

Galicia 3D Seismic Reflection PSTM Volume

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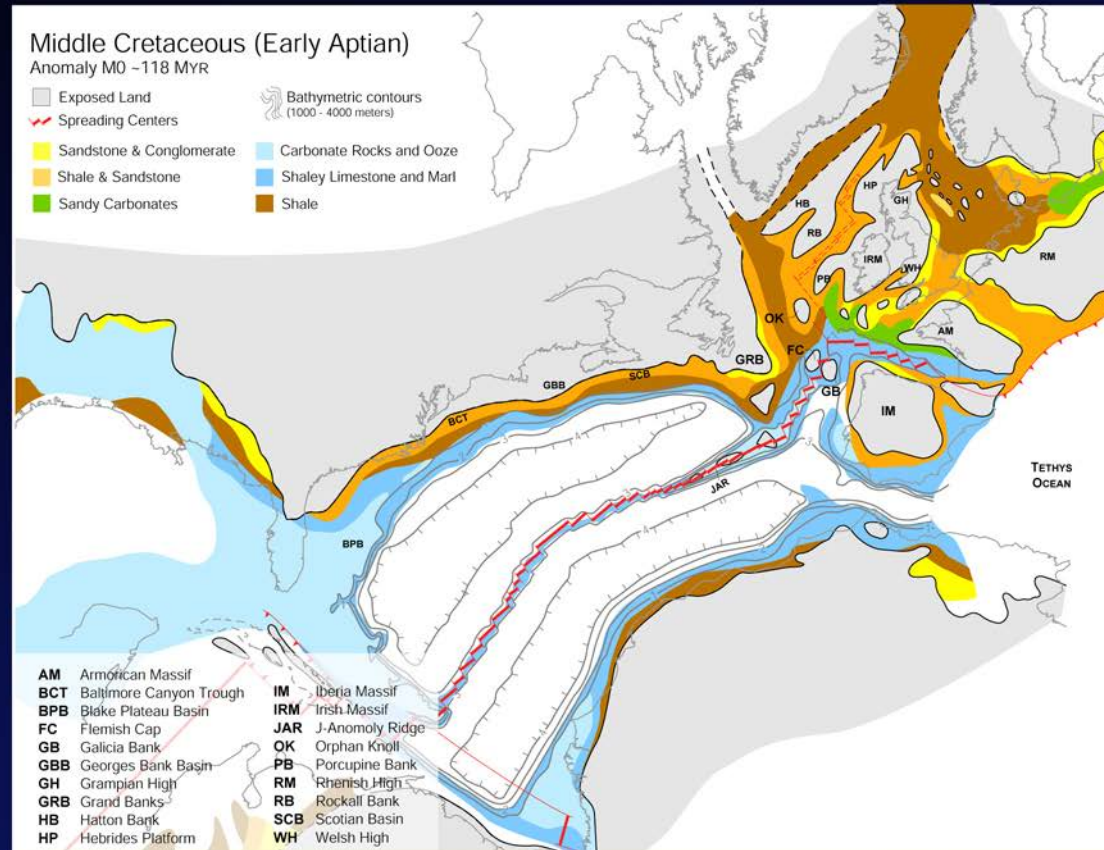
We Thank

