



Angle Mute & Full Stack

NZ 3D Processing

30 June 2021

cgg.com



INSTITUTE FOR GEOPHYSICS



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

- **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: CDP Gathers, full stacks with different angle mutes.

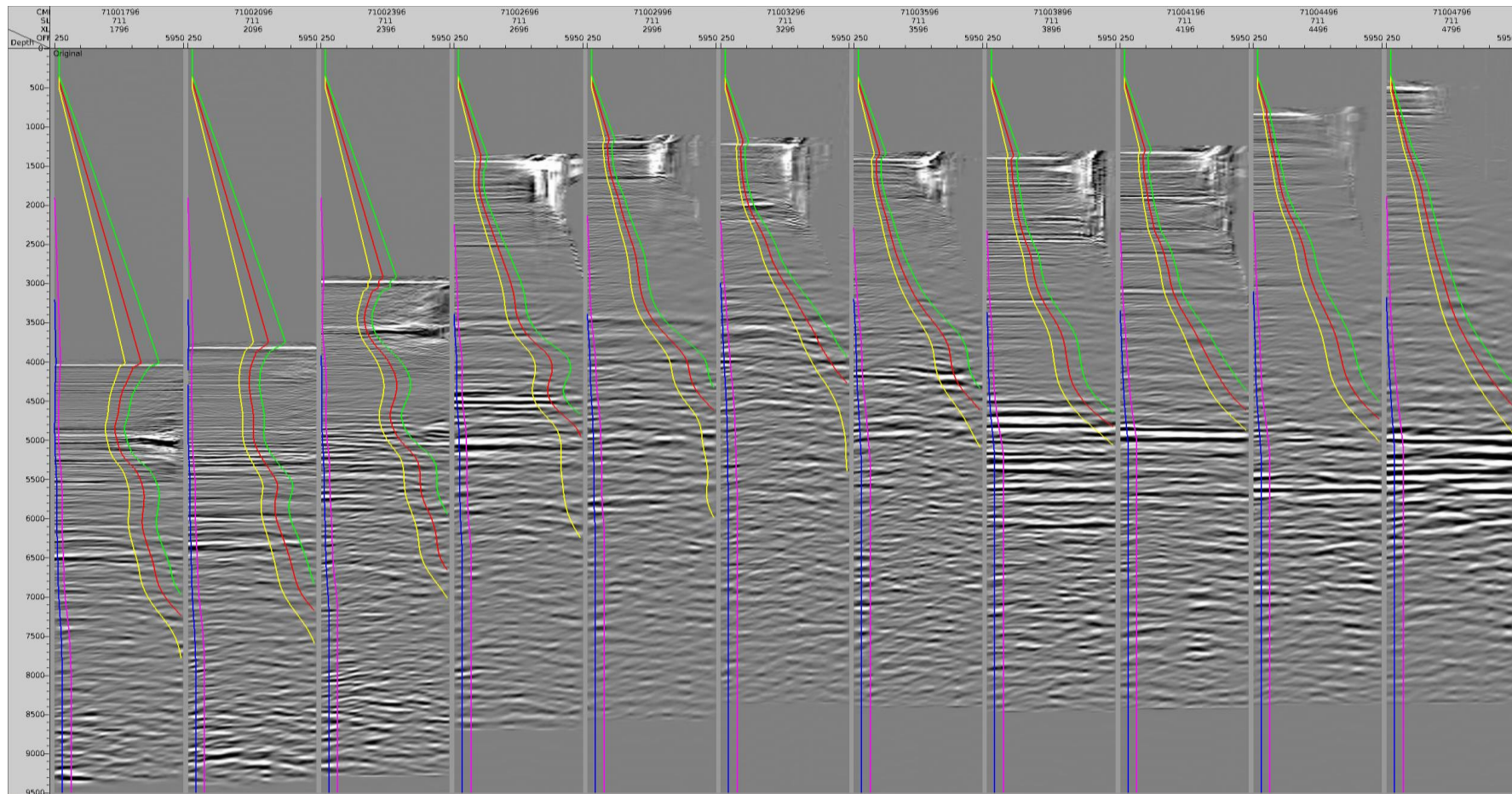
- **Observation & Recommendation:**

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.



