Angle Mute & Full Stack

NZ 3D Processing

08 July 2021

INSTITUTE FOR GEOPHYSICS

cgg.com

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Processing flow

1. Convert to CGG Internal Format
2. Nav merge / trace edit
3. Low Cut Filter
4. Time Variant Scaling (TVS) & Resample to 4ms
5. Swell Noise Attenuation (SNA)
6. Debubble
7. Linear Noise Attenuation (LNA)
8. Tidal Statics Correction
9. Water Column Statics Correction
10. Shot & Channel Scaling
11. Receiver Motion Correction (RMC)
12. Joint Deghost & Designature
13. Residual Bubble Removal
14. Source Sensor Datum Correction
15. Shallow Water Demultiple
16. Surface Related Multiple Elimination (3D SRME)
17. Simultaneous Subtraction of MWD & SRME
18. Residual Linear Noise Attenuation (residual LNA)
19. Trace Regularization & Interpolation
20. Velocity Analysis
21. Radon Demultiple
22. Footprint Removal
23. Diffracted Multiple Removal
24. Common Offset Denoise
25. Q Analysis and Compensation
26. Final TTI Kirchhoff Migration
27. Convert from Depth to Time Domain
28. High Density Automatically Velocity Analysis
29. Radon Demultiple
30. Trim Static Correction
31. Post Migration Denoise
32. Q Compensation (Amplitude)
33. Spectra Offset Balancing
34. Angle Mute & Full Stack

Outline

- **Objective:**

  To test inner and outer angle mute for full stack.

- **Procedure:**
  - Input is CDP gathers after offset spectra balancing.
  - Inner muting angle are tested with 0, 3, 5 degree.
  - Outer muting angle are tested with 30, 35, 40 degree.
  - The stacks with different angle mute are generated.

- **Display:**

  IL711, 300, 530 and 776: CDP Gathers, full stacks with different angle mutes.

- **Observation & Recommendation:**

  Inner angle mute of 3 degree and outer angle mute of 35 degree give good quality of stack at target zone and have best balance between event focusing and useful angle. So we recommend to use angle mute of 3~35 degree for full stack on the production.

Subline 300

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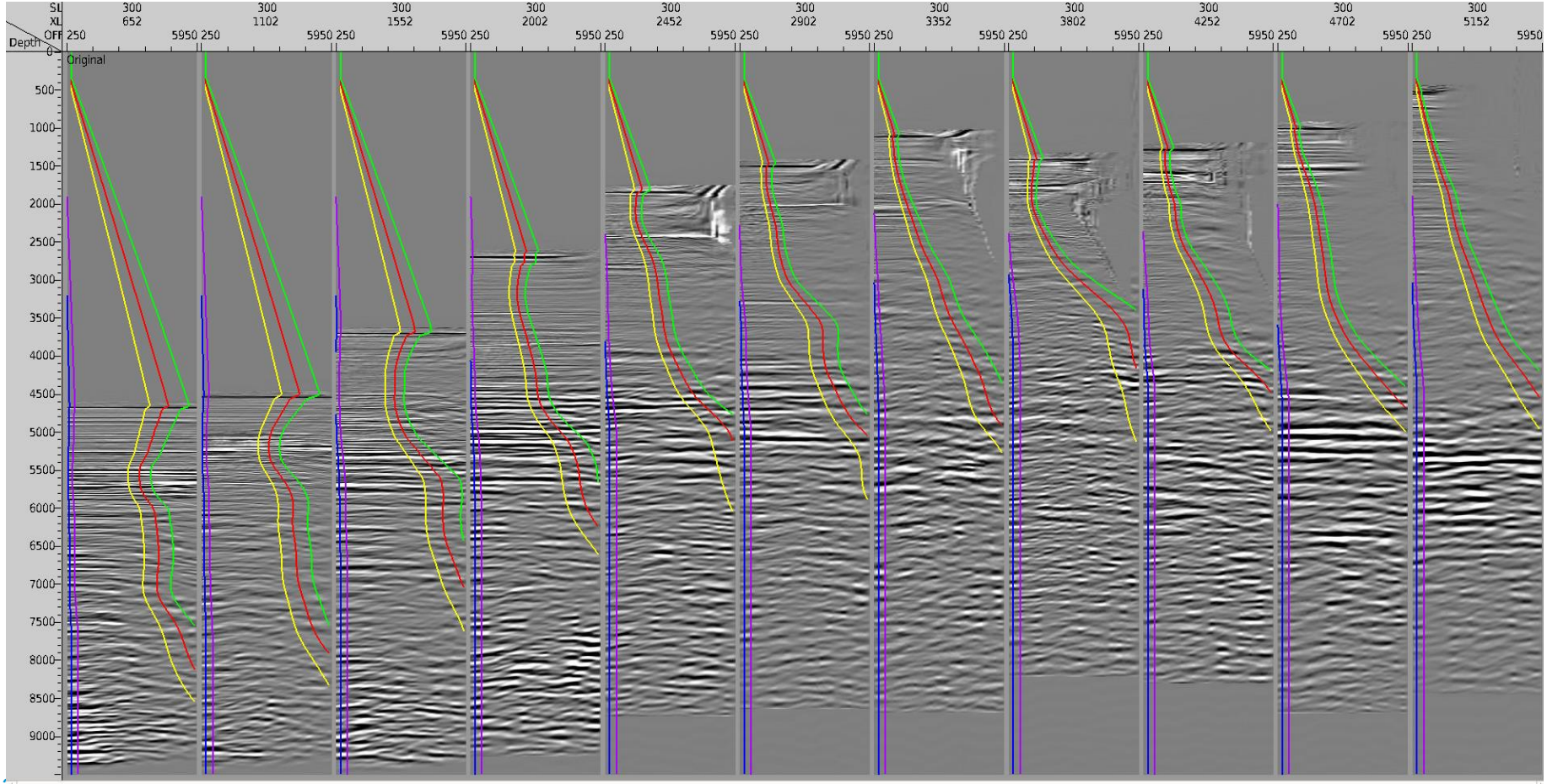
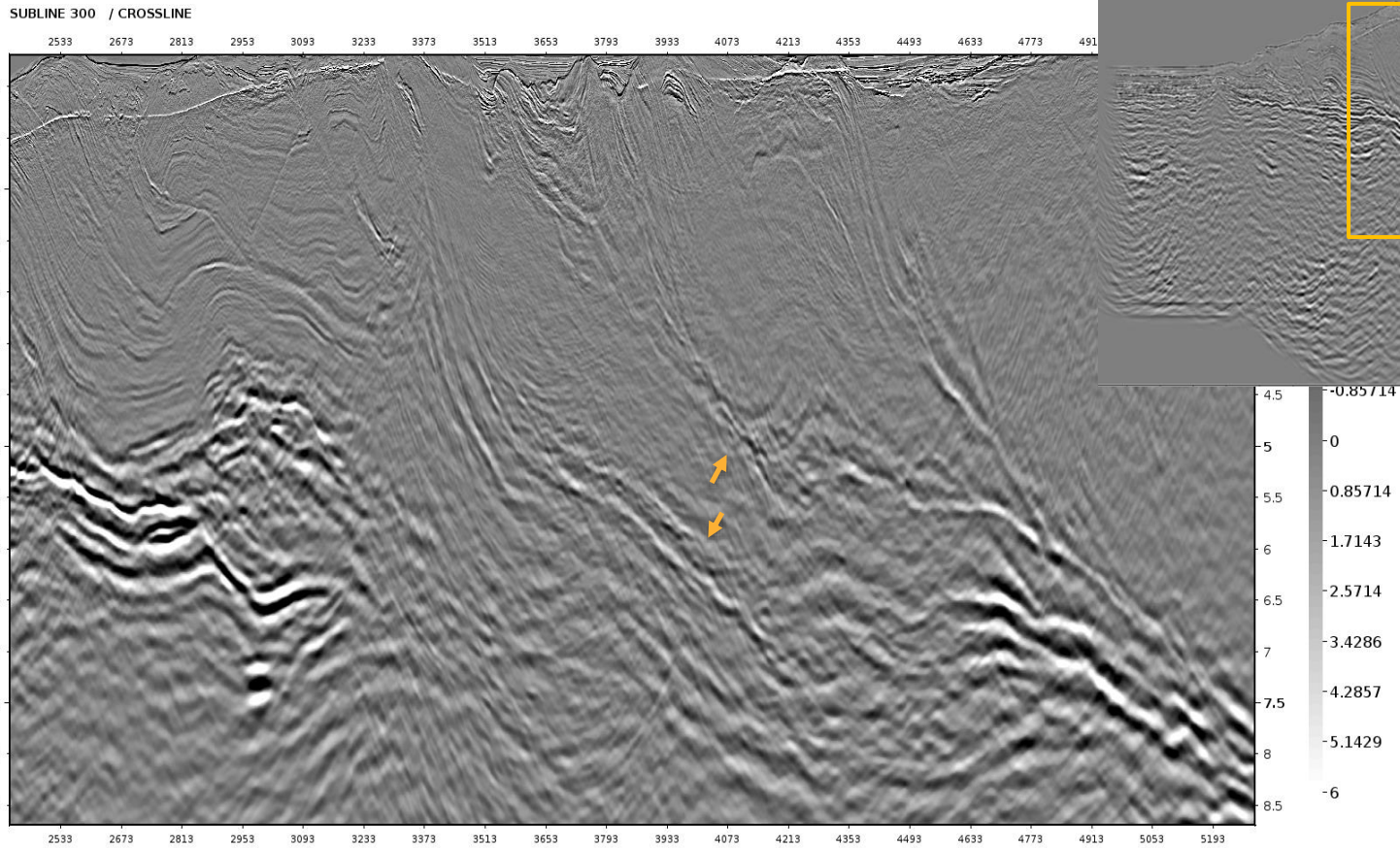
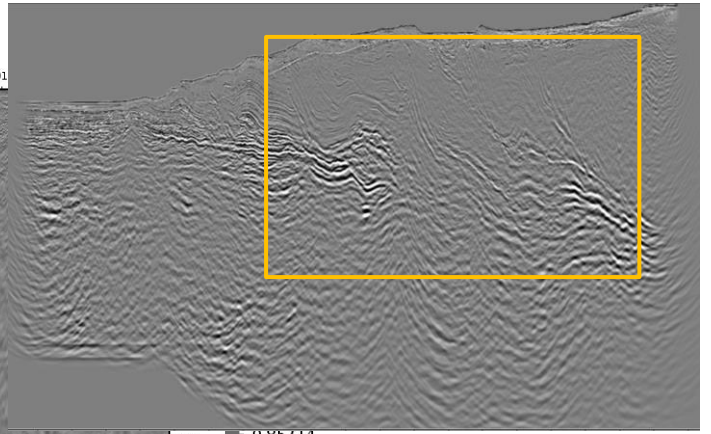
Subline 300: Angle Display - 03deg 05deg 30deg 35deg 40deg