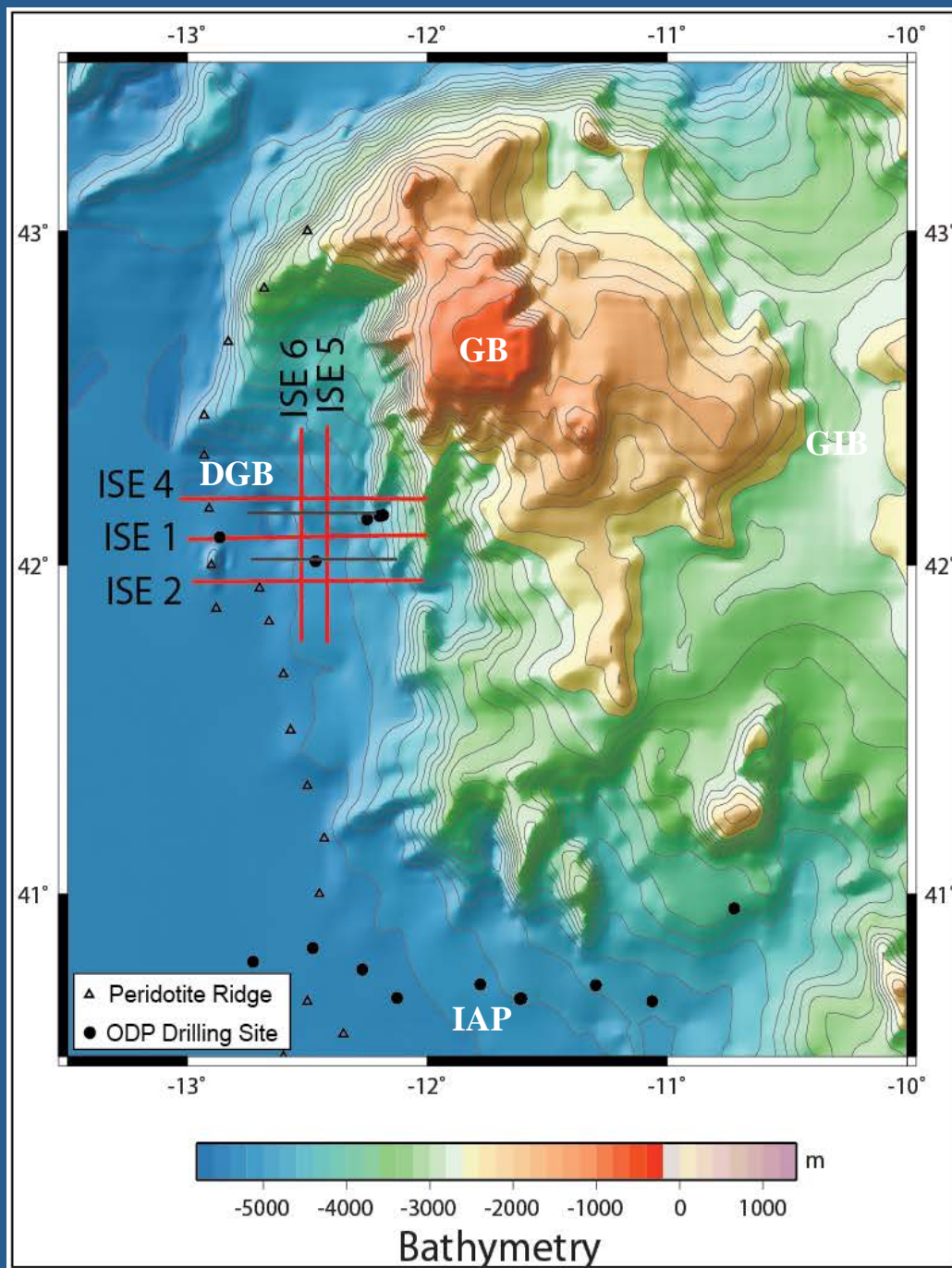


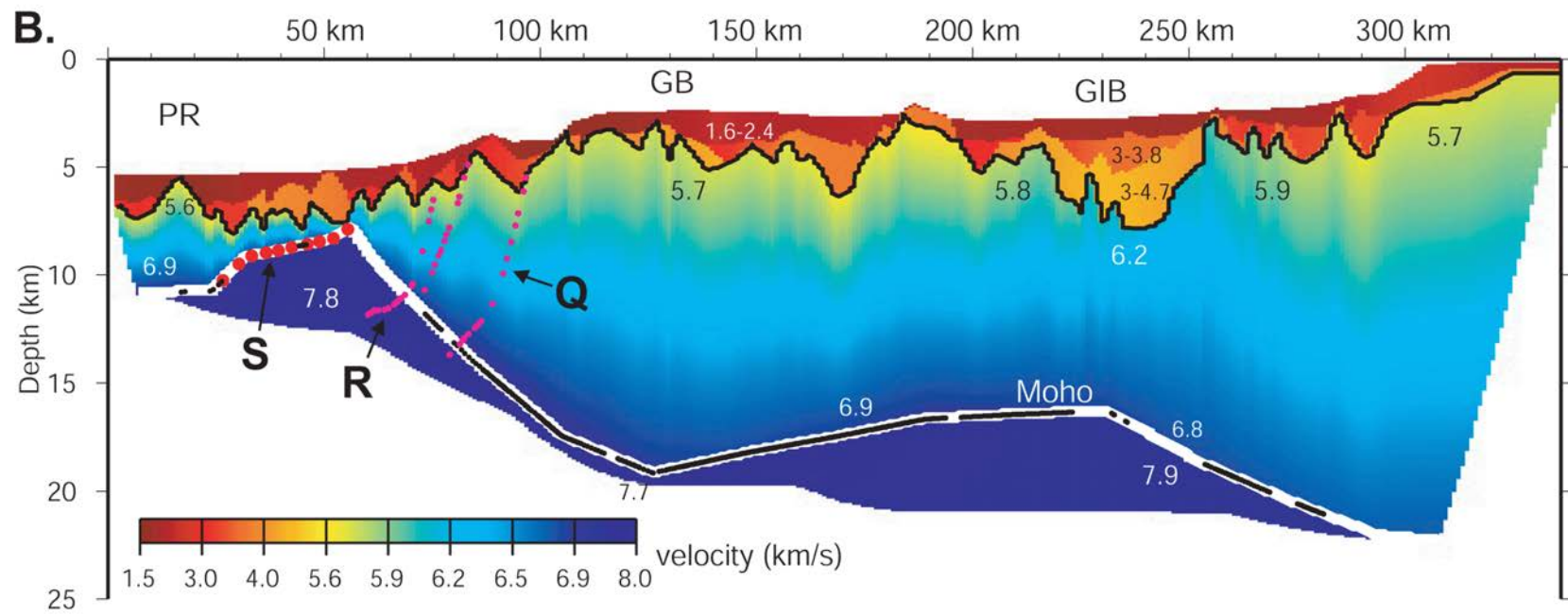
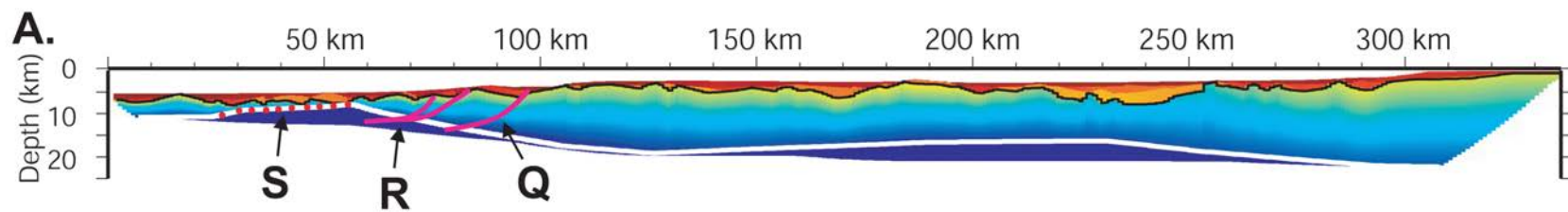
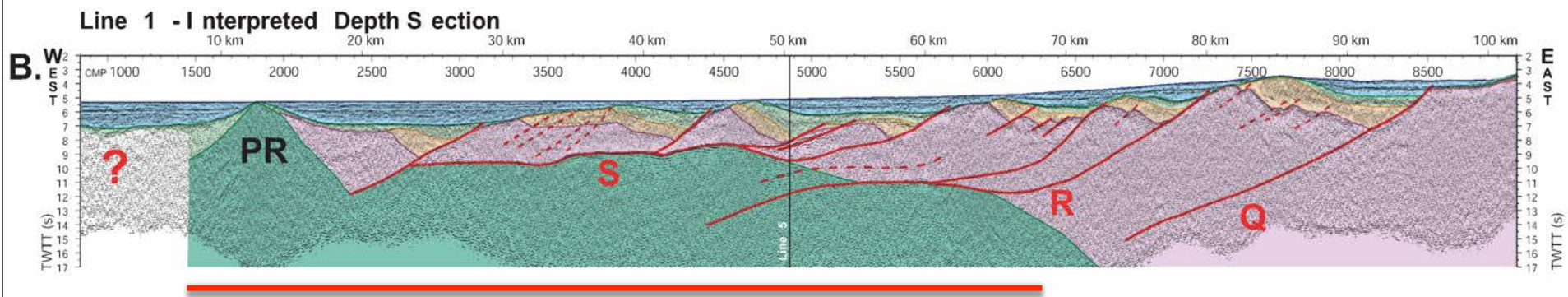
Repsol