Angle Display - 03deg 05deg 30deg 35deg 40deg

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Inner Angle Test

0 – 35 deg Depth stack

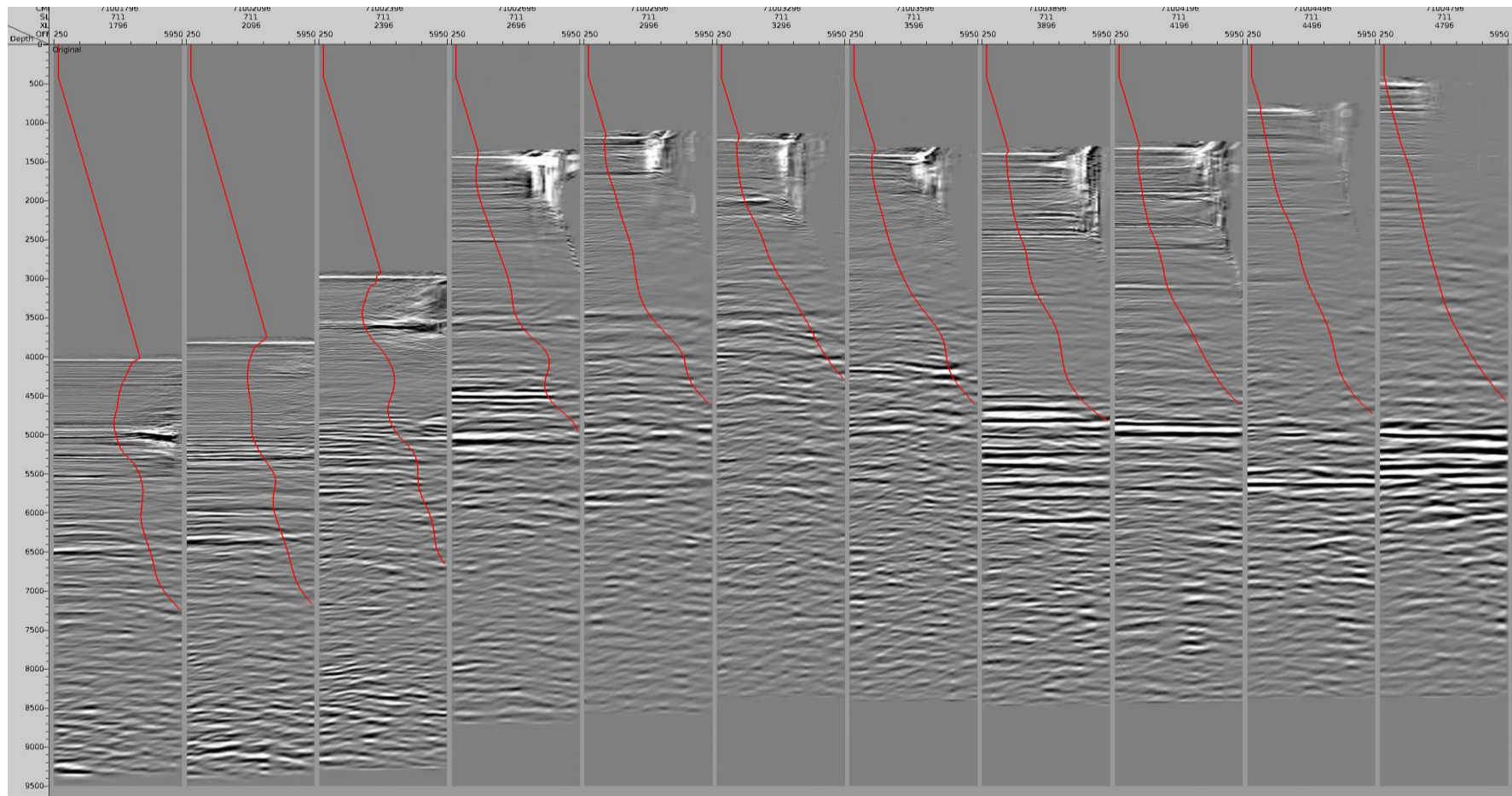
03 – 35 deg Depth stack

05 – 35 deg Depth stack



0-35deg Angle Mute Display

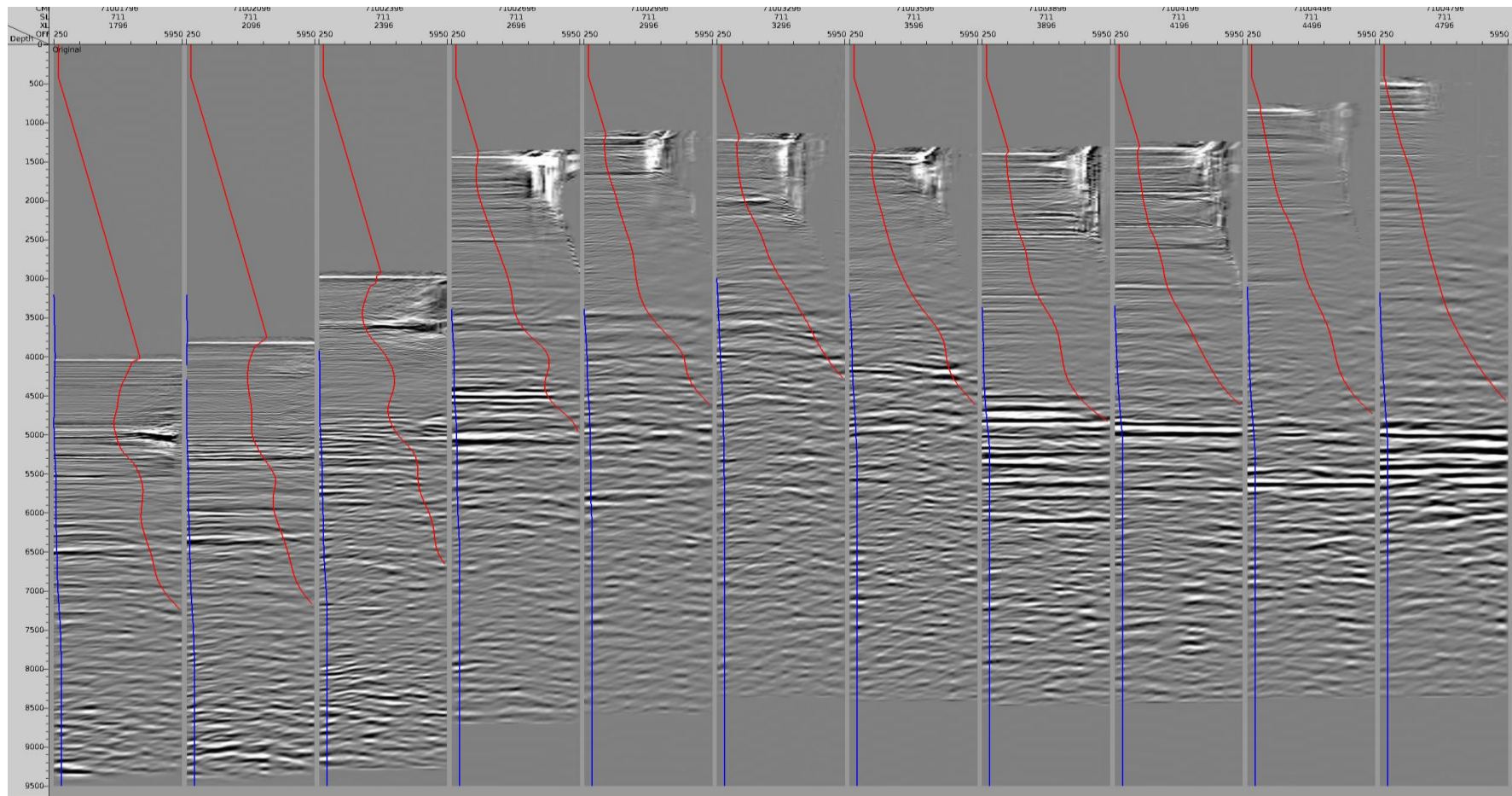
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03-35deg Angle Mute Display