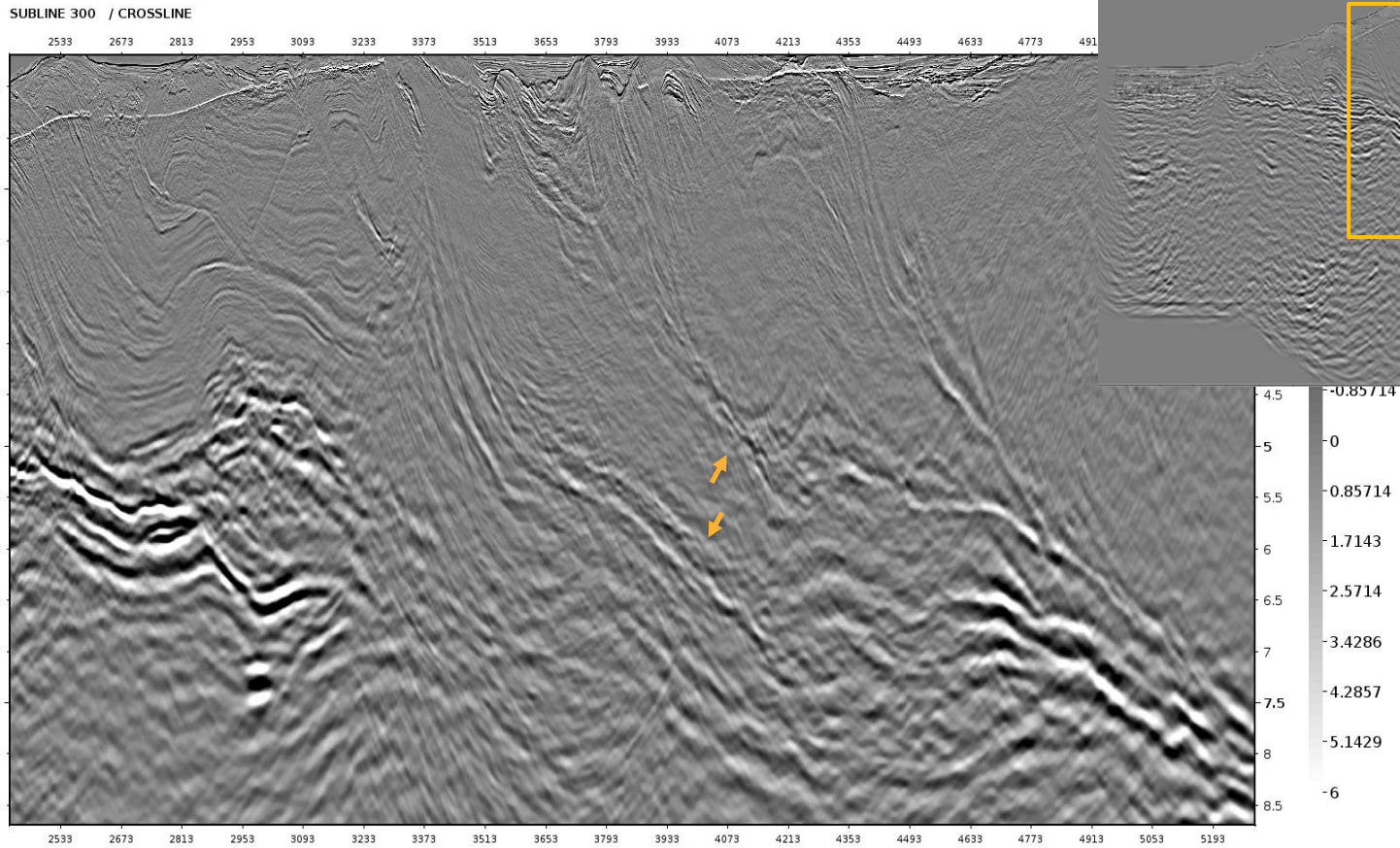


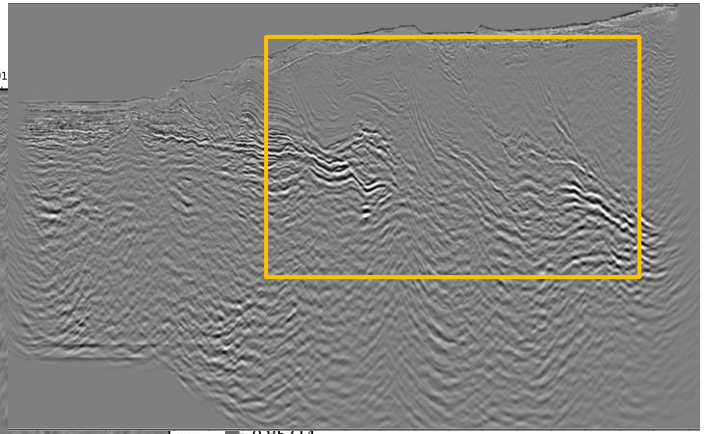
Subline 300: 0–35 deg Depth Stack



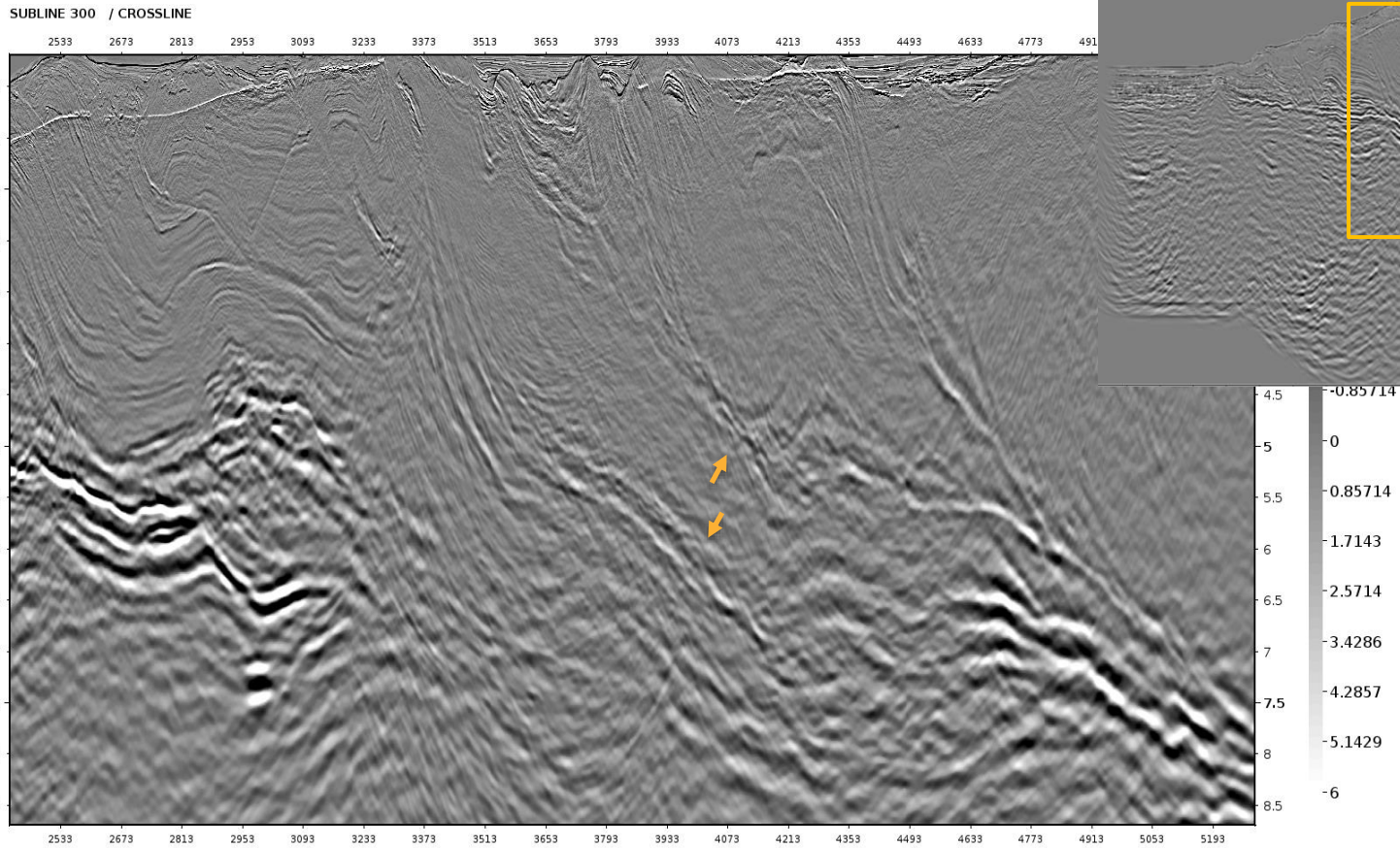


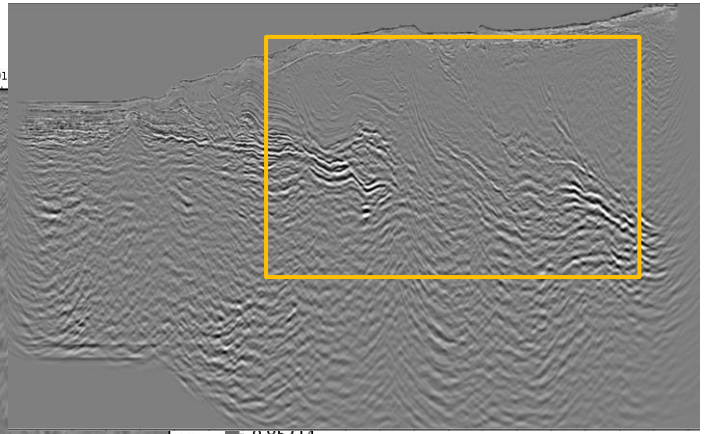
Subline 300: 3–35 deg Depth Stack



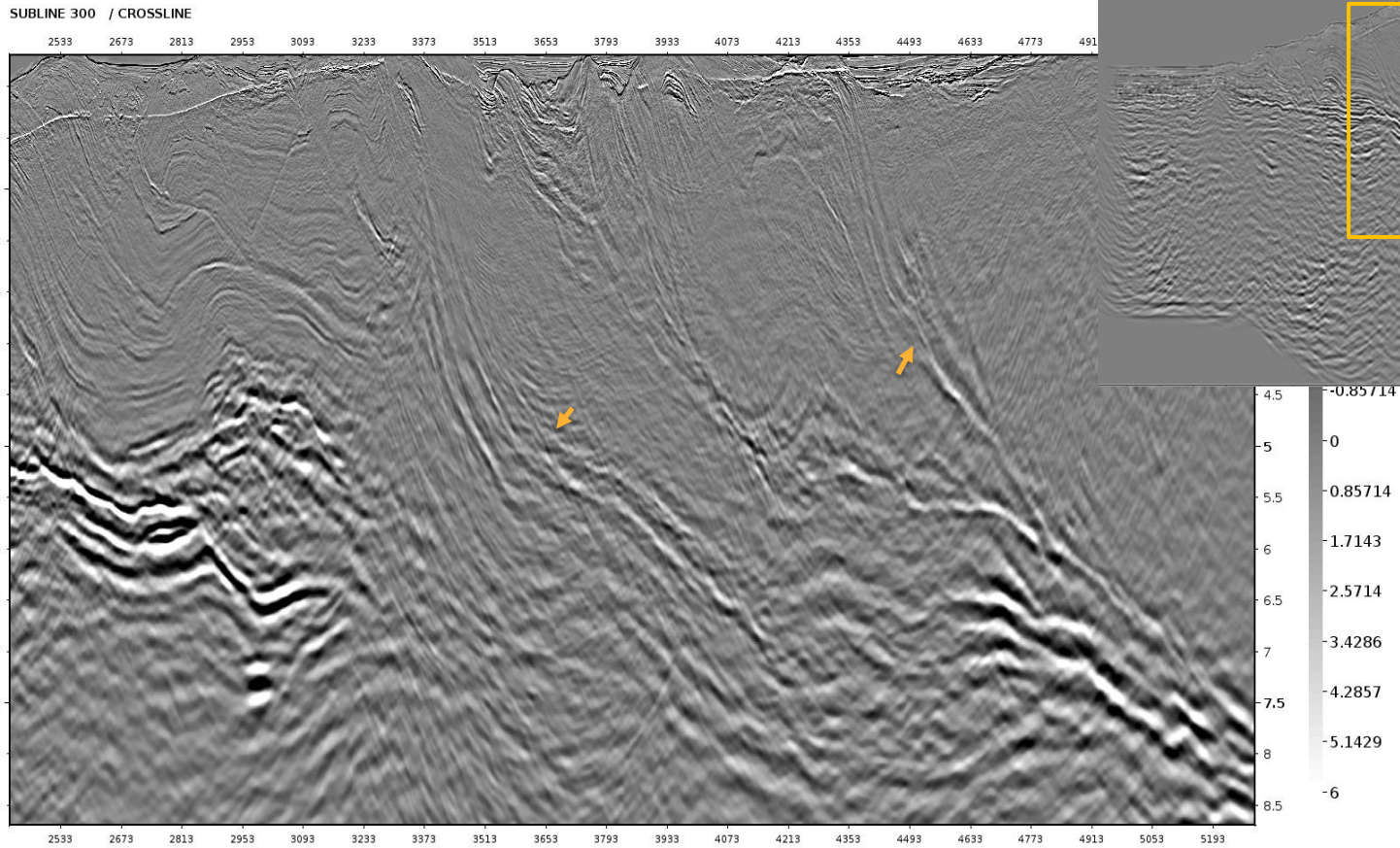