17 November 2014

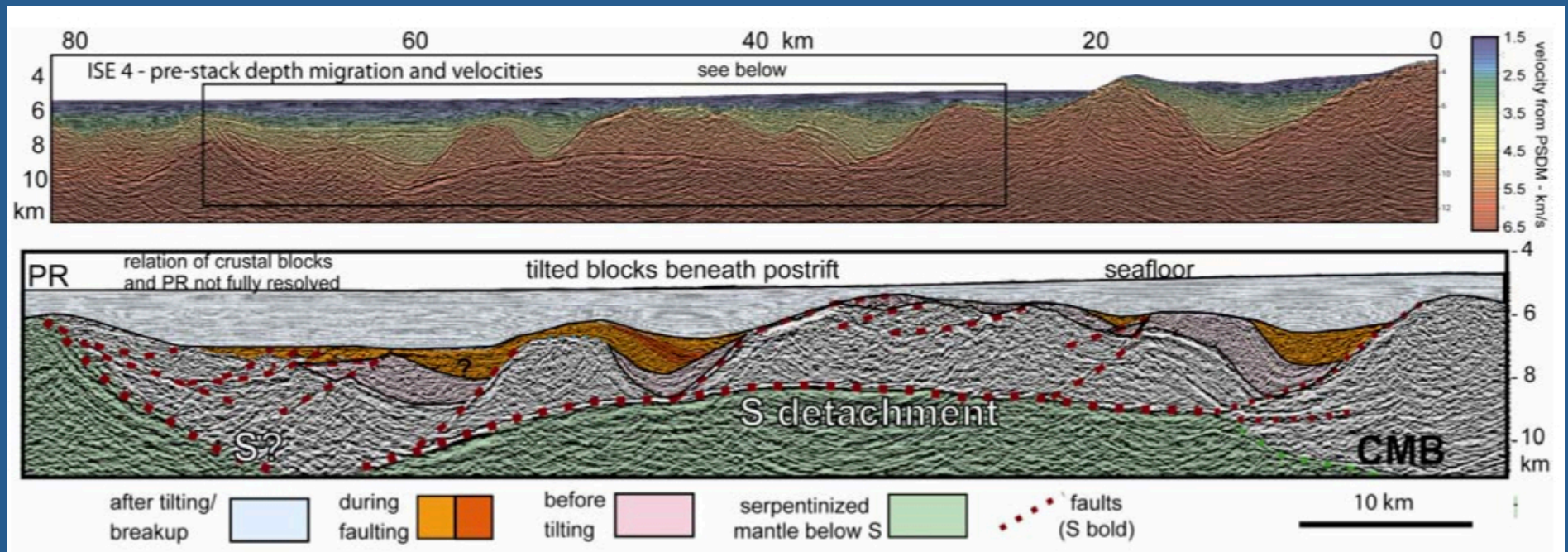
Tectonic Evolution - Mid Cretaceous



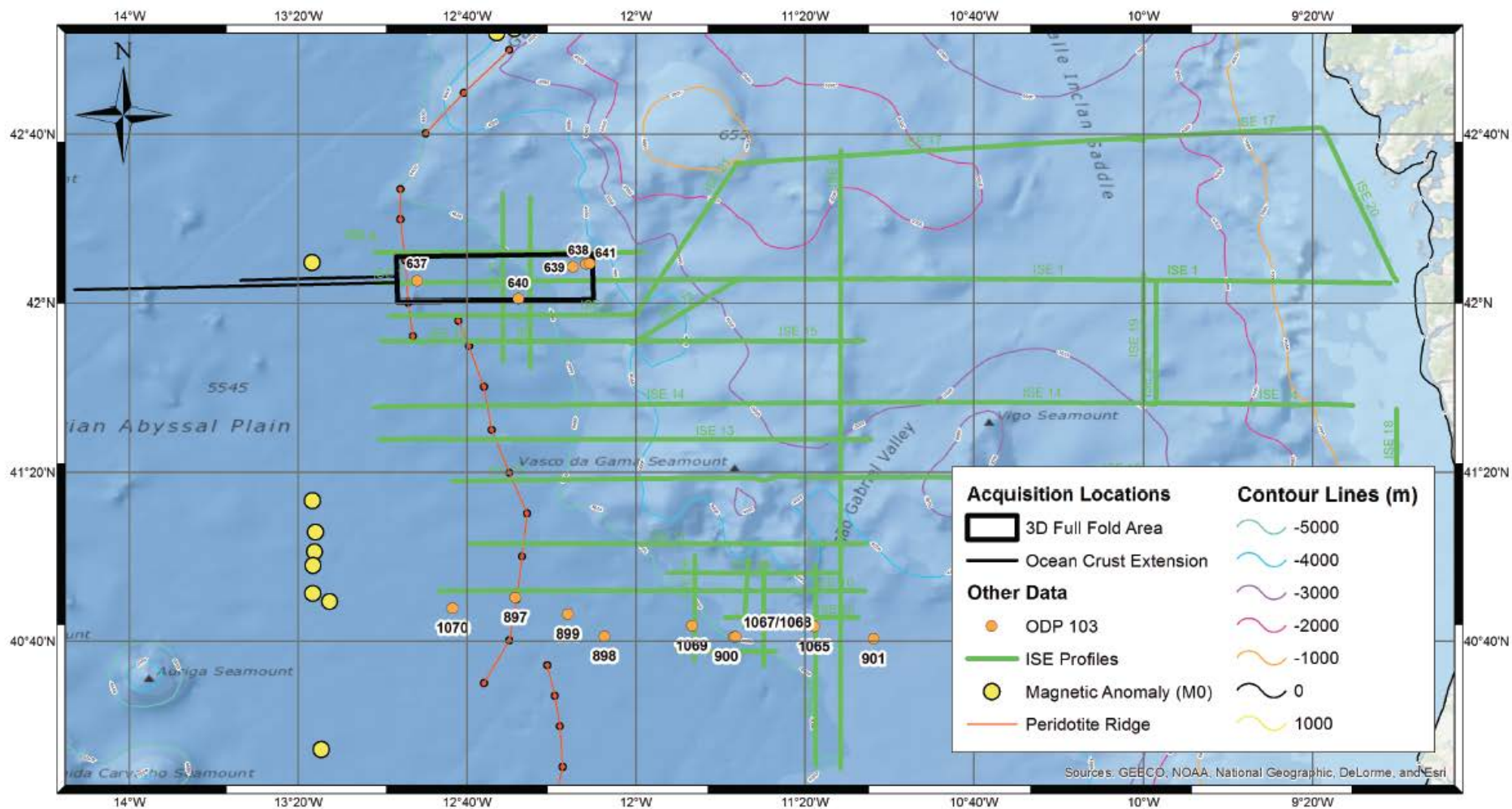




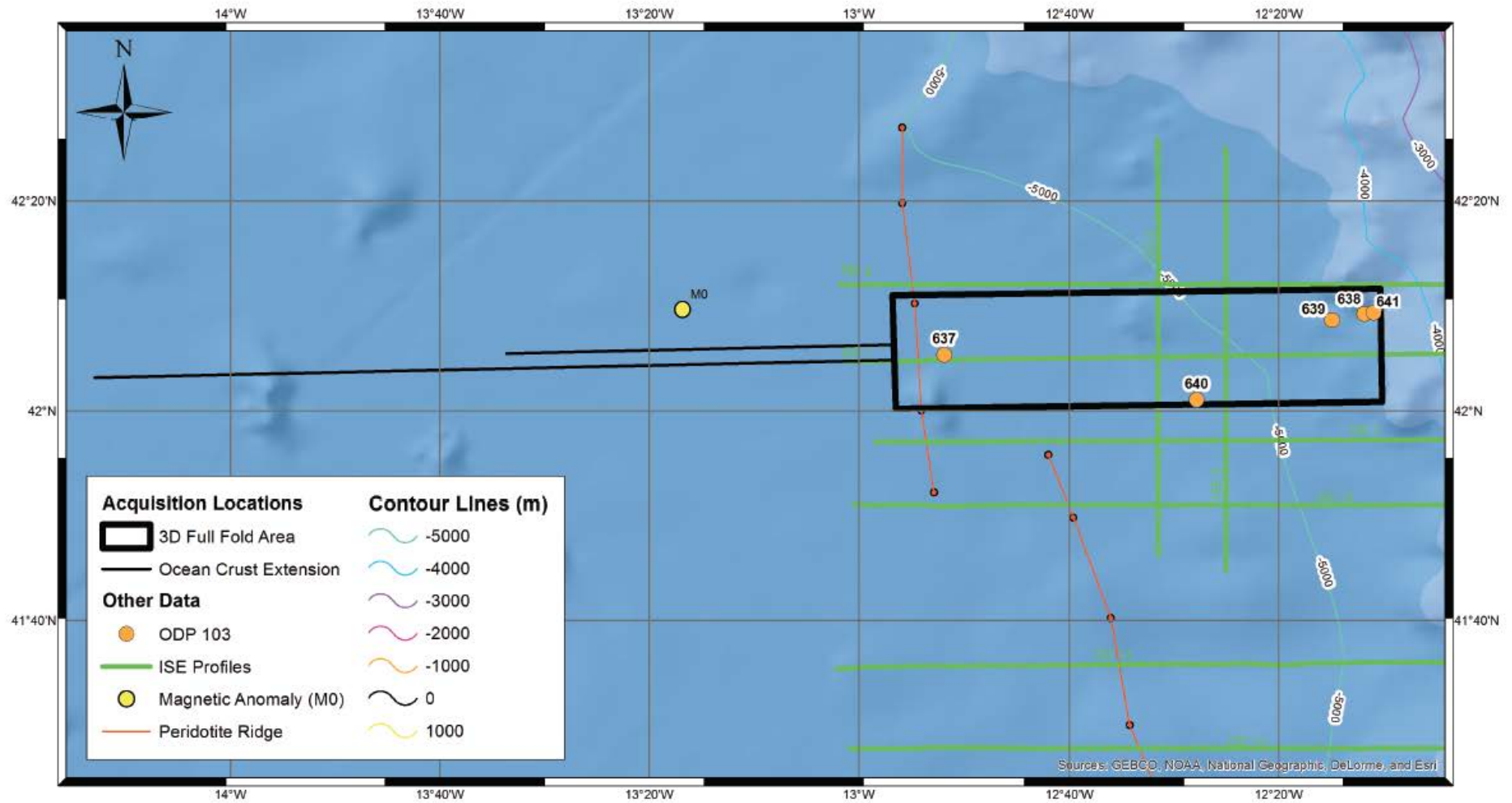
Focus of this project: the S reflector



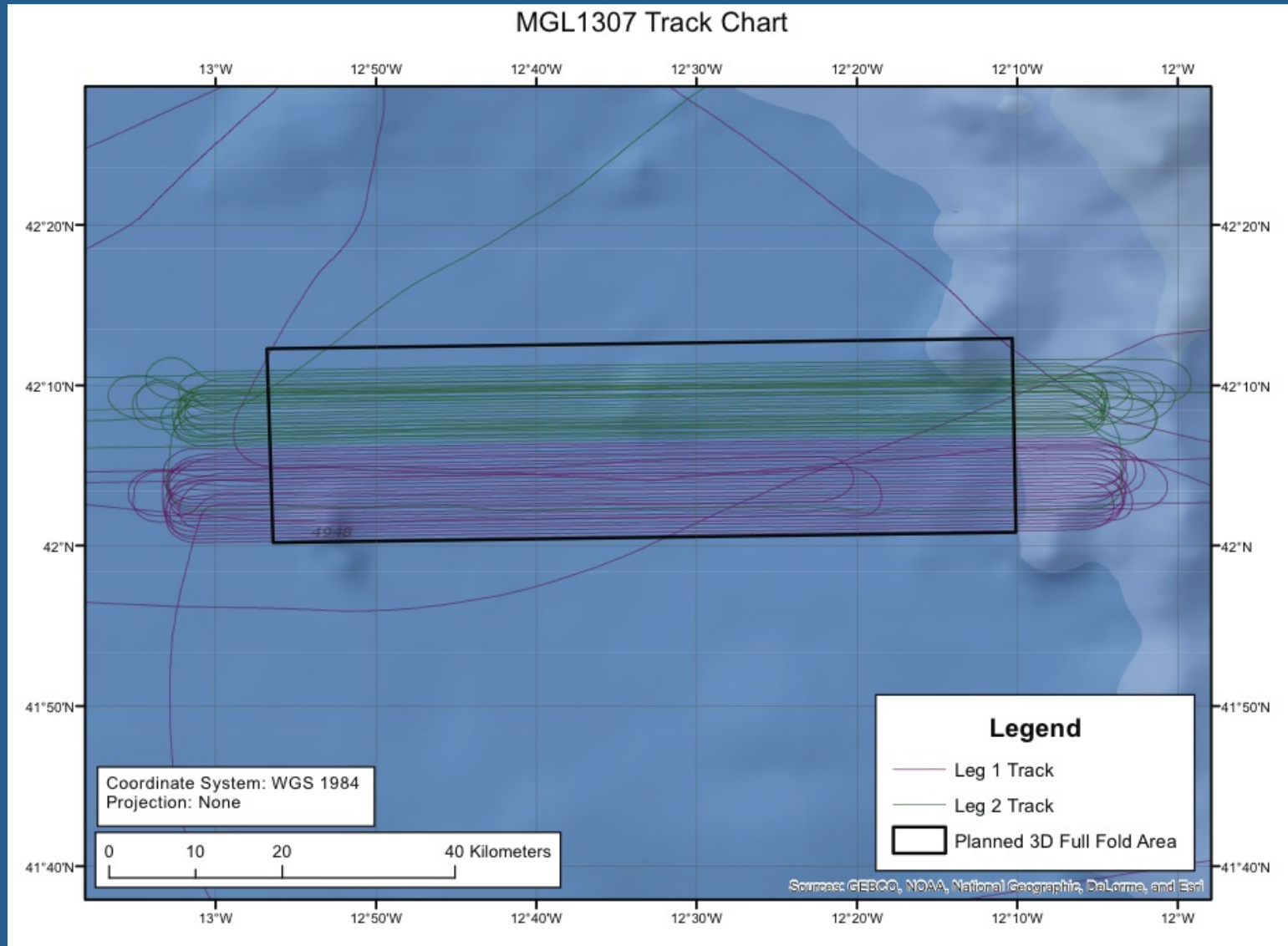