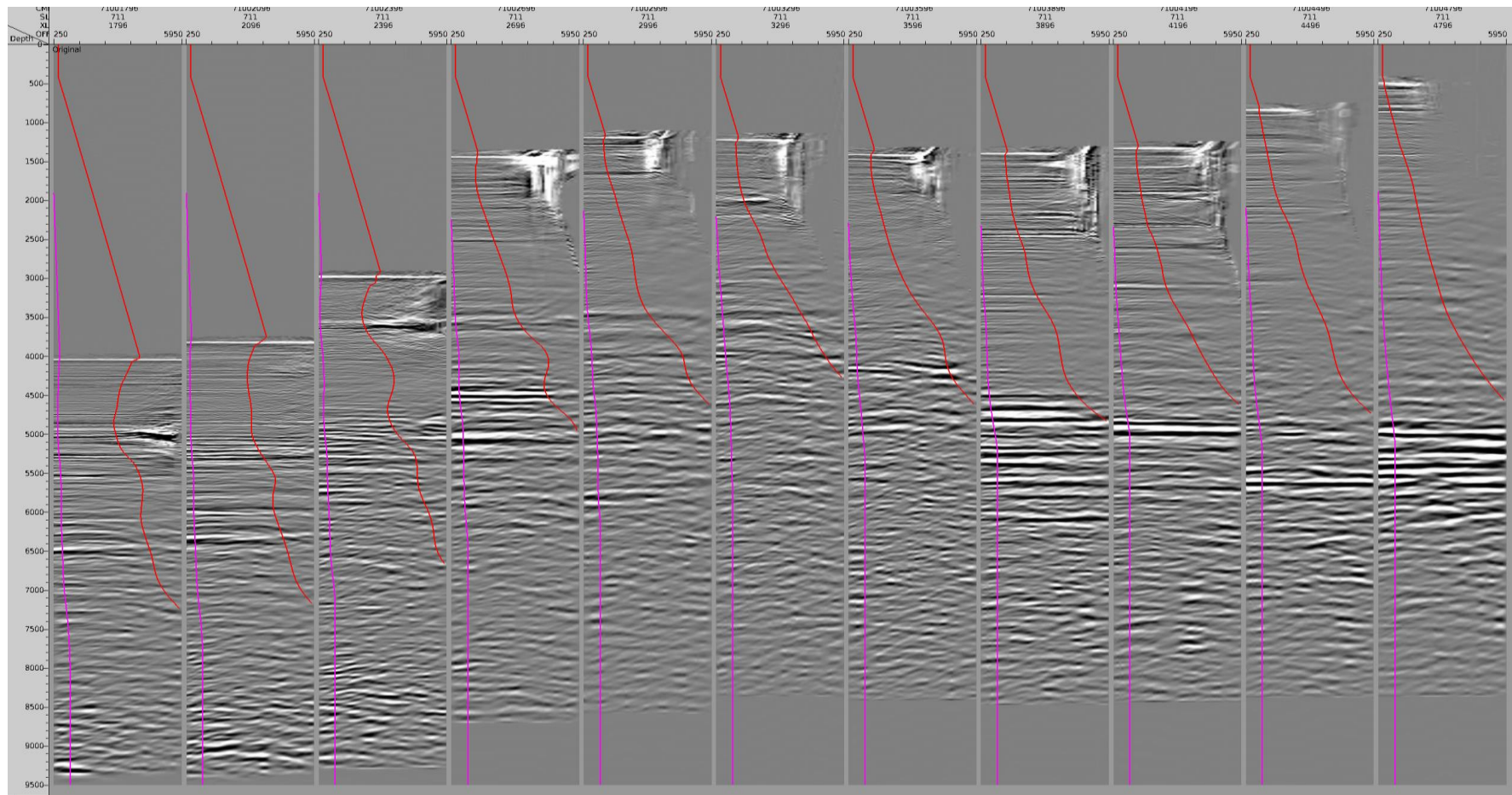
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05-35deg Angle Mute Display