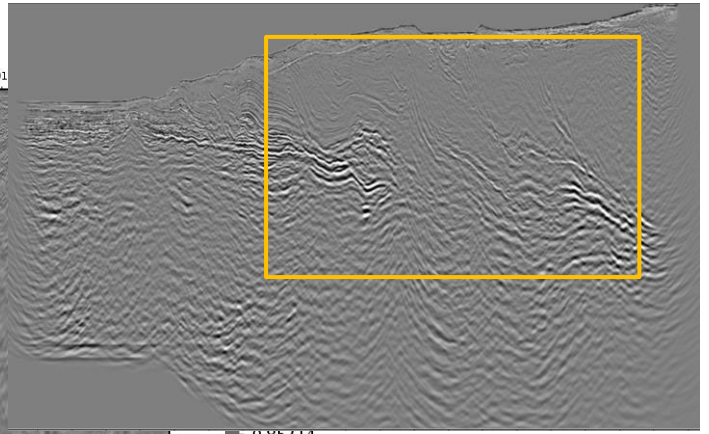
Subline 300: 5–35 deg Depth Stack



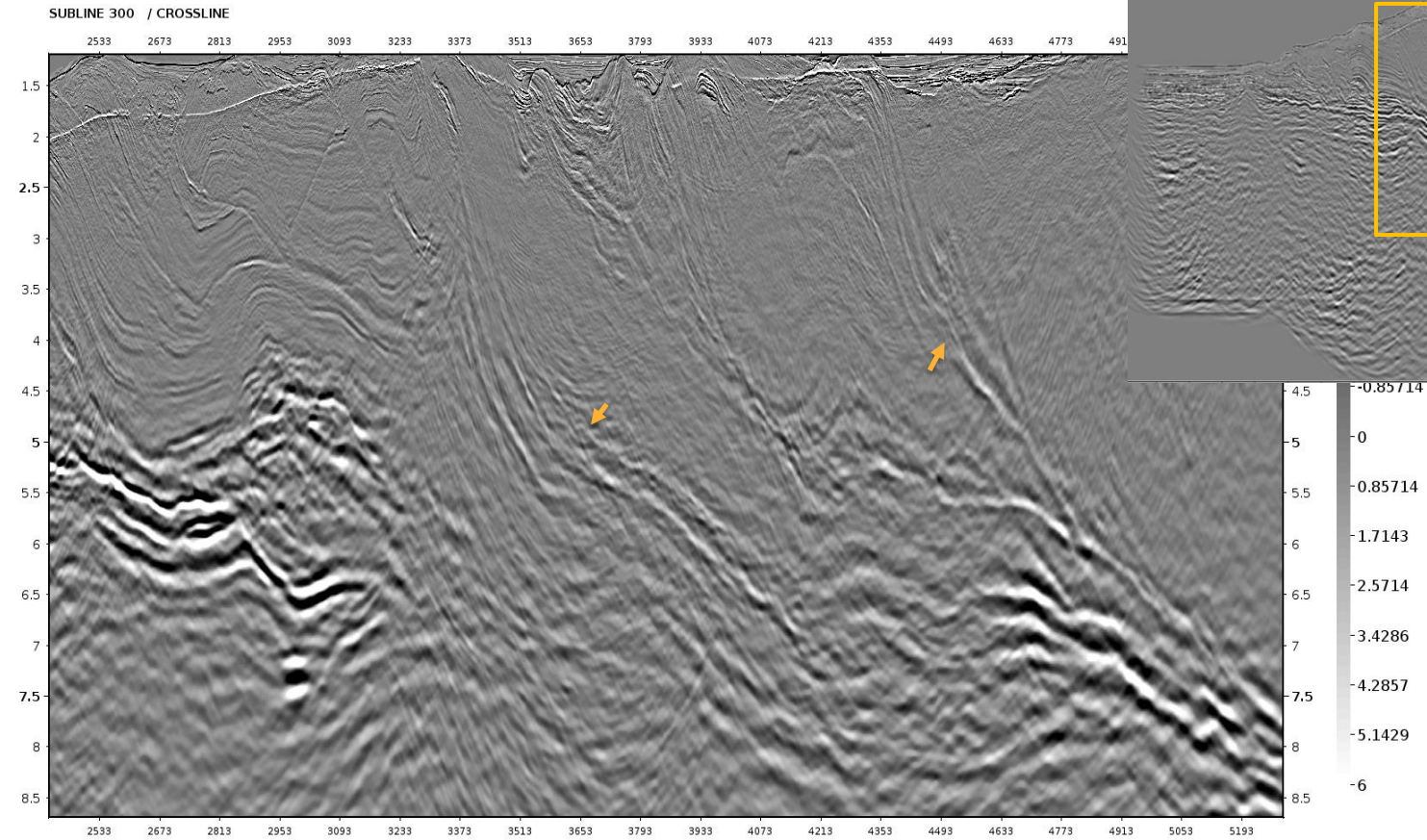


Subline 300: 3–30 deg Depth Stack

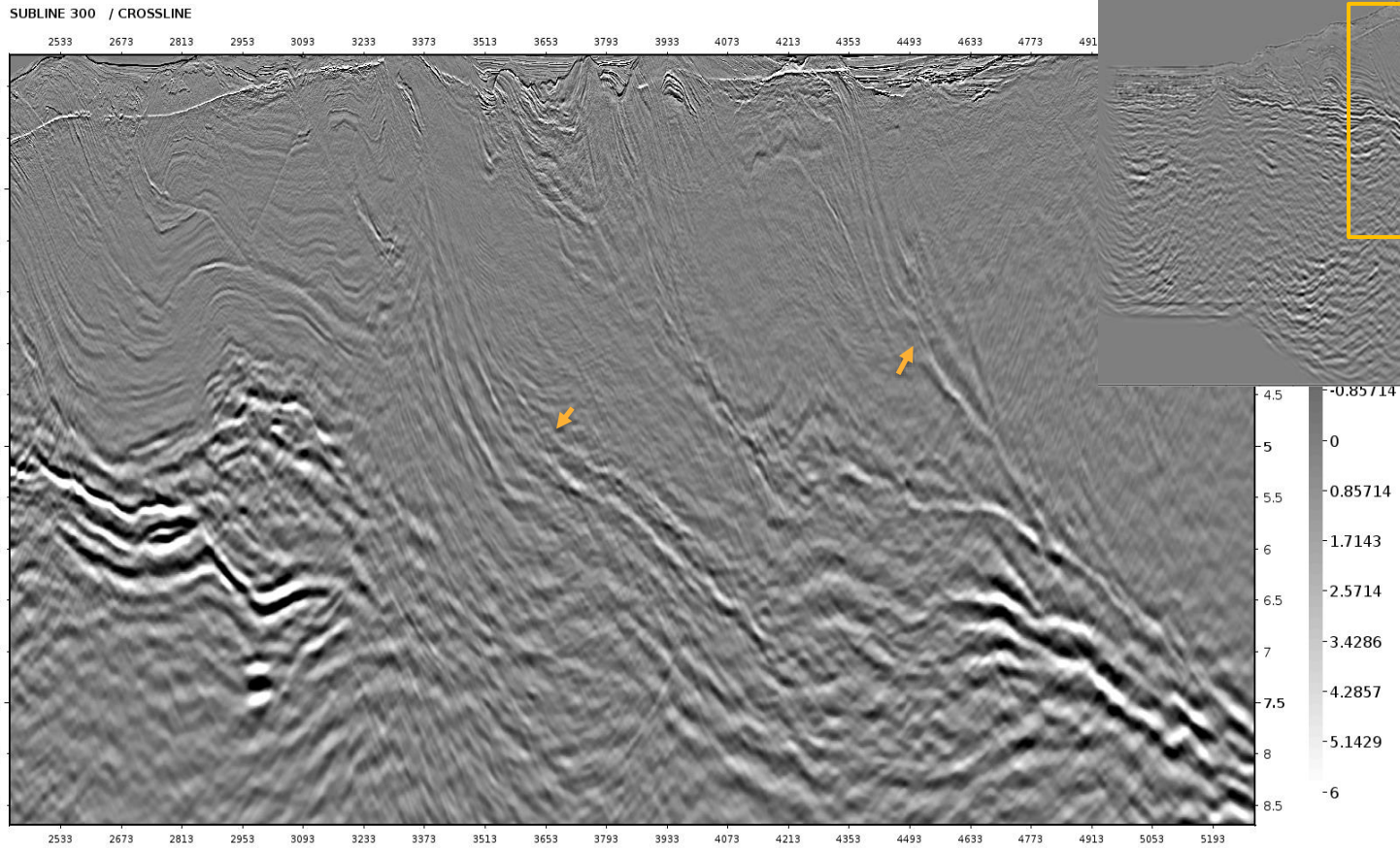


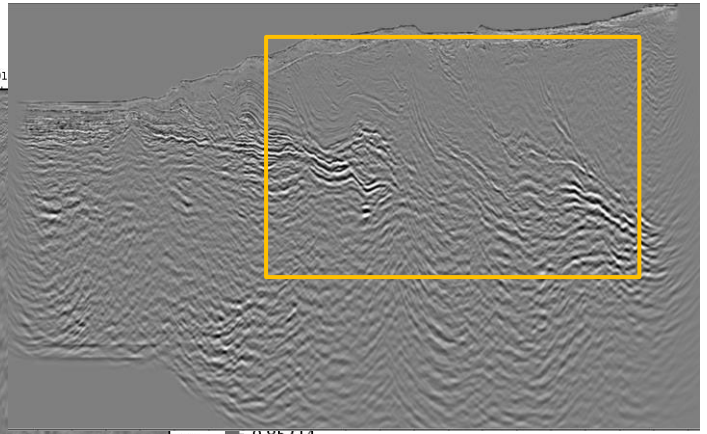


Subline 300: 3–35 deg Depth Stack



