



IT4 – RTM Test

NZ 3D Processing

24 March 2021

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INSTITUTE FOR GEOPHYSICS



Passion for Geoscience

- **Objective:**

To evaluate the benefit from RTM compared to Kirchhoff migration.

- **Procedure:**

TTI RTM was run to 20Hz using IT4 velocity.

- **Display:**

Migrated depth full stack & gathers.

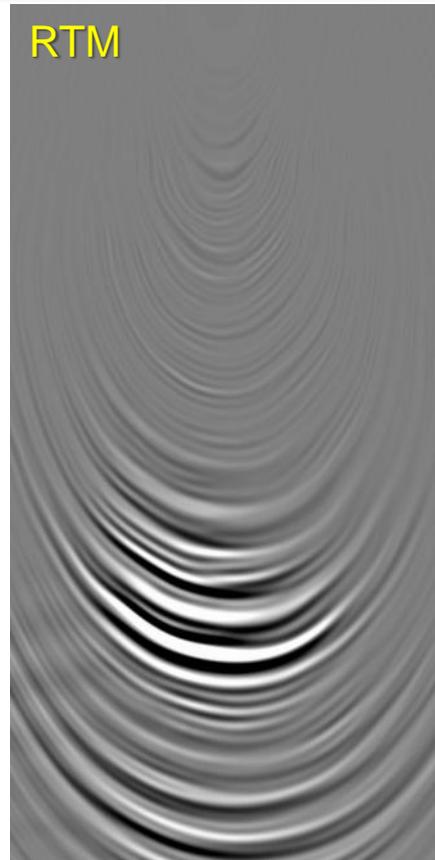
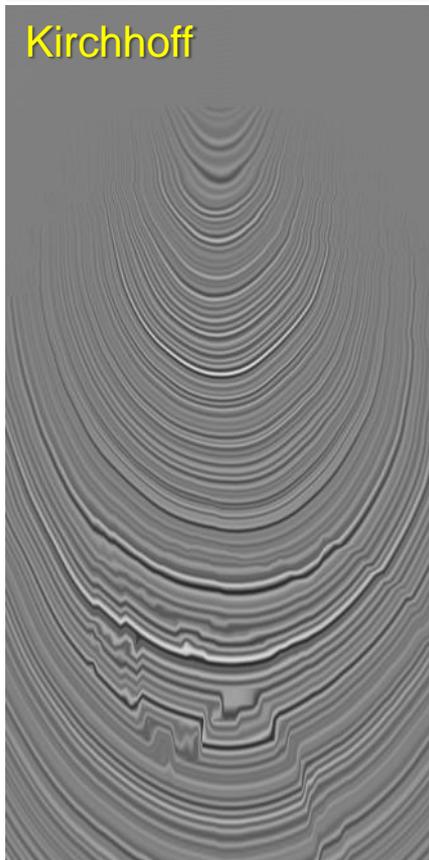
- **Observation and Recommendation:**

20Hz TTI RTM result has less migration swings and high frequency noises. Events in the deep sections are more continuous and better illuminated at places where velocity is complex.

Inline 601

Kirchhoff

RTM



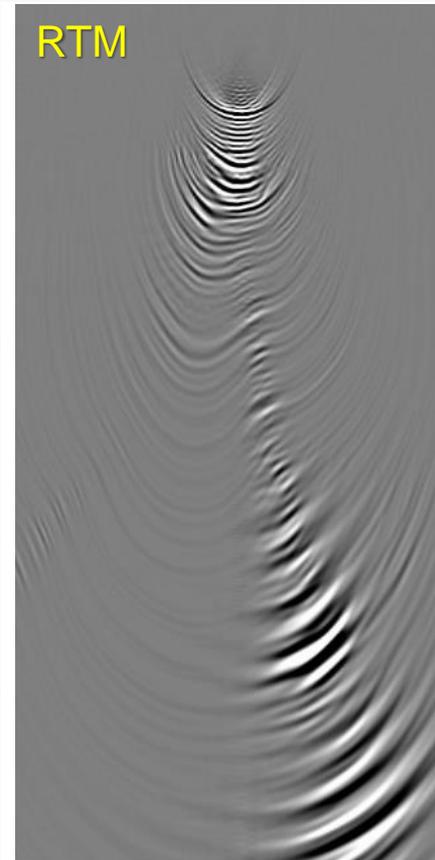
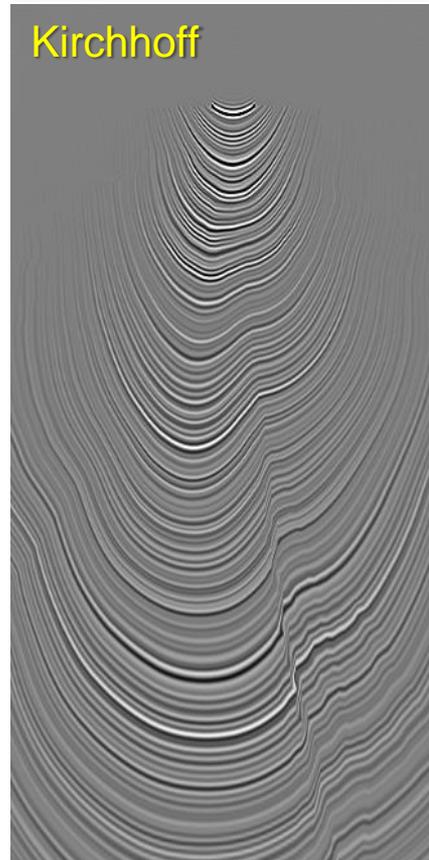
4km

