



Final Migration

NZ 3D Processing

05 May 2021

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INSTITUTE FOR GEOPHYSICS



Passion for Geoscience

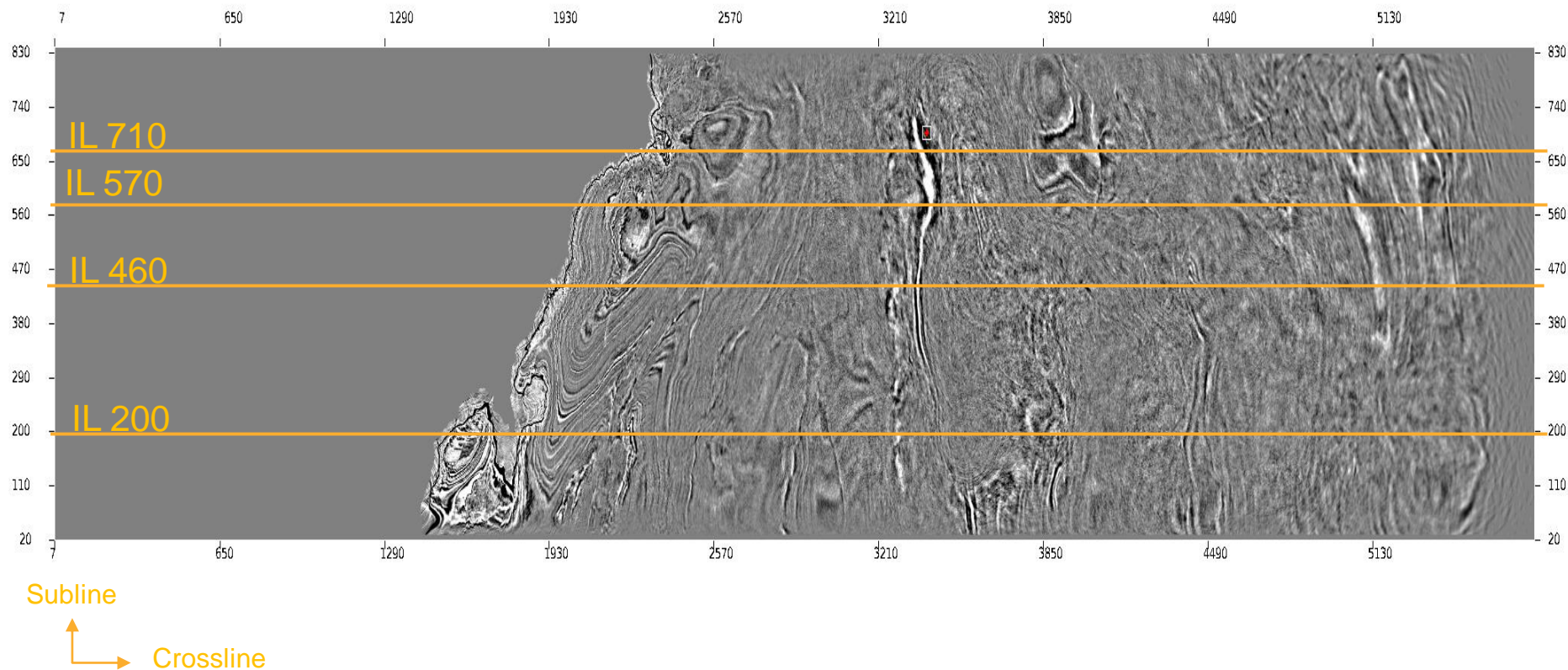
1. Convert to CGG internal format
2. Nav merge / trace edit
3. Low cut filter
4. Time Variant Scaling (TVS) & Resample to 4ms
5. Swell noise attenuation (SNA)
6. Debubble
7. Linear noise attenuation (LNA)
8. Tidal statics correction
9. Water column statics correction
10. Shot & channel scaling
11. Receiver 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 Migration