Subline 300: 3–40 deg Depth Stack





Subline 530

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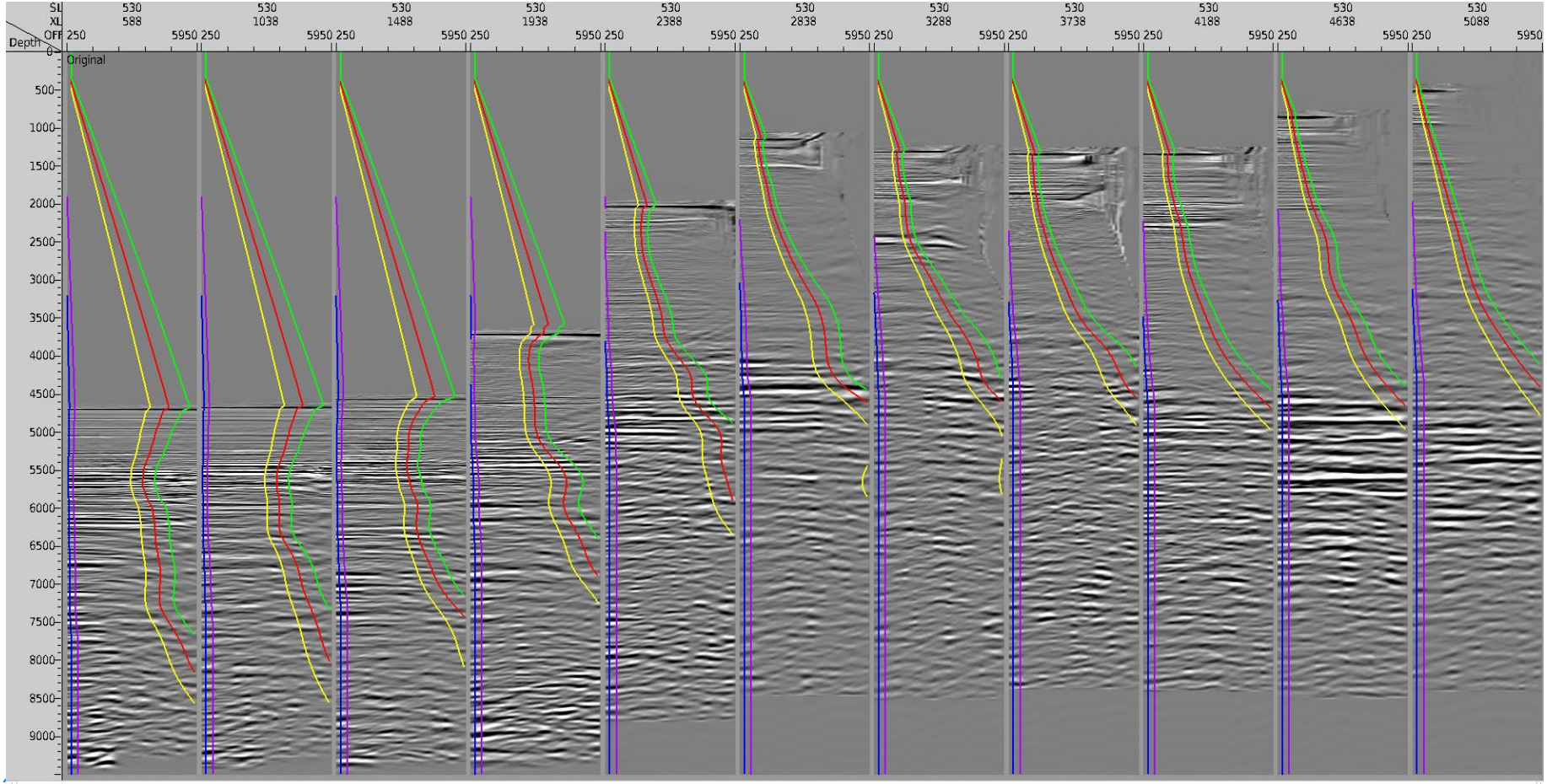
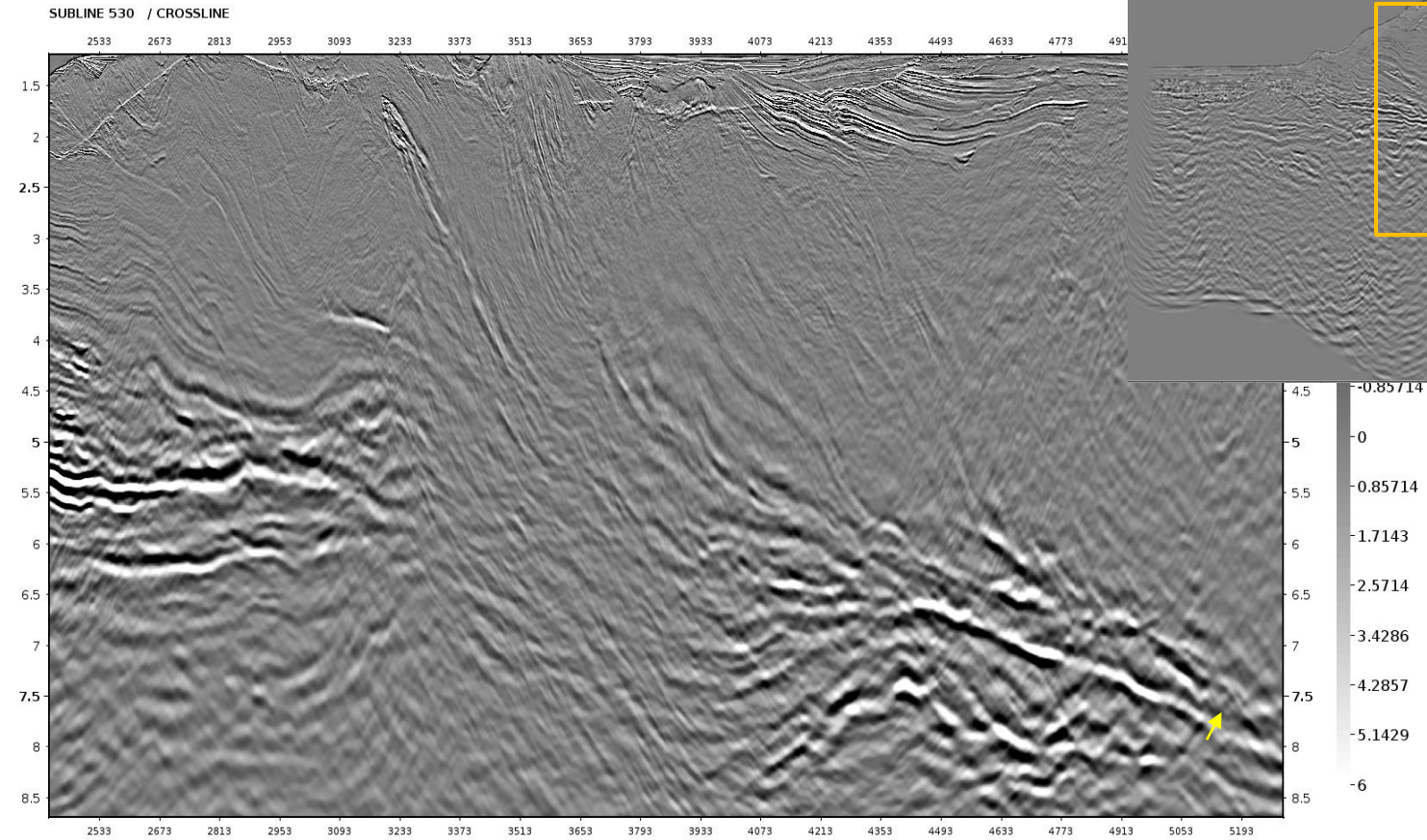
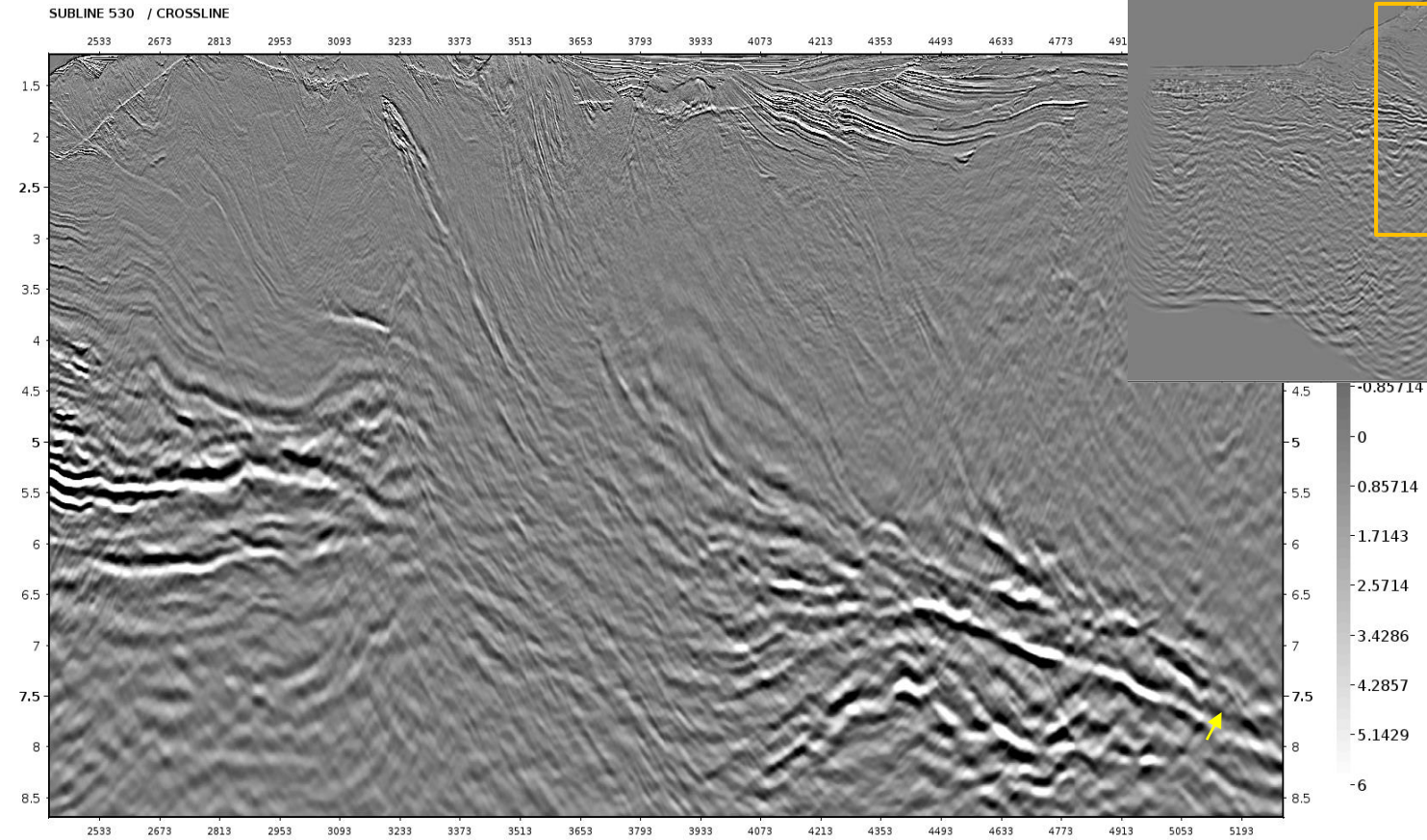
Subline 530: Angle Display - 03deg 05deg 30deg 35deg 40deg



