN018.
  - Parameters used for the delay time solution:
    - Centre of the first trough of the wavelet picked
    - $V_0=1000$  m/s
    - $V_r=1700$  m/s
    - Datum=MSL
    - Single refractor analysed over 500-1000 m offsets
    - Refractor elevation smoothed using 2 km smoother
- The picking was particularly difficult on this line and required iterations of re-picking and pick killing in the area of CDP 4500-6000. No clipping of the model was required.

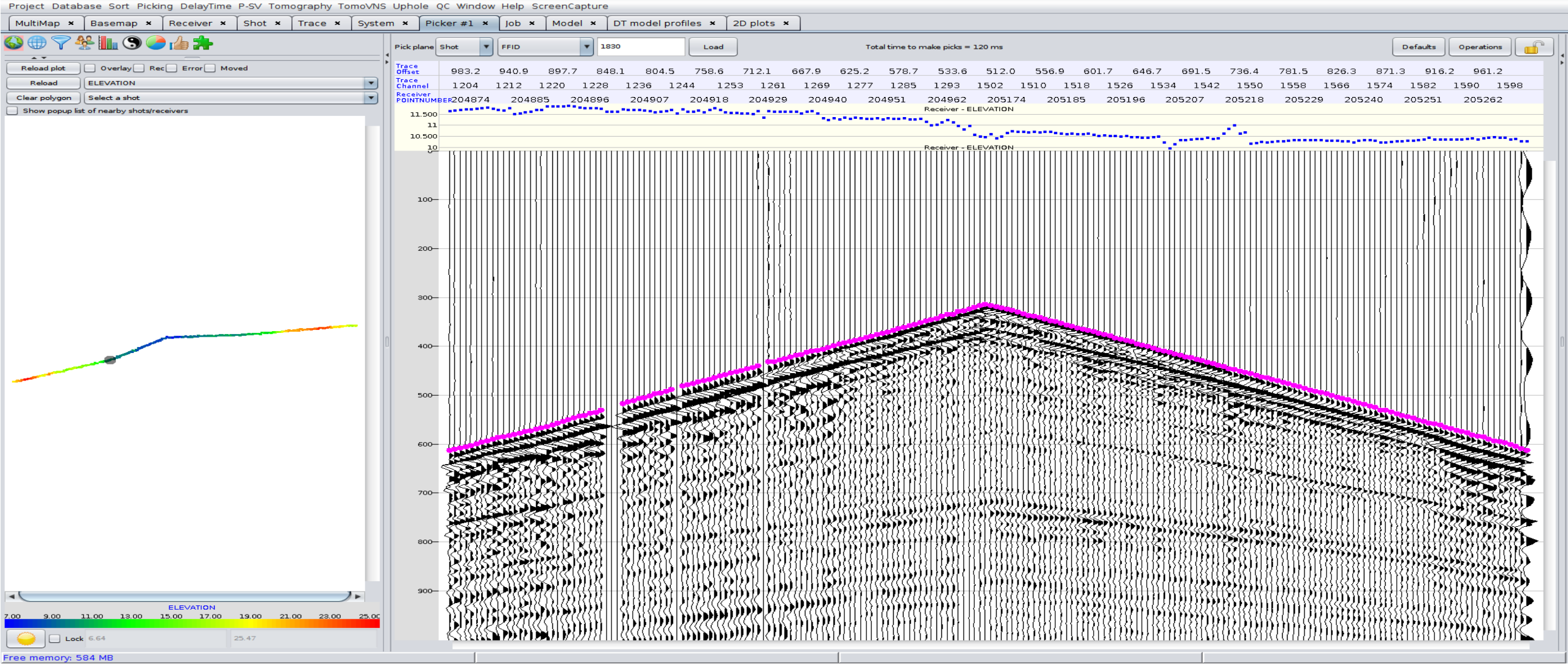
## Update

- UOBR017 had initially been processed to fast-track migration as a standalone line in September. This updated version of the report includes stack images from that initial processing at the same stage. In addition, the velocities for the current merged line processing were updated to match more closely what had been picked for the UOBR017 fast-track.