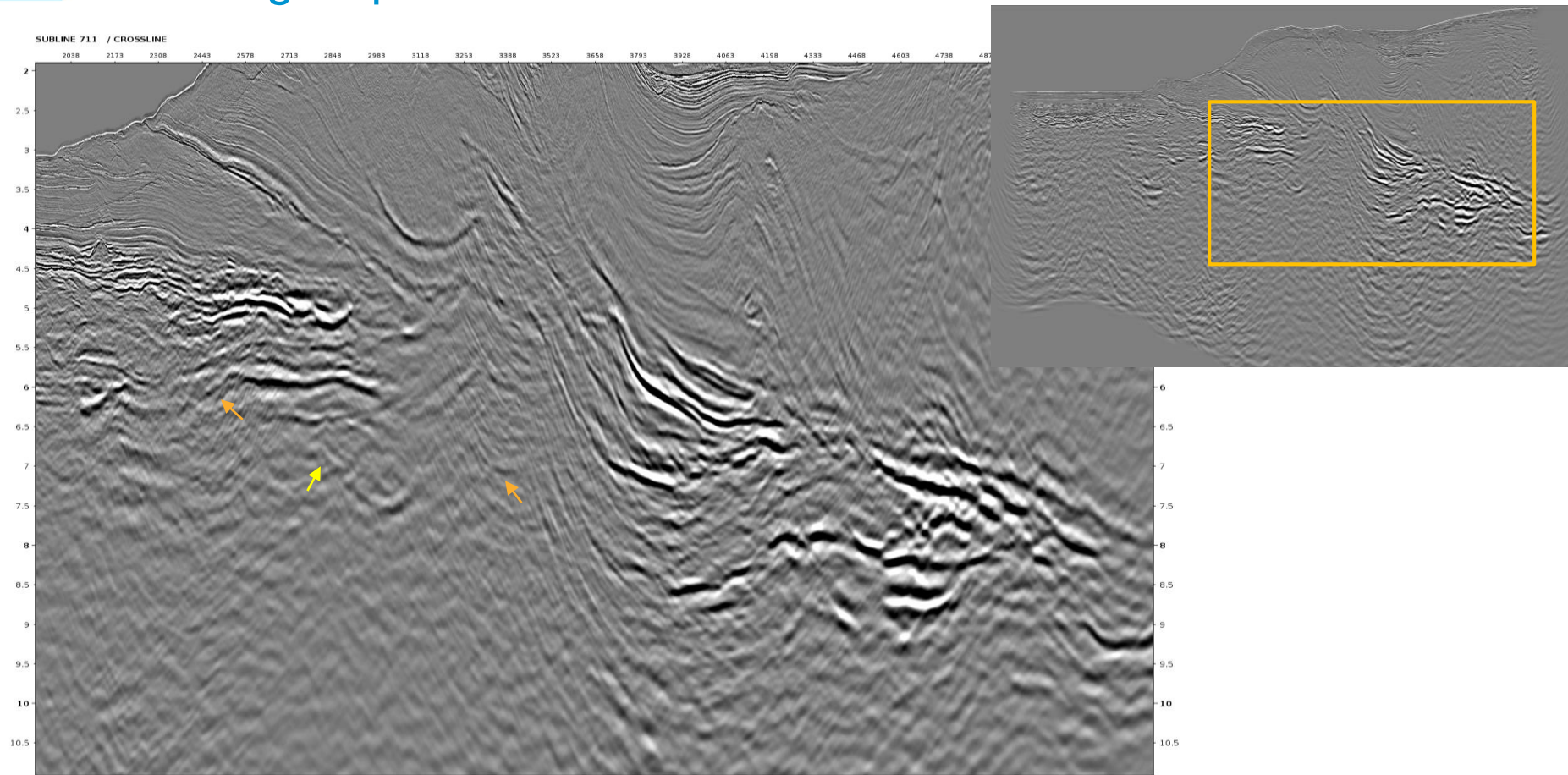
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0 – 35deg Depth Stack

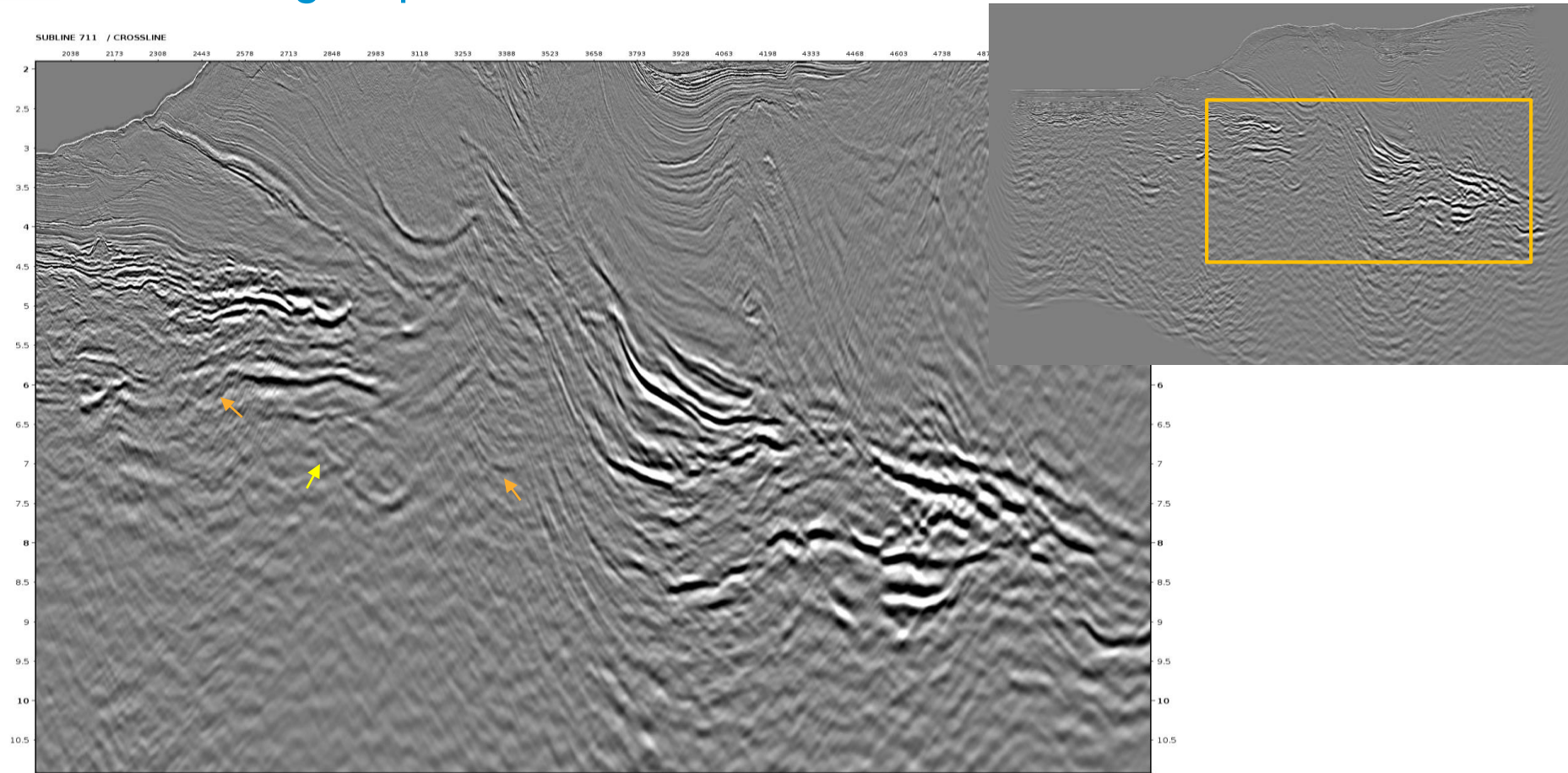
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03 – 35deg Depth Stack

