



# IT5 – Part 1

## NZ 3D Processing

7 April 2021

[cgg.com](http://cgg.com)



INSTITUTE FOR GEOPHYSICS



- **Objective:**

To further improve deep velocity, especially in the middle and west part.

- **Procedure:**

Following the previous global TTI tomography, a high resolution tomography is applied on the east side and scanning tomography is applied on the east deep part, that outside the OBN FWI coverage.

- **Display:**

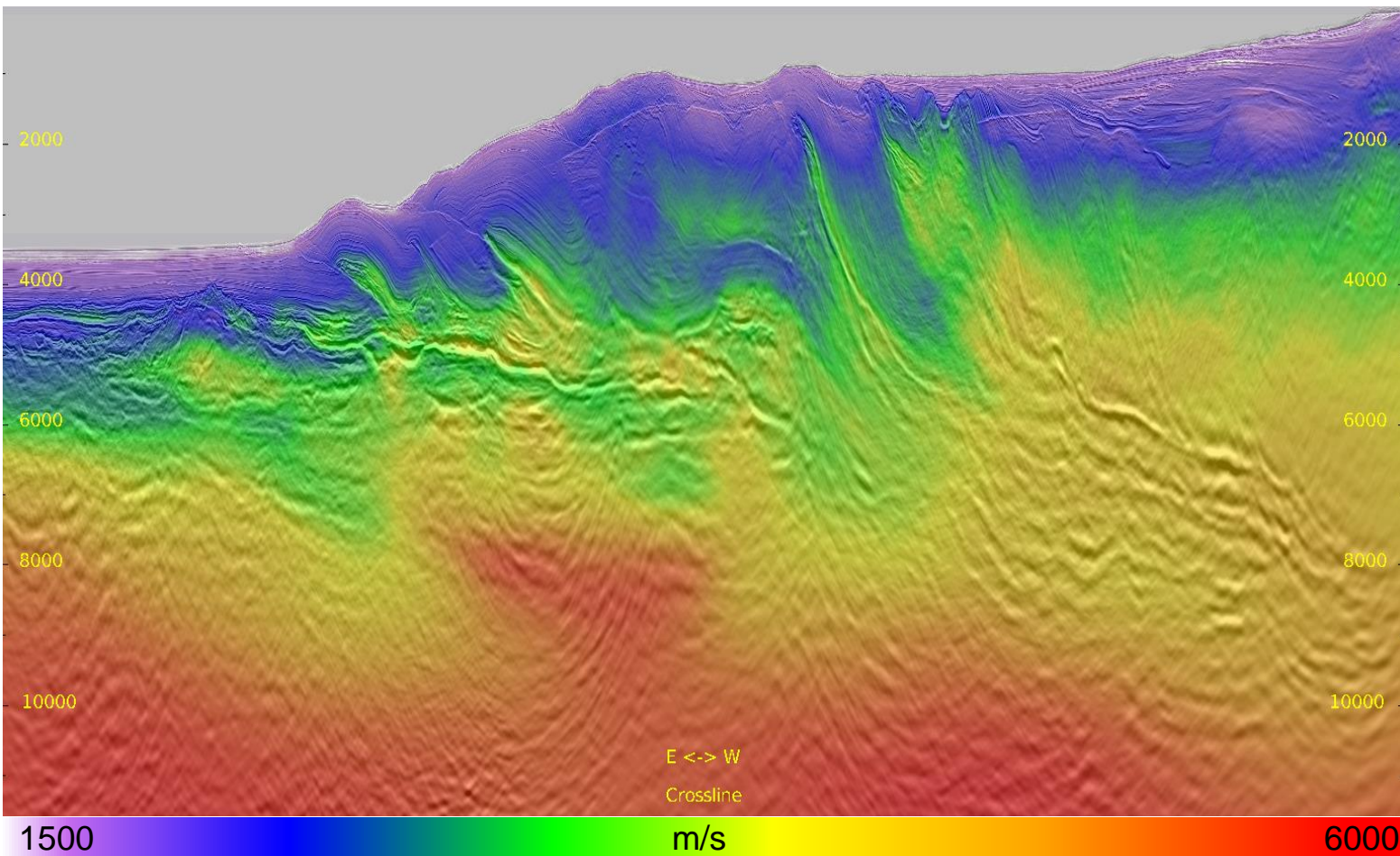
Velocity, migrated depth full stack & gathers.

- **Observation and Recommendation:**

The flatness of the gathers are improved. And events on stack have better focus and continuity. We'll further update the deep velocity.

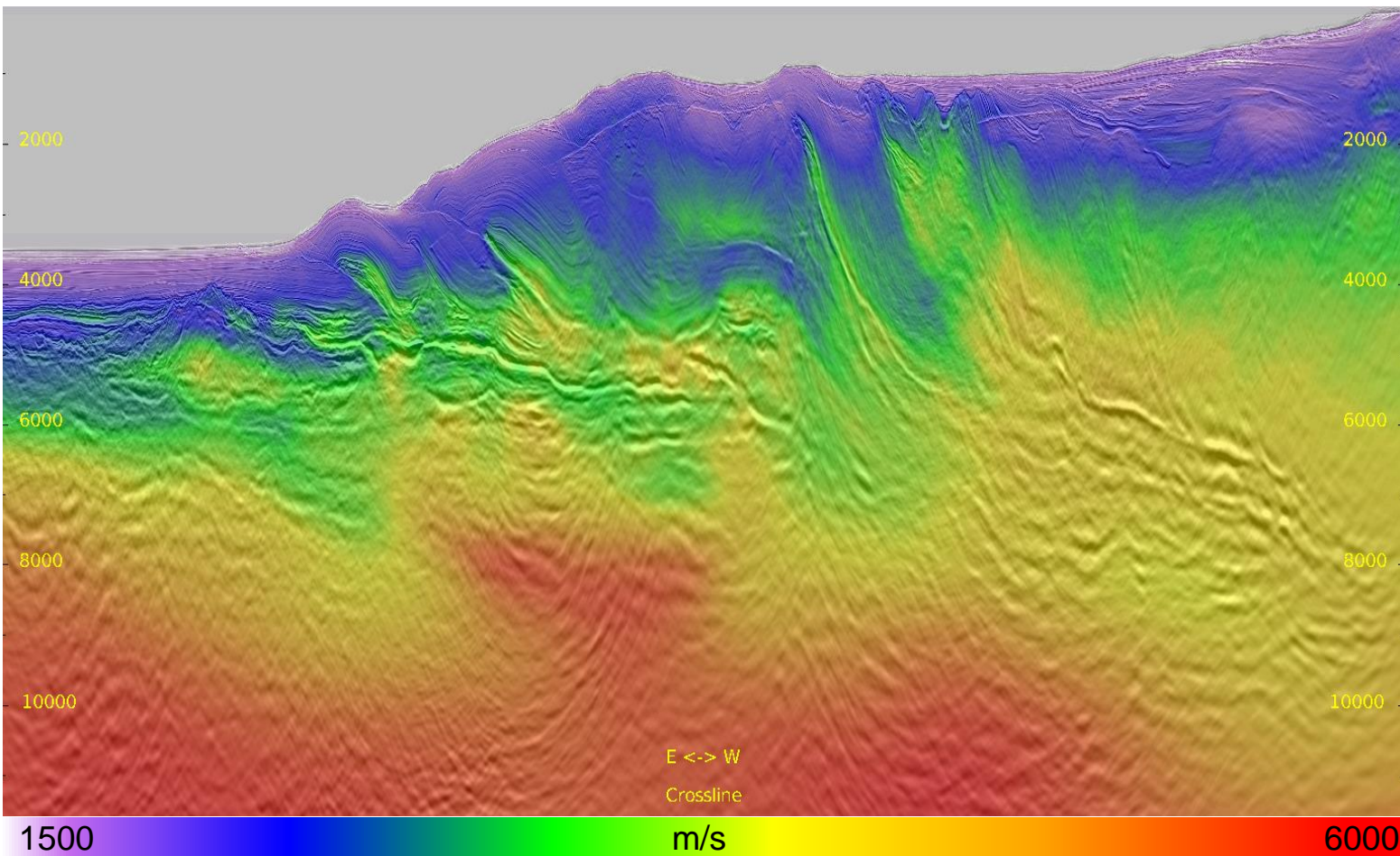
# Velocity Model





- IT4 velocity

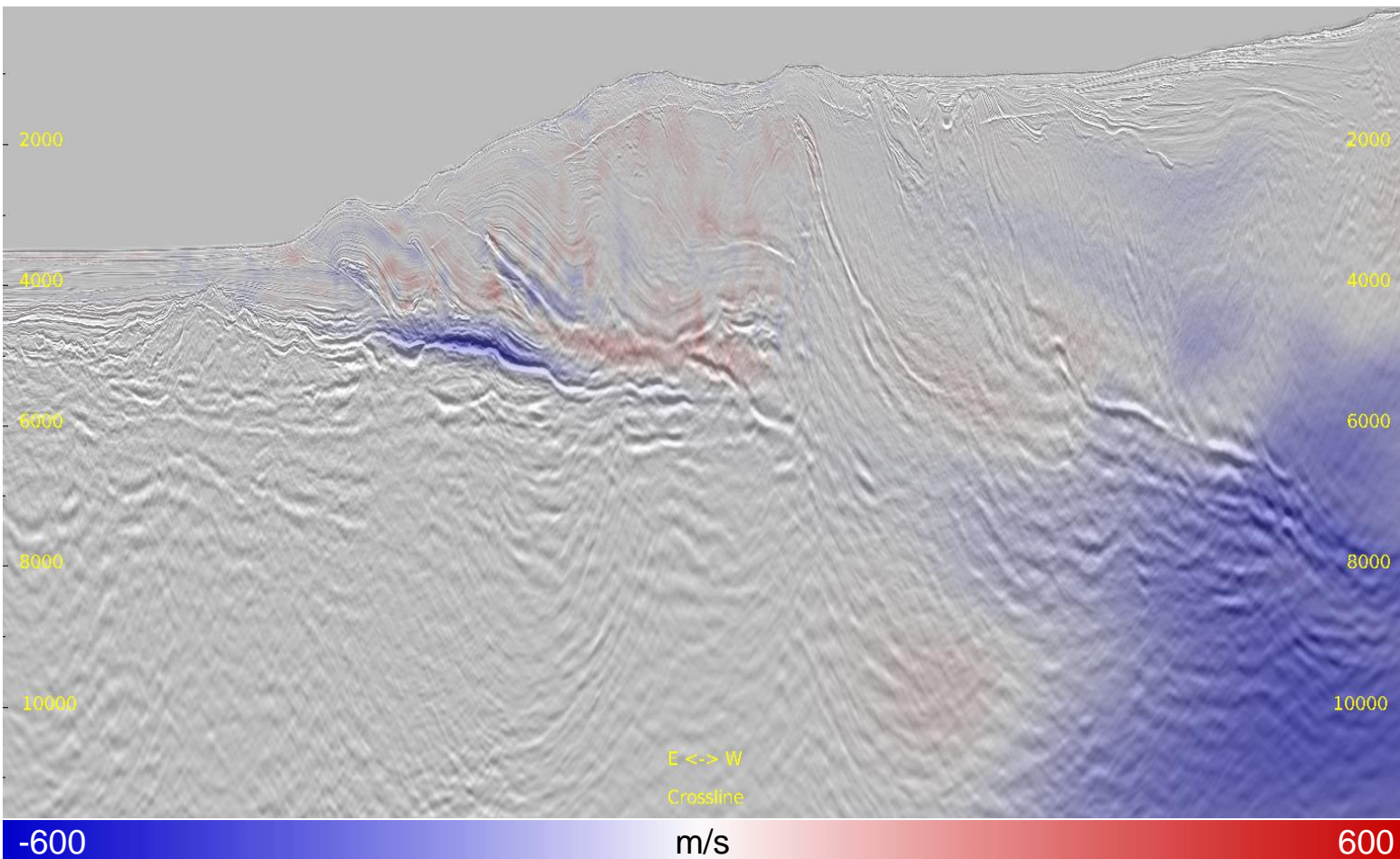




- IT5 preliminary velocity

# Inline 436: Velocity Perturbation

6



- High resolution tomography result on the east side.
- Smoothed update on the west side.