# Line UOBR017-SCAN018 SP 5069 no refraction statics



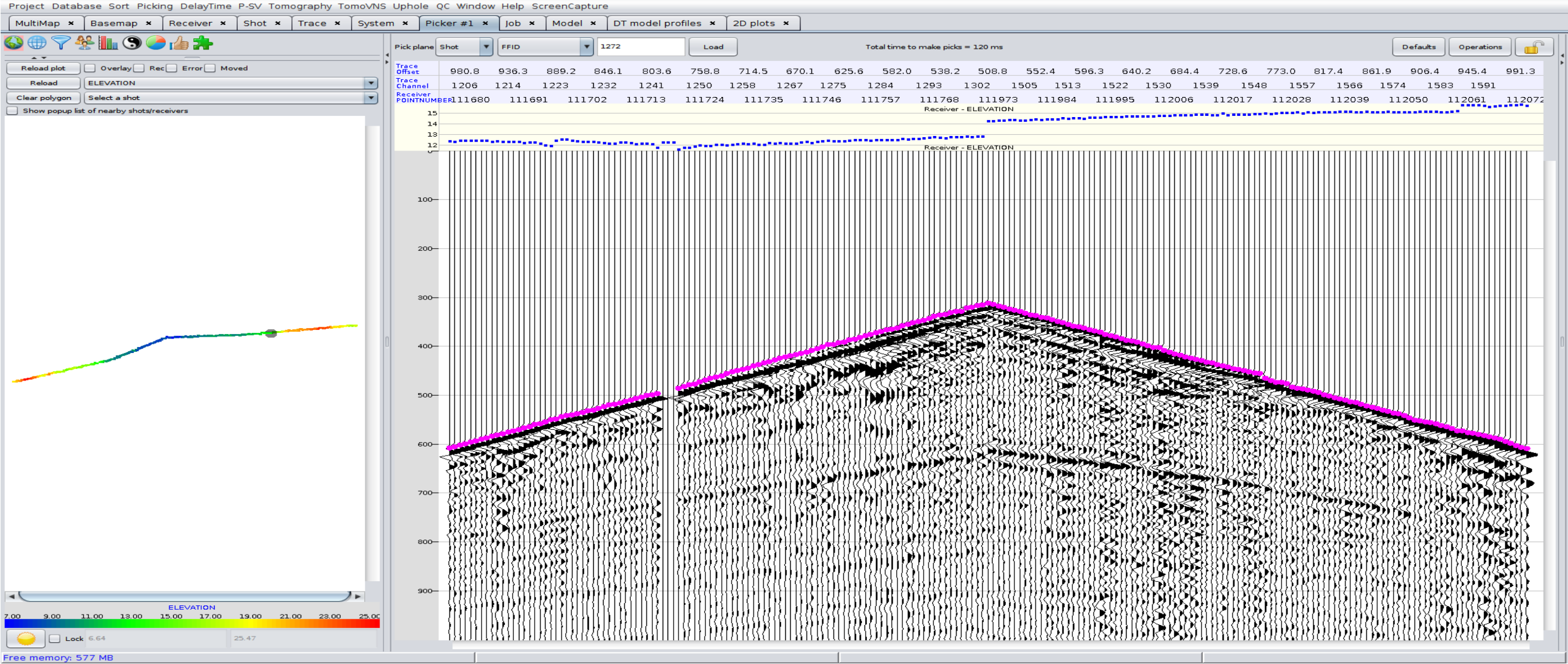
# Line UOBR017-SCAN018 SP 5069 with refraction statics