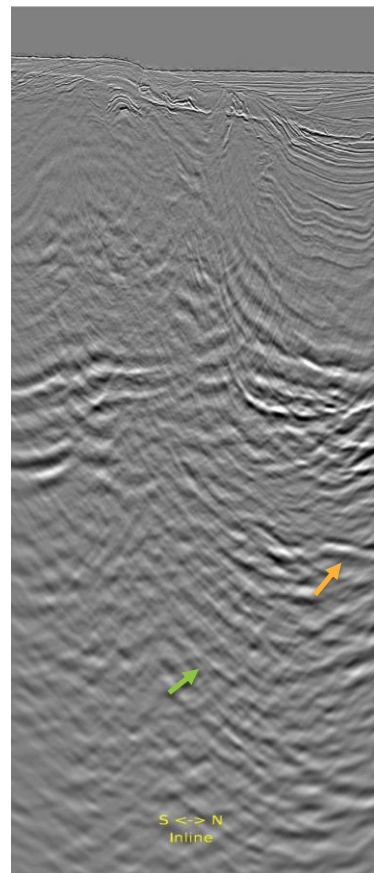
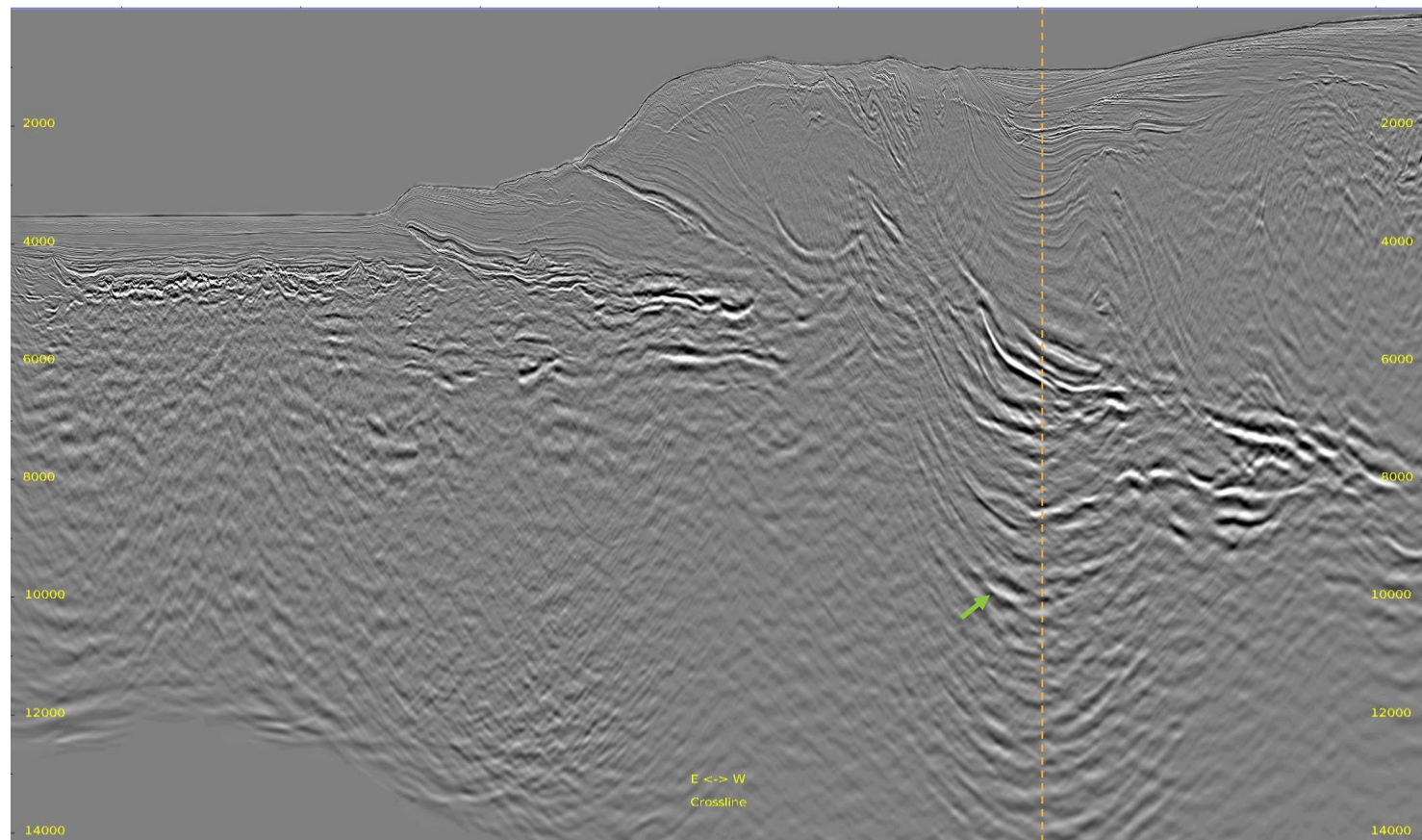
- **Objective:**
Final migration

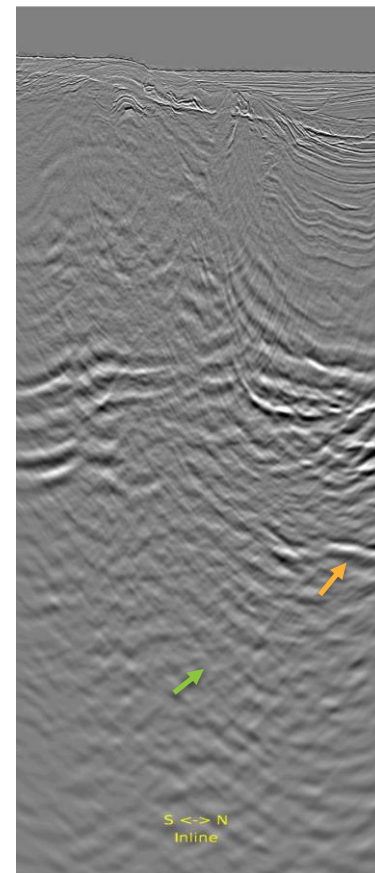
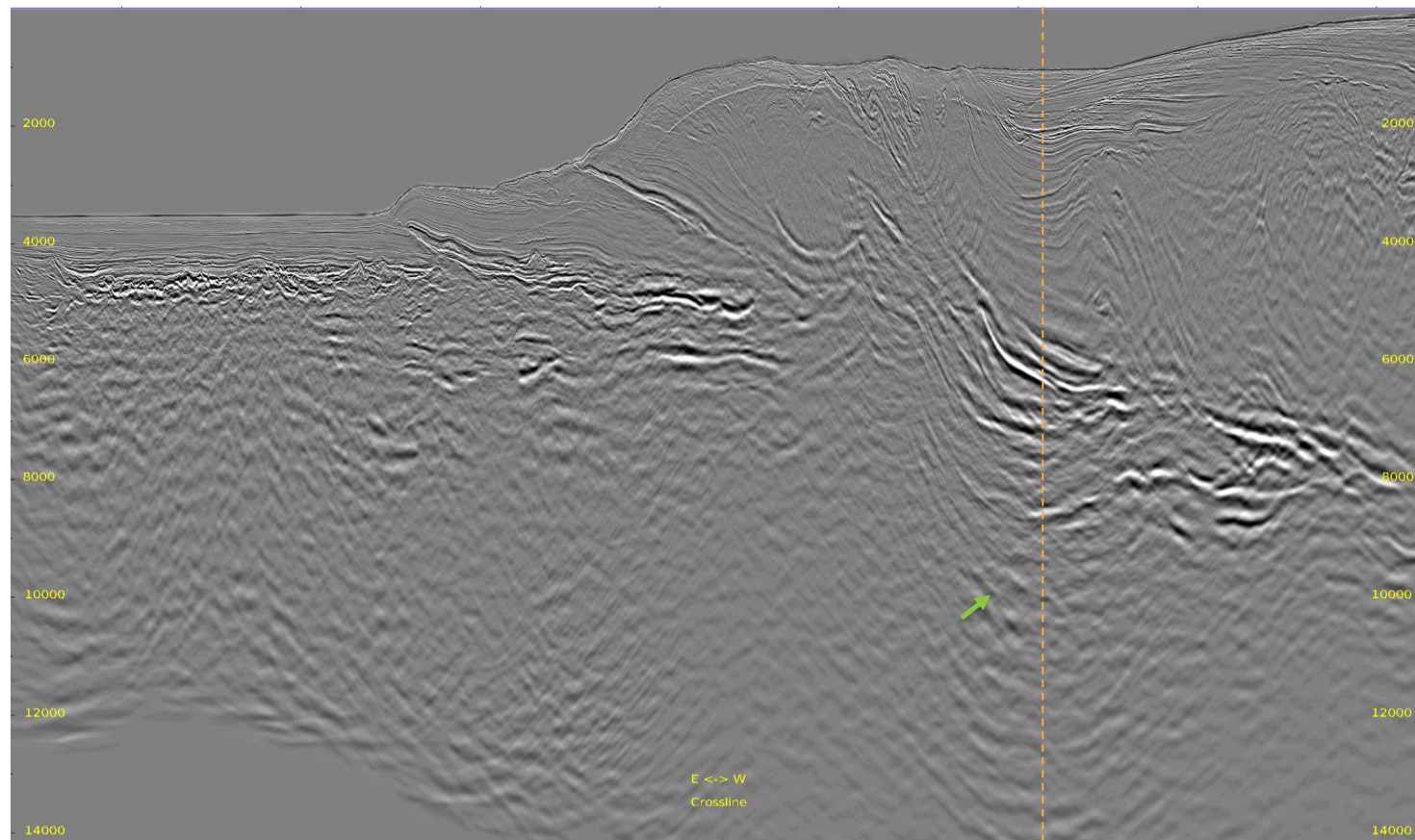
- **Procedure:**
Apply Kirchhoff migration with 5km aperture.
Q phase compensation is applied before migration.