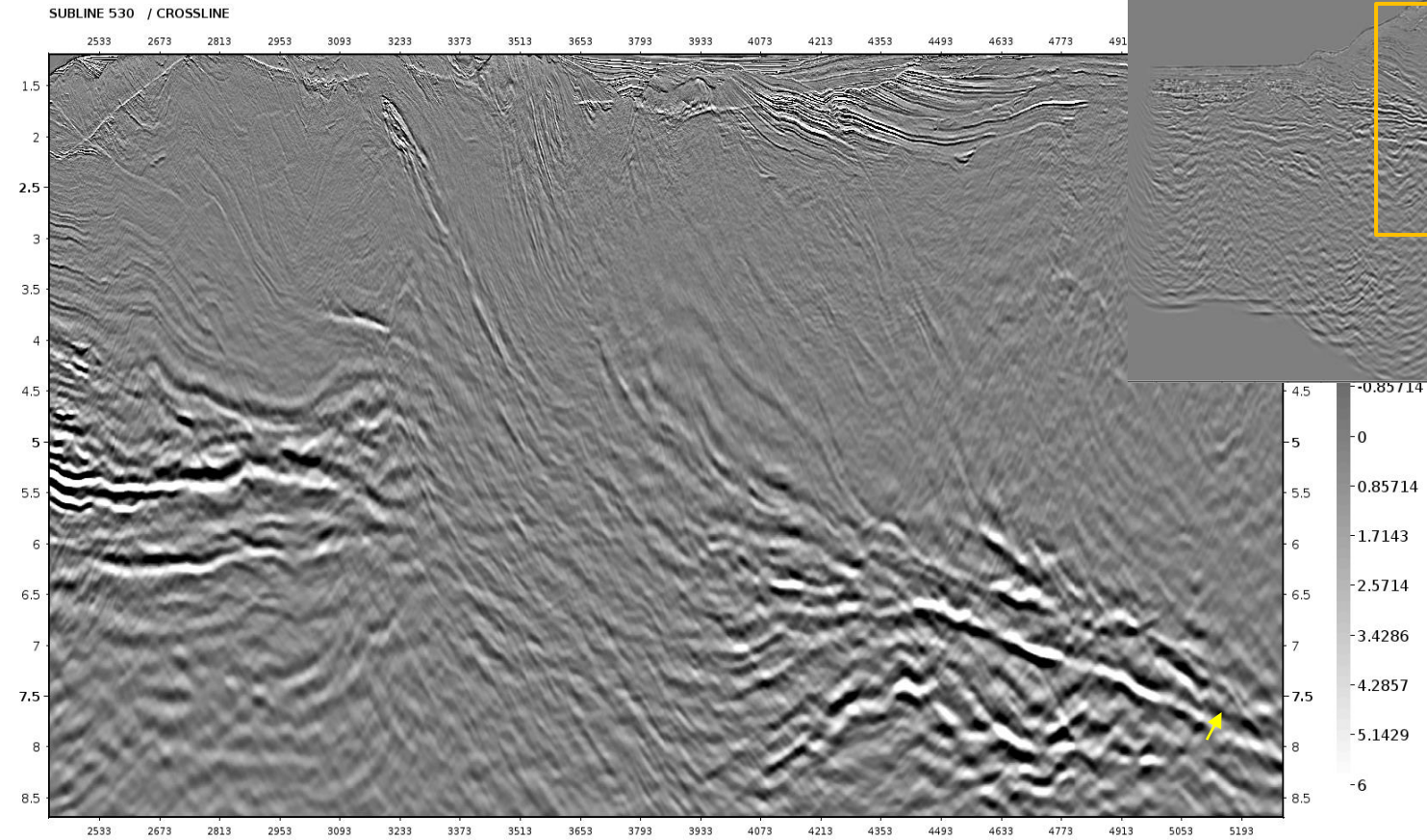
Subline 530: 0–35 deg Depth Stack



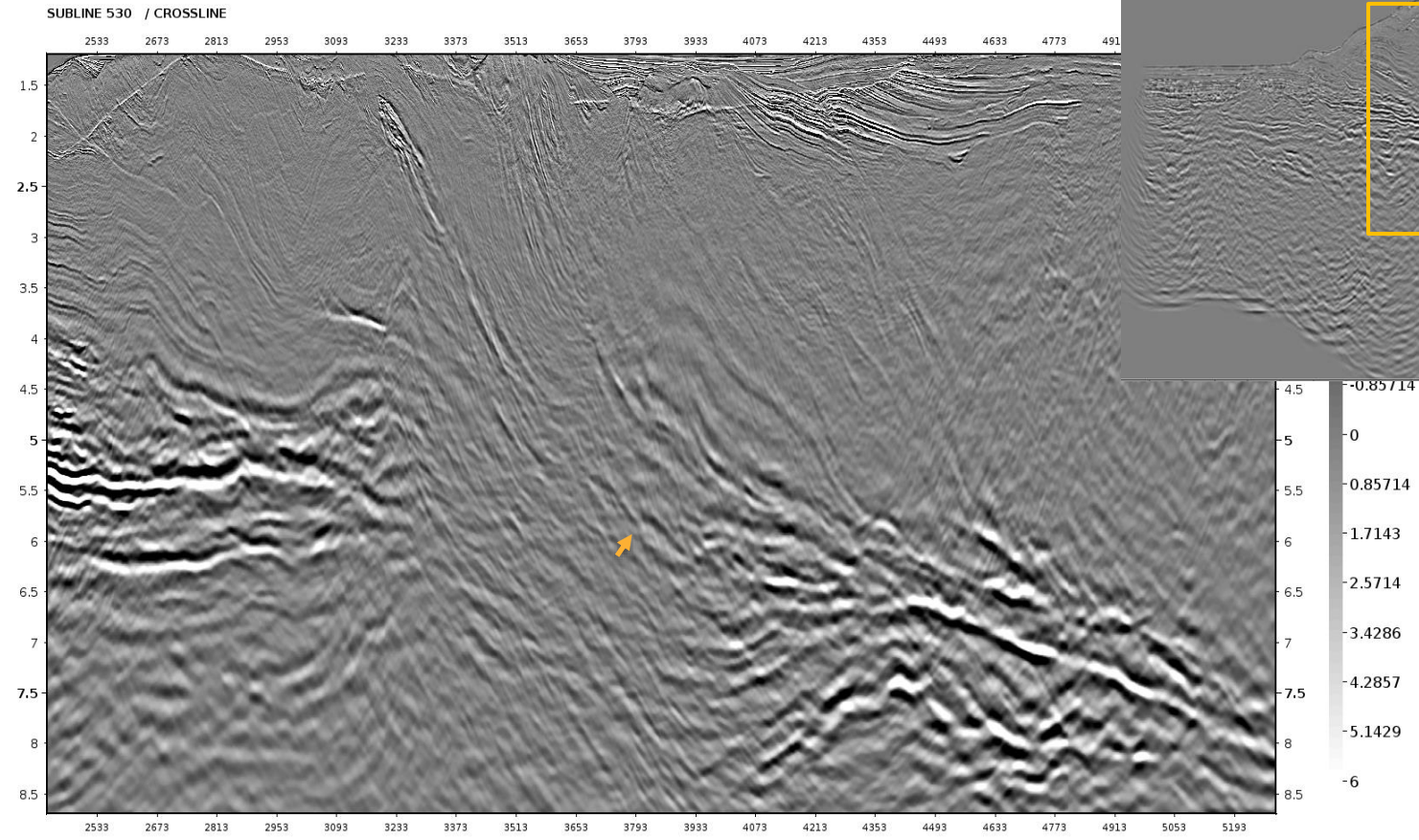
Subline 530: 3–35 deg Depth Stack



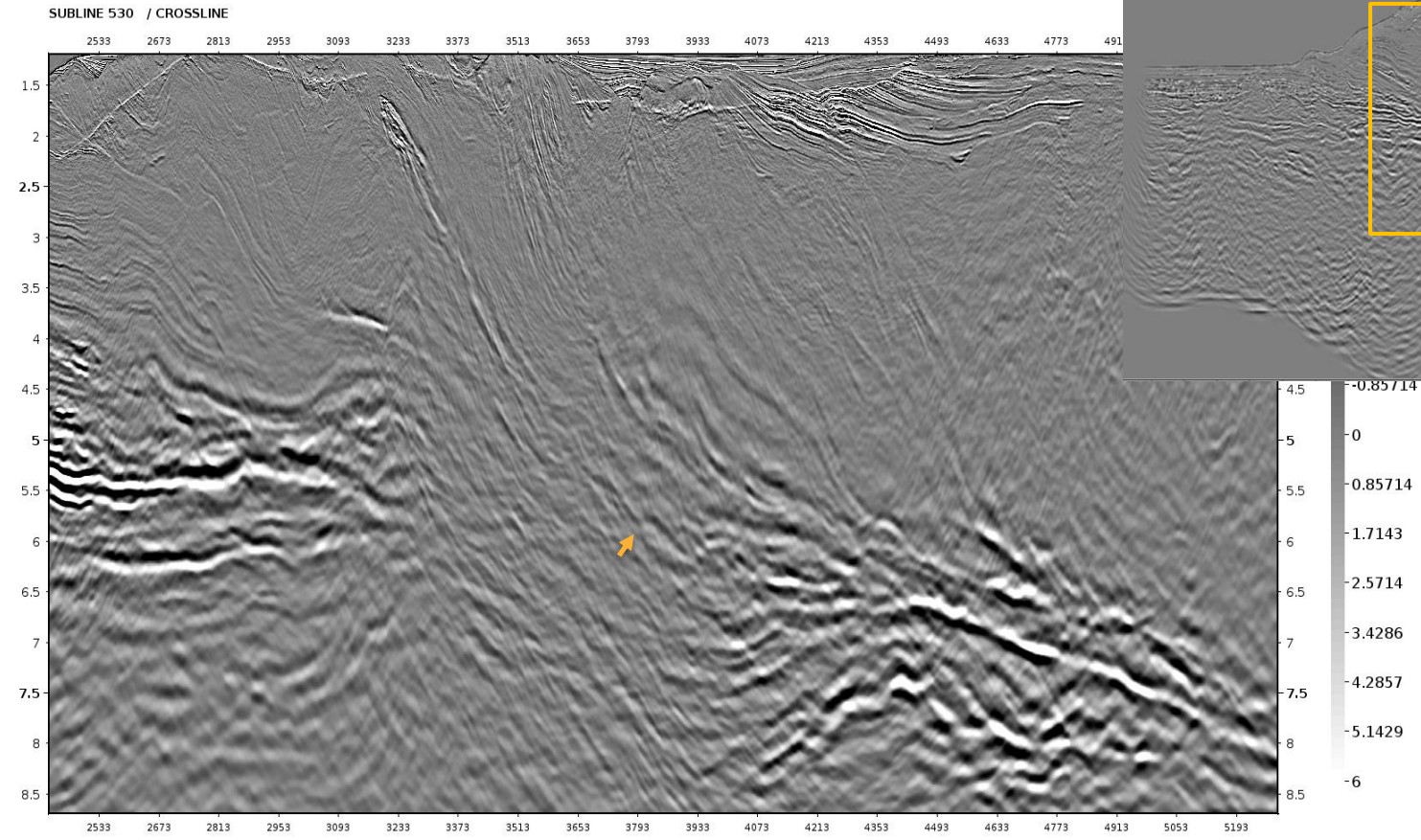
Subline 530: 5–35 deg Depth Stack



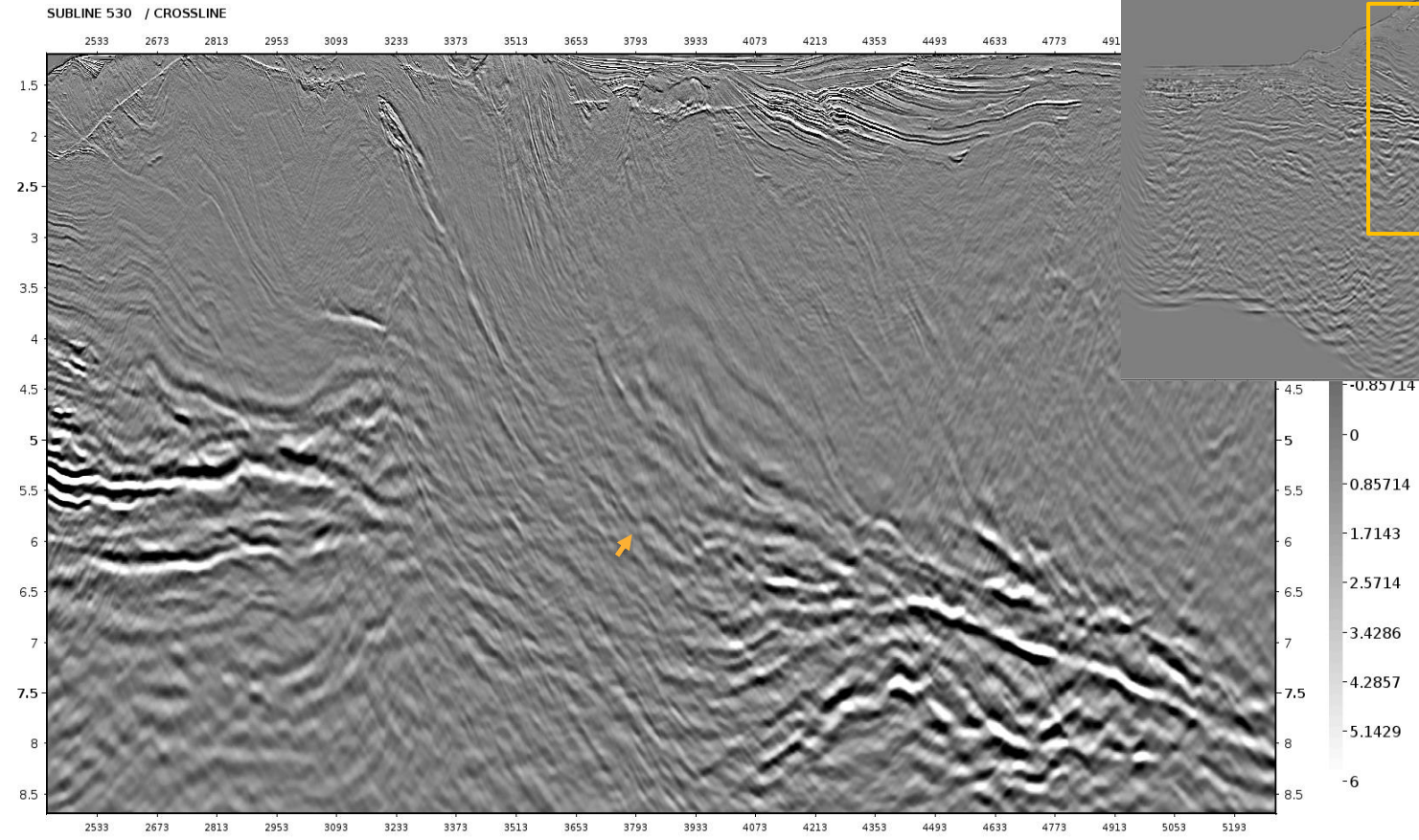
Subline 530: 3–30 deg Depth Stack