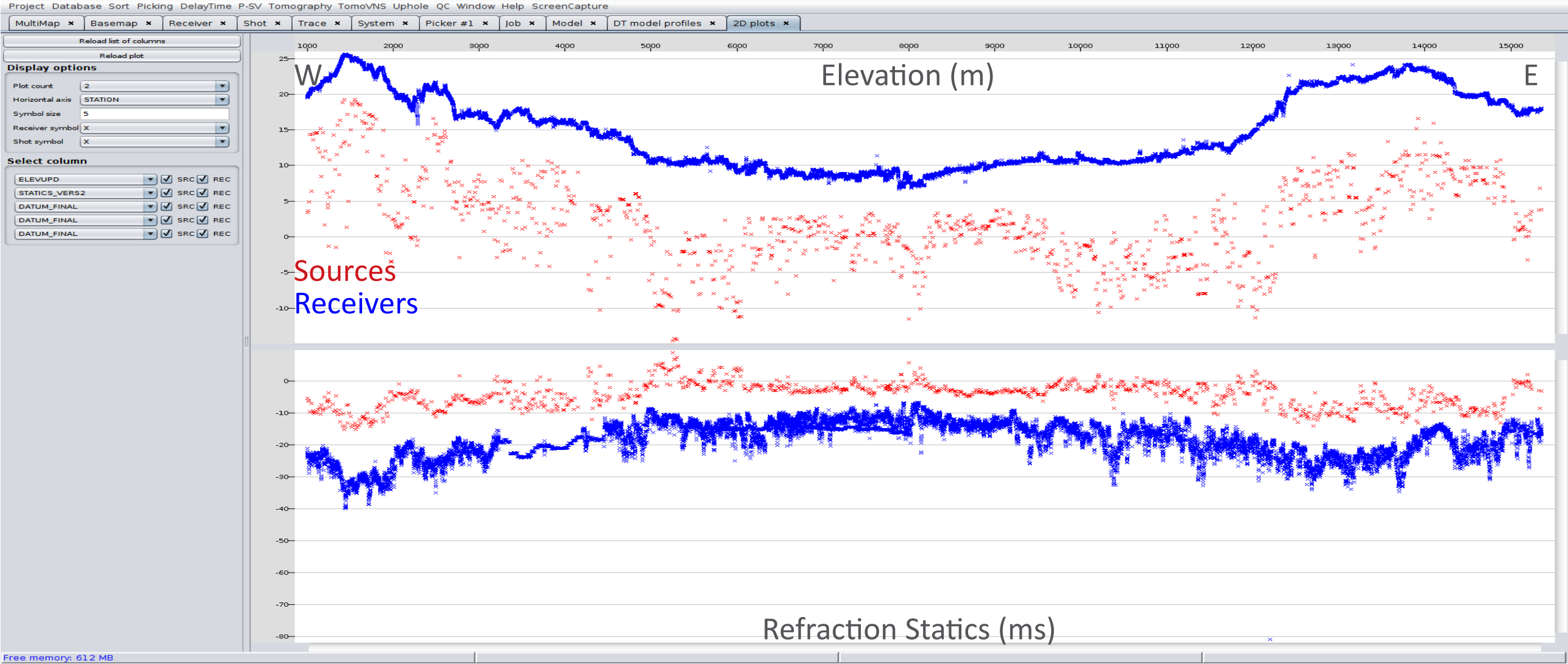




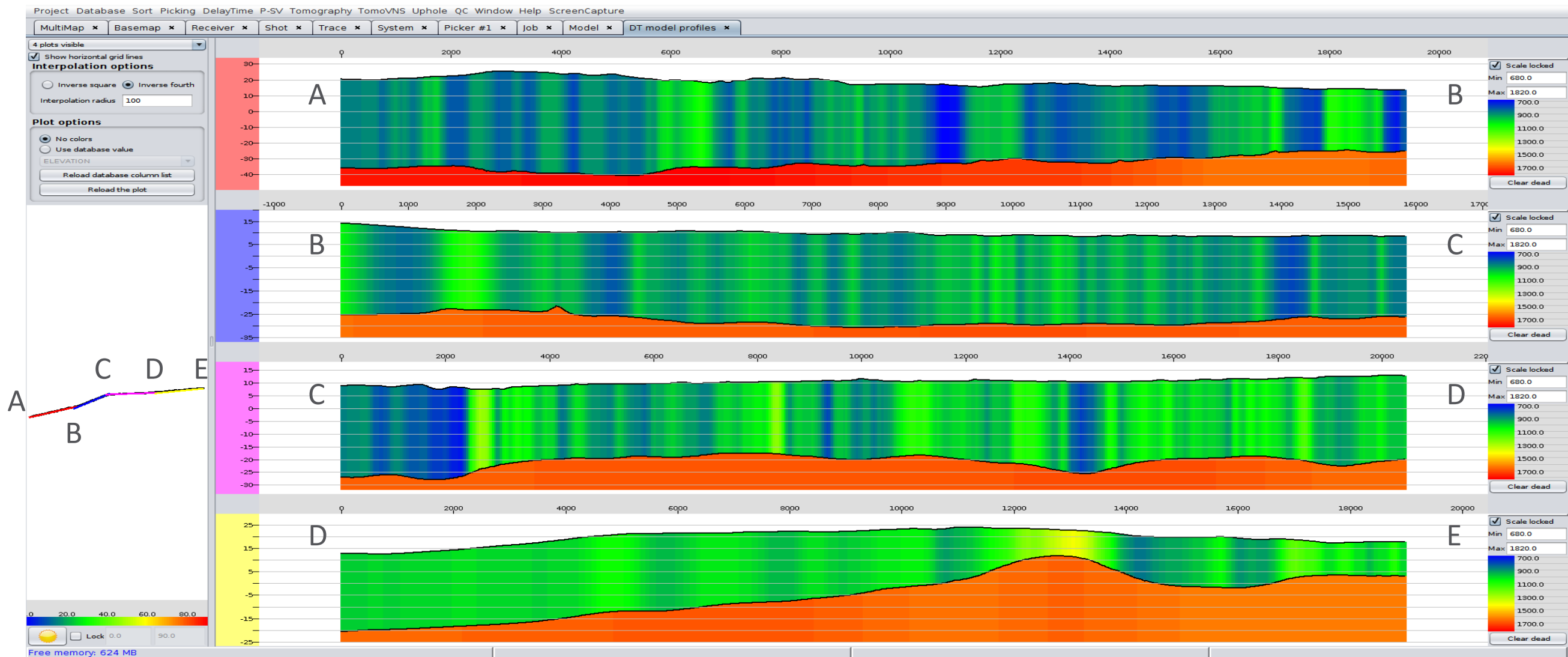
# Line UOBR017-SCAN018 SP 11873 with refraction statics