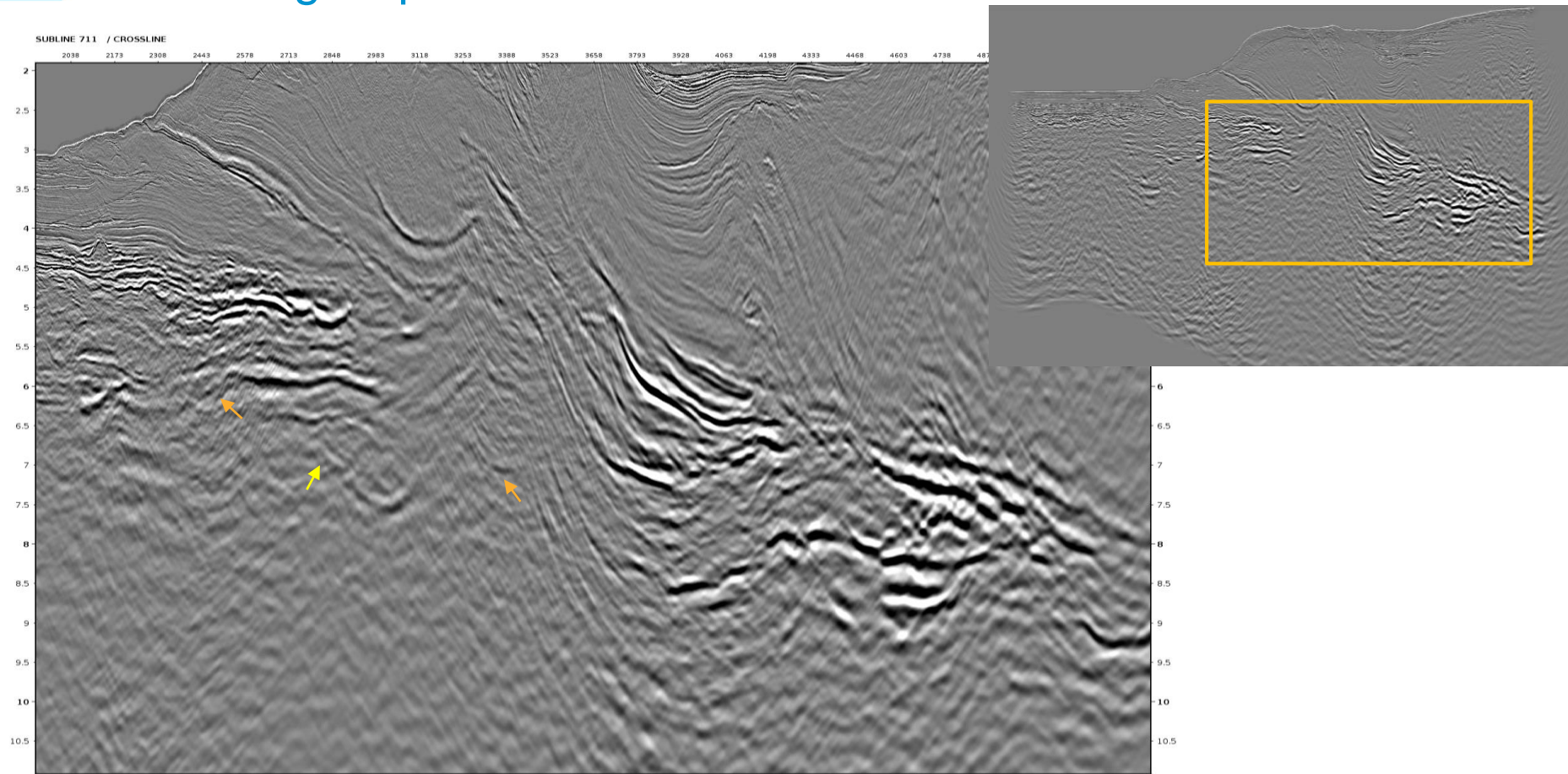
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05 – 35deg Depth Stack