Galicia 3D Seismic Acquisition



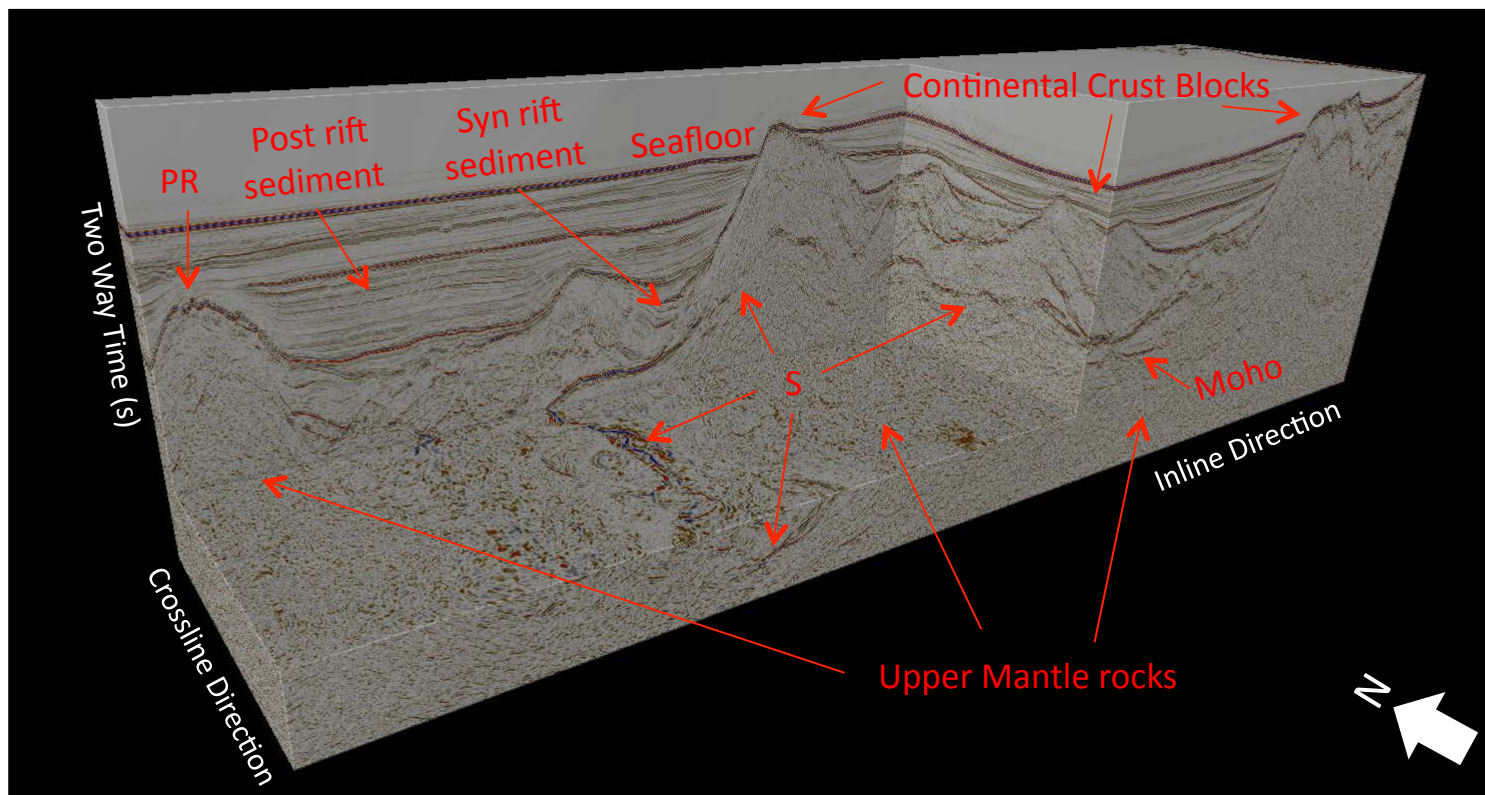
Galicia 3D Seismic Acquisition



Survey Completed



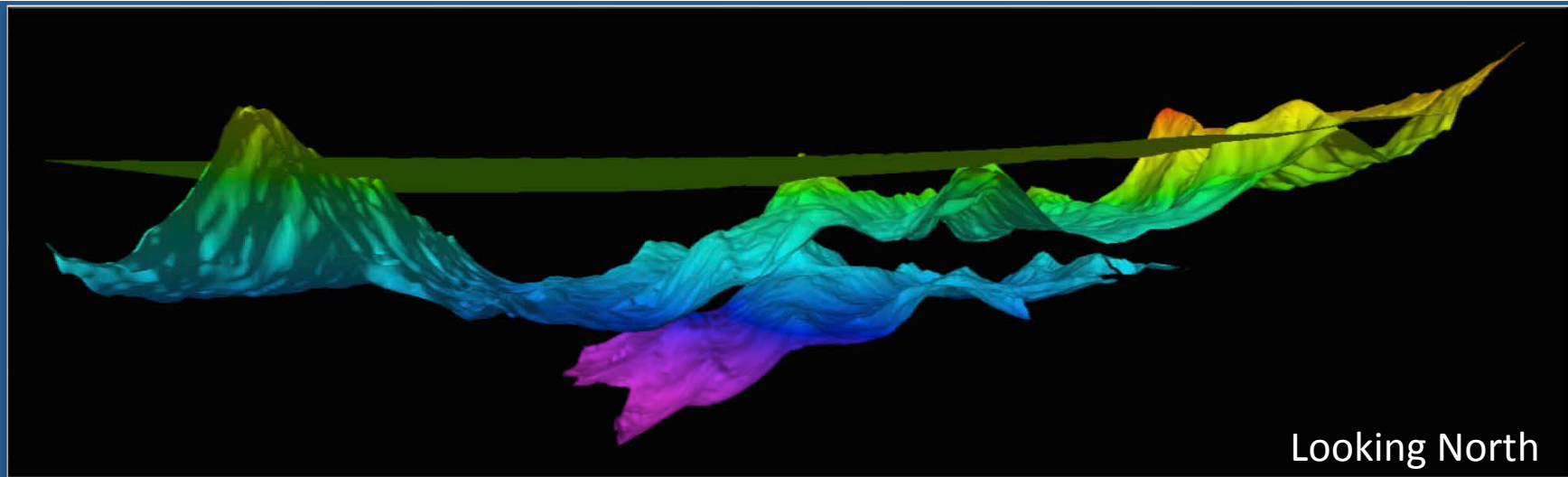
This is a portion of the Galicia 3D reflection seismic volume. It was exposed in order to see features on the inlines, crosslines, and time slices. The volume is 64 by 20 km. The vertical section is from 5.9 to 10.4 seconds (TWT)



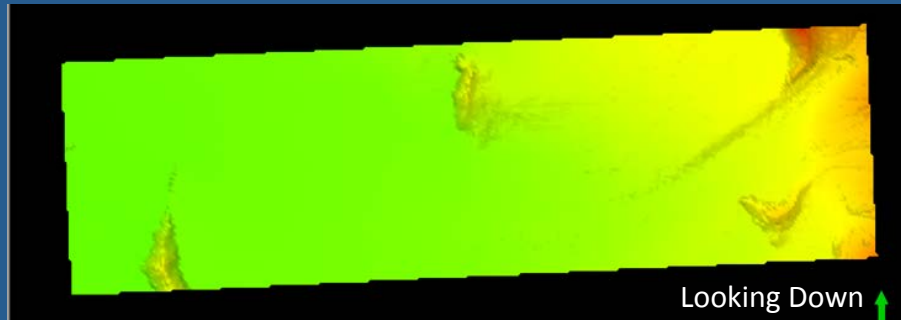
Galicia 3D – Thanks to Repsol, NSF, NERC, and Deutsche NSF