Subline 530: 3–35 deg Depth Stack



Subline 530: 3–40 deg Depth Stack



Subline 776

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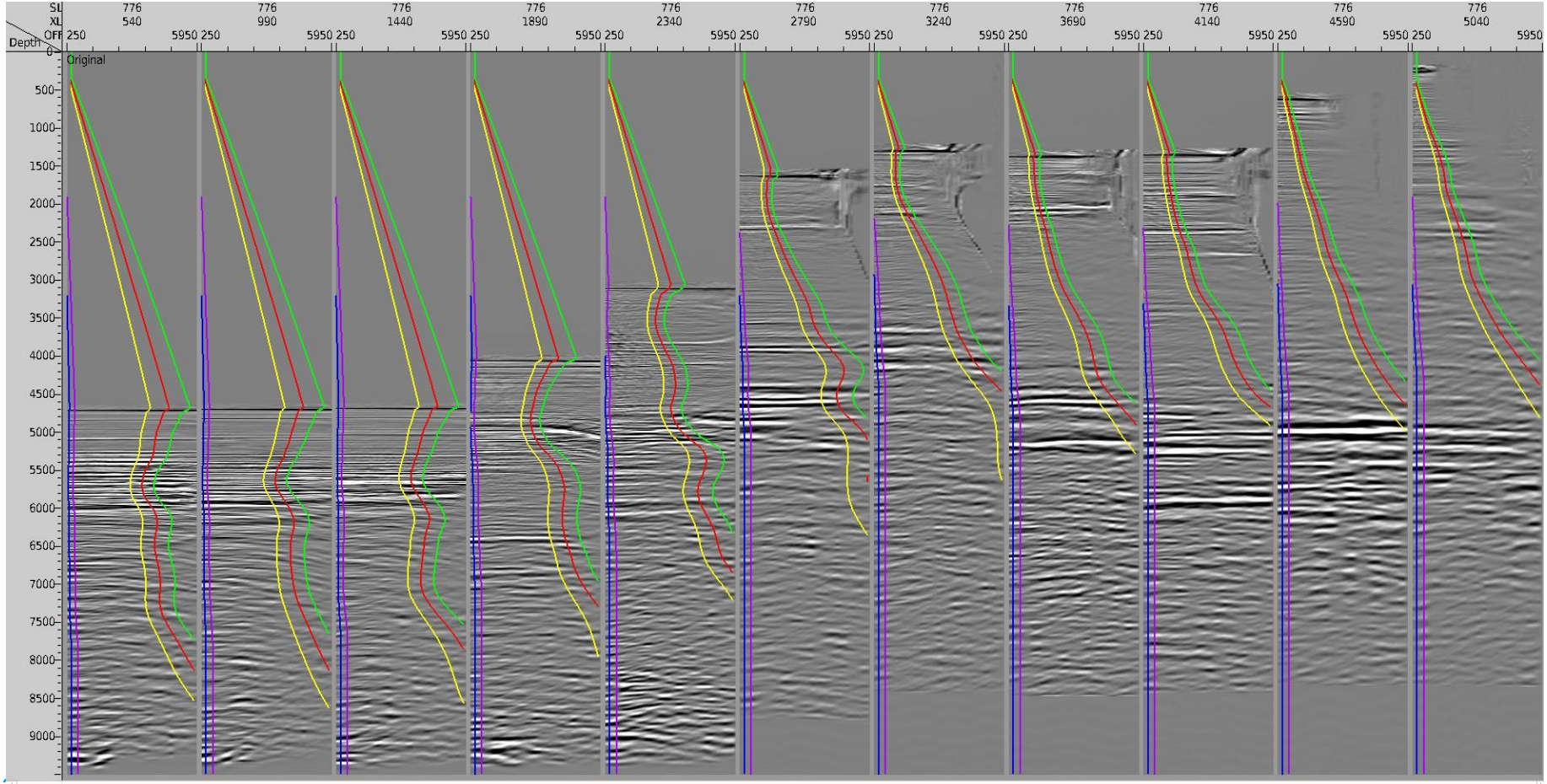
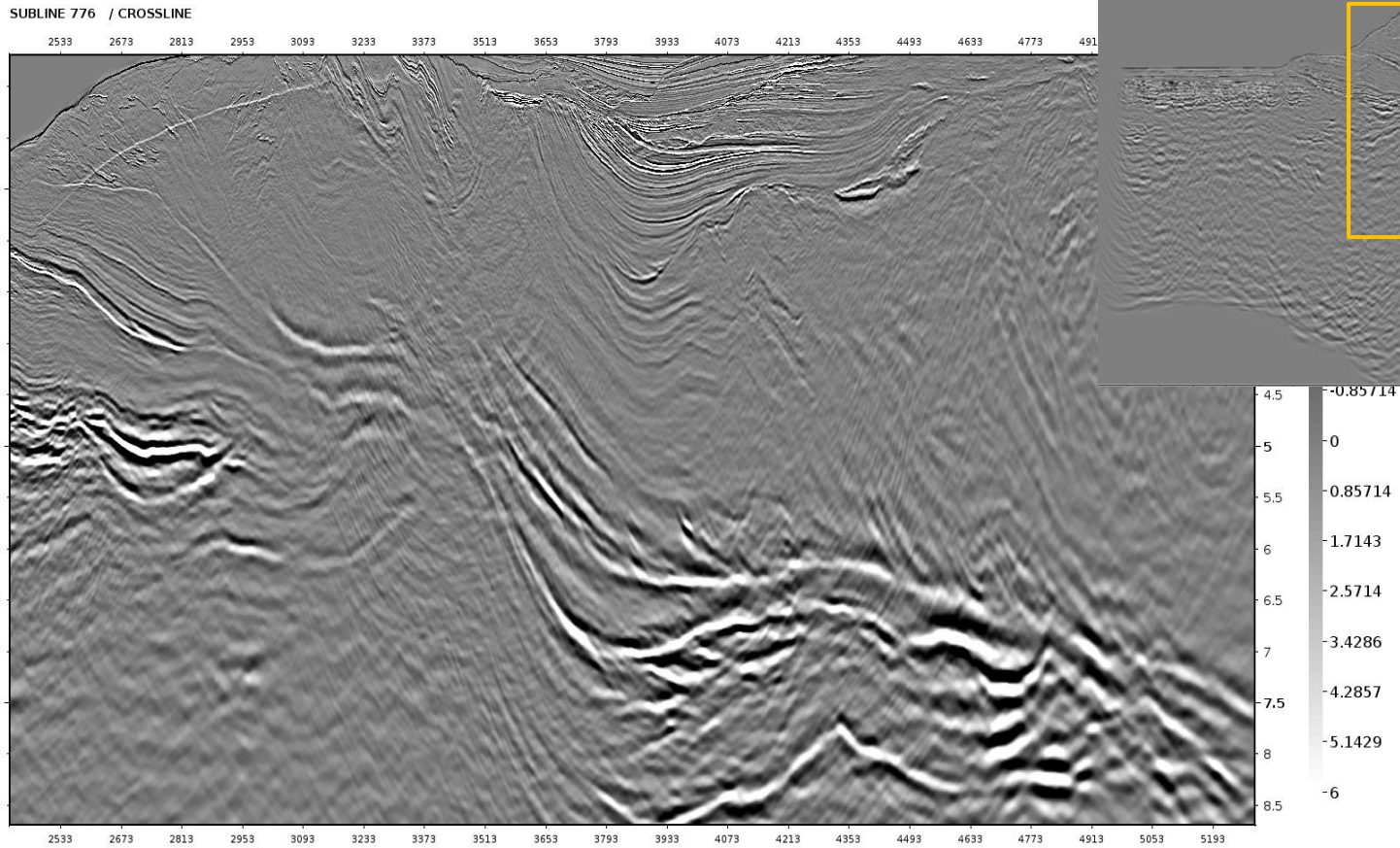
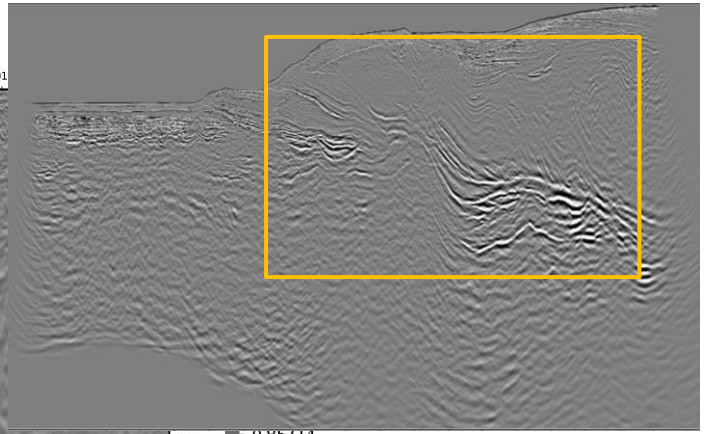
Subline 776: Angle Display - 03deg 05deg 30deg 35deg 40deg