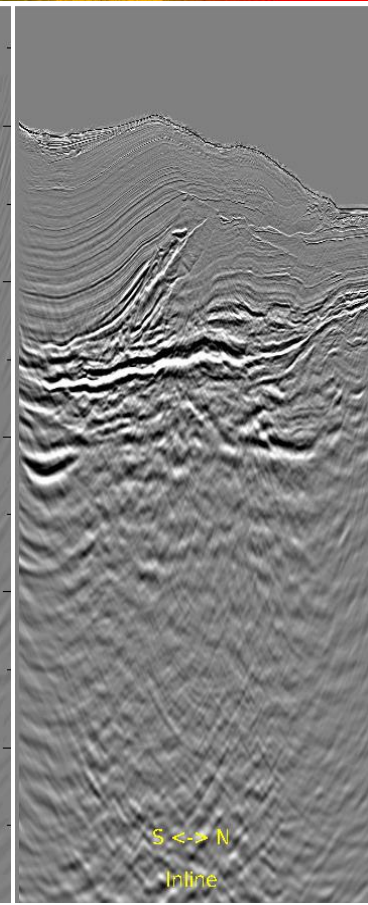
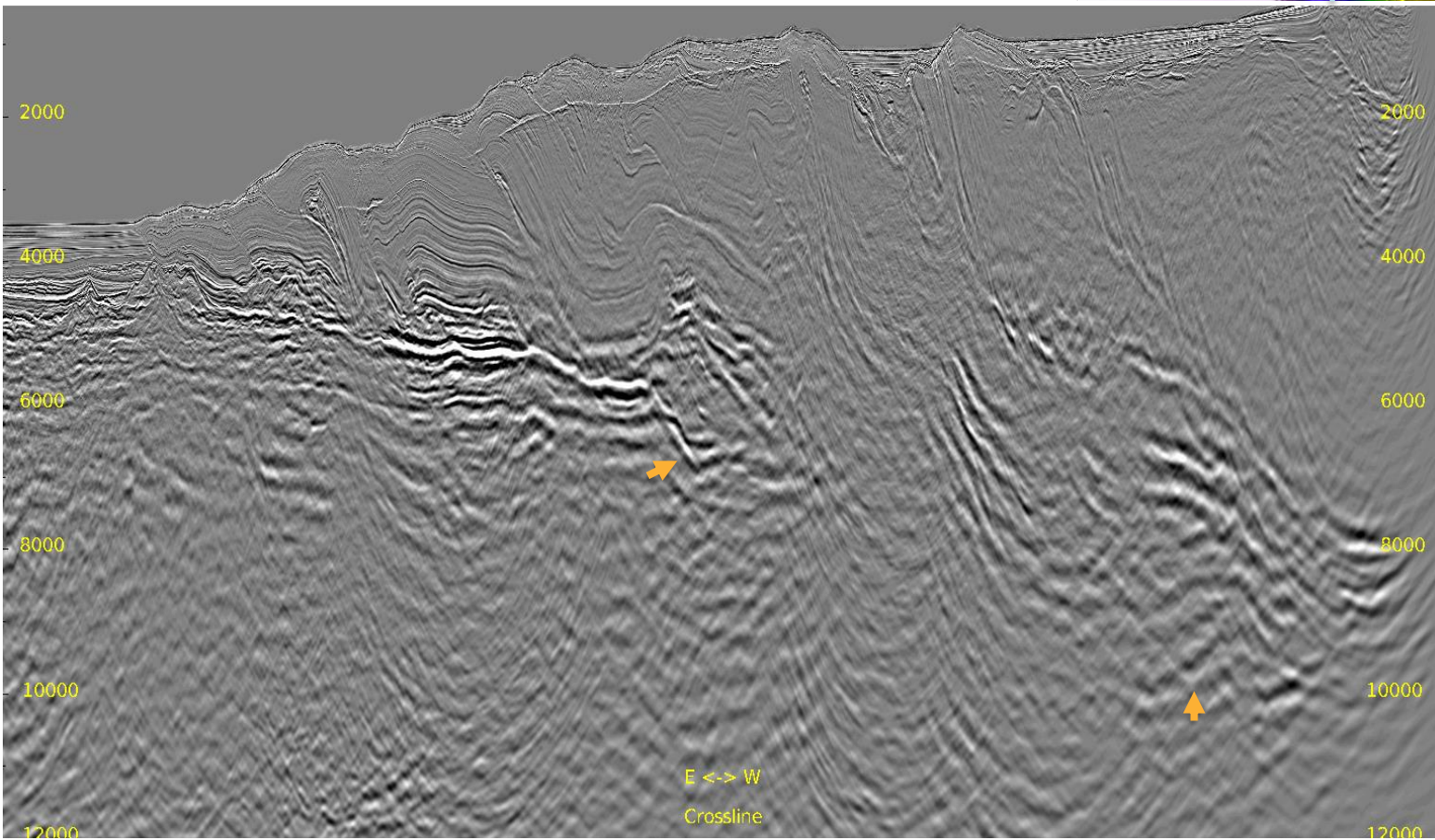
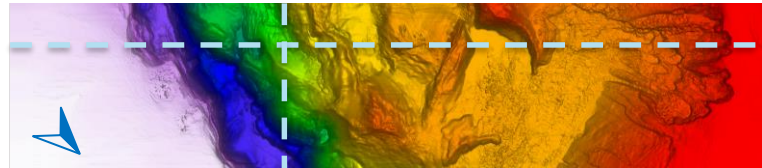
# Kirchhoff Depth Migration





# Full Stack: IT4 Result

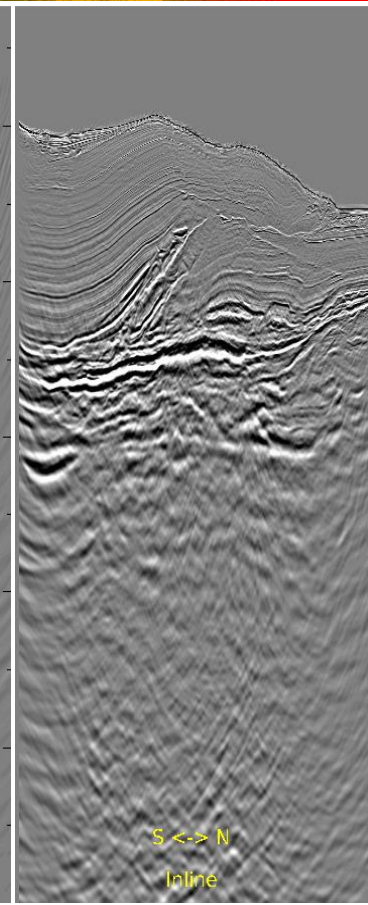
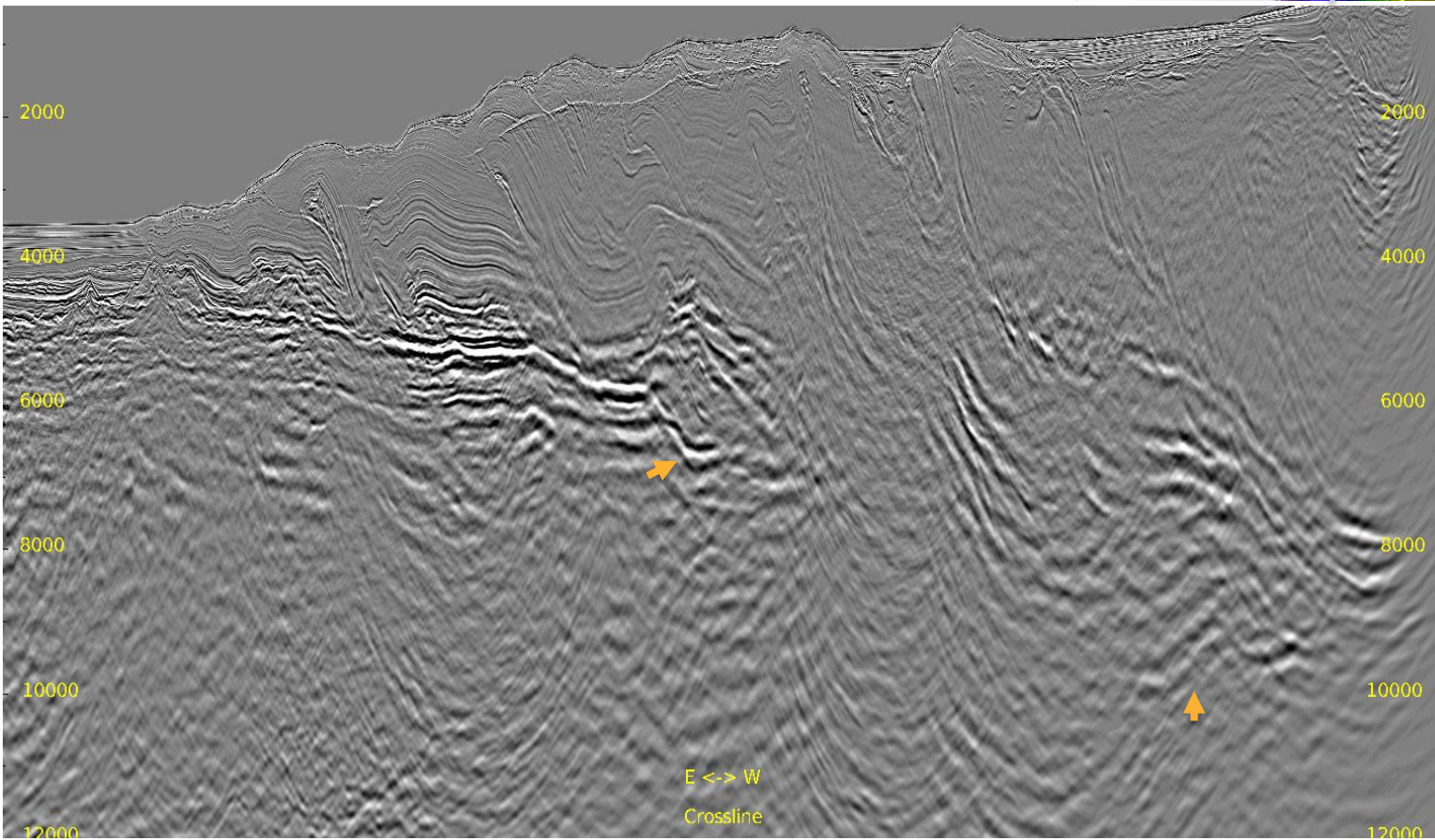
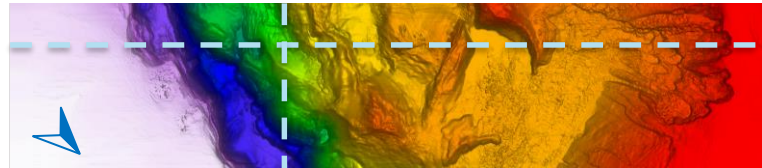
Inline 236 & Crossline 2050