# Line UOBR017-SCAN018 elevation and refraction statics profiles



# Line UOBR017-SCAN018 refraction statics velocity model profile

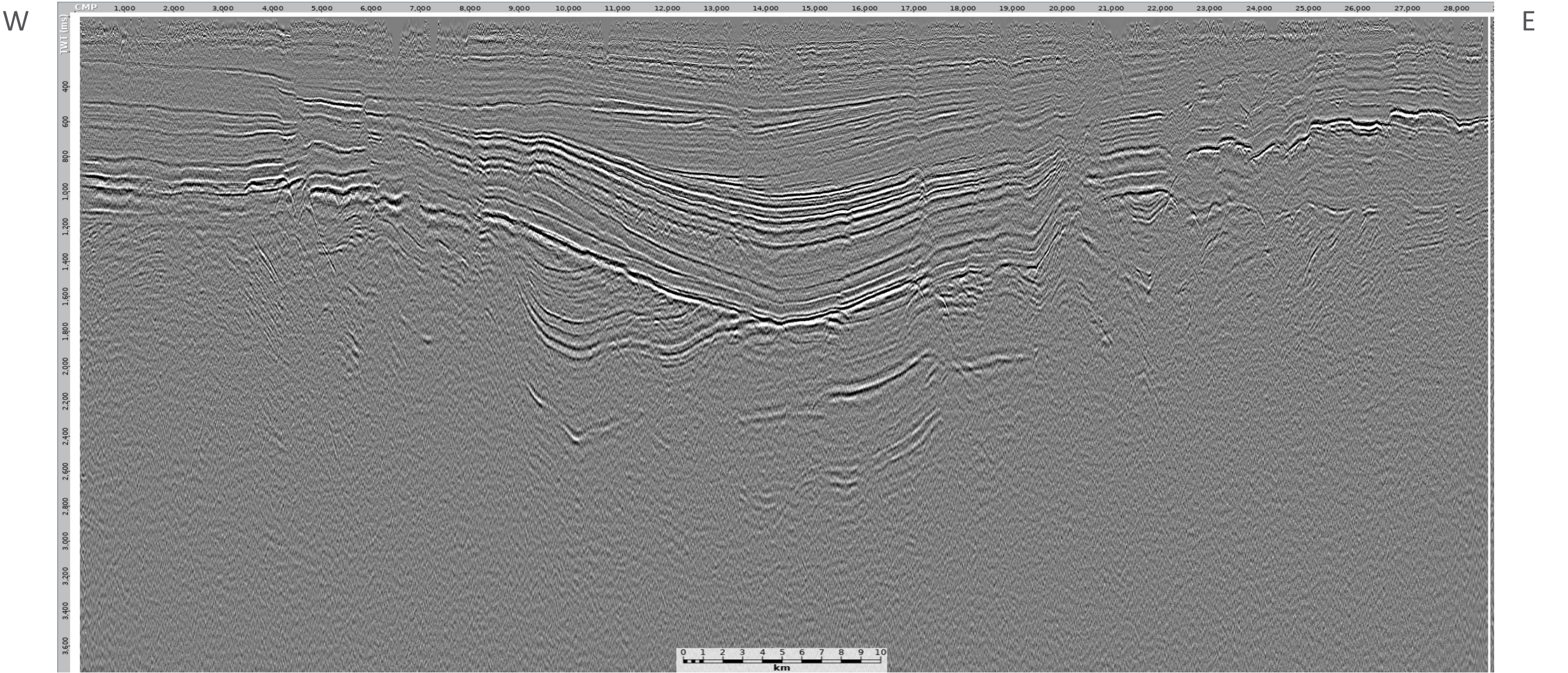


## Processing sequence applied to stacks

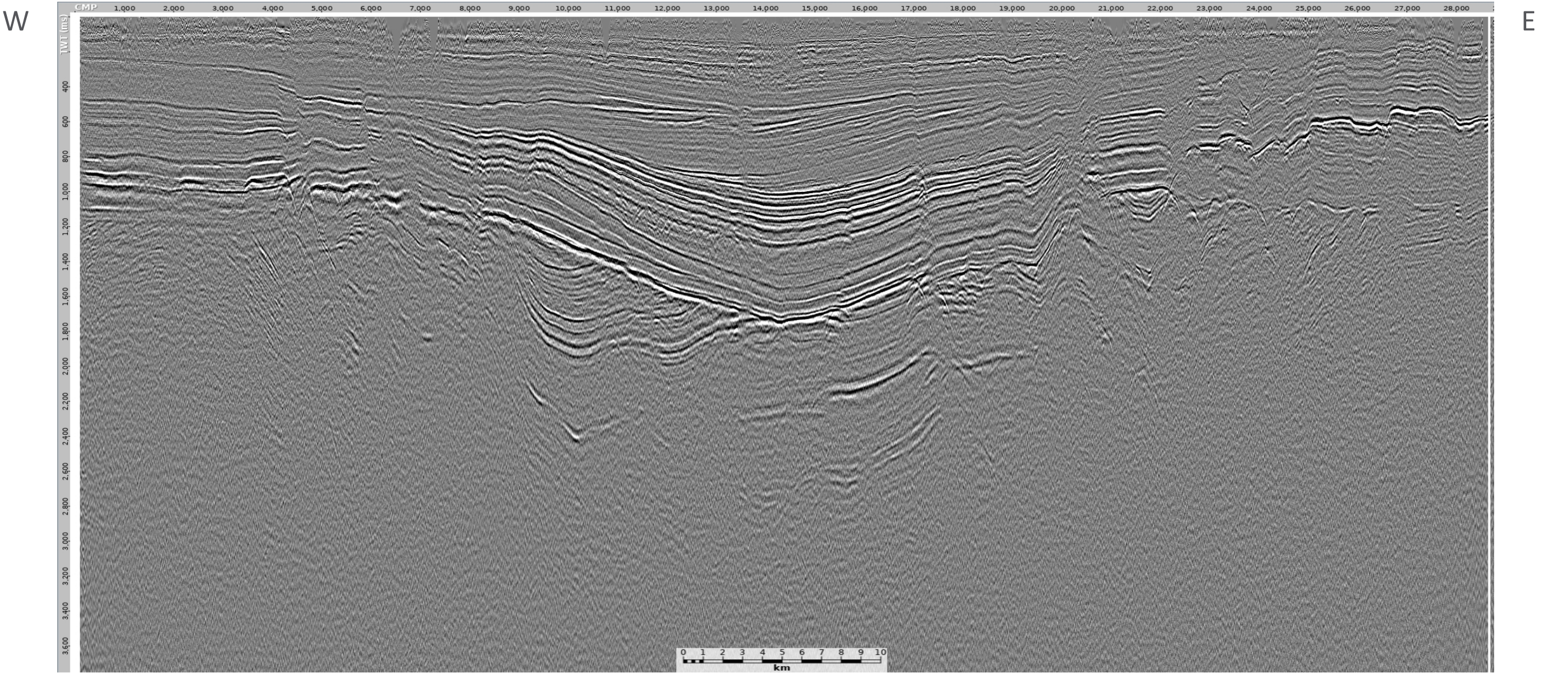
- Data reformat: SEGY to internal format
- Geometry: Crooked line with 2.5 m CDP interval
- Weak shots: 0-500 m offsets only
- Spherical divergence correction: T
- Geophone response correction:
- Statics: Elevation (1700 m/s) or delay time using  $V_0=1000$  m/s  $V_R=1700$  m/s  $SRD=NAP$
- Edits: Kill invalid shots and receivers
- DBS: Trace-by-trace with 160 ms operator length with 16 ms predictive gap  
0.1% white noise stabilisation - Design window: 200-3000 ms
- Velocity analysis: Initial 1 km interval
- Scaling: 500 ms AGC
- Stack:  $1/\sqrt{N}$  with 55° mute
- Static: Static to shift from floating to final datum (NAP)
- Bandpass filter: 8-12-120-150 Hz