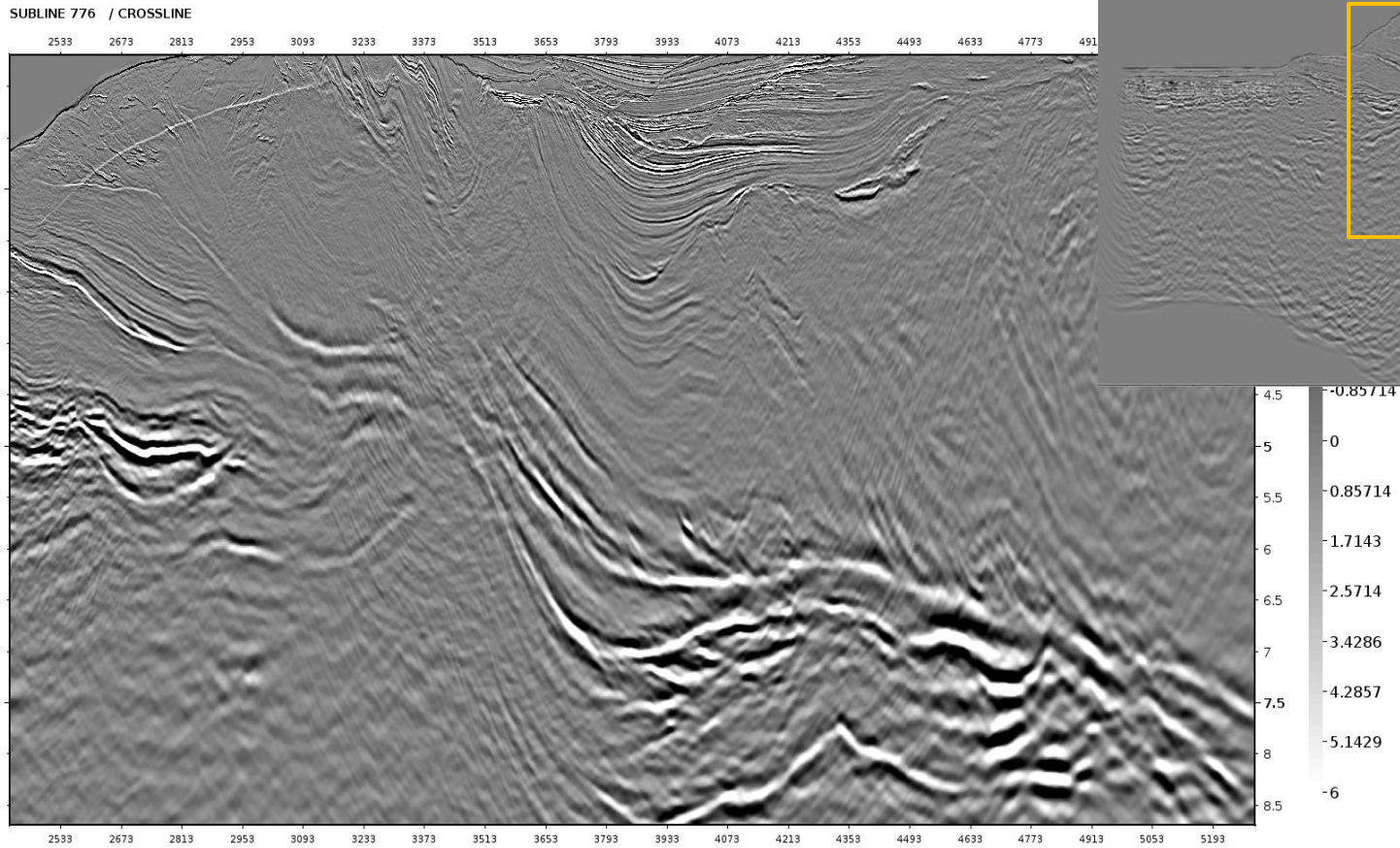


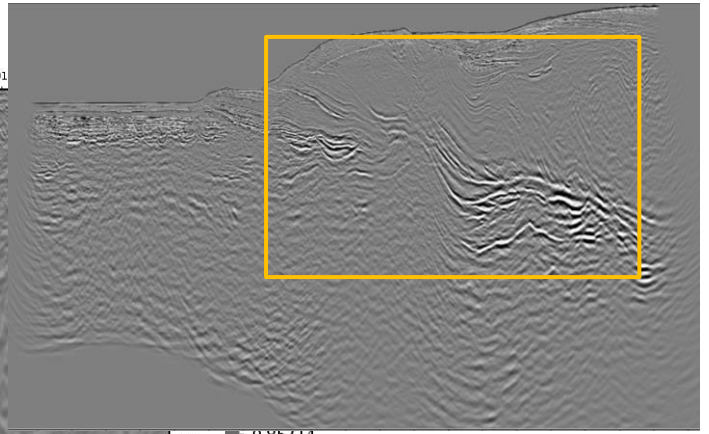
Subline 776: 0–35 deg Depth Stack



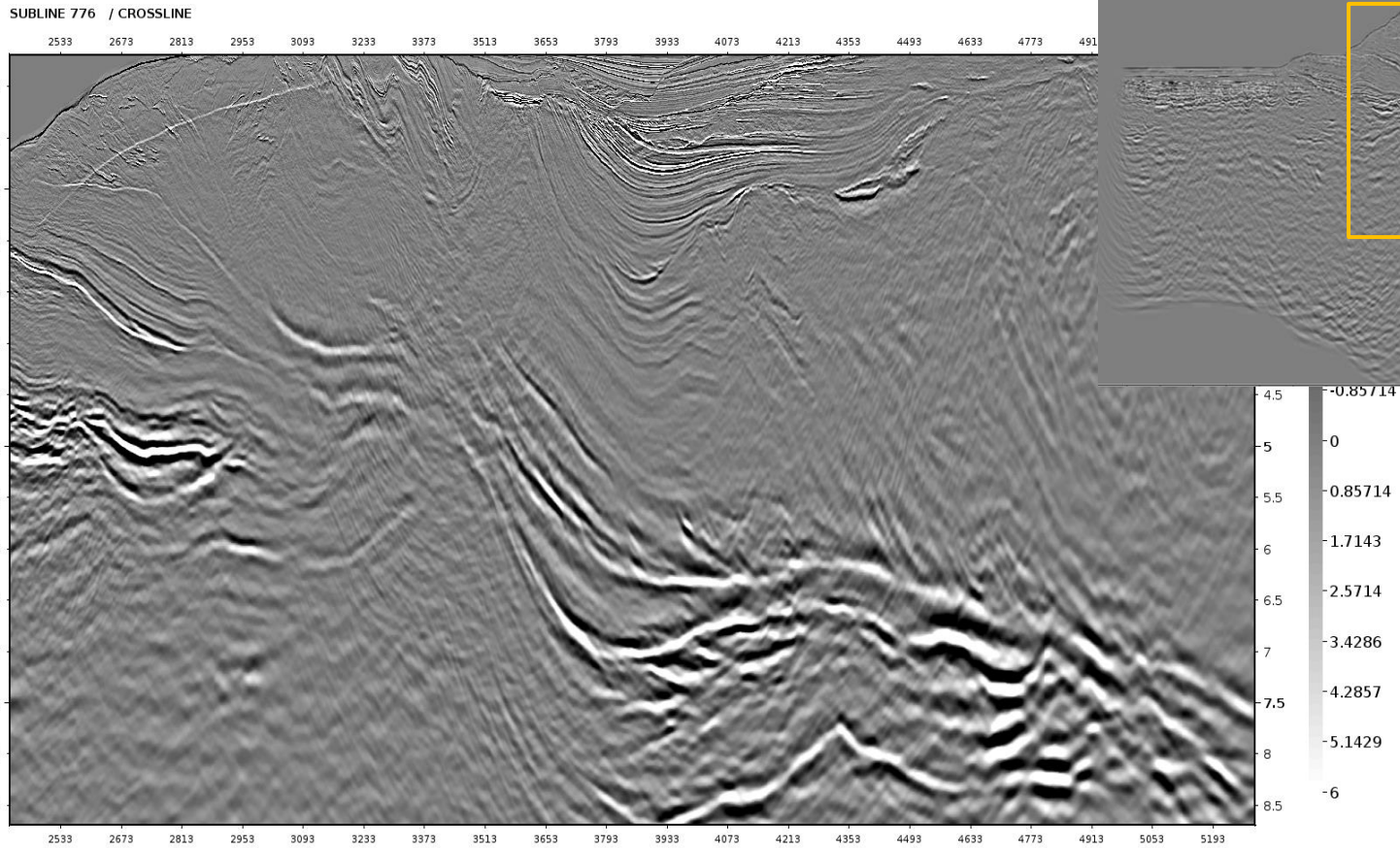


Subline 776: 3–35 deg Depth Stack

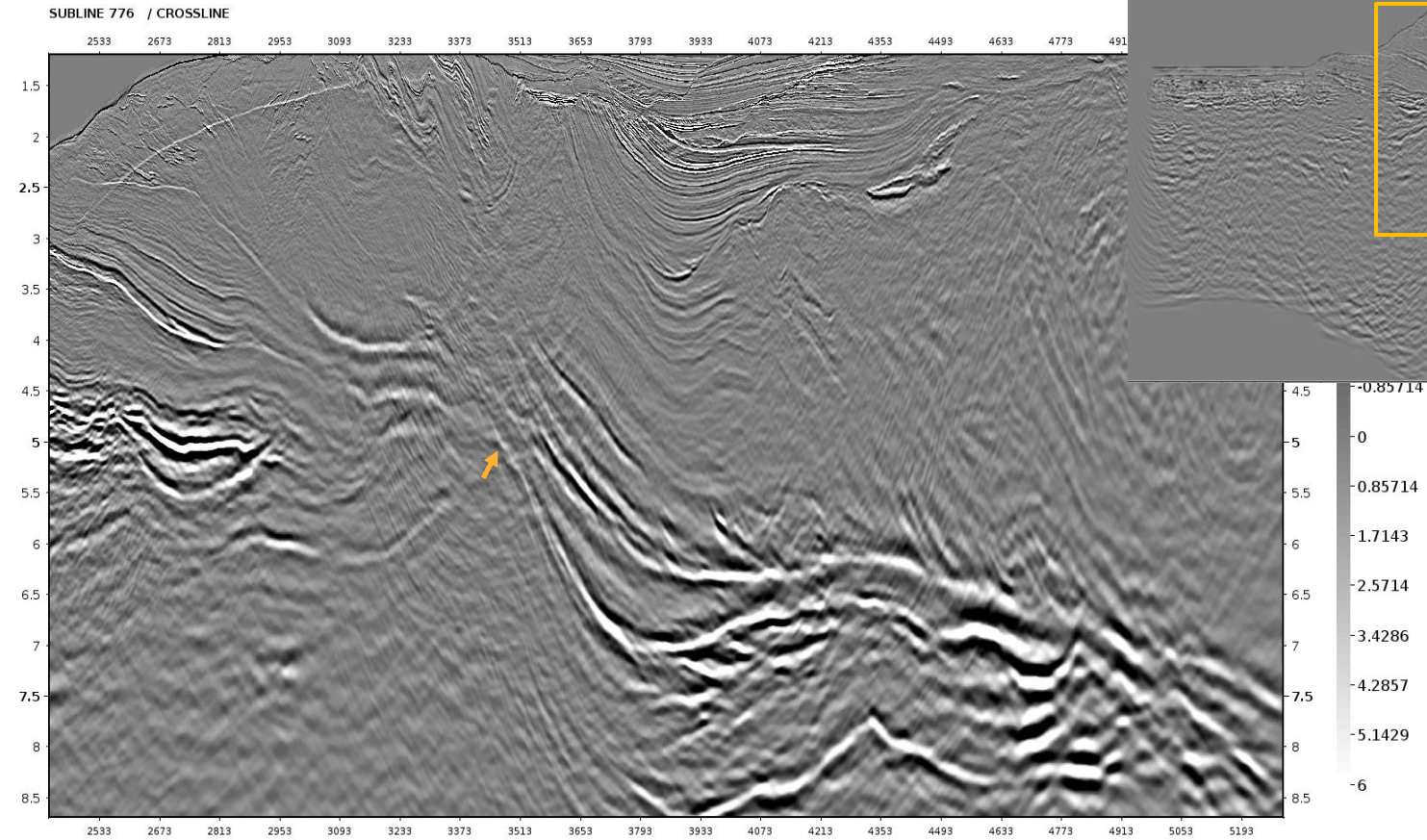