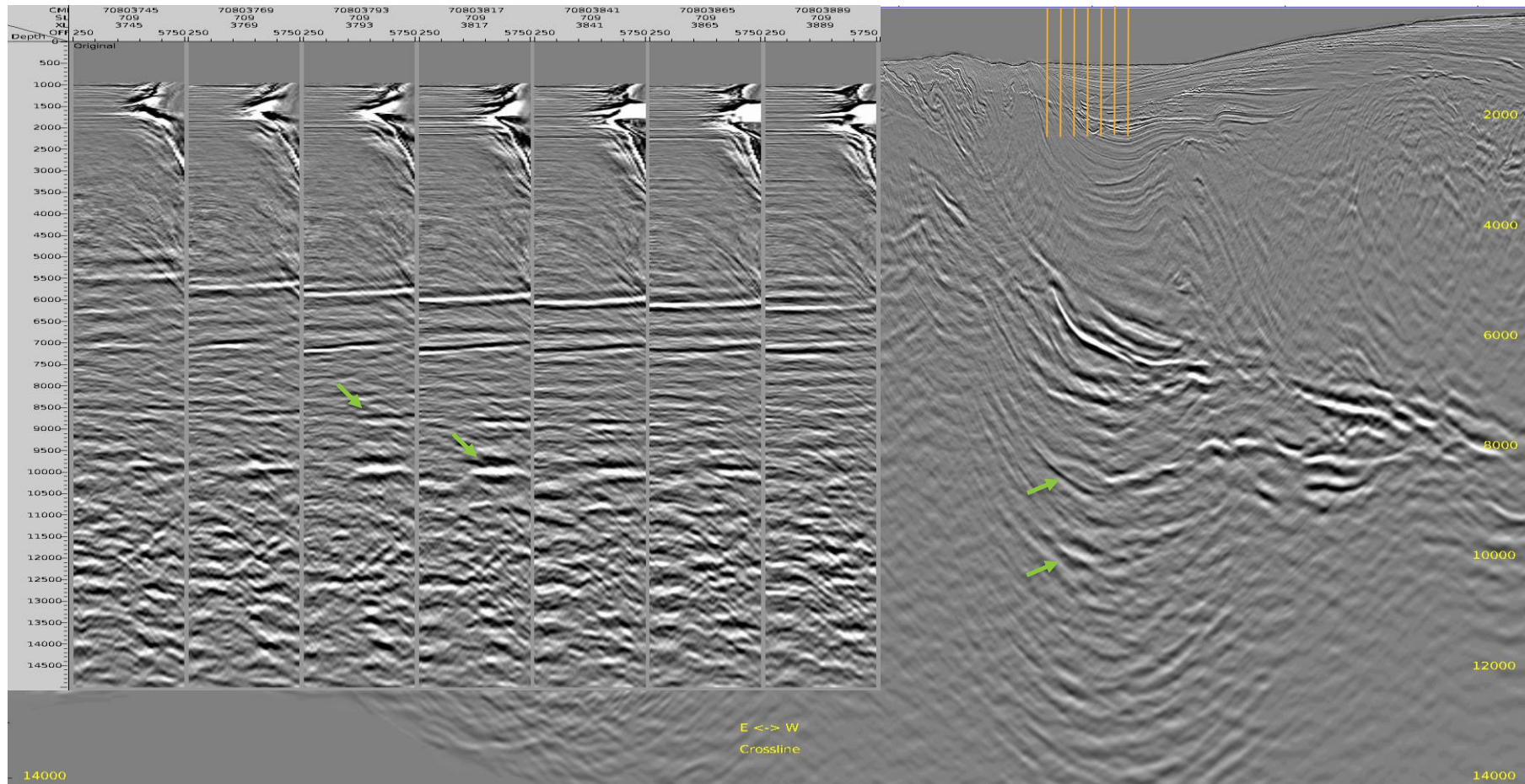
- **Display:**
Post migration depth stack (subline, crossline)

- **Observation & Recommendation:**
Post migration stack presents more clear imaging versus VMB volume, and meanwhile shows benefit in primary preservation.