# UOBR017-SCAN018 elevation statics stack

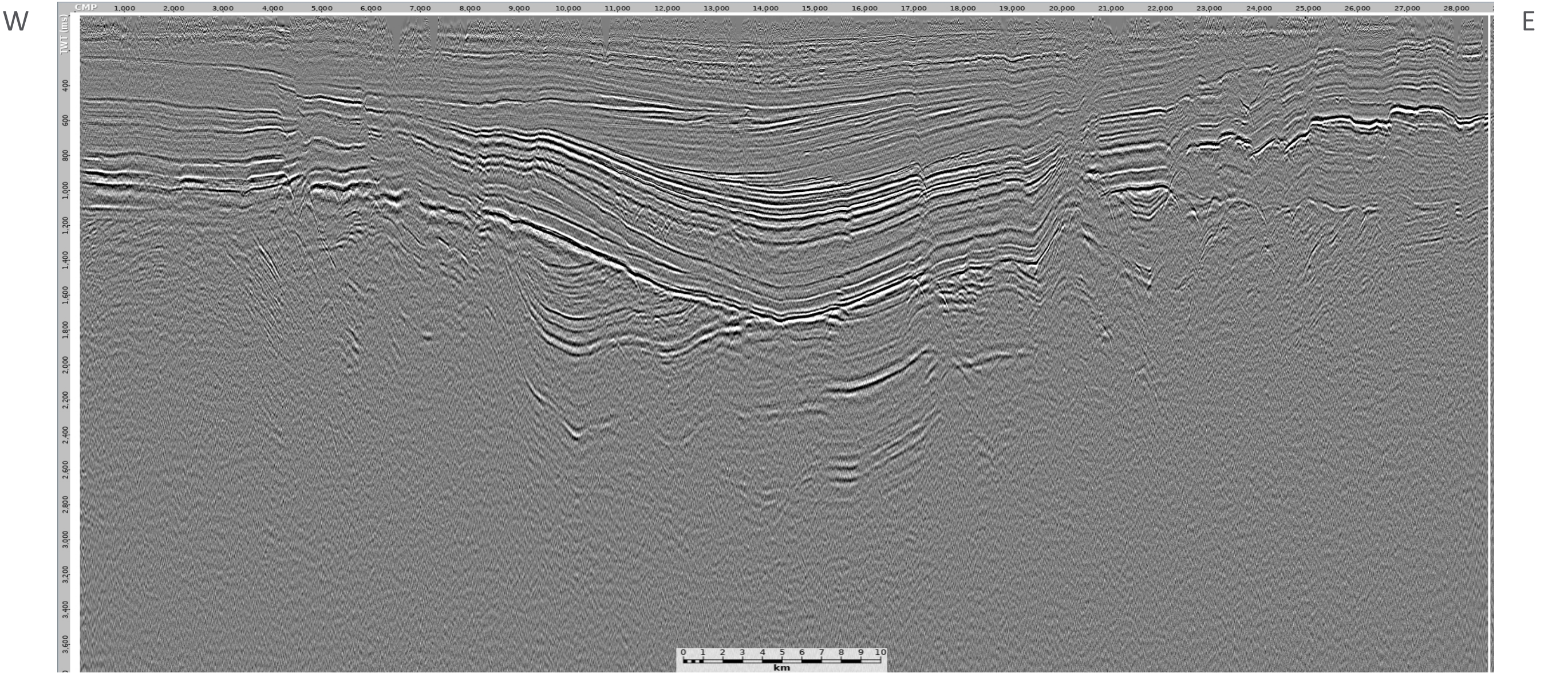






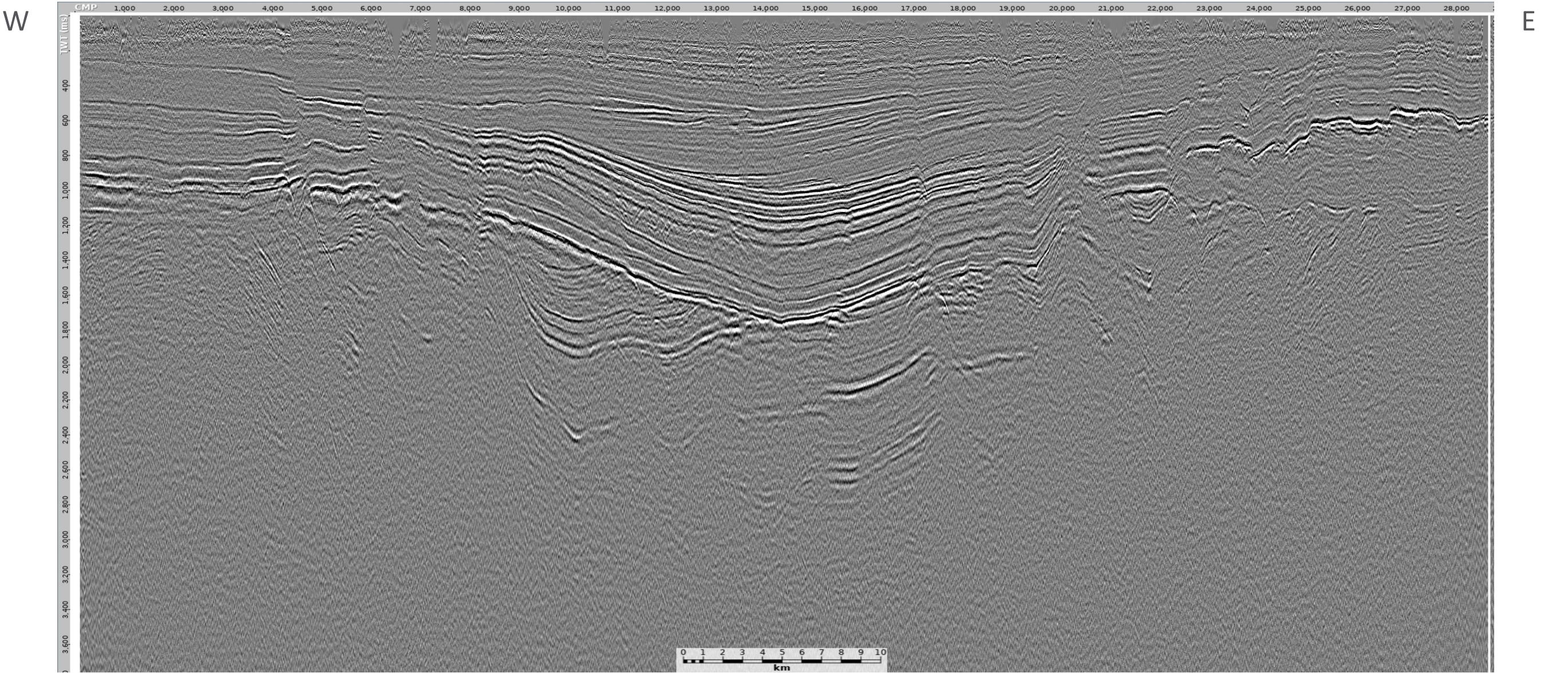