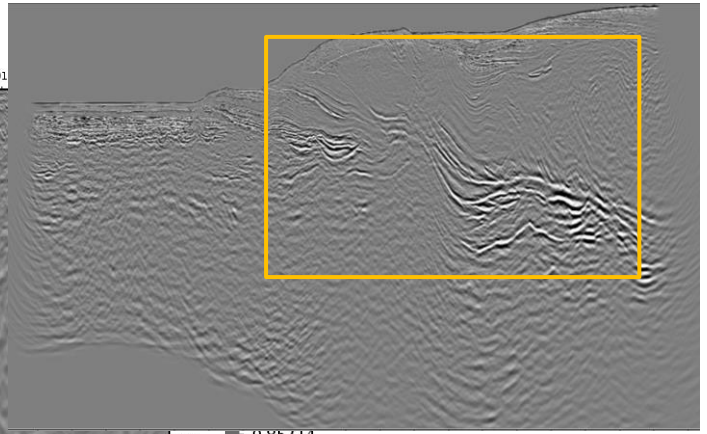


Subline 776: 5–35 deg Depth Stack

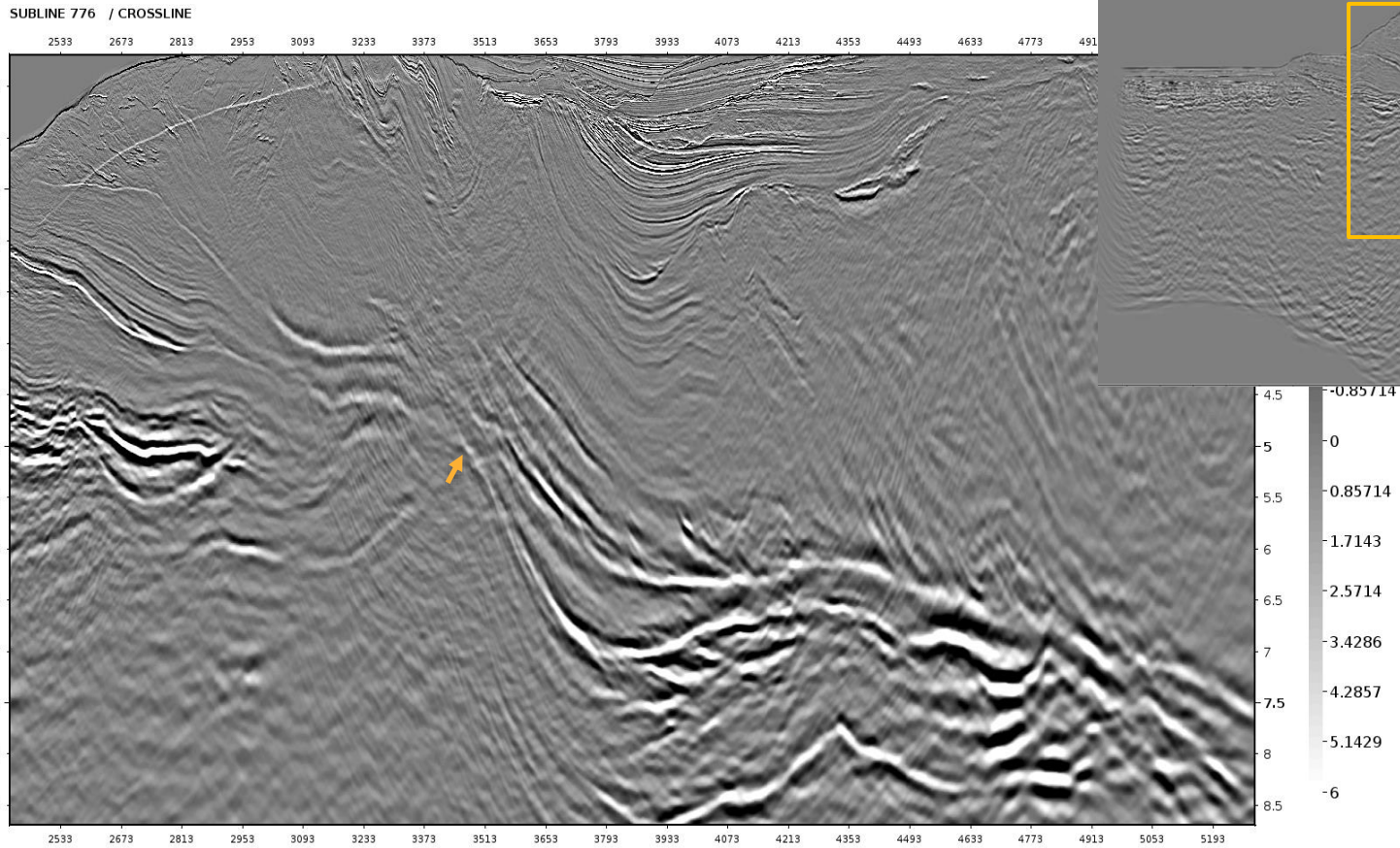


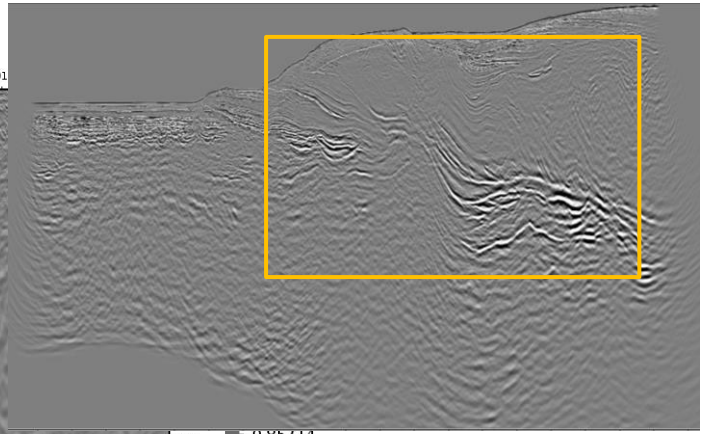
Subline 776: 3–30 deg Depth Stack





Subline 776: 3–35 deg Depth Stack





Subline 776: 3–40 deg Depth Stack