PSTM Repsol - Time

Sawyer – Rice University - Oct 2014



Seafloor



TWT milliseconds

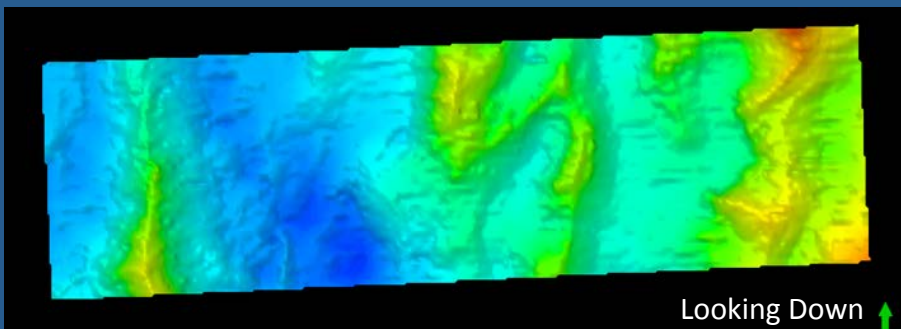
Vertical : 5,300 – 10,000 ms

Three surfaces

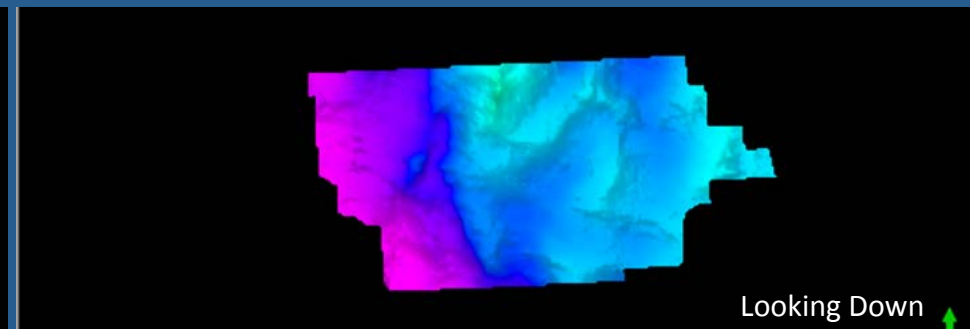
VE = 4X

Volume is 64 km by 20 km

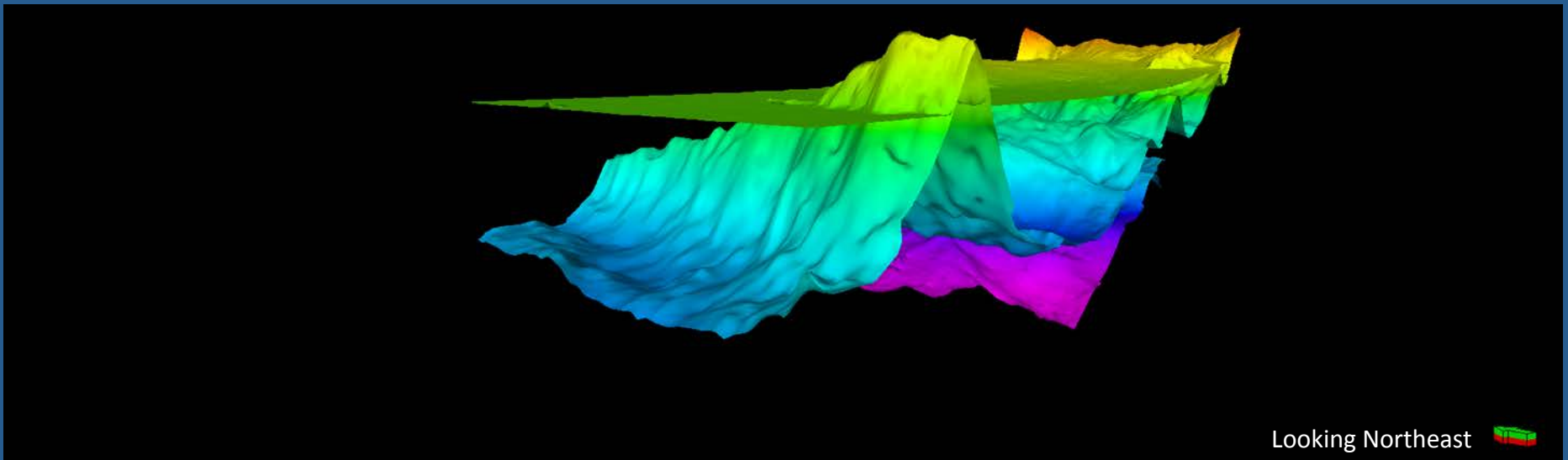
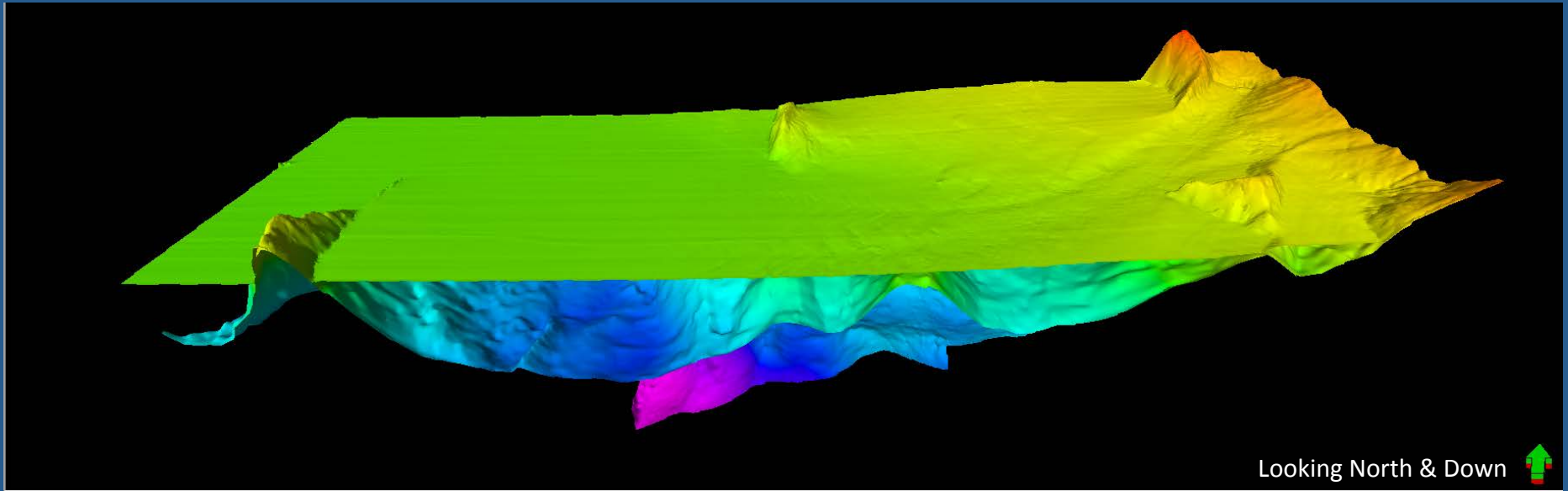
Base Post-rift Sediment



S Reflector



PSTM Repsol - Time



PSTM Repsol - Time

PreStack Time Migration

Inlines, Crosslines, and Time Slices

Velocity models from ISE-1. These were produced using Pre-Stack Depth Migration (PSDM). I have simplified these velocities and extrapolated them throughout the 3D seismic volume.