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Outer Angle Test

03 – 30 deg Time stack

03 – 35 deg Time stack

03 – 40 deg Time stack

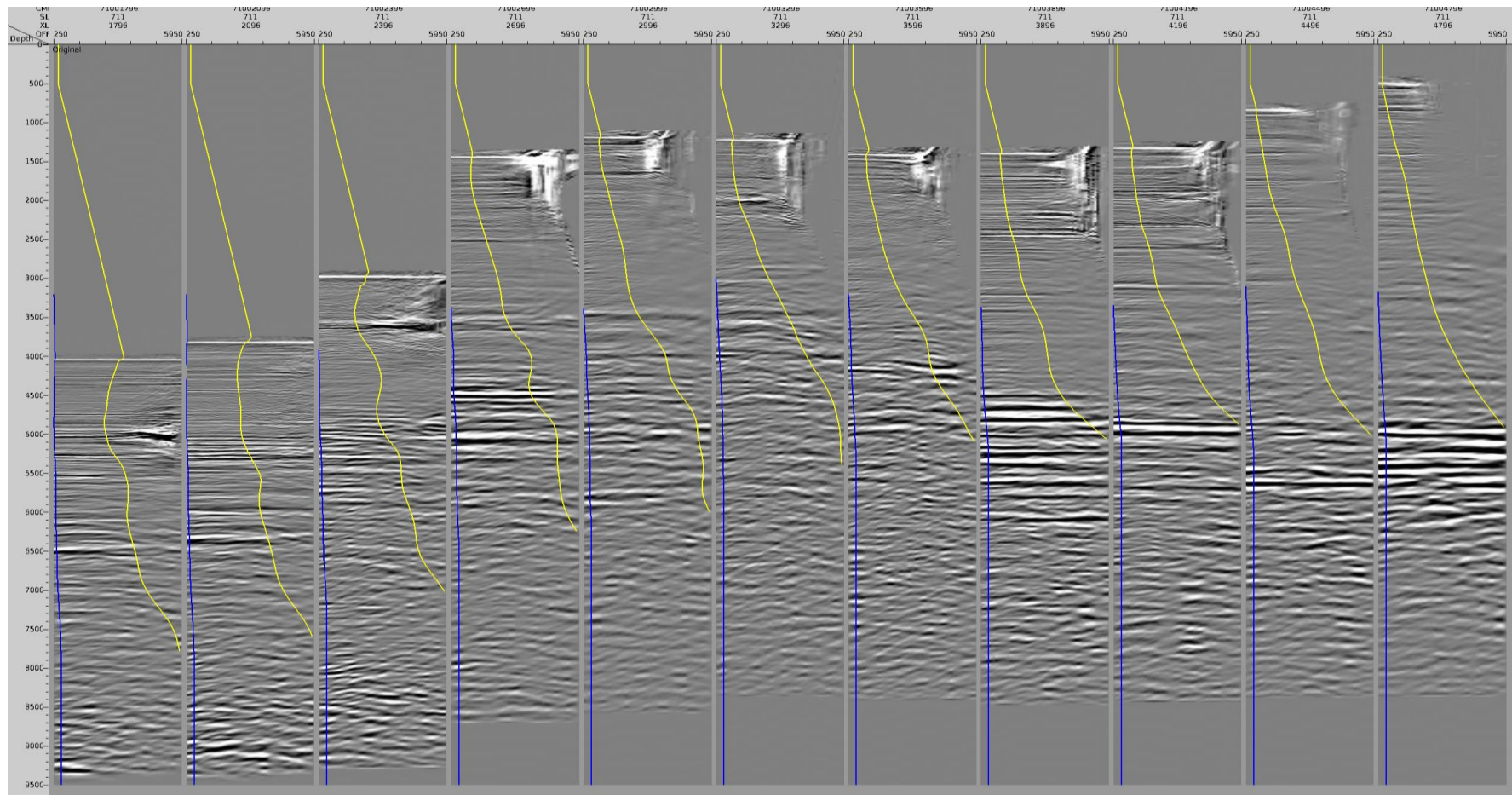


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03-30deg Angle Mute Display

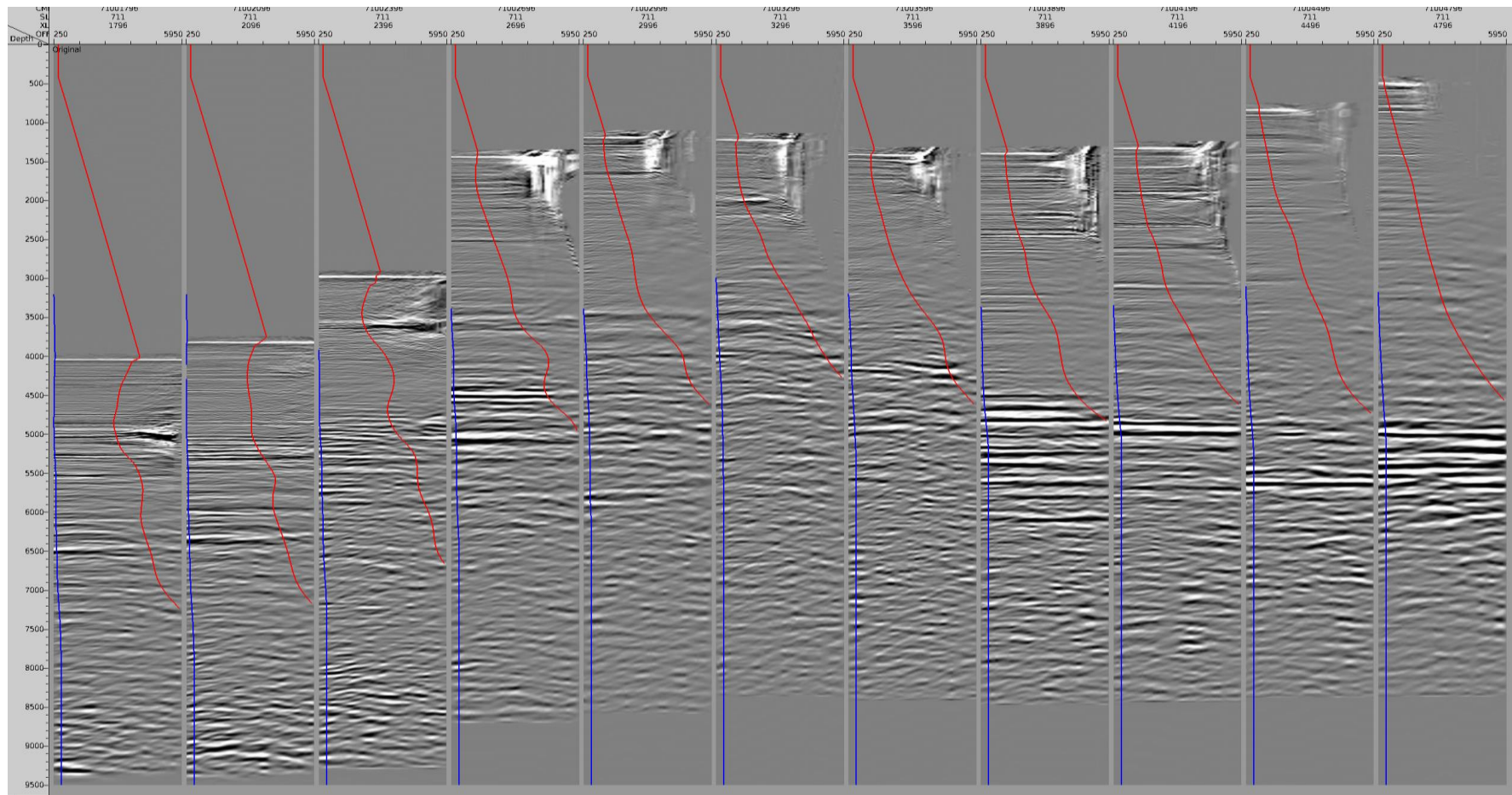
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03-35deg Angle Mute Display

