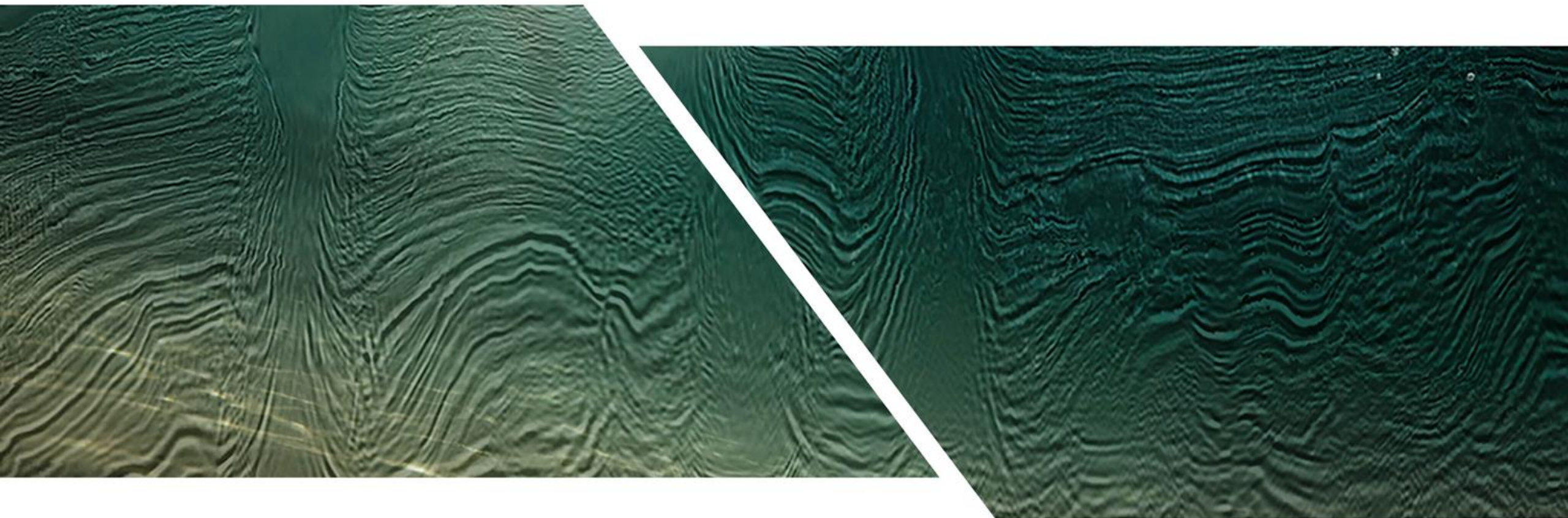
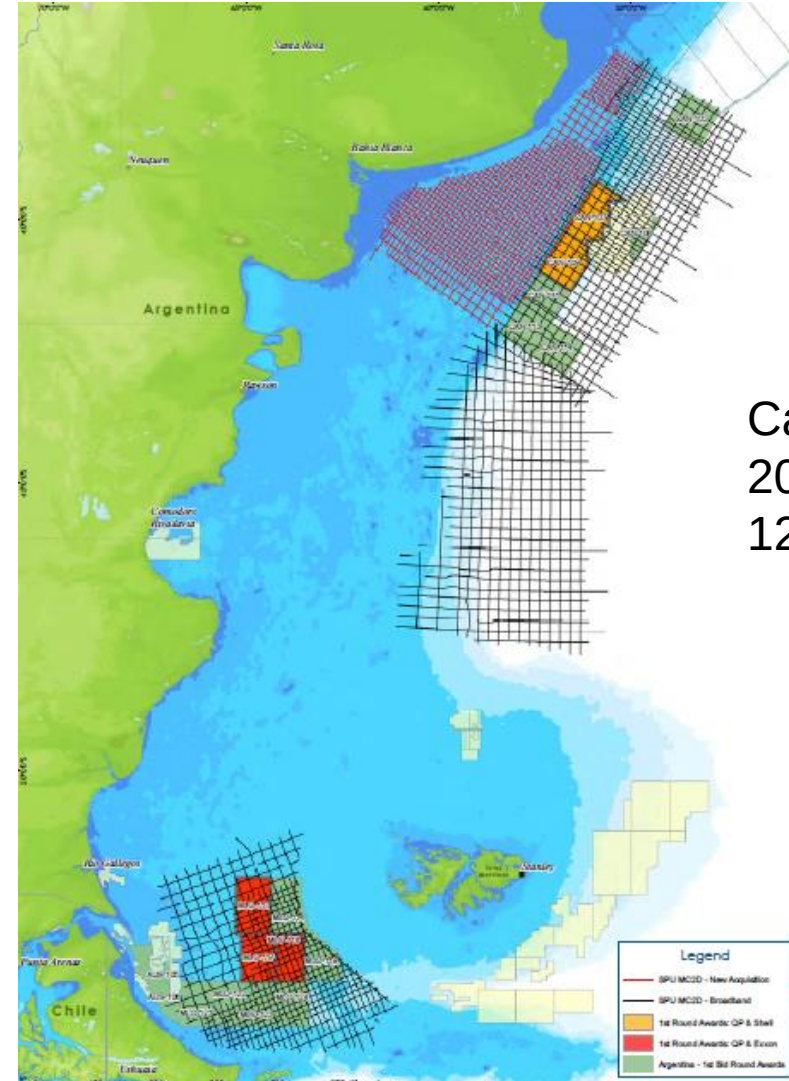