8km

Xline 3898

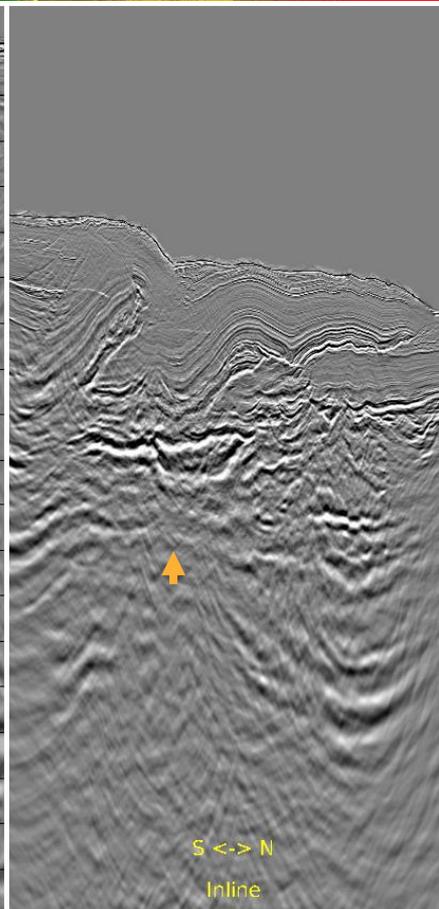
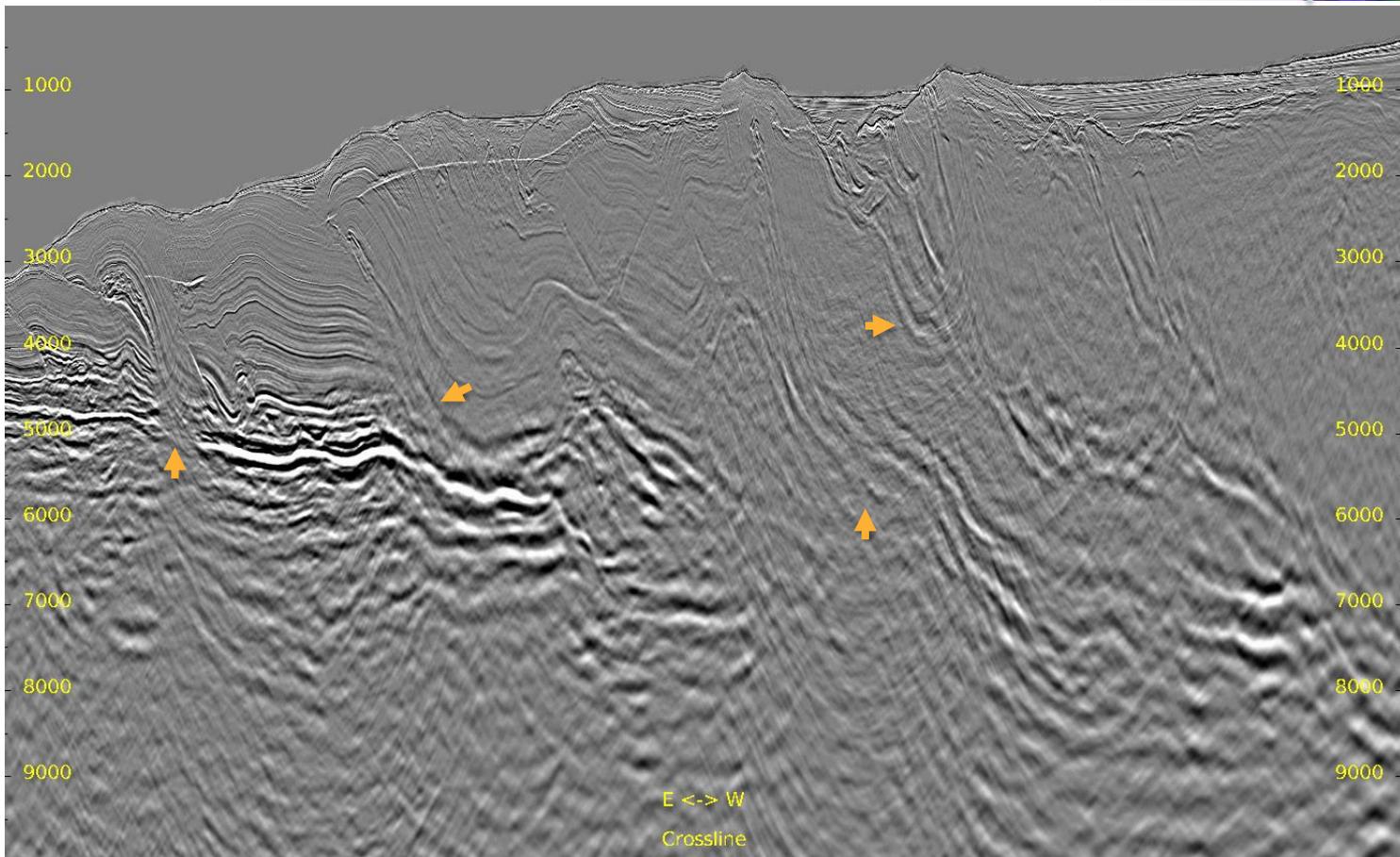
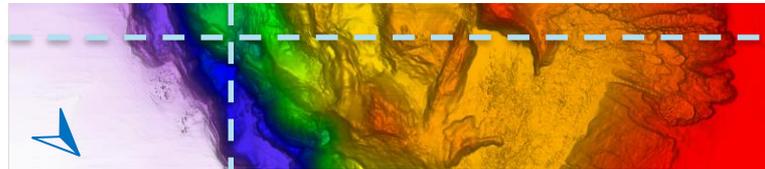
Kirchhoff

RTM



Full Stack: TTI Kirchhoff Migration

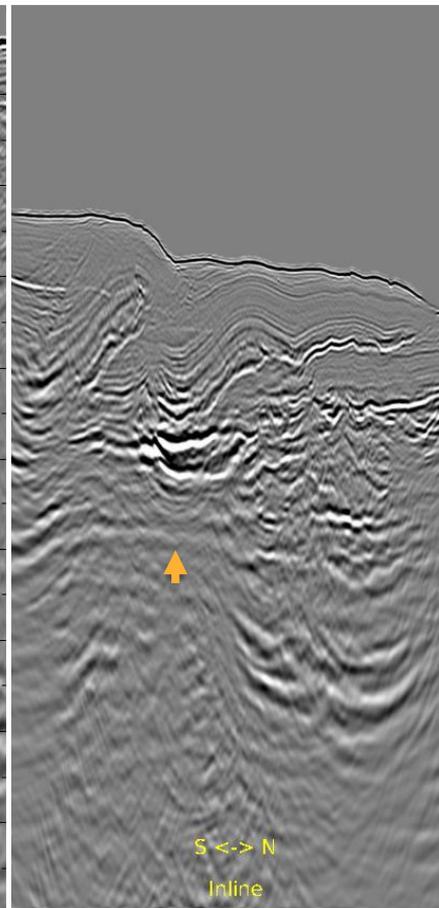
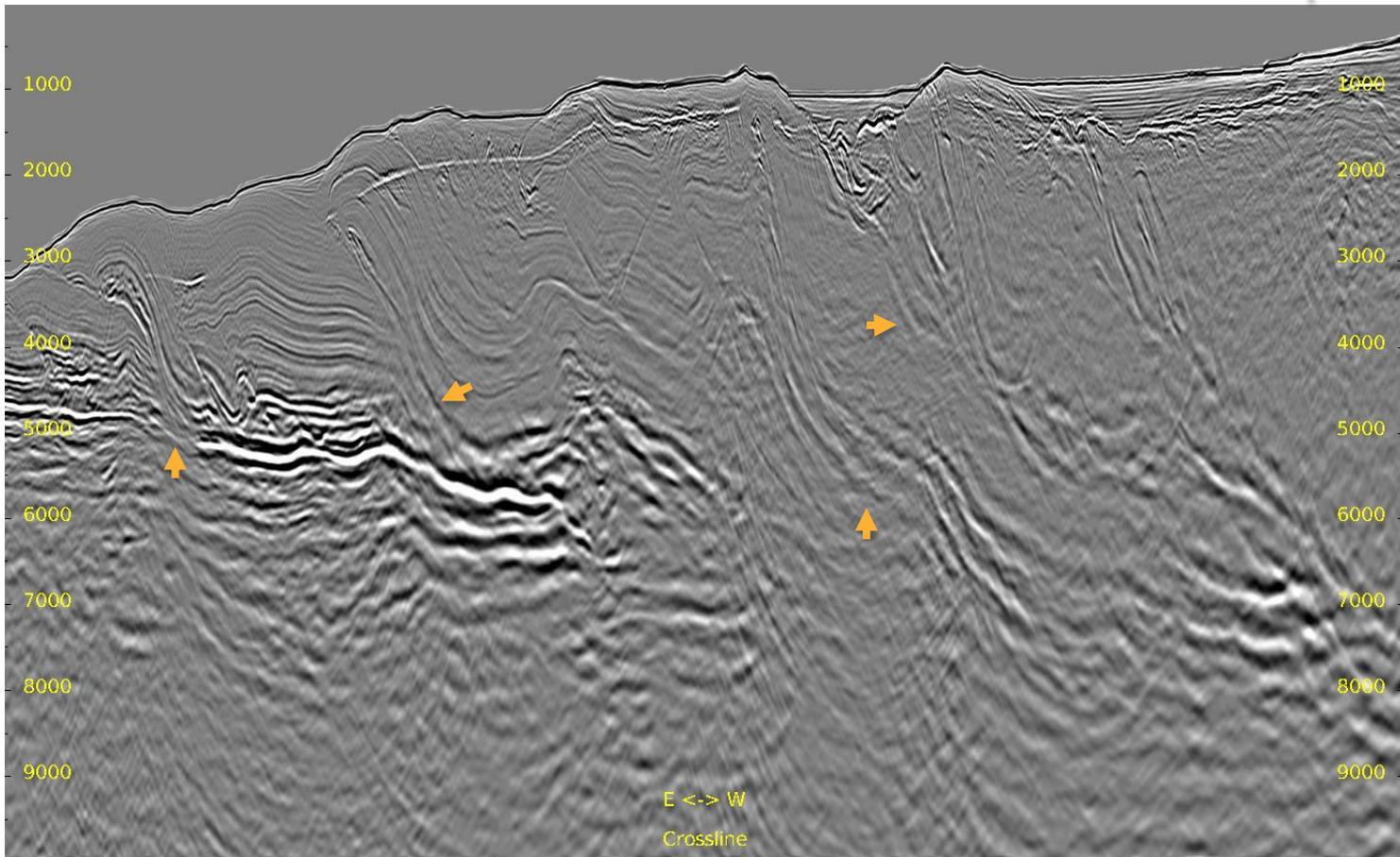
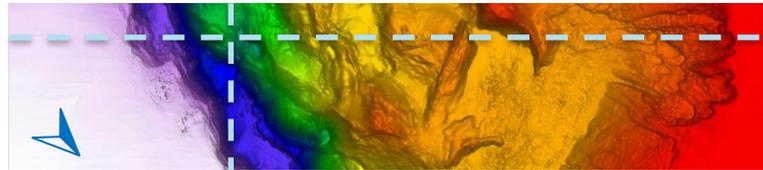
Inline 209 & Crossline 1683