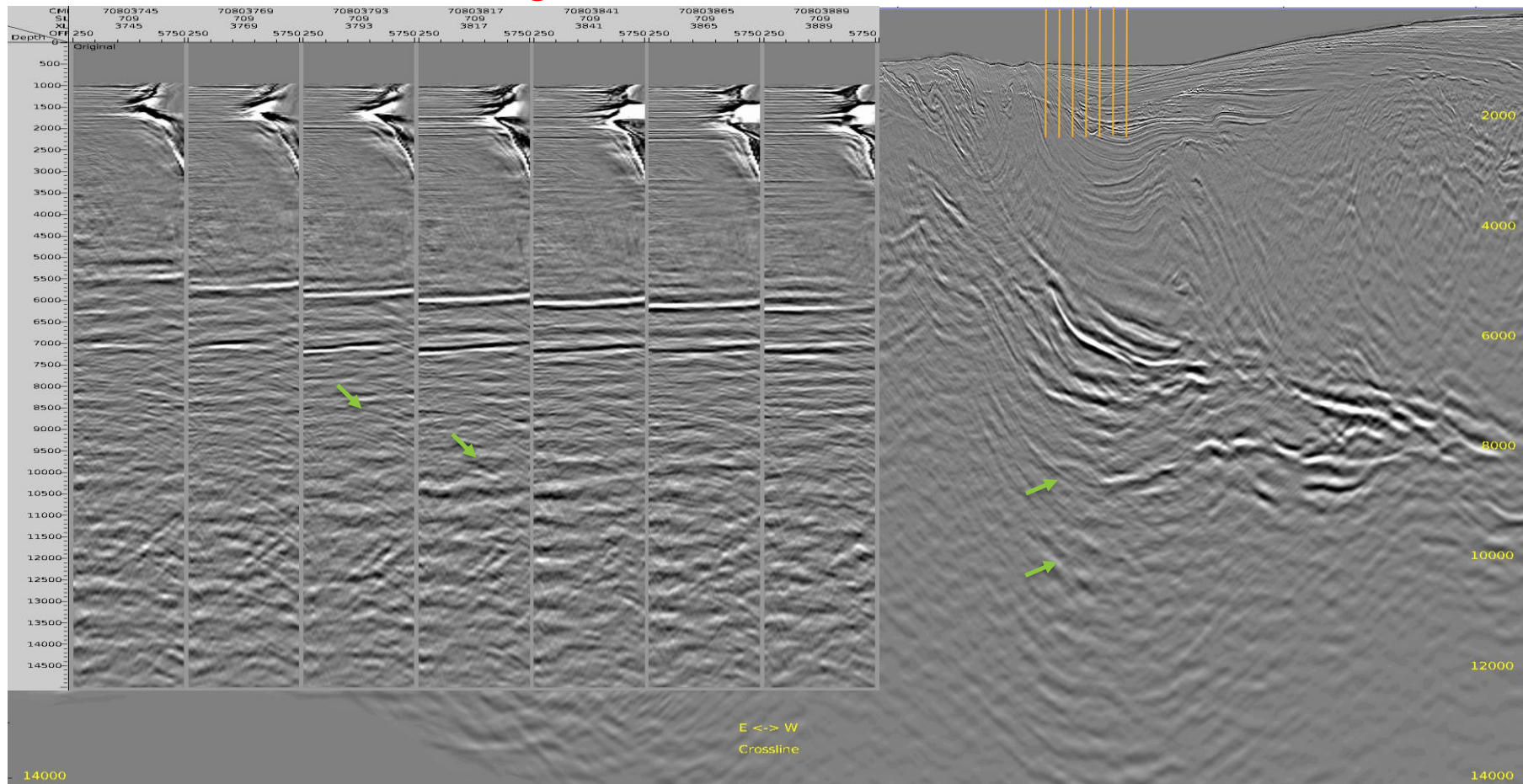


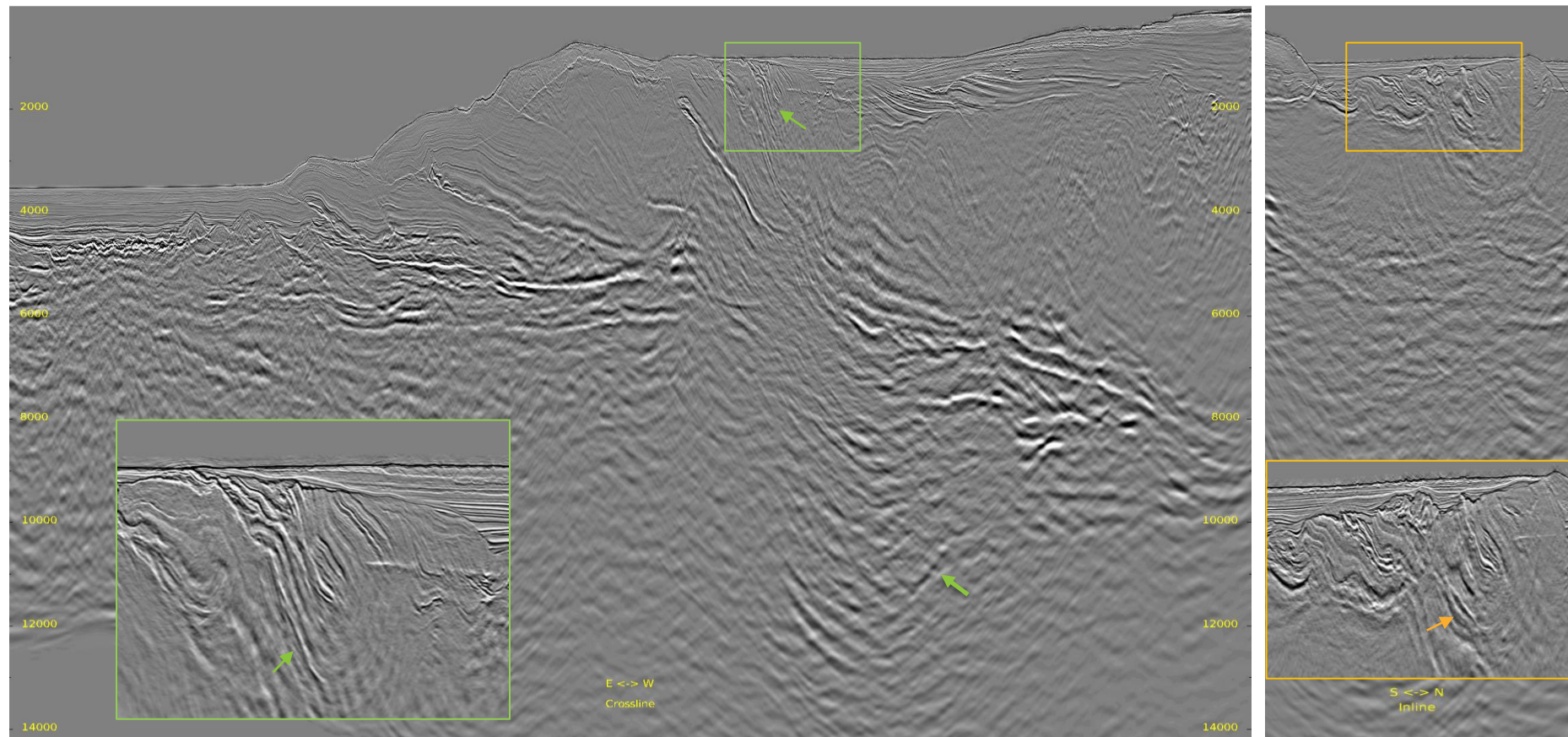