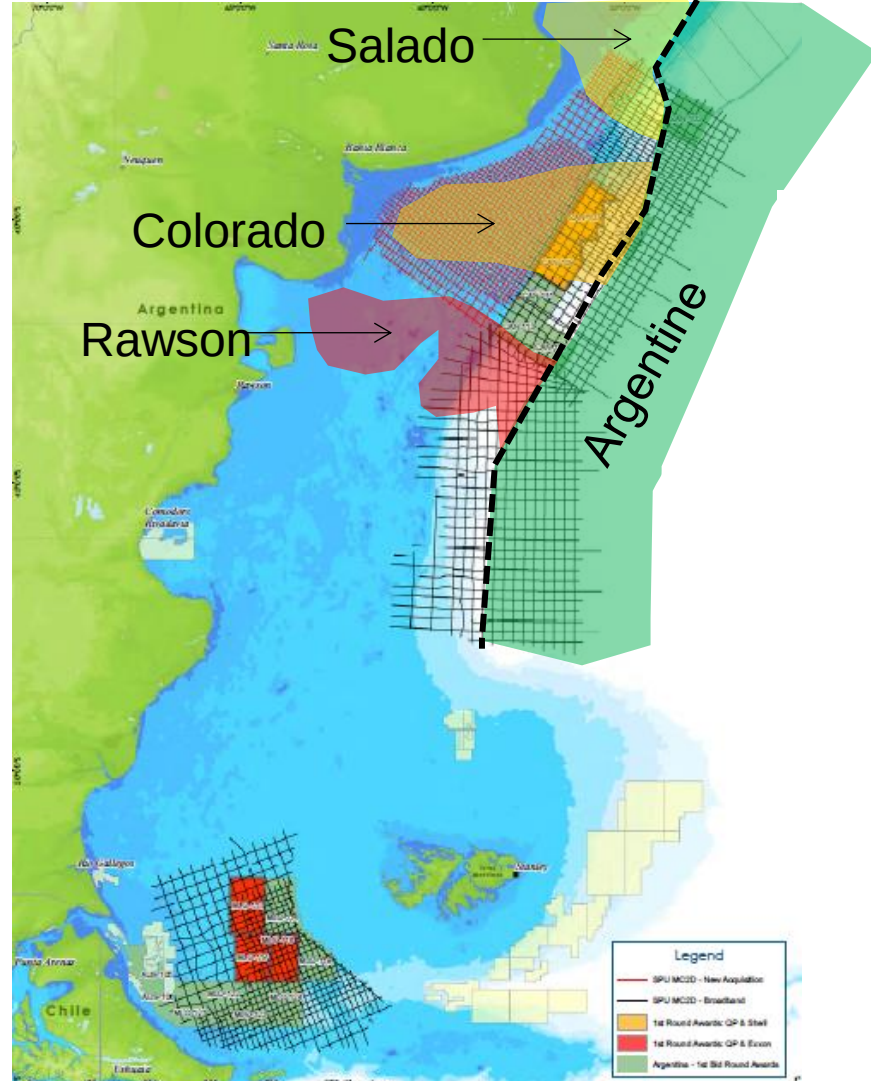




“Offshore Northern Argentina – A