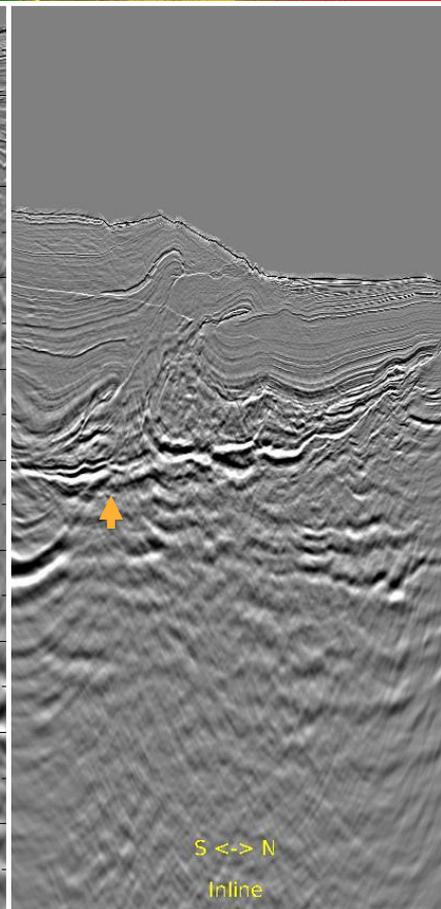
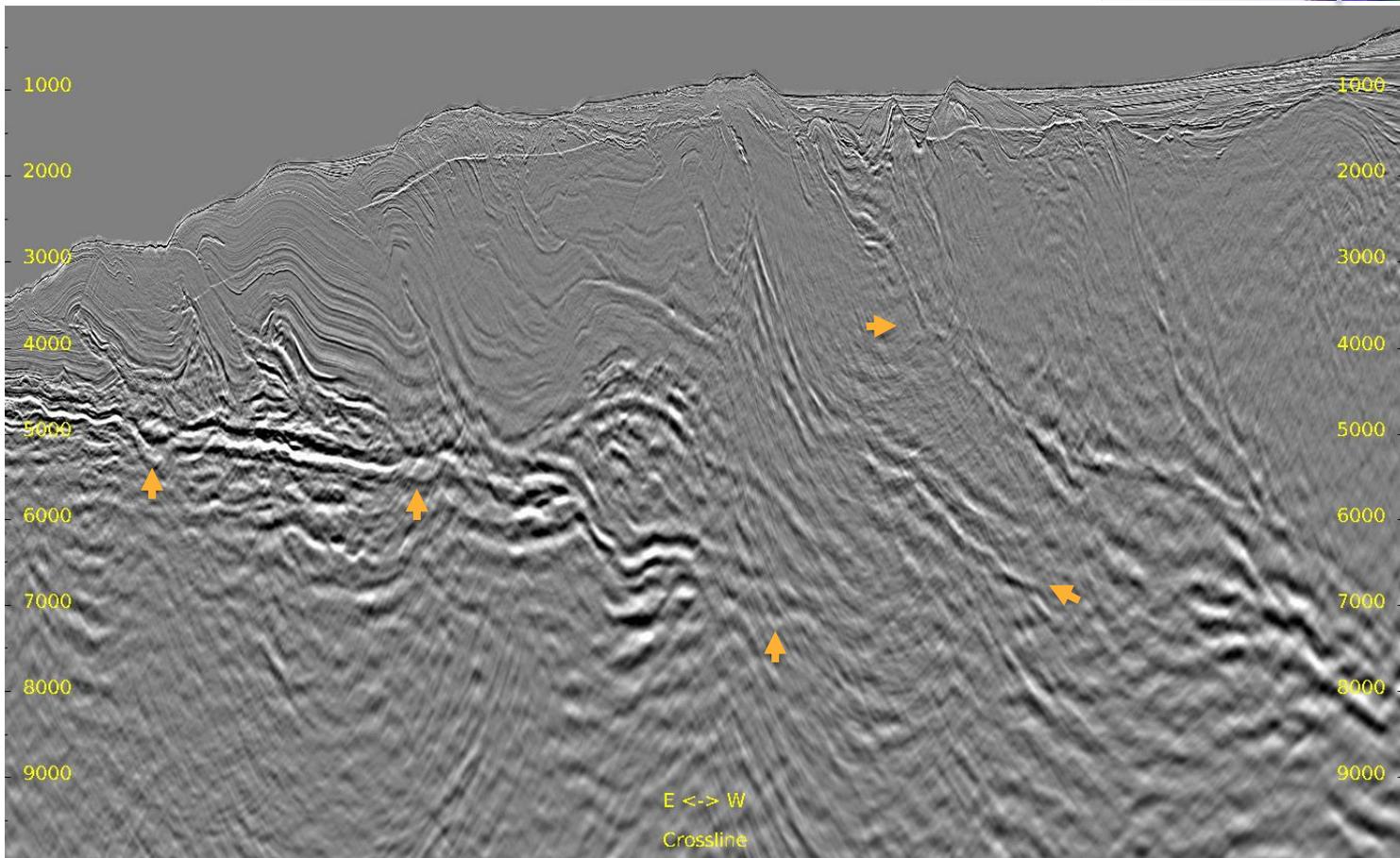
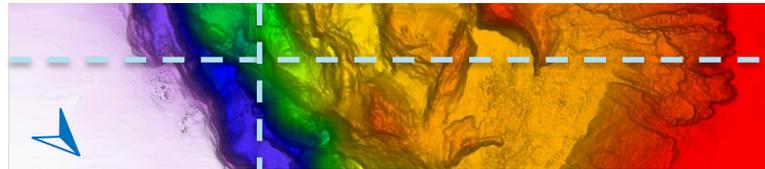
Full Stack: TTI RTM