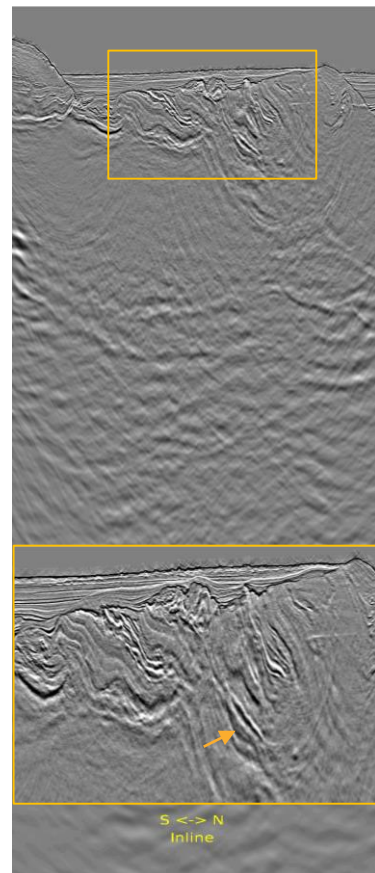
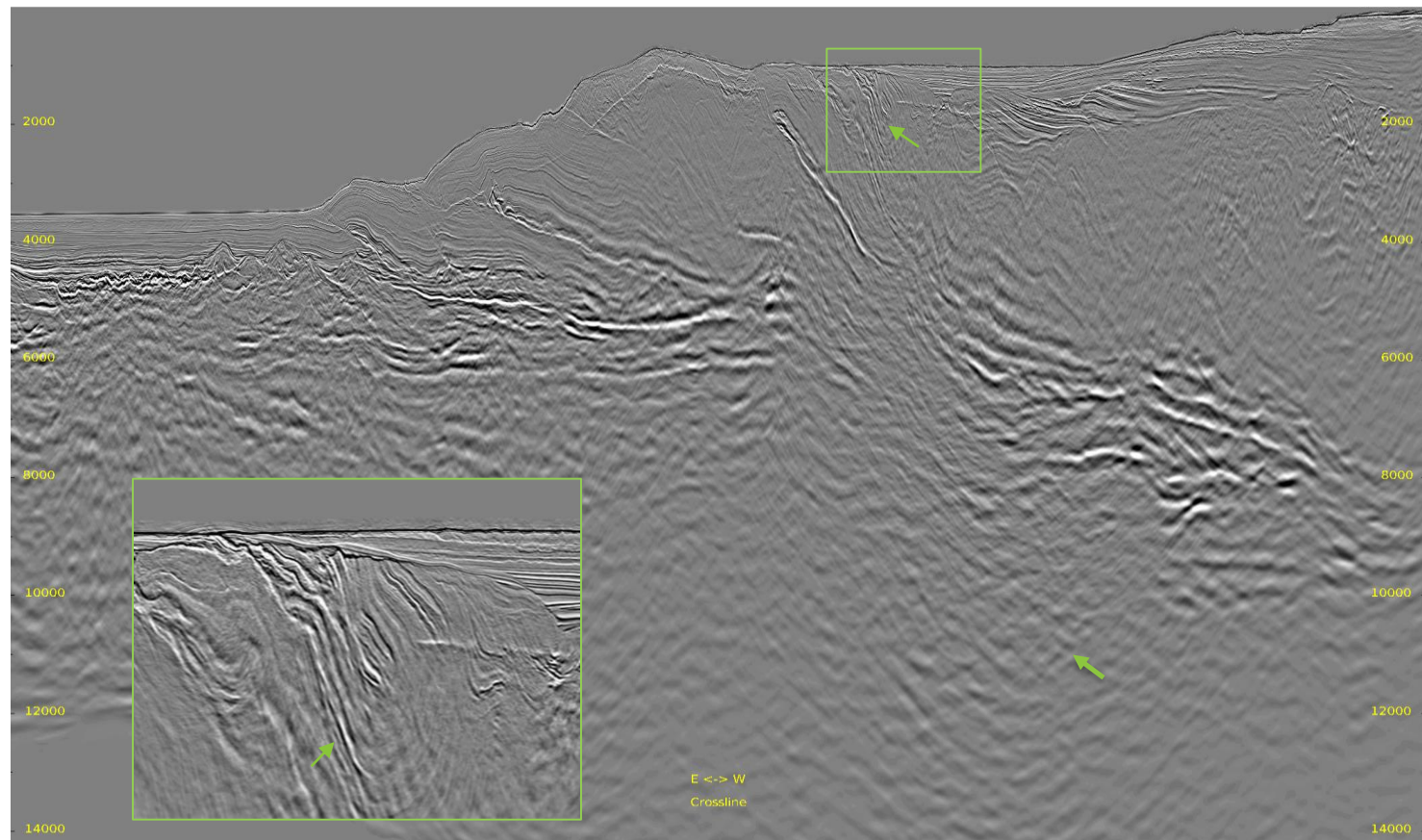