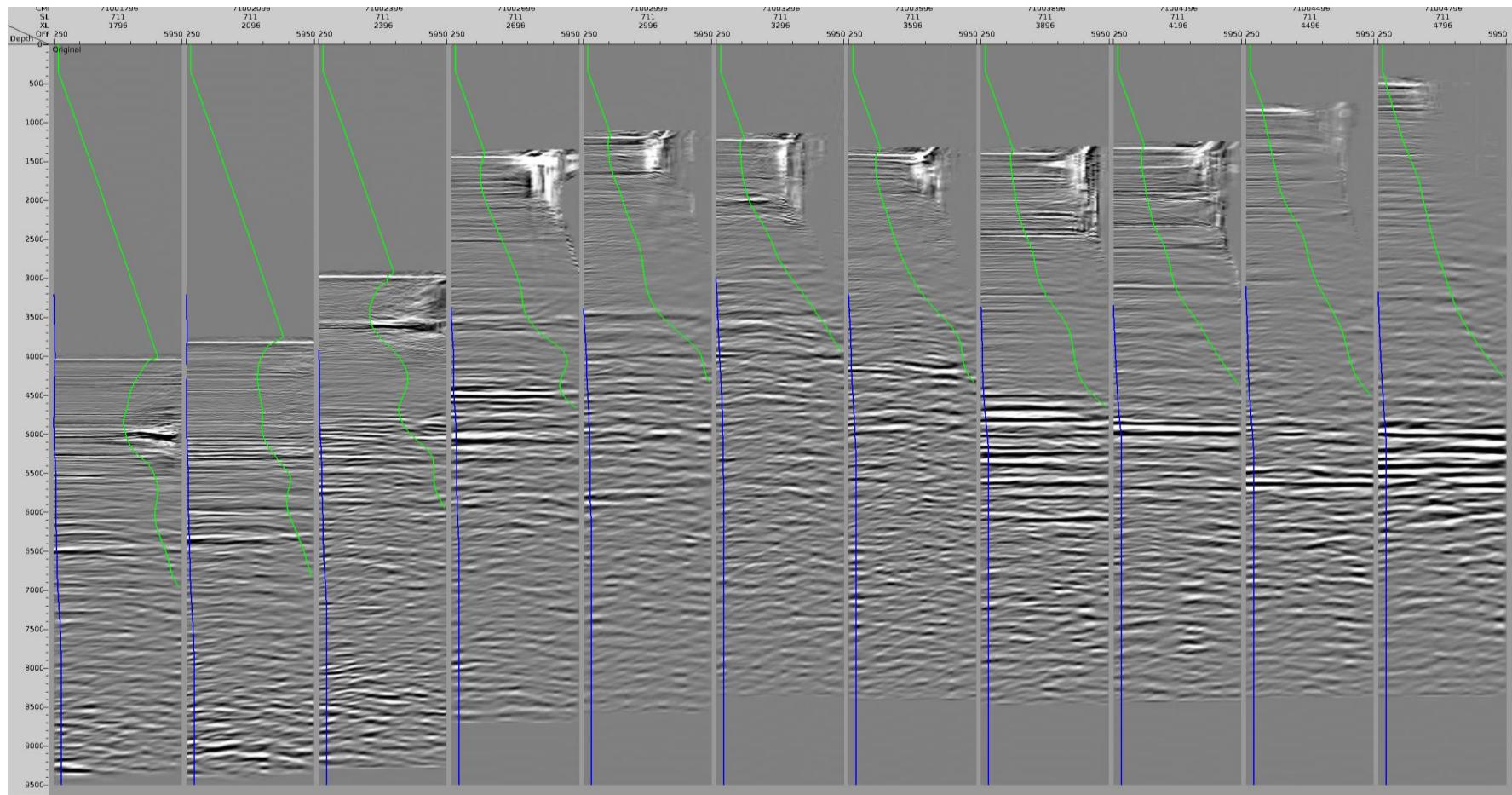
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03-40deg Angle Mute Display