Inline 209 & Crossline 1683



Full Stack: TTI Kirchhoff Migration

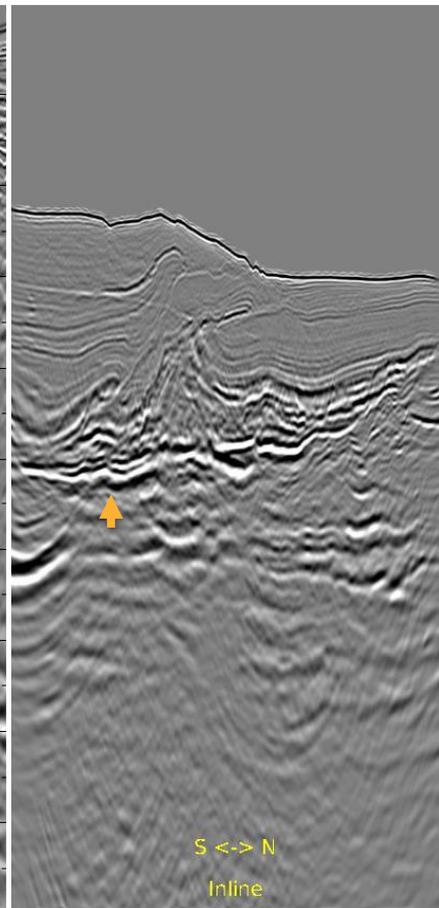
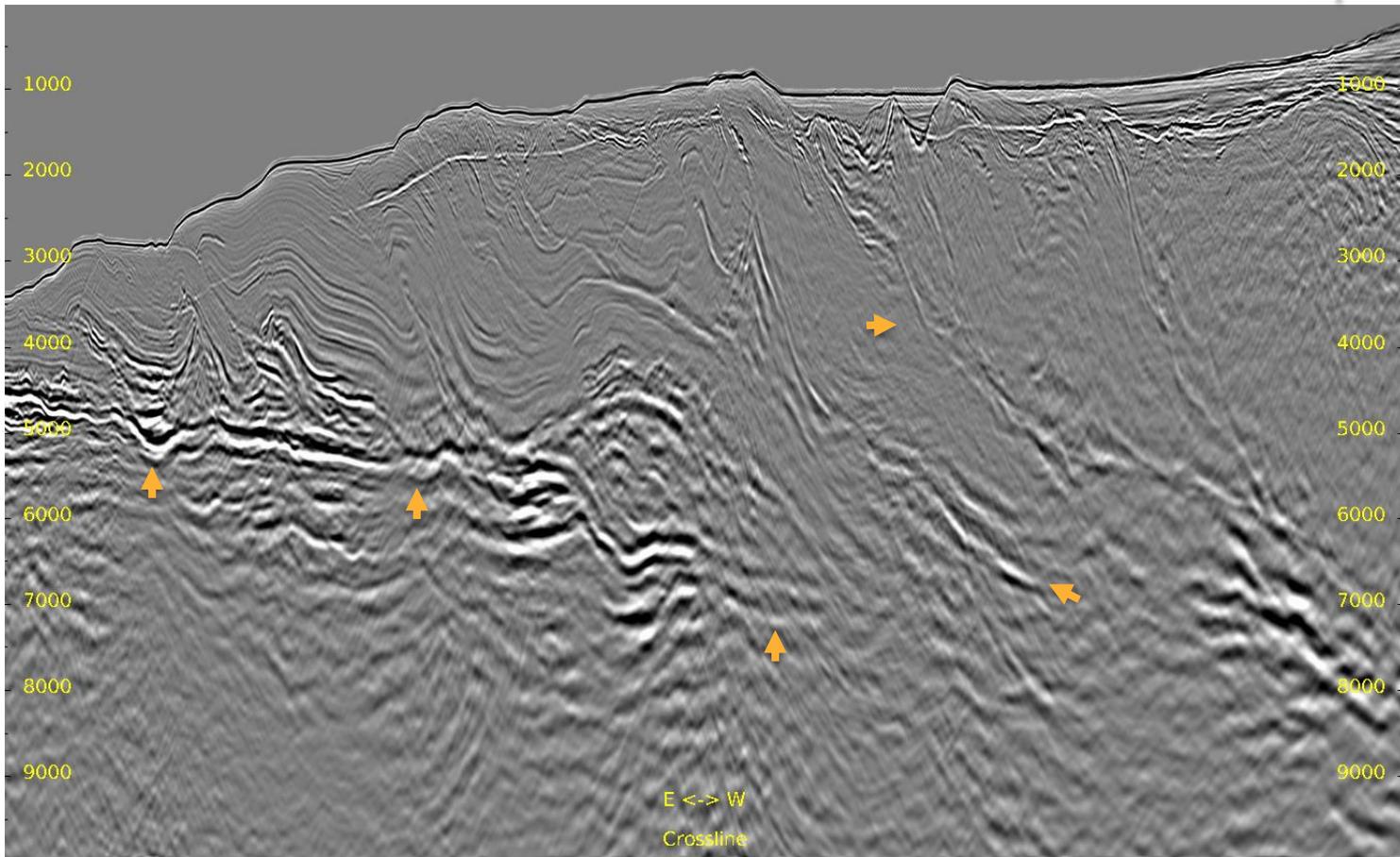
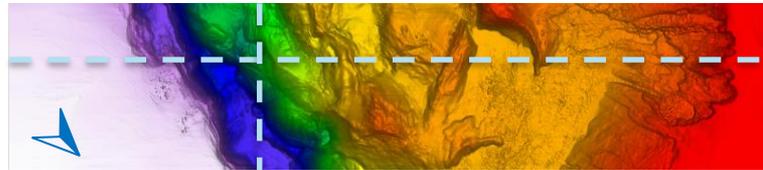
Inline 329 & Crossline 1835