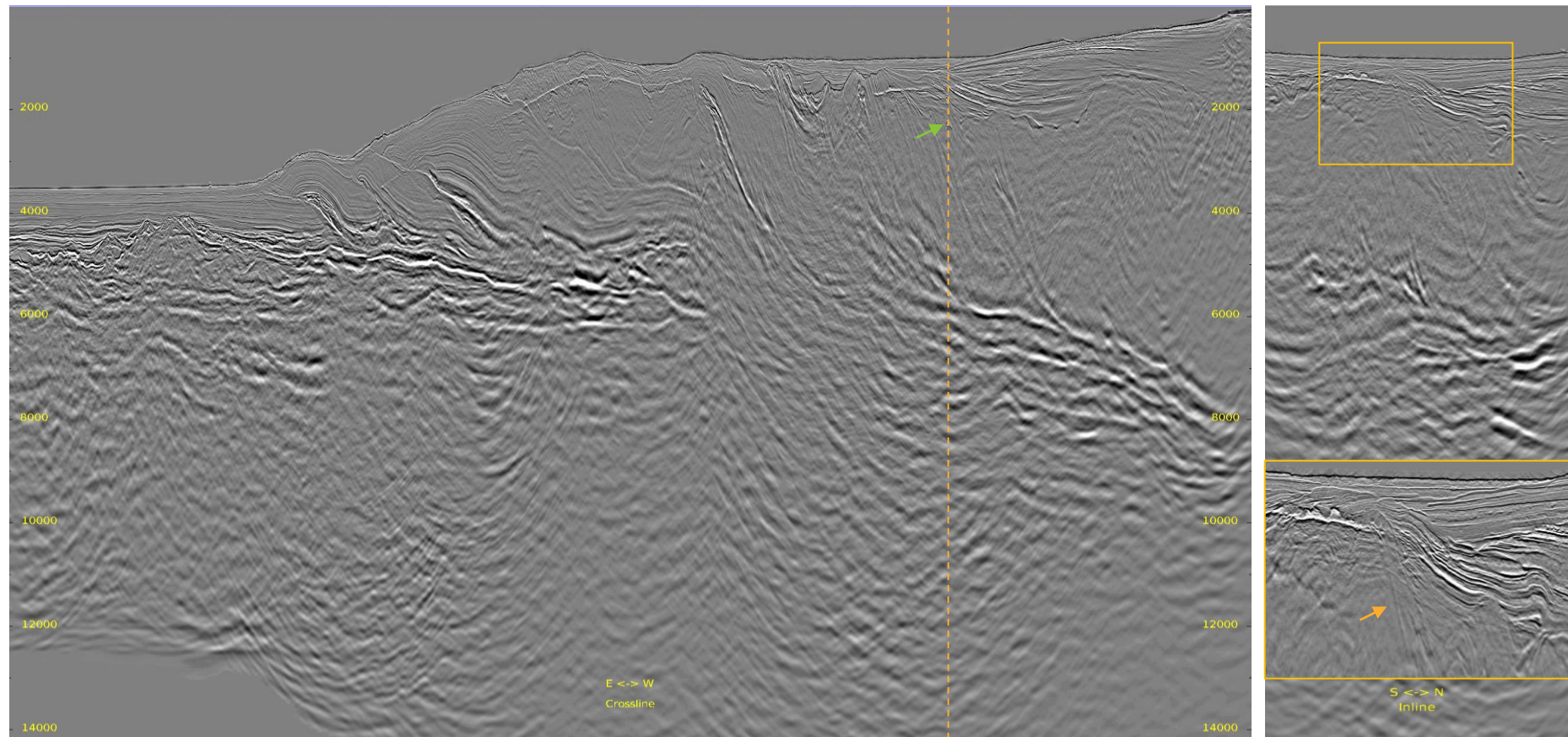
Gathers from Final Migration

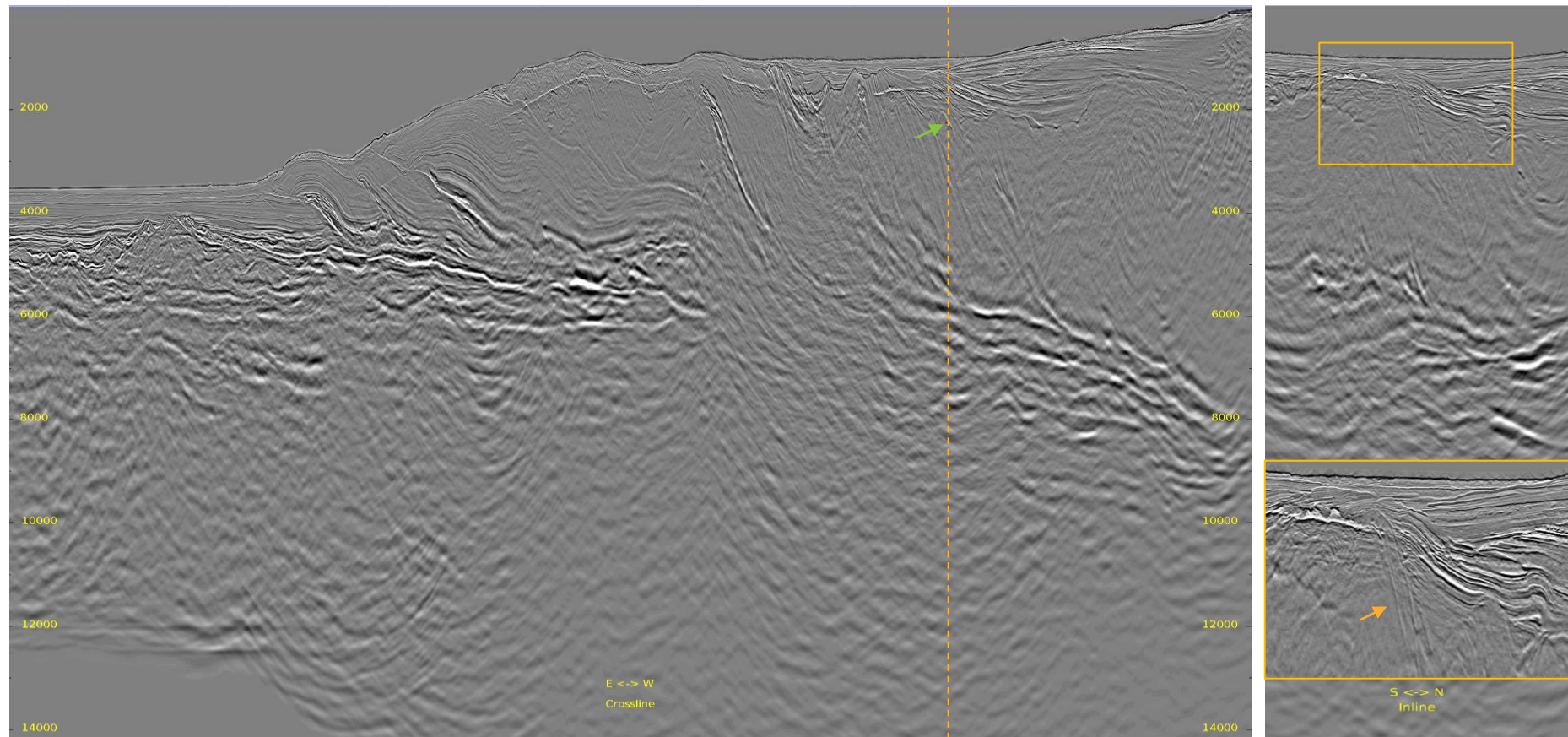