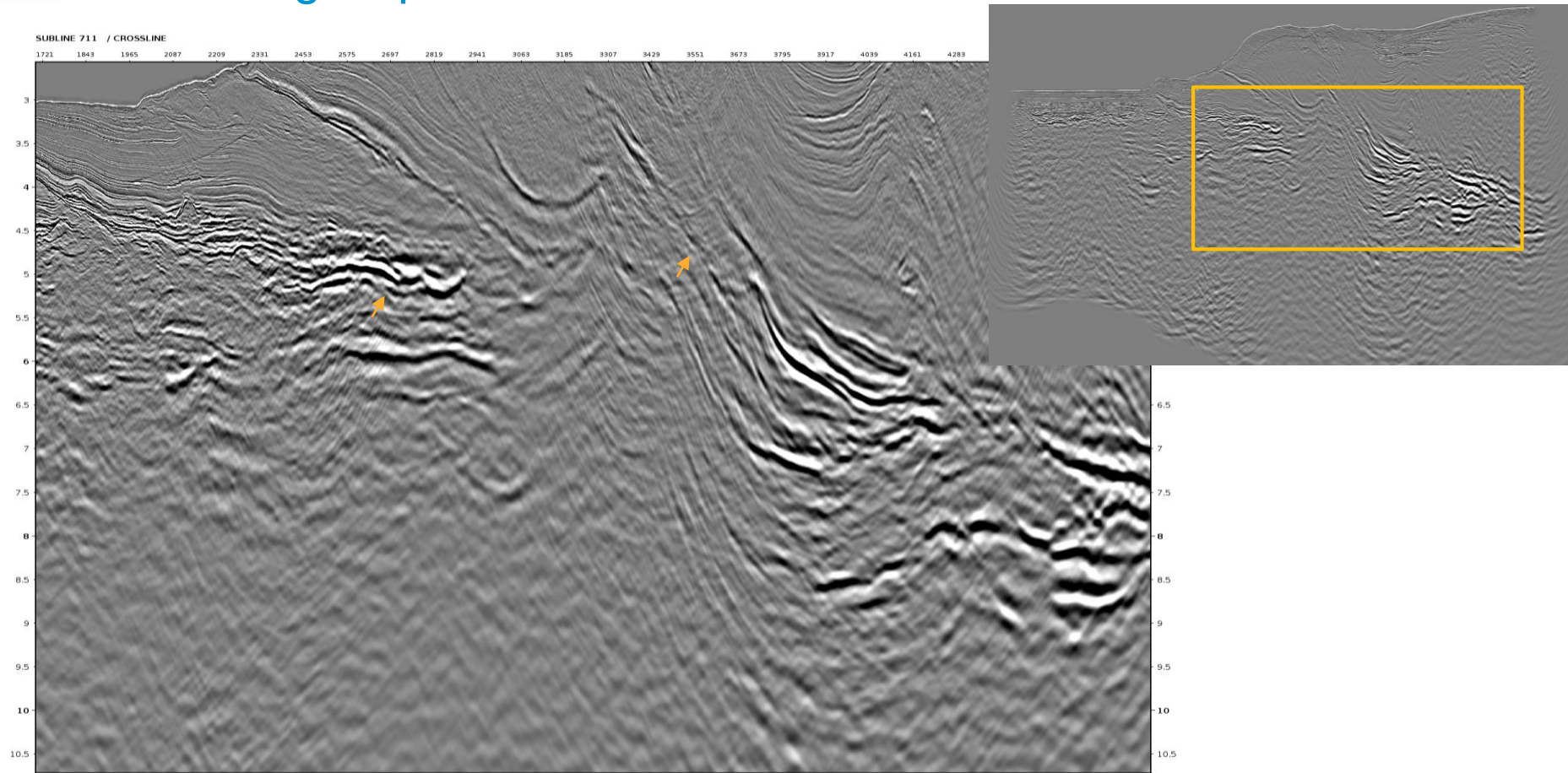
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03 – 30deg Depth Stack

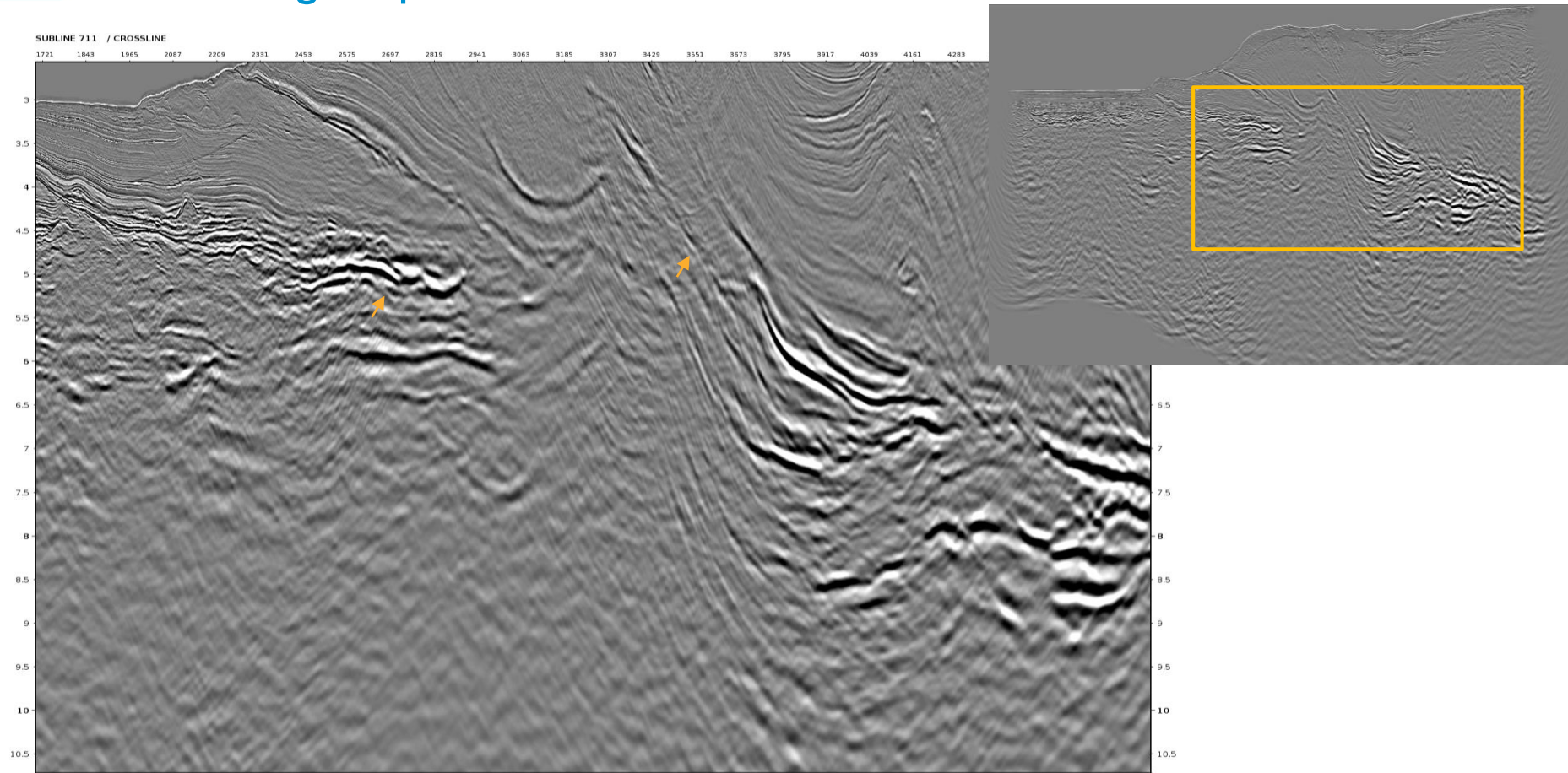
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03 – 35deg Depth Stack

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03 – 40deg Depth Stack

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