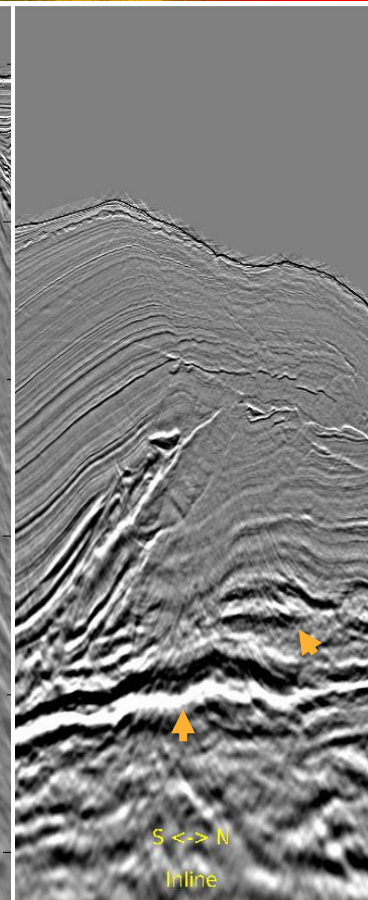
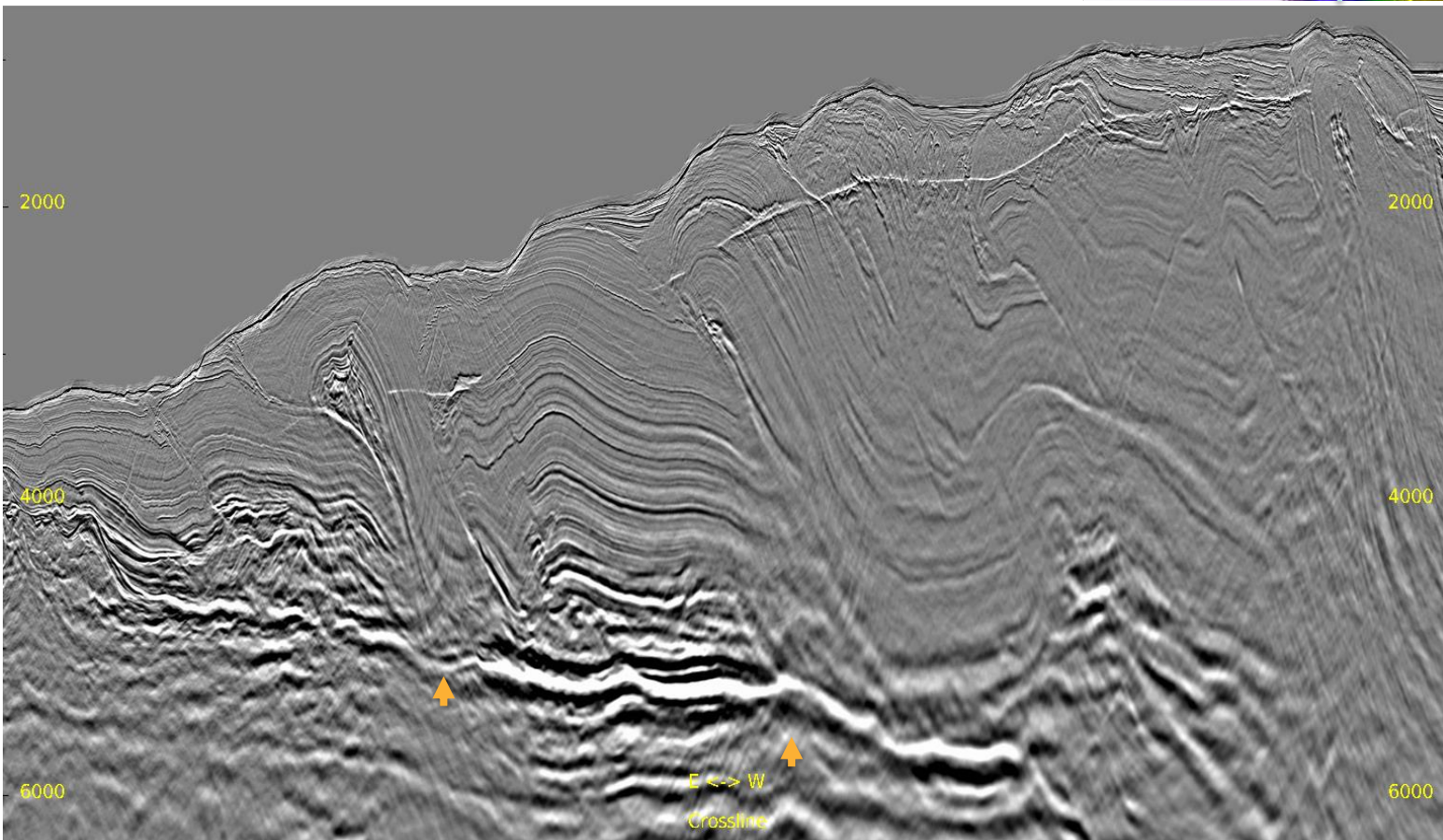
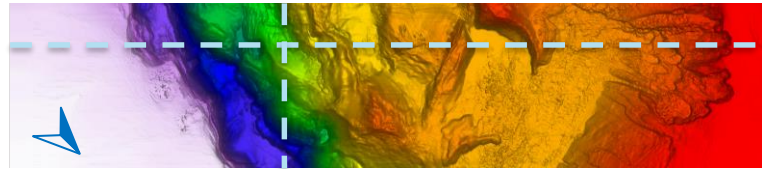
# Full Stack: Current Result

Inline 236 & Crossline 2050



# Zoomed Full Stack: IT4 Result

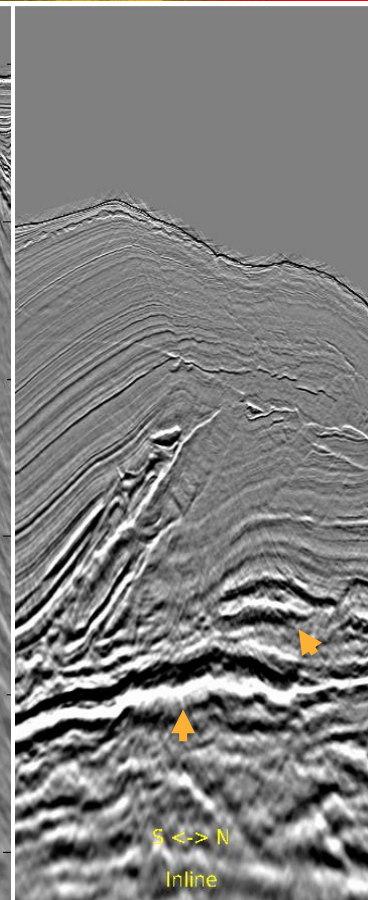
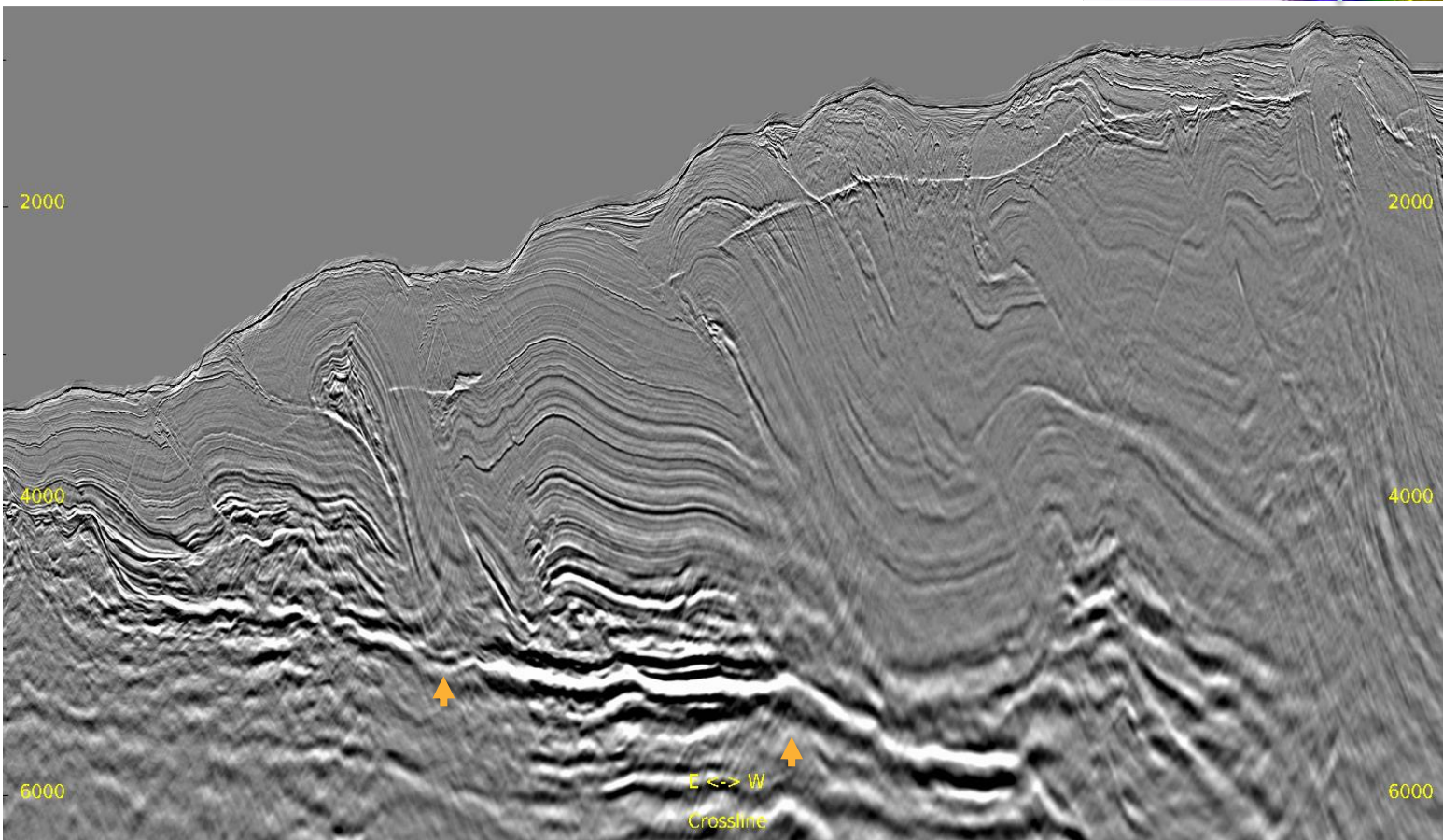
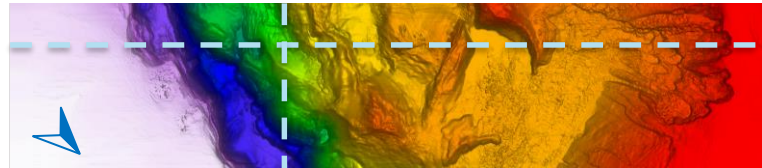
Inline 236 & Crossline 2050