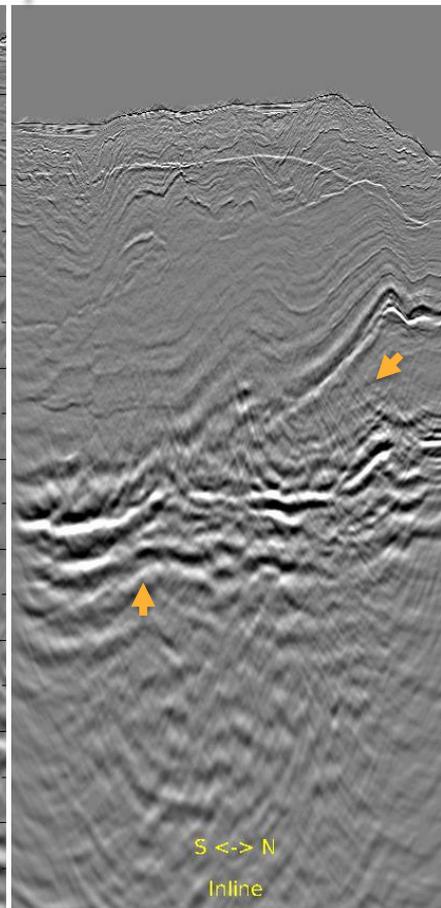
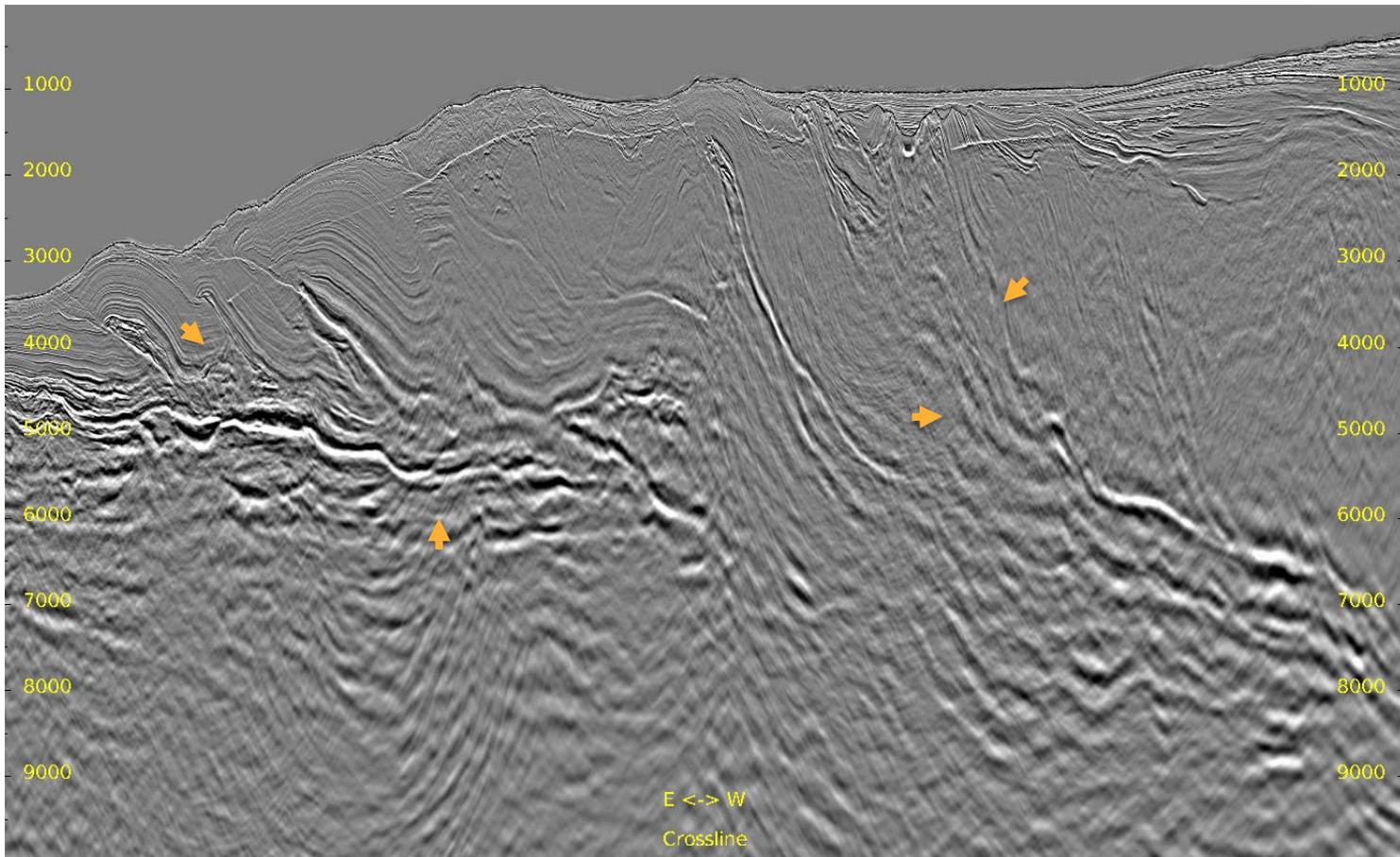
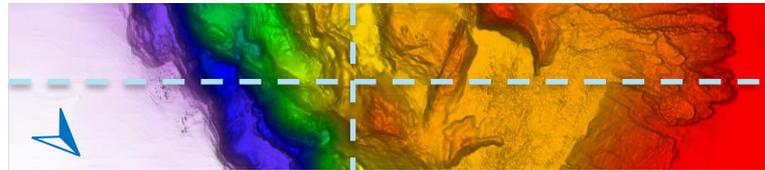
Full Stack: TTI RTM