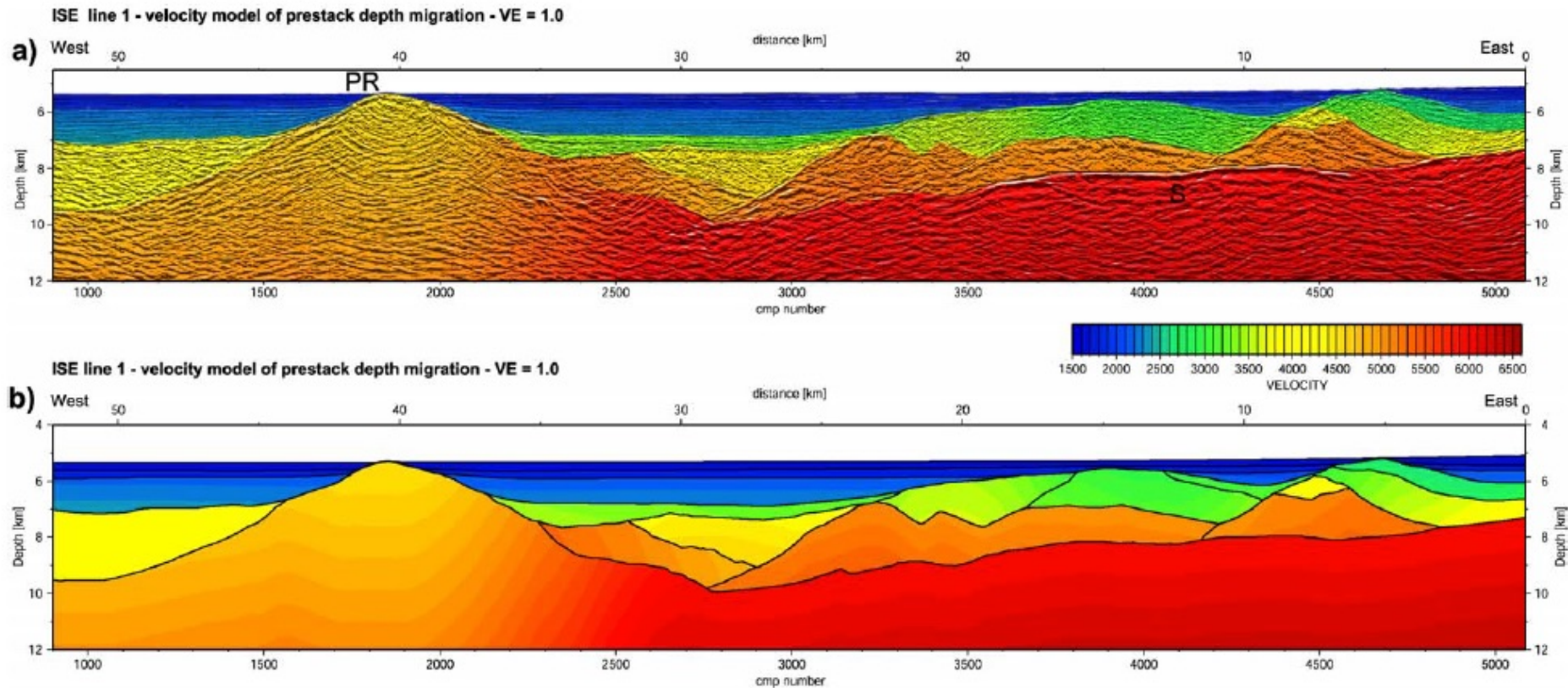
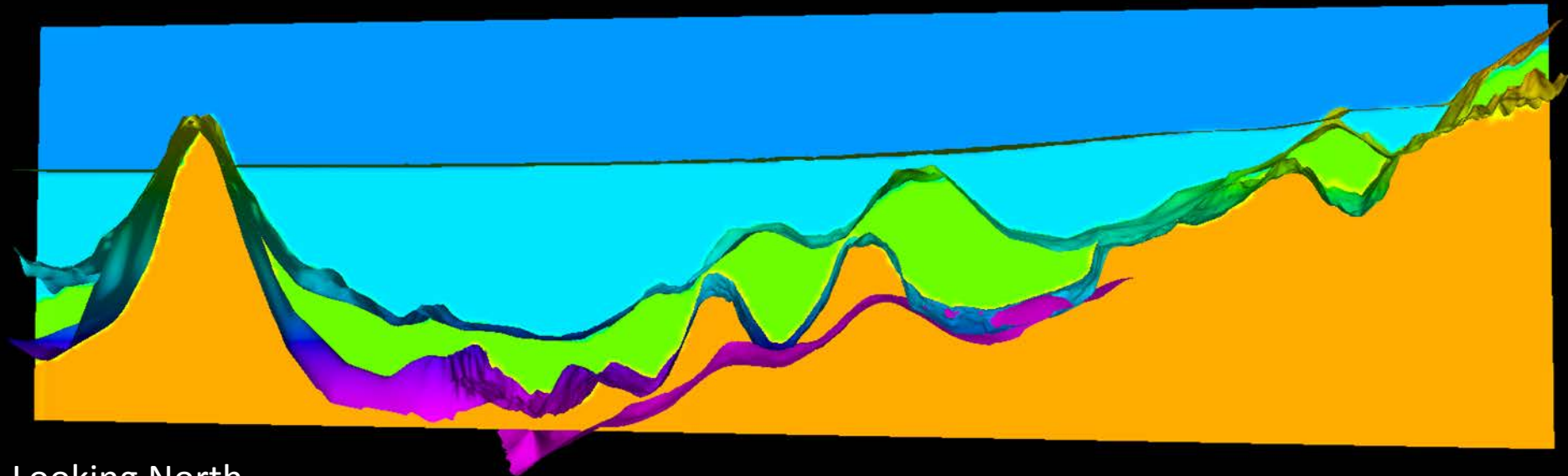


Fig. 4.2.3 : Velocity model of prestack depth migration of line ISE-1 in true scale. (a) Velocity model overlain on seismic image (b) Velocity model including the velocity domains. Velocities deep in section below S and peridotite ridge (PR) are poorly constrained.