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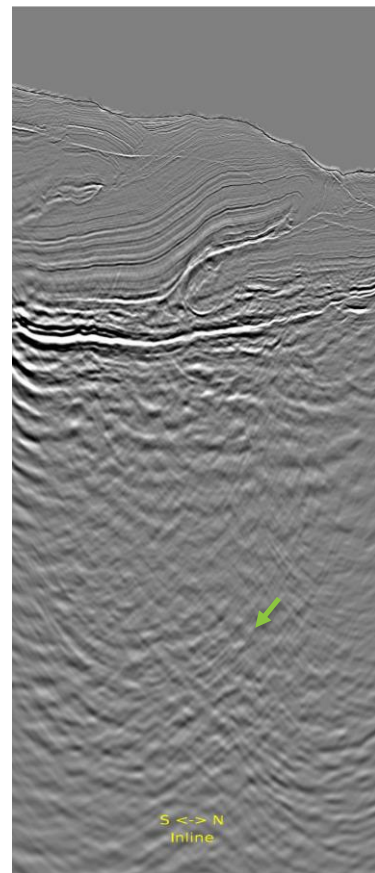
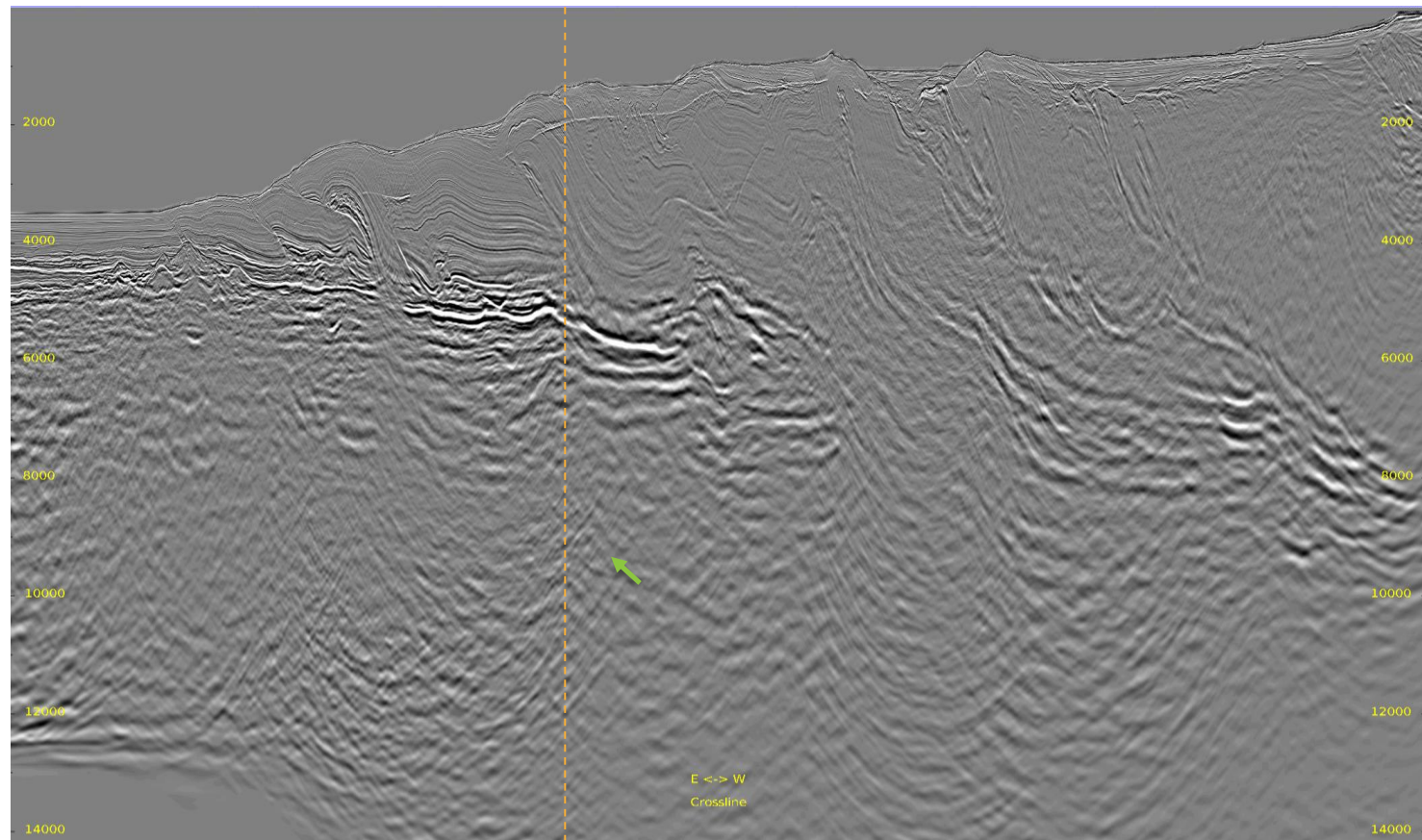