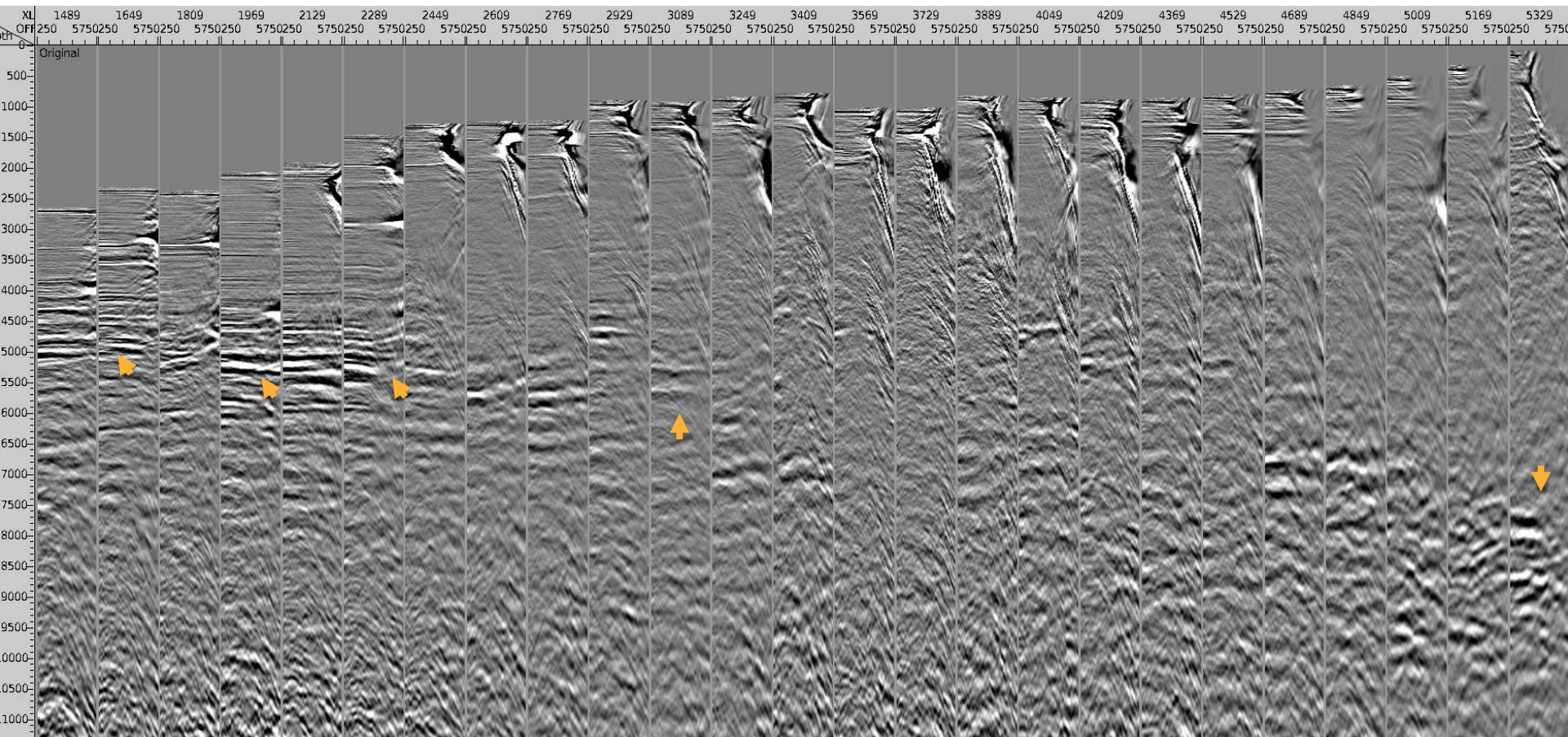




# Zoomed Full Stack: Current Result

Inline 236 & Crossline 2050





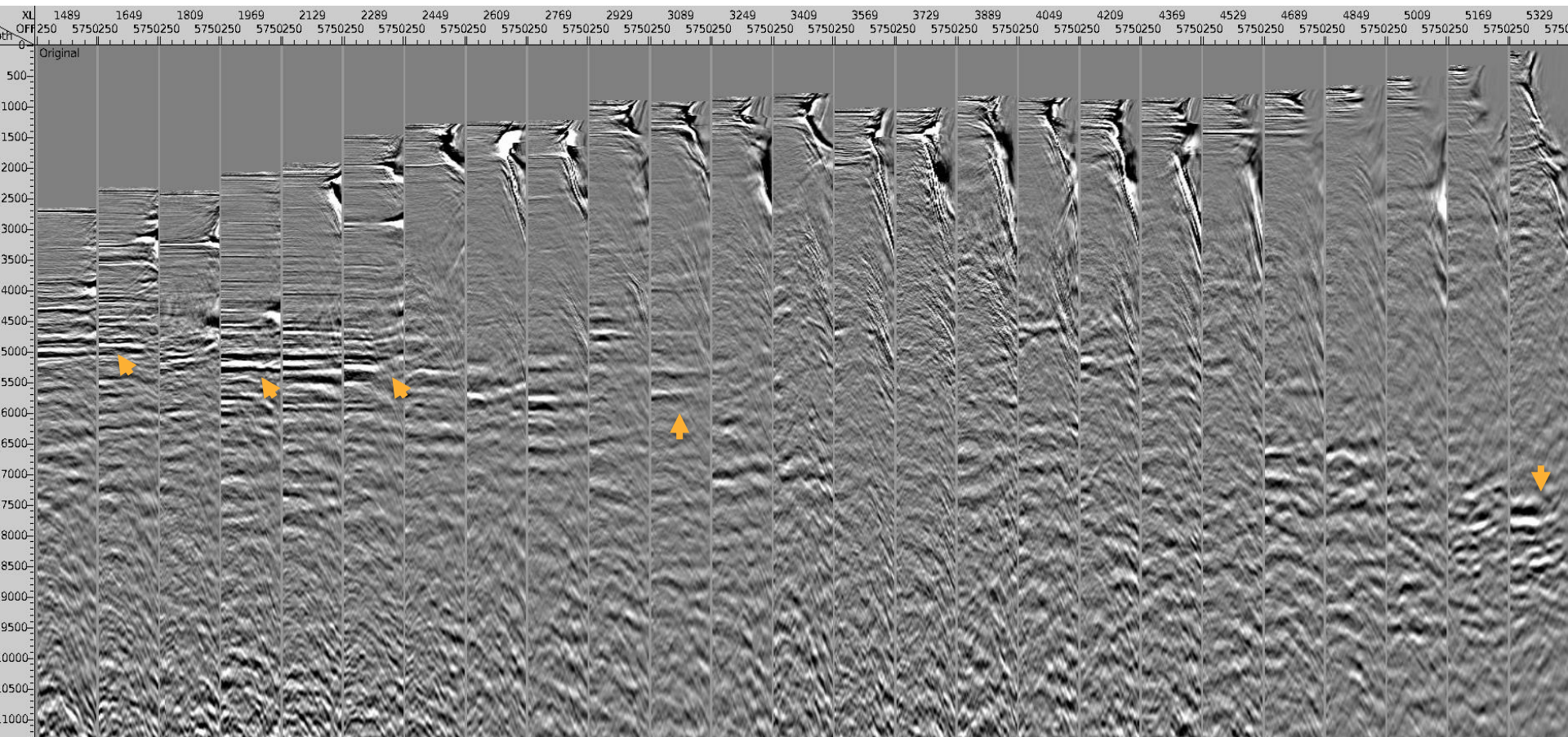




# Inline 236 CDP Gathers: Current Result

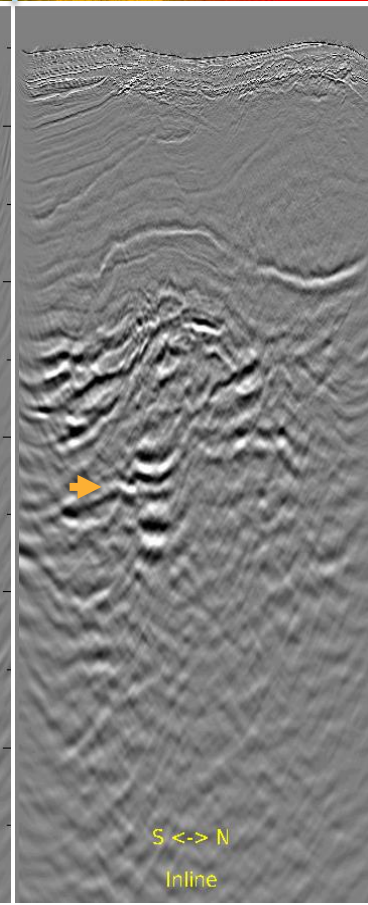