# UOBR017-SCAN018 refraction statics stack with updated velocities



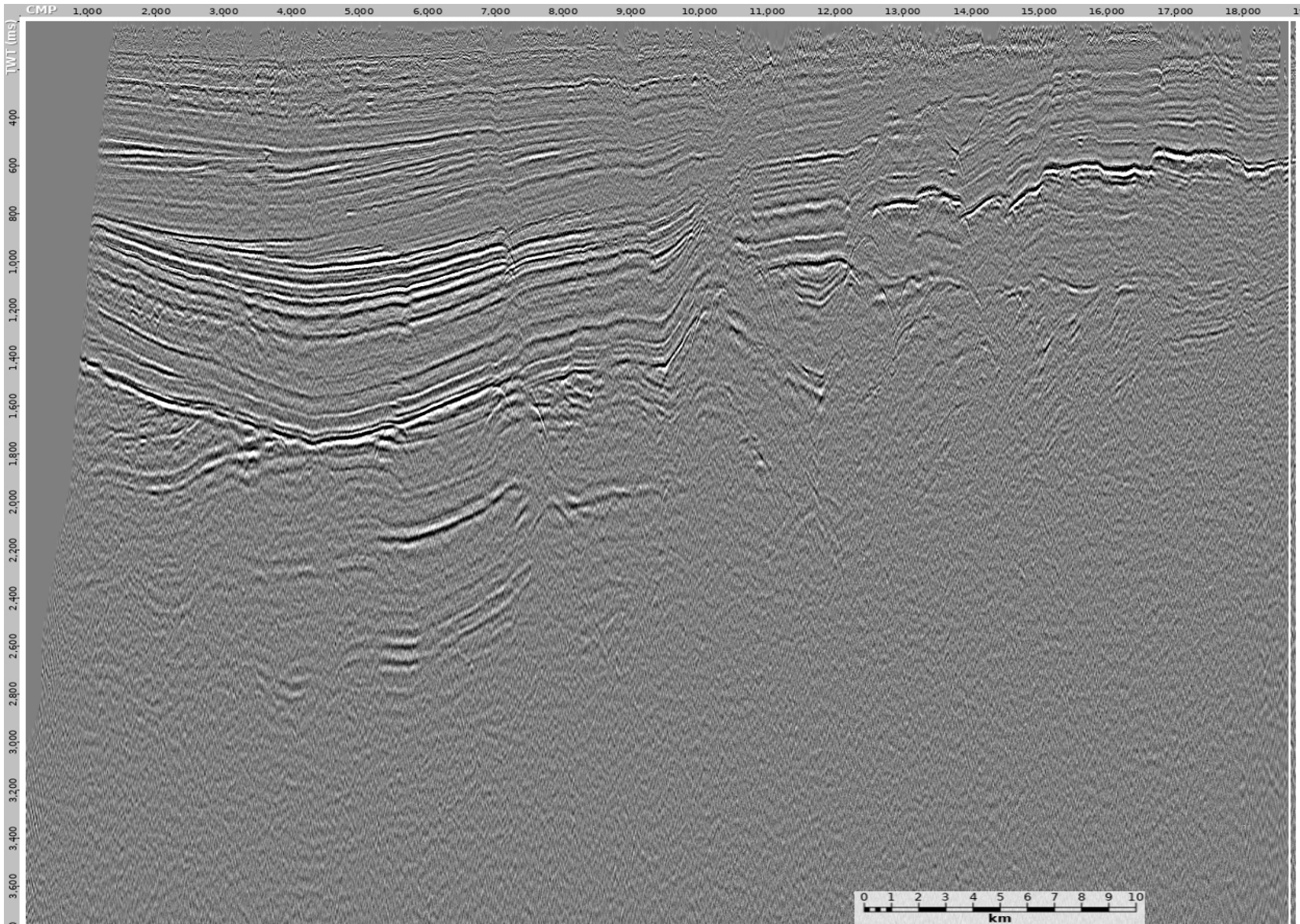


# UOBR017-SCAN018 elevation