New Frontier ”

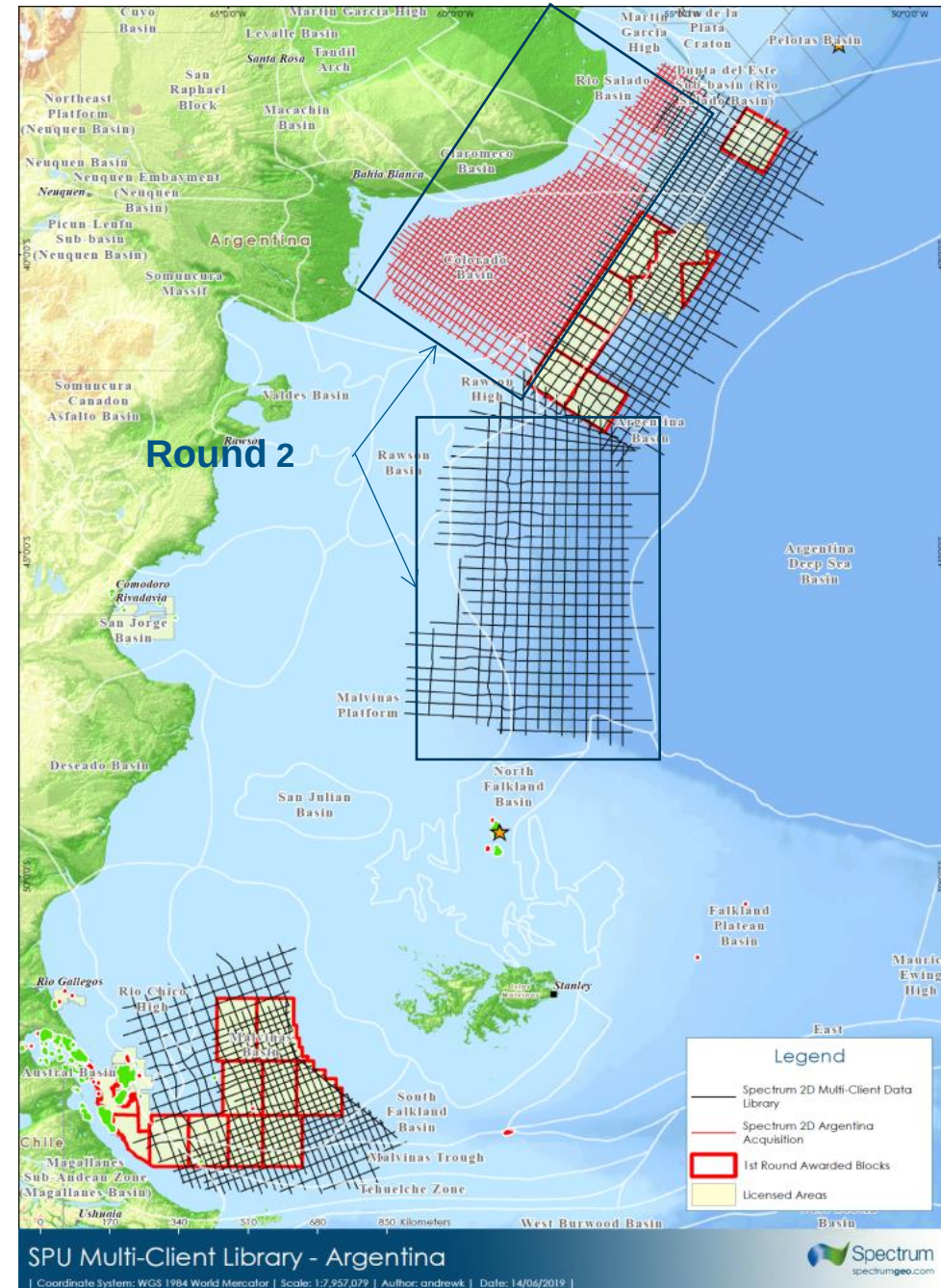


Geography and Dataset