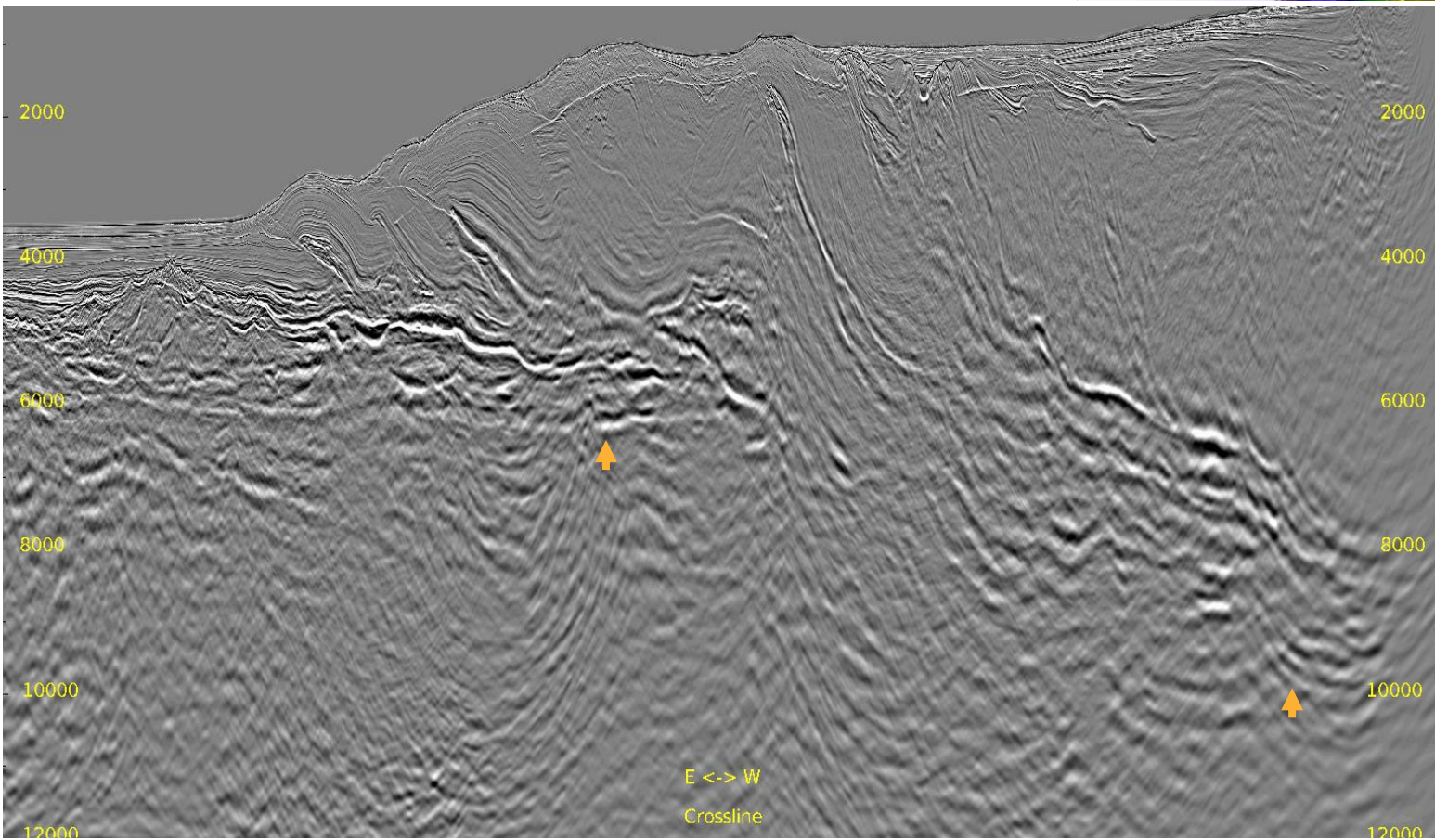
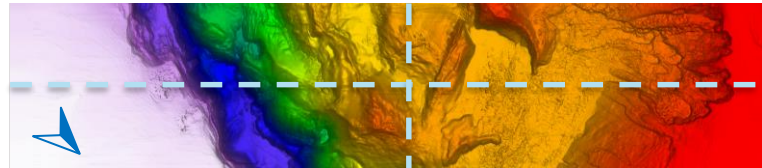
— 35° Mute

13



# Full Stack: IT4 Result

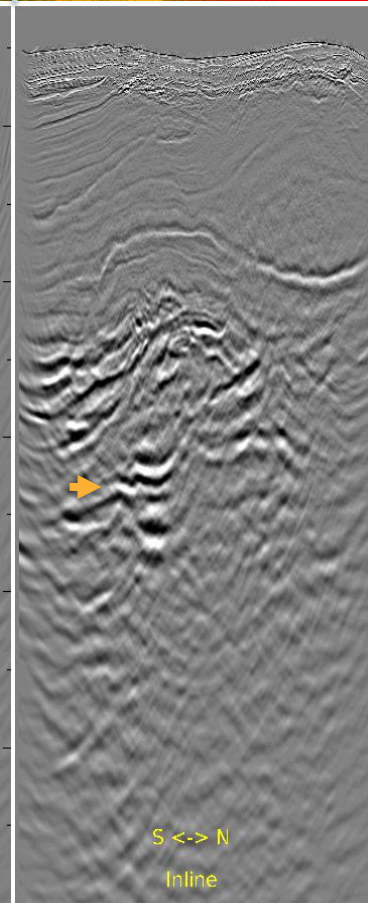
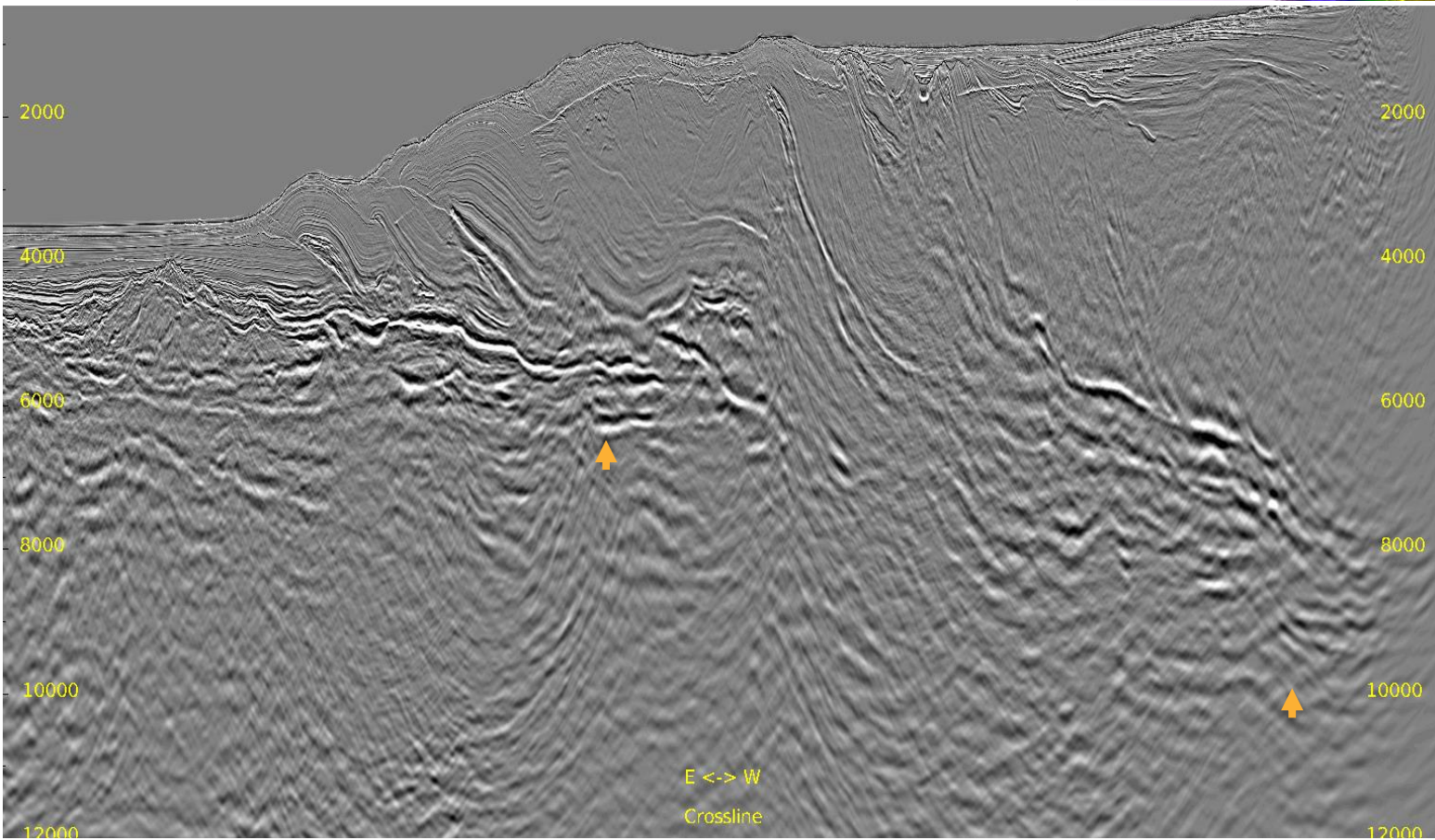
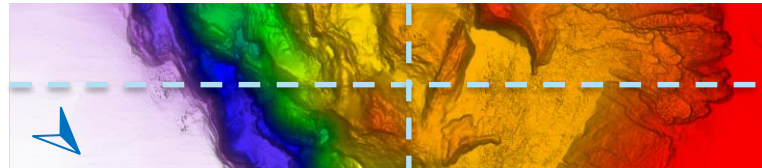
Inline 436 & Crossline 3040