statics stack with updated velocities





W



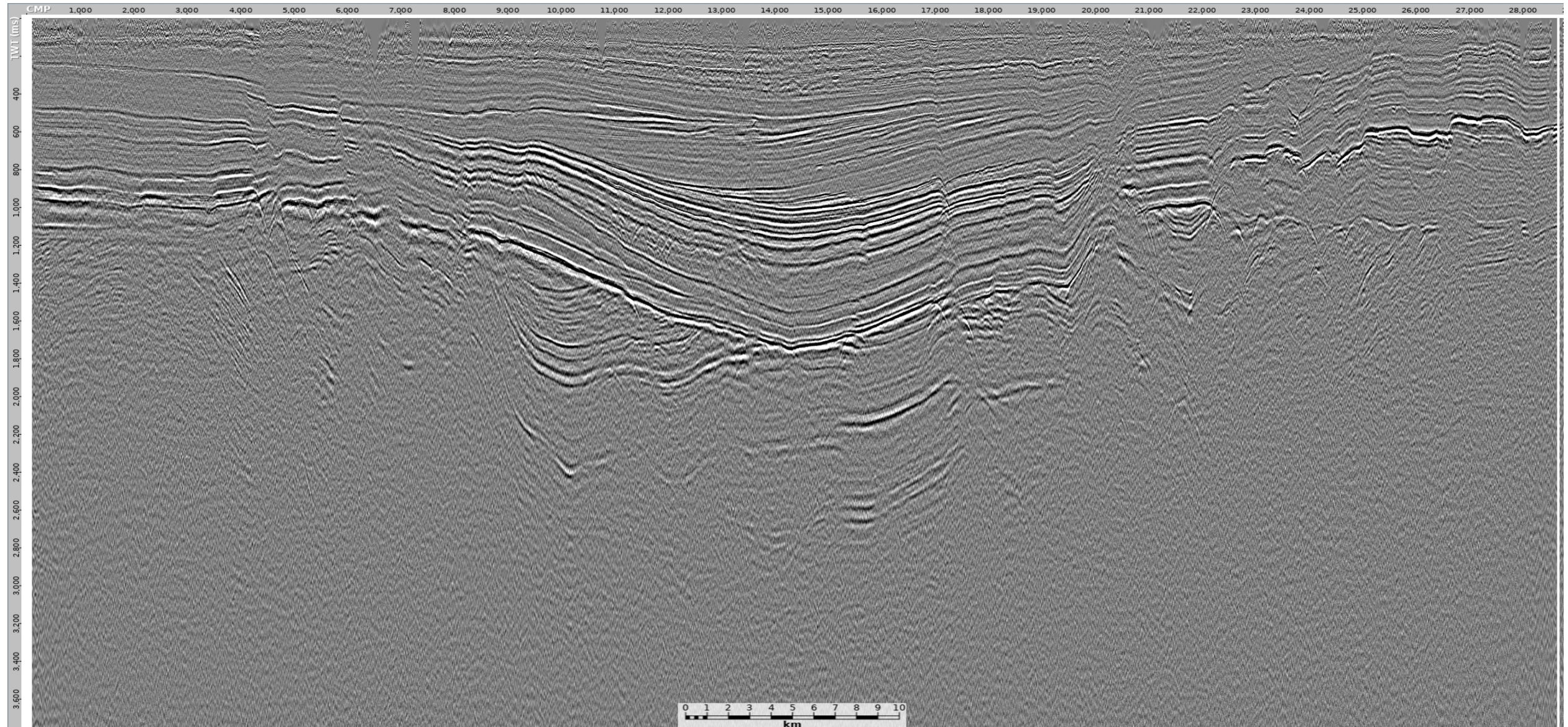
E



# UOBR017-SCAN018 refraction statics