Inline 329 & Crossline 1835



Full Stack: TTI Kirchhoff Migration

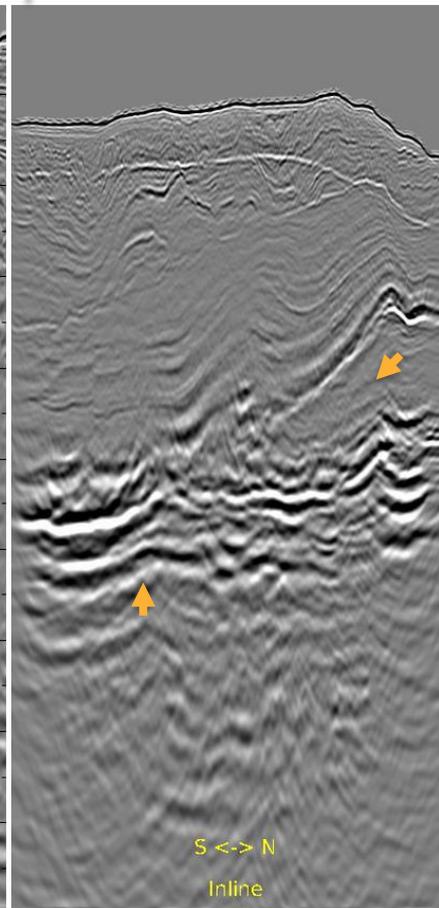
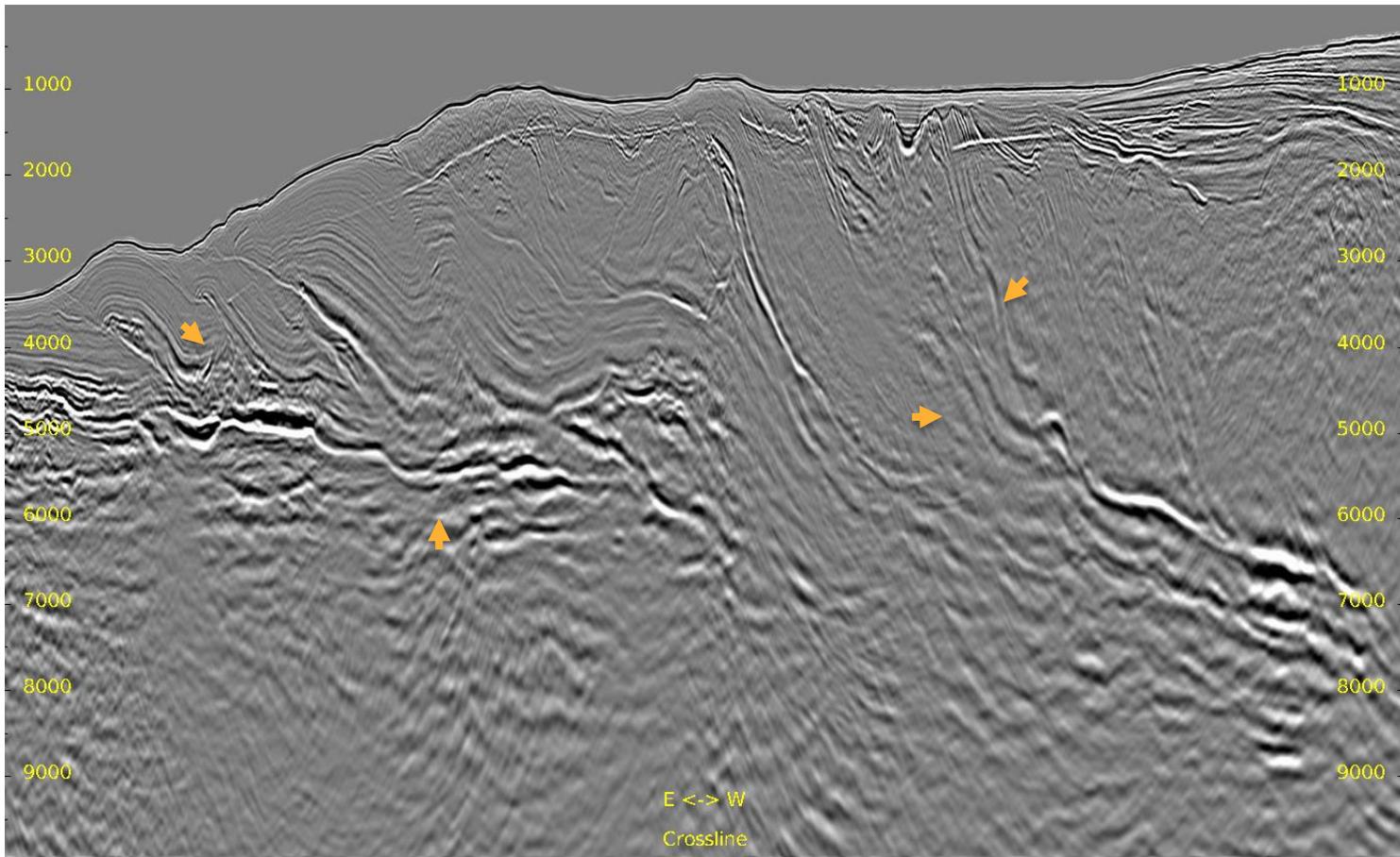
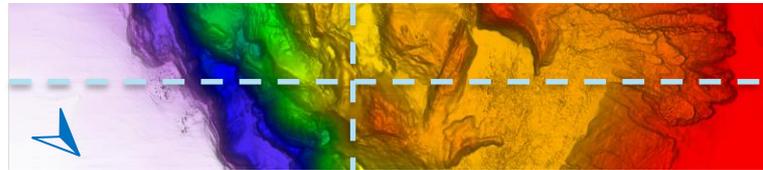
Inline 436 & Crossline 2585





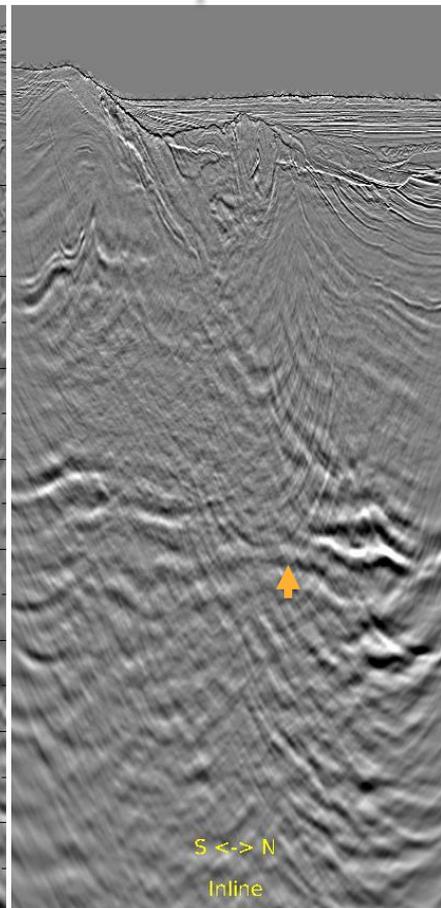
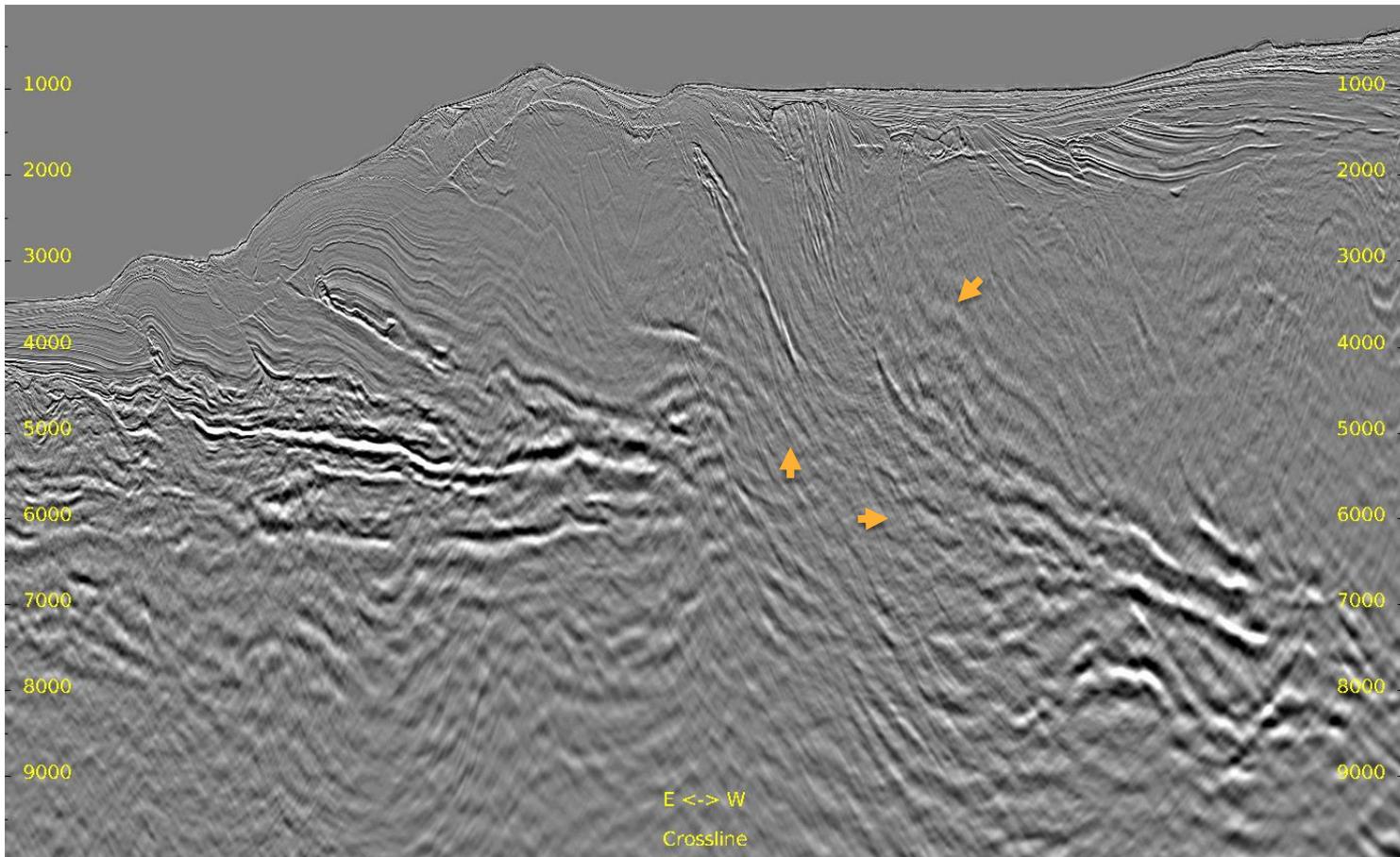
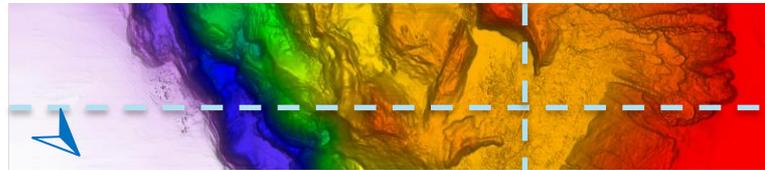
Full Stack: TTI RTM