Looking North

Time, TWT ms
4X exaggeration

Sea Surface (not displayed)

1500 m/s - Blue

Seafloor

2000 m/s - Light Blue

Above Post-rift sediments

3500 m/s - Green

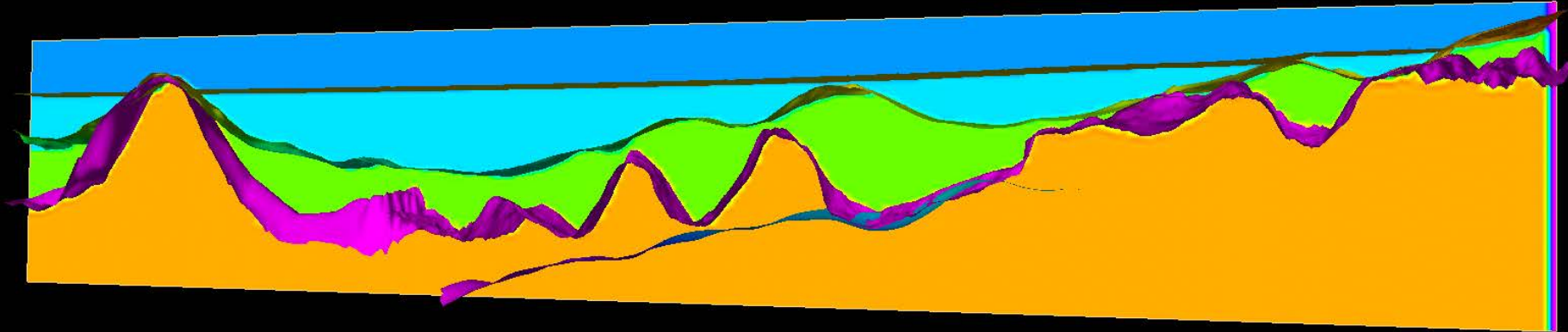
Above all sediments

5000 m/s - Orange

S-reflector

5000 m/s - Orange

PSTM Repsol - Time



Looking North

Depth, meters
2X Exaggeration

Sea Surface (not displayed)

1500 m/s - Blue

Seafloor

2000 m/s - Light Blue

Above Post-rift sediments

3500 m/s - Green

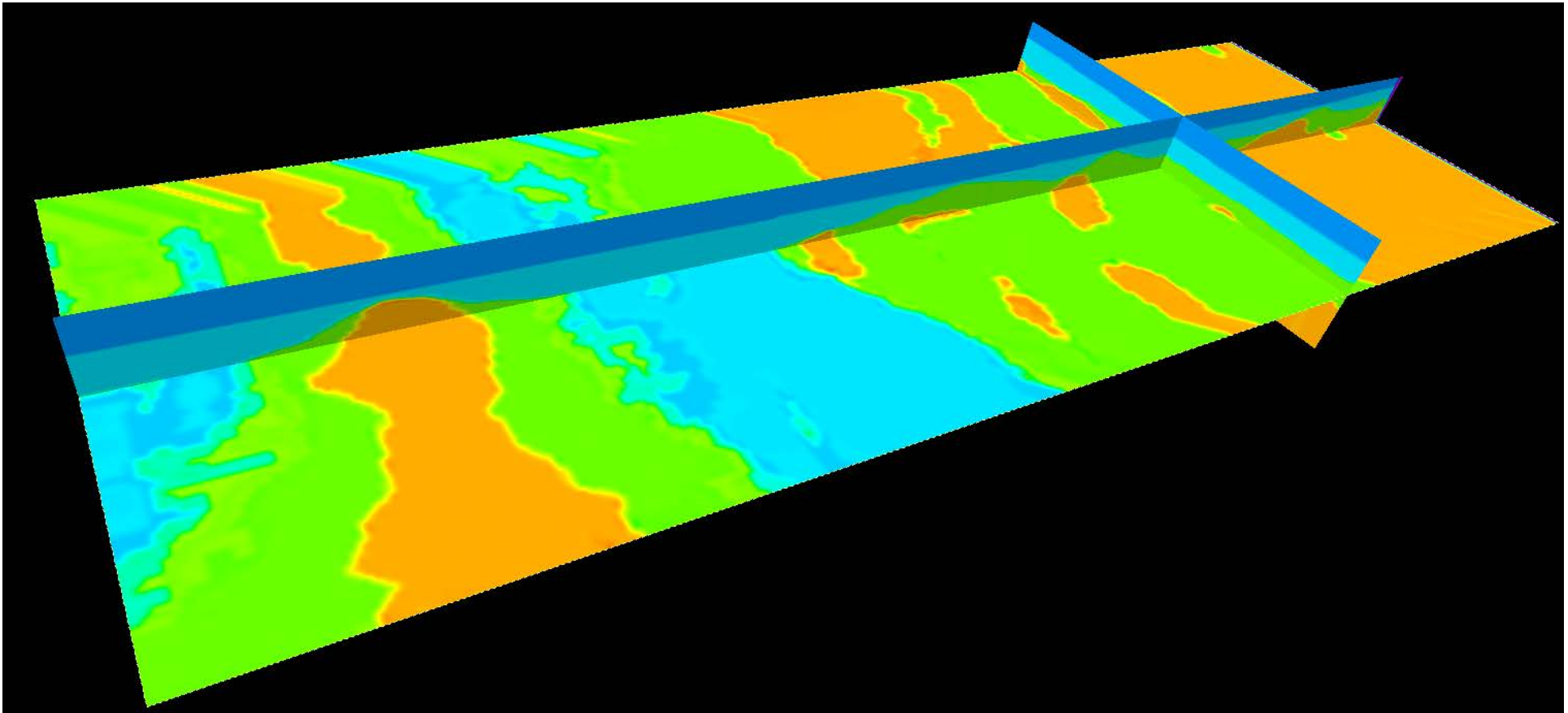
Above all sediments

5000 m/s - Orange

S-reflector

5000 m/s - Orange

PSTM Repsol - Depth



1500 m/s - Blue

Sea floor

2000 m/s - Light Blue

Above Post-rift sediments

3500 m/s - Green

Above all sediments

5000 m/s - Orange

S-reflector

5000 m/s - Orange

PSTM Repsol - Depth

PreStack Time Migration with Depth Conversion

Inlines, Crosslines, and Depth Slices

Galicia 3D Presentations

T54A-03 Friday 4:30 pm Gaye Bayrakci
3D P-Wave Velocity Structure of the Deep Galicia Rifted Margin

T43A-4682 Thursday Poster Dale Sawyer
3D Seismic Reflection Experiment over the Galicia Deep Basin

T43A-4683 Thursday Poster Sarah L Dean
Galicia Bank Ocean-Continent Transition Zone: New Seismic
Reflection Constraints

T43A-4684 Thursday Poster Richard G Davy
Searching for the Onset of Seafloor Spreading West of Galicia:
Wide-Angle Seismic Constraints