stack with updated velocities (REPEAT)



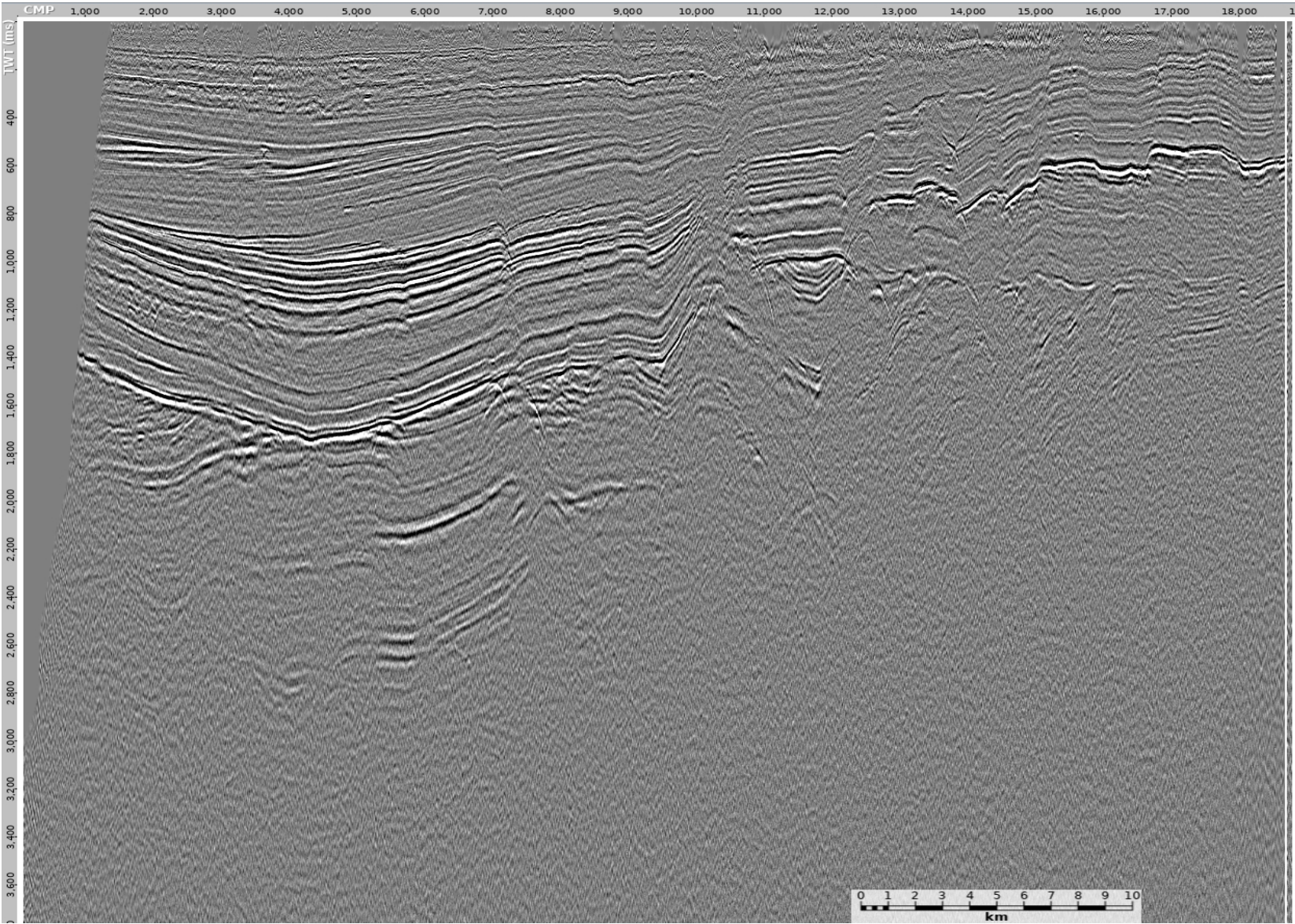
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