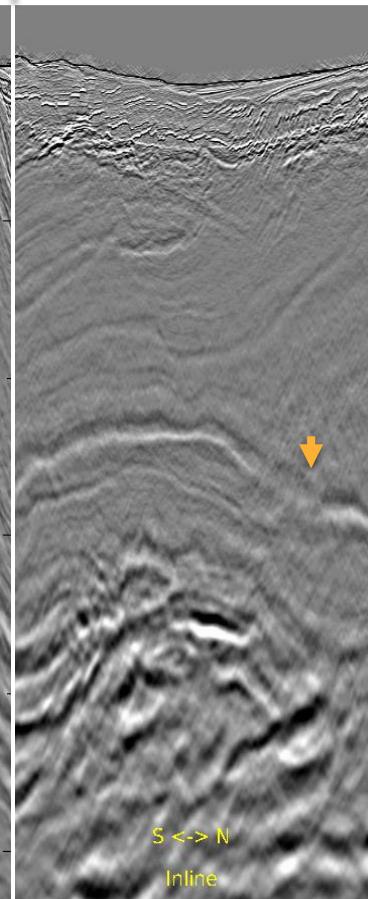
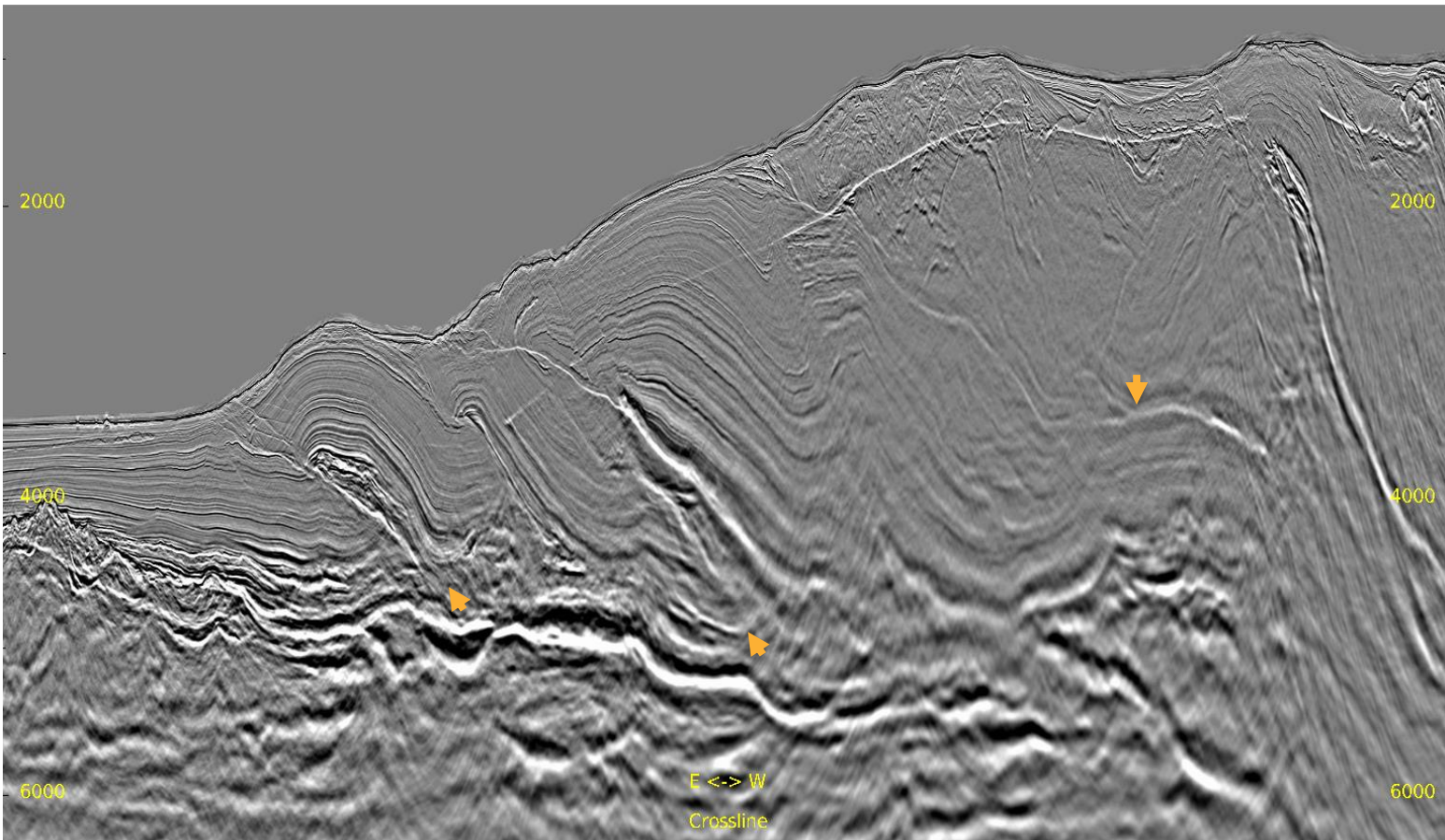
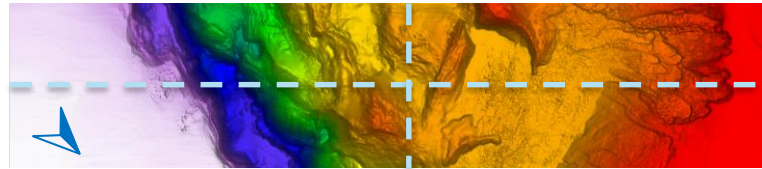
# Full Stack: Current Result

Inline 436 & Crossline 3040



# Zoomed Full Stack: IT4 Result

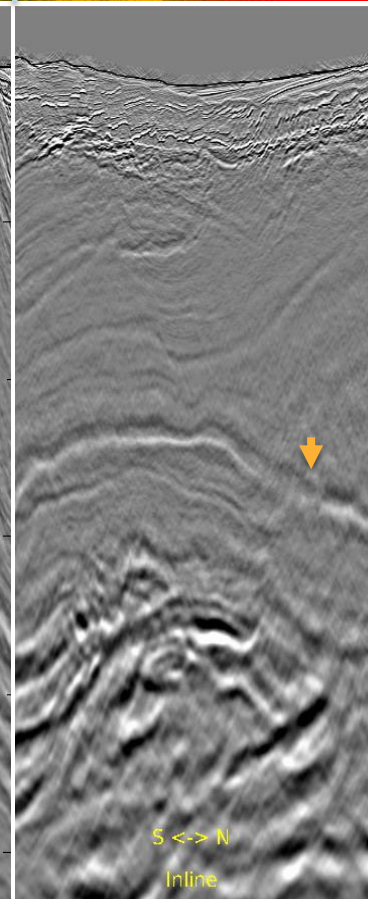
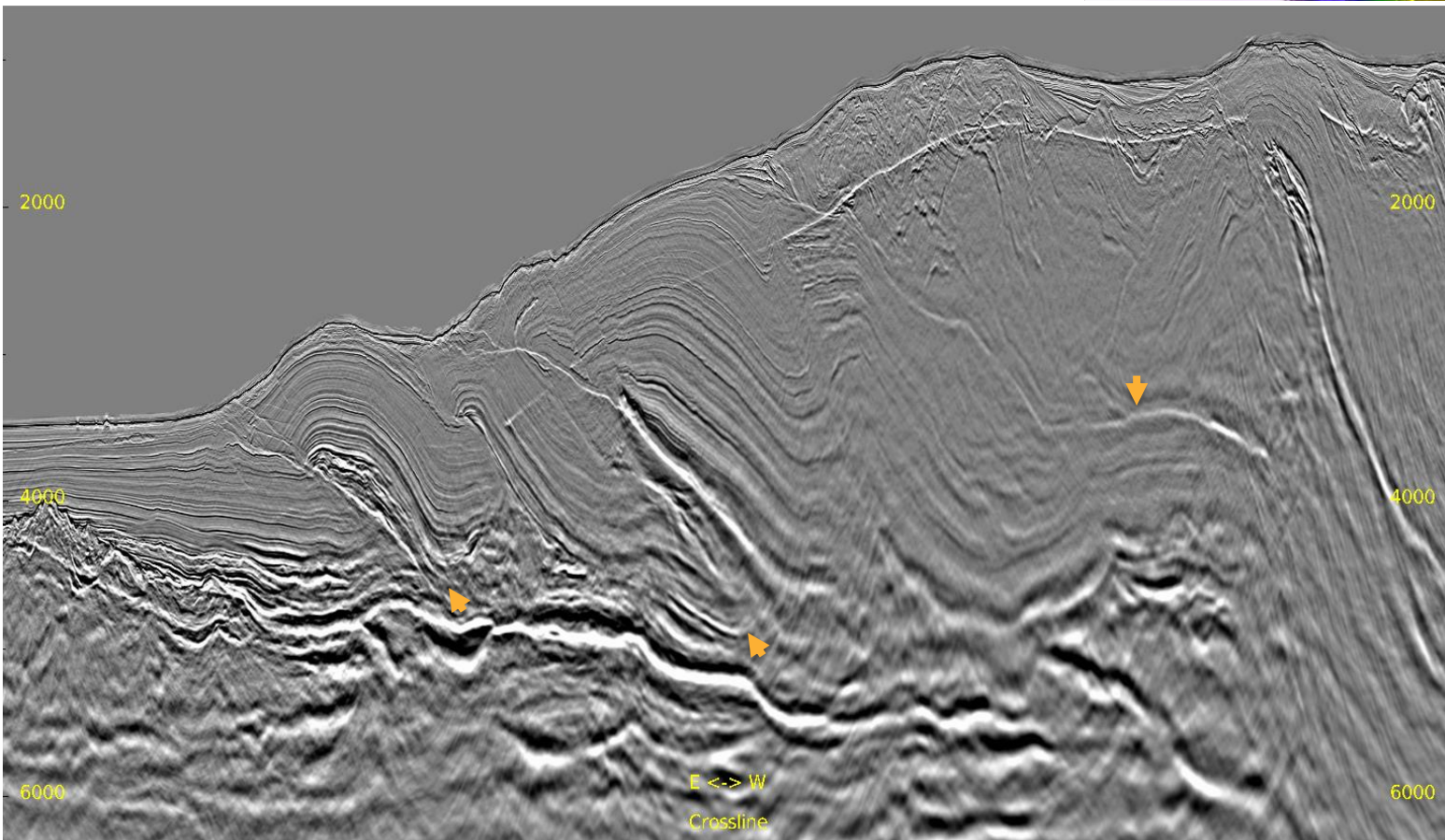
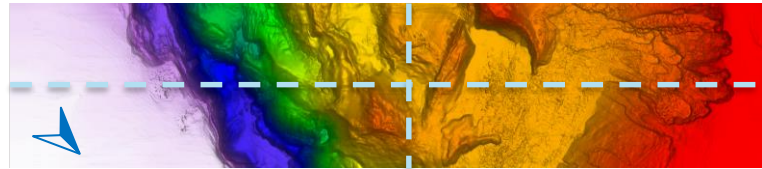
Inline 436 & Crossline 3040

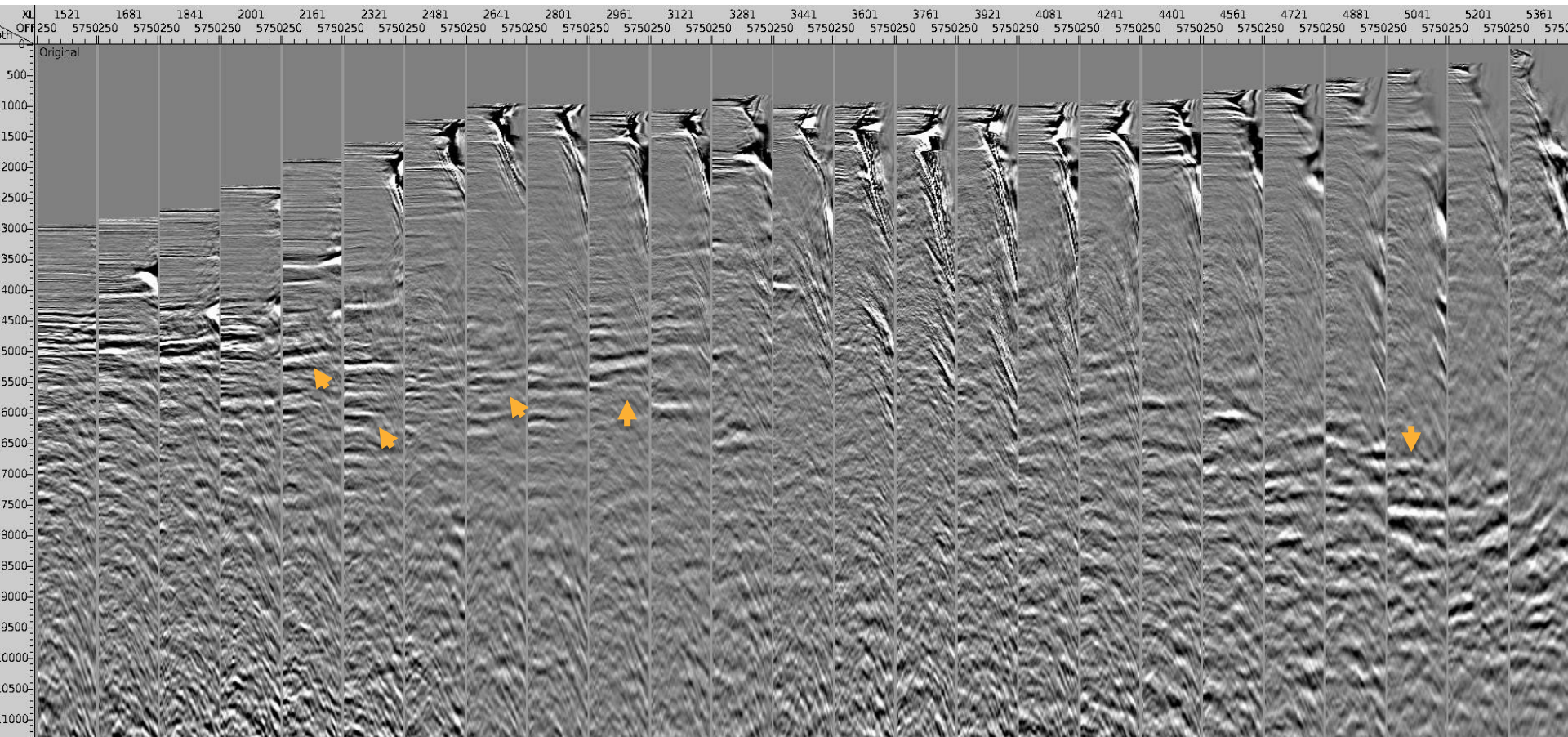




# Zoomed Full Stack: Current Result

Inline 436 & Crossline 3040





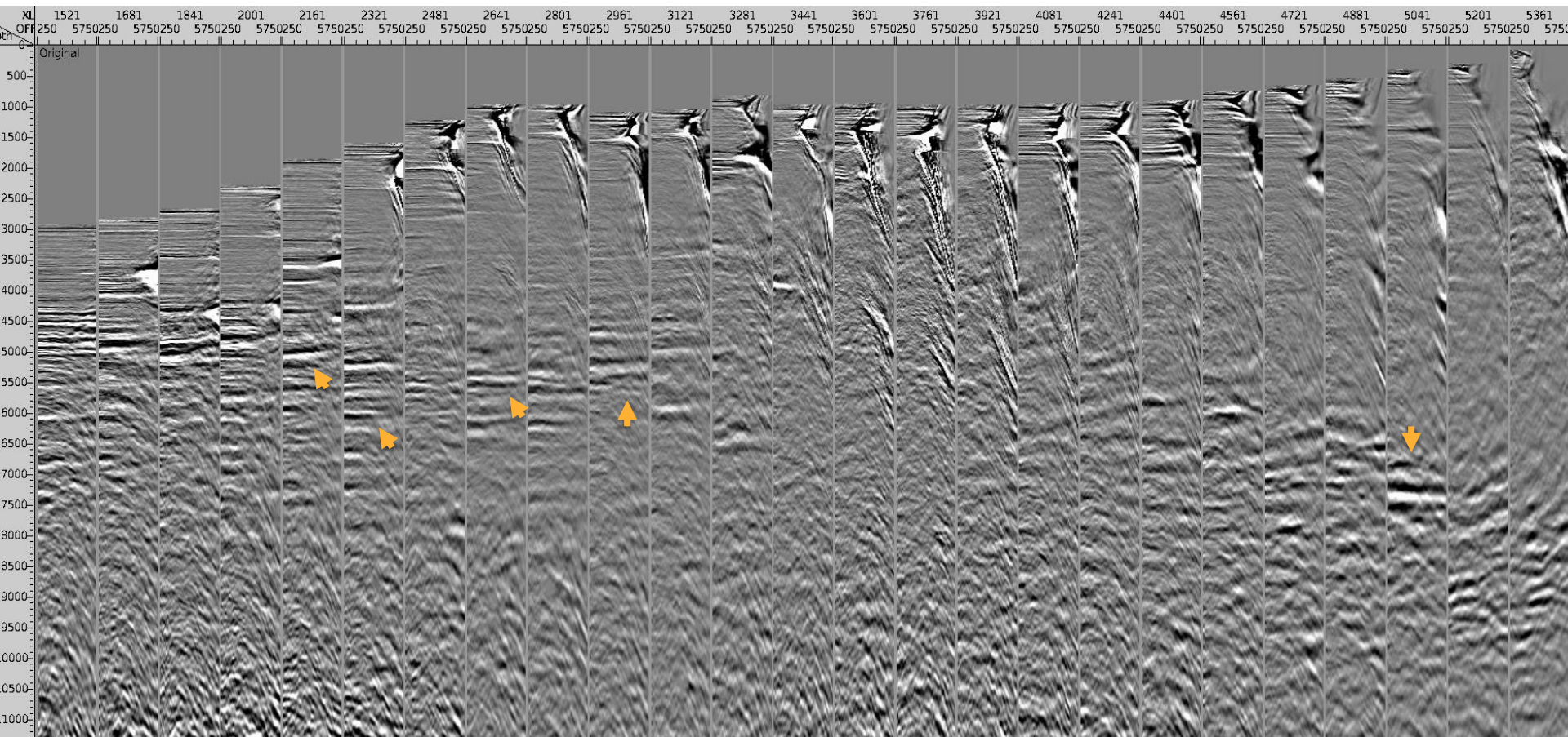




# Inline 436 CDP Gathers: Current Result

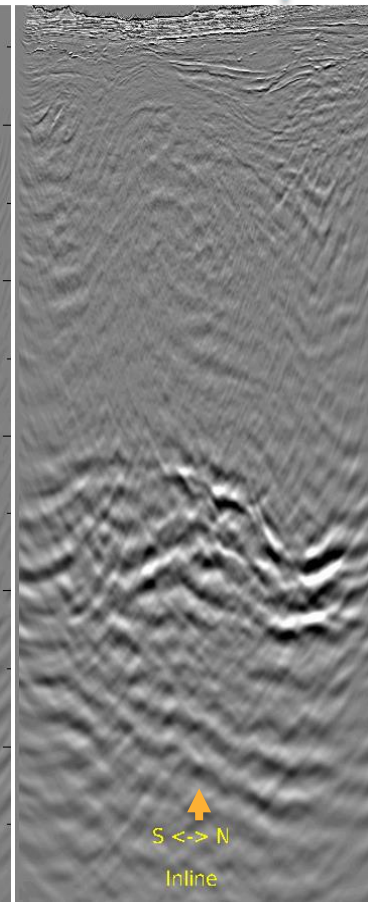
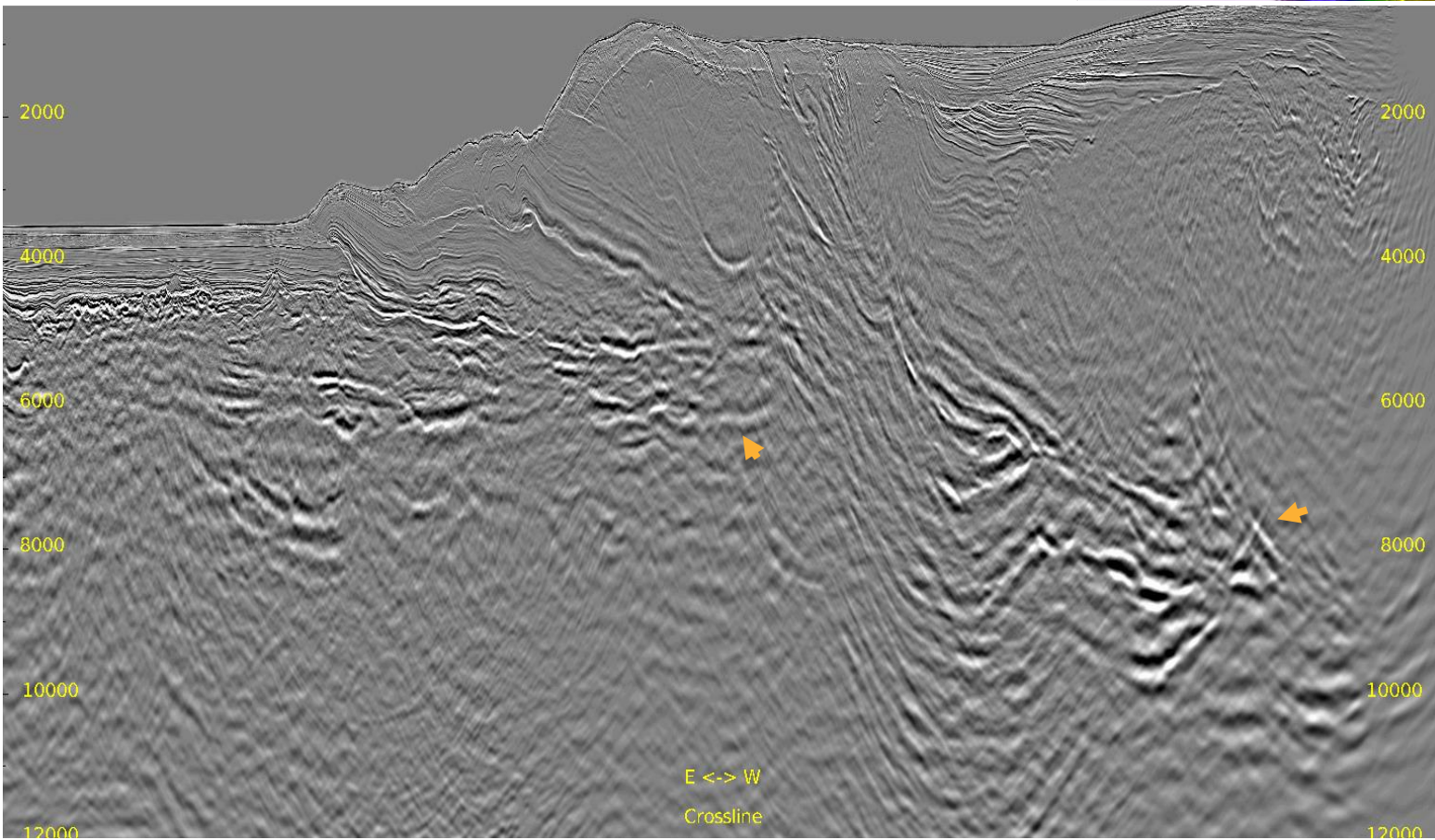
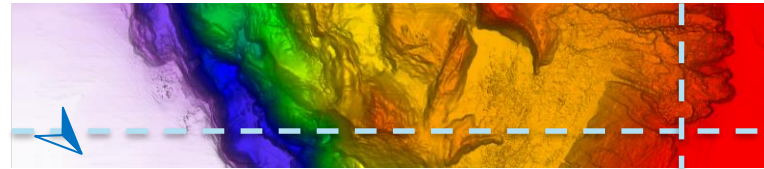
— 35° Mute

19



# Full Stack: IT4 Result

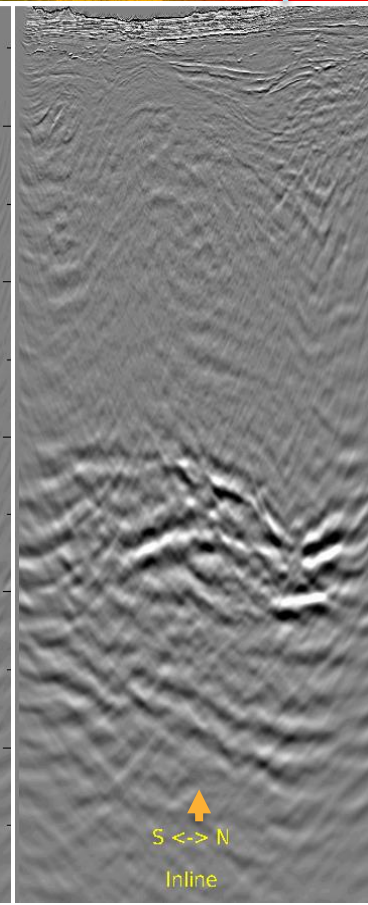
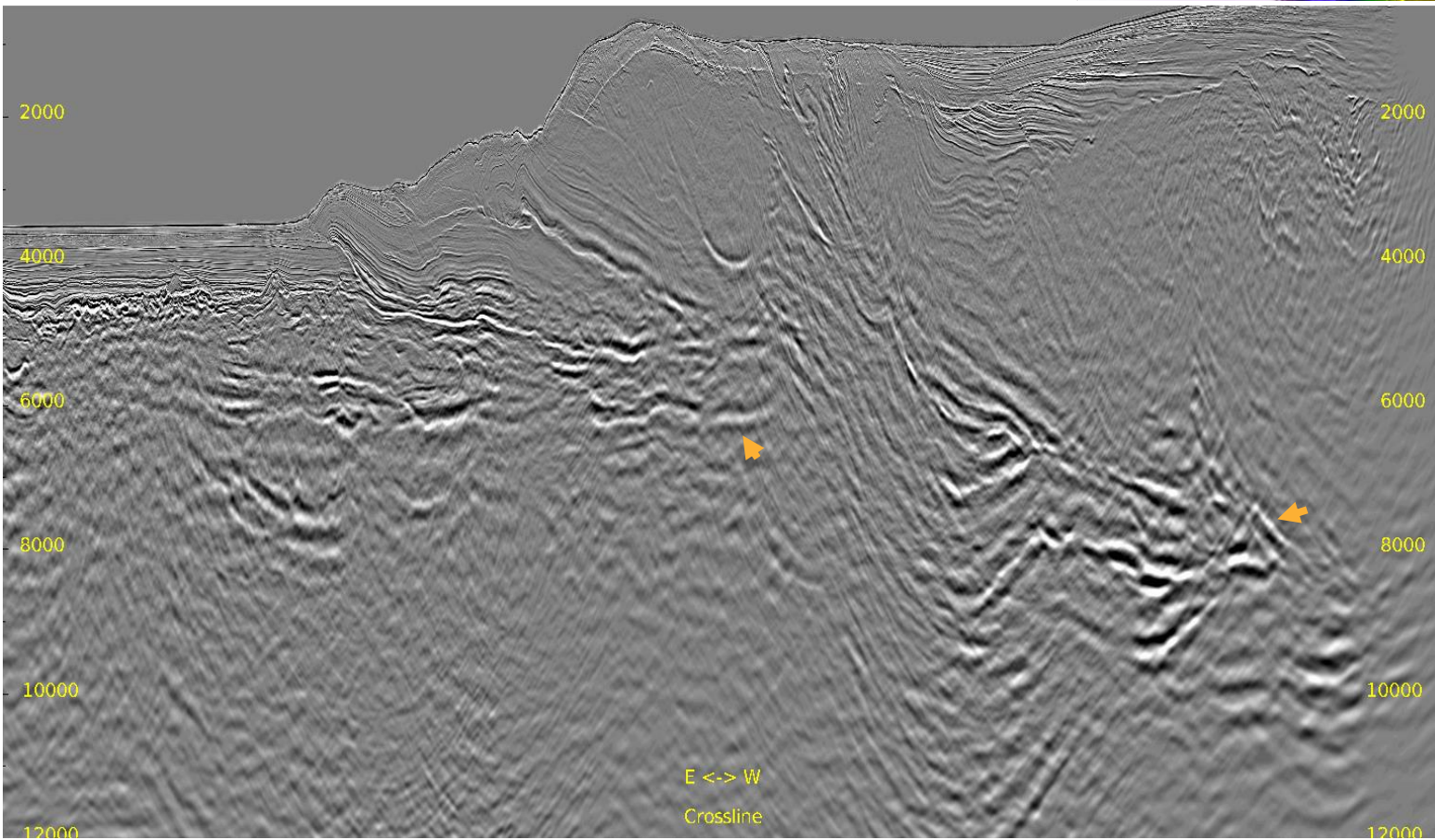
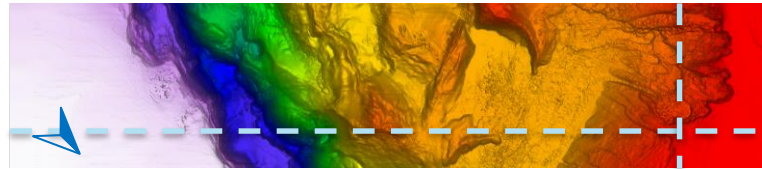
Inline 636 & Crossline 4947





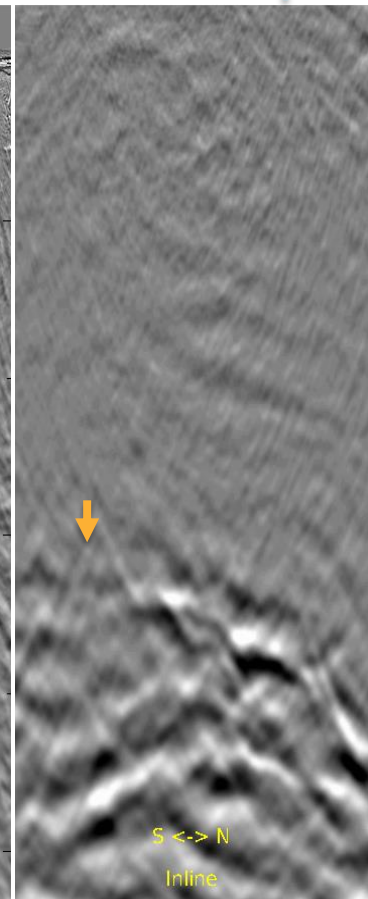
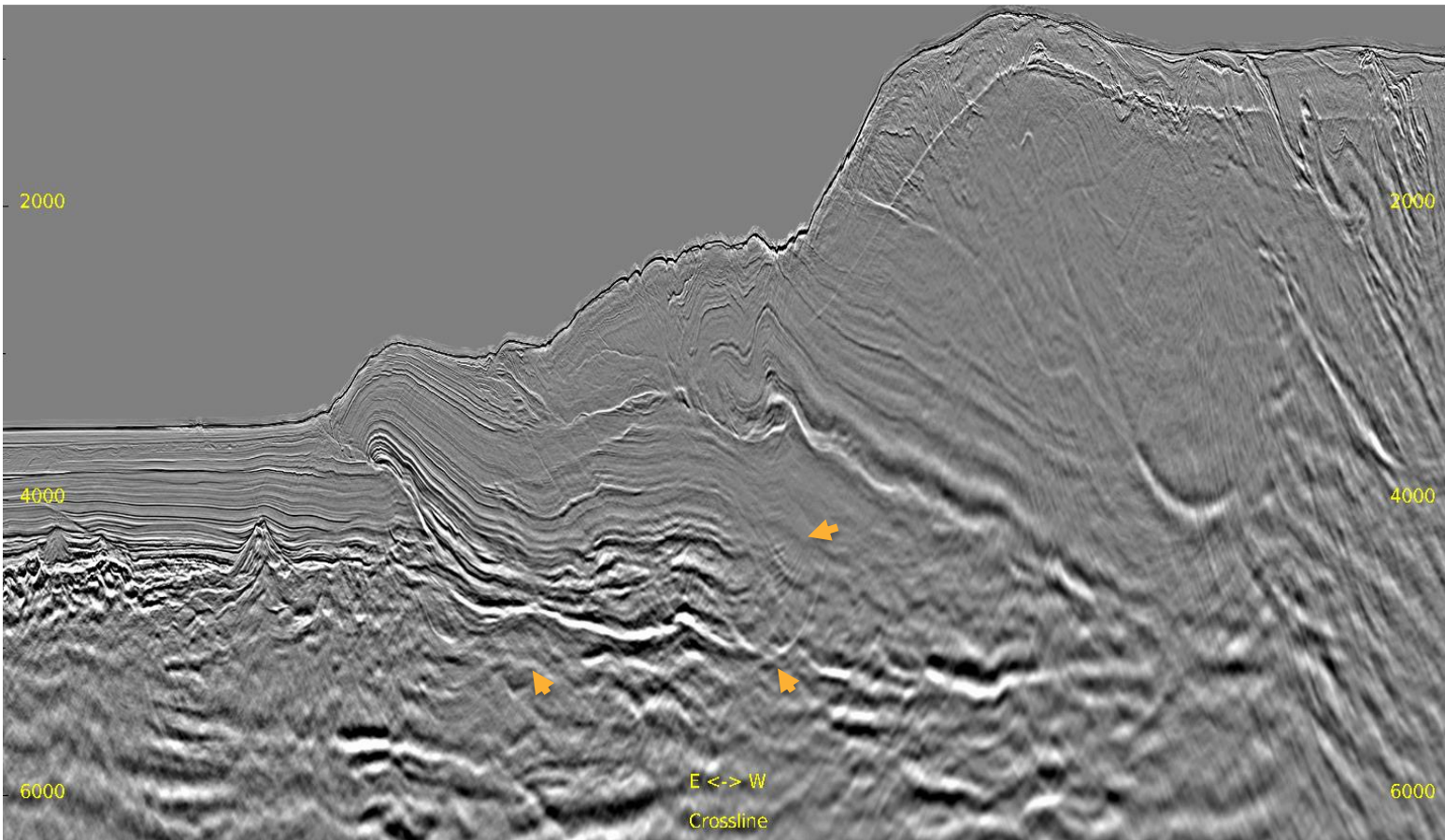
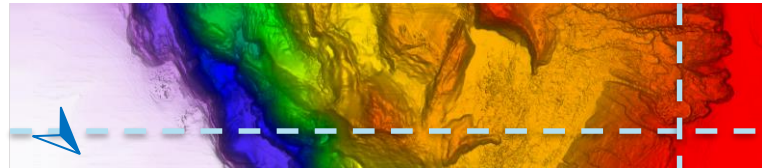
# Full Stack: Current Result

Inline 636 & Crossline 4947



# Zoomed Full Stack: IT4 Result

Inline 636 & Crossline 4947





# Zoomed Full Stack: Current Result

Inline 636 & Crossline 4947