Inline 436 & Crossline 2585



Full Stack: TTI Kirchhoff Migration

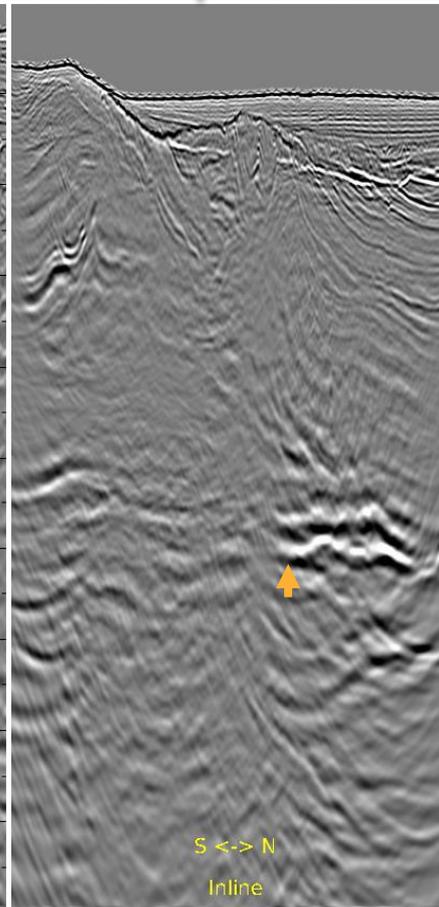
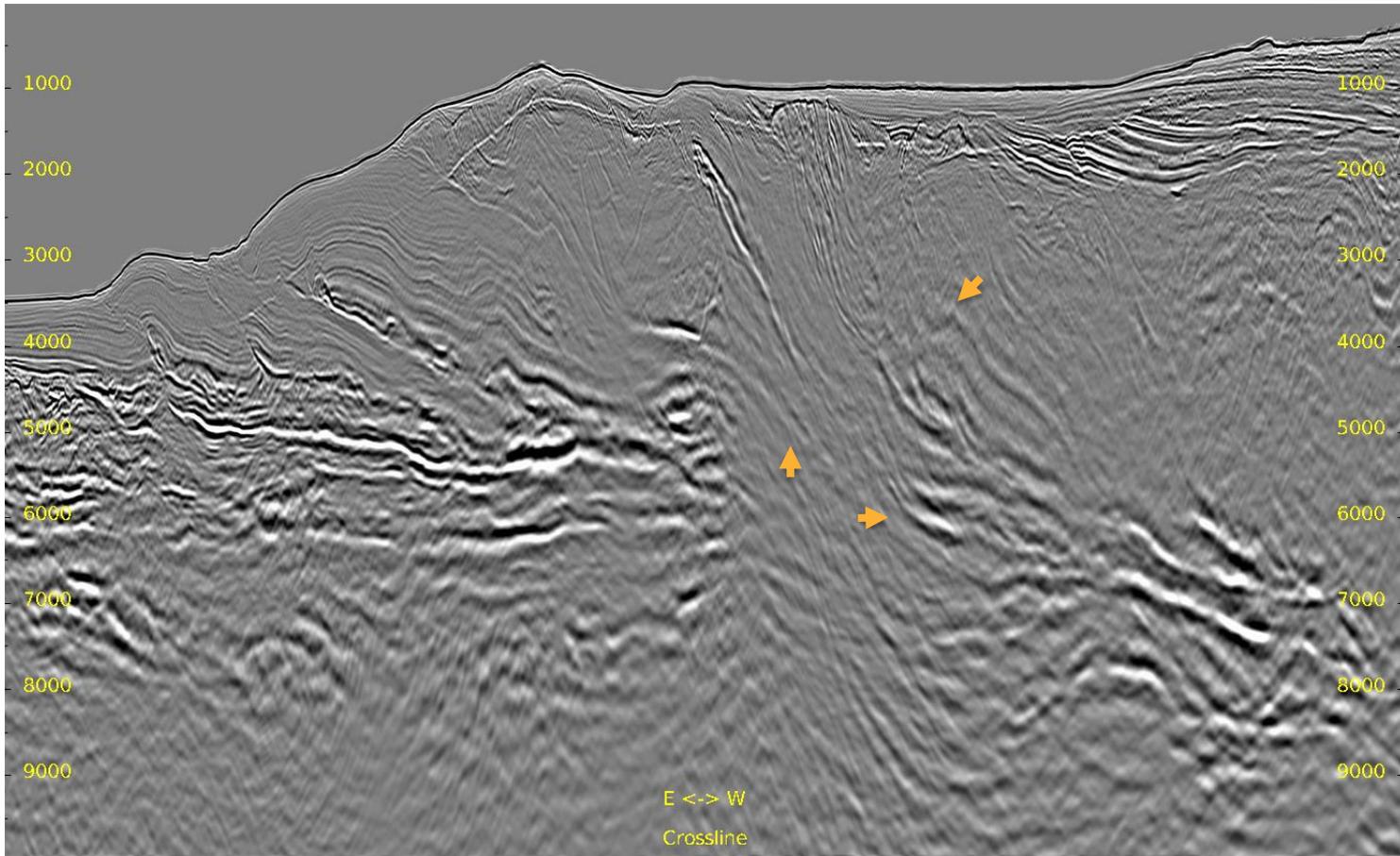
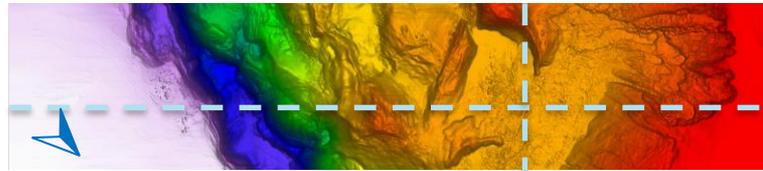
Inline 537 & Crossline 3843





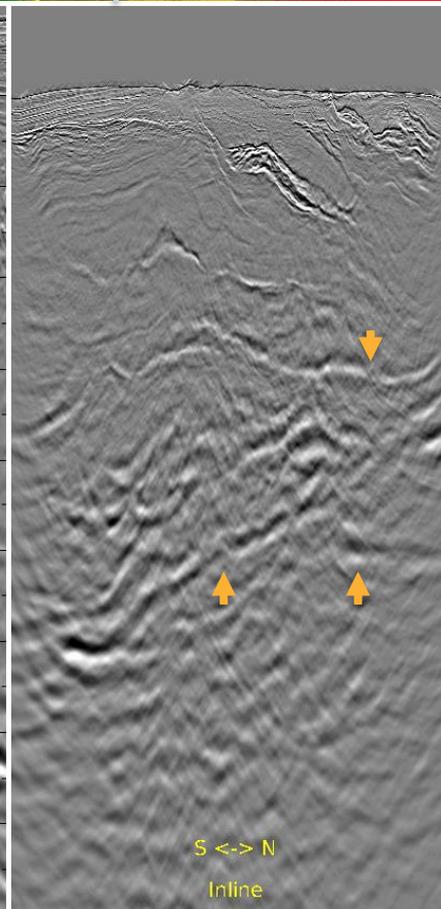
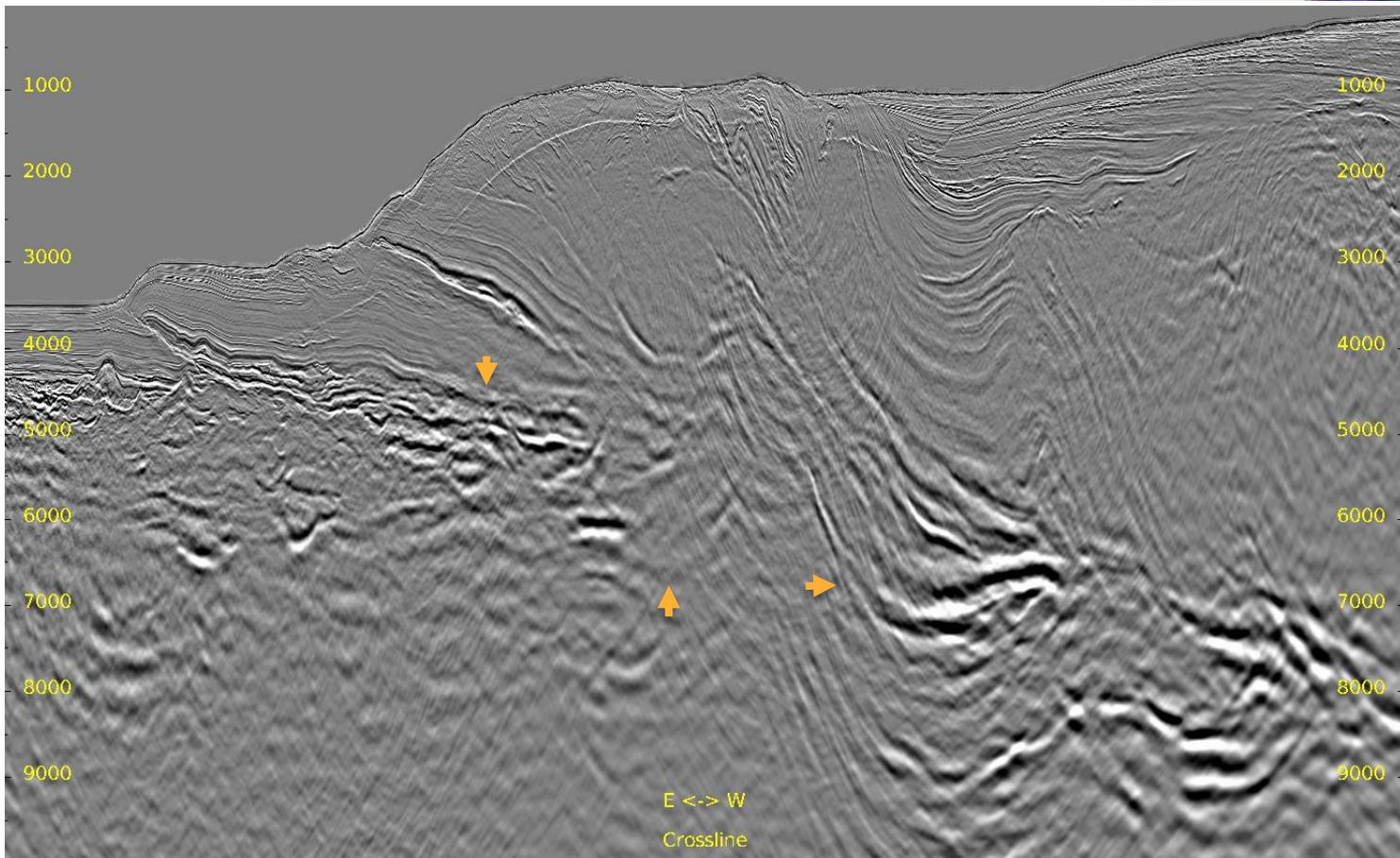
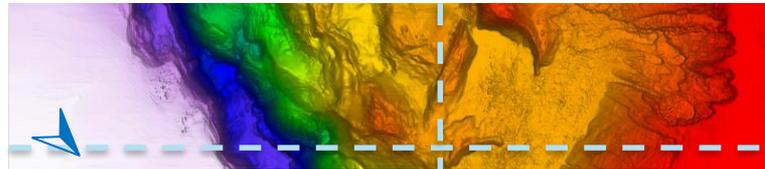
Full Stack: TTI RTM

Inline 537 & Crossline 3843



Full Stack: TTI Kirchhoff Migration

Inline 725 & Crossline 3231





Full Stack: TTI RTM

Inline 725 & Crossline 3231