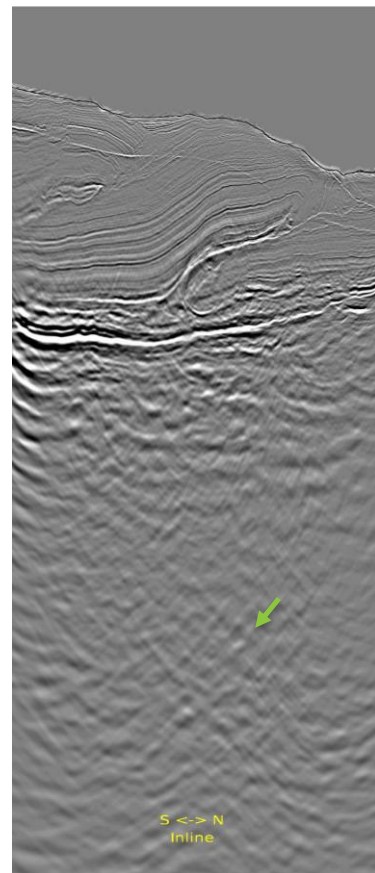
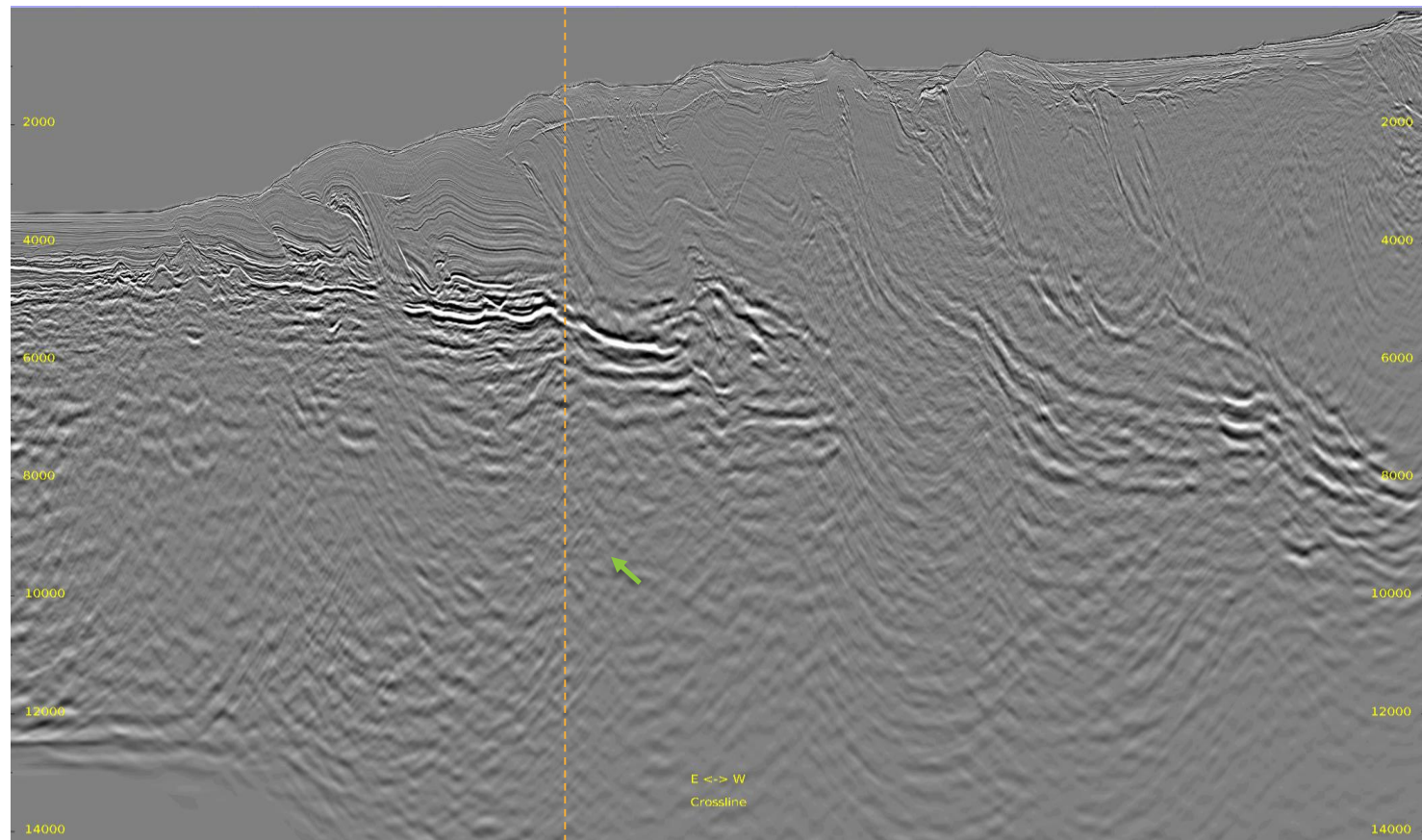












- Post migration stack presents more clear imaging versus VMB volume, and meanwhile shows benefit in primary preservation.
- We recommend to use final migration volume for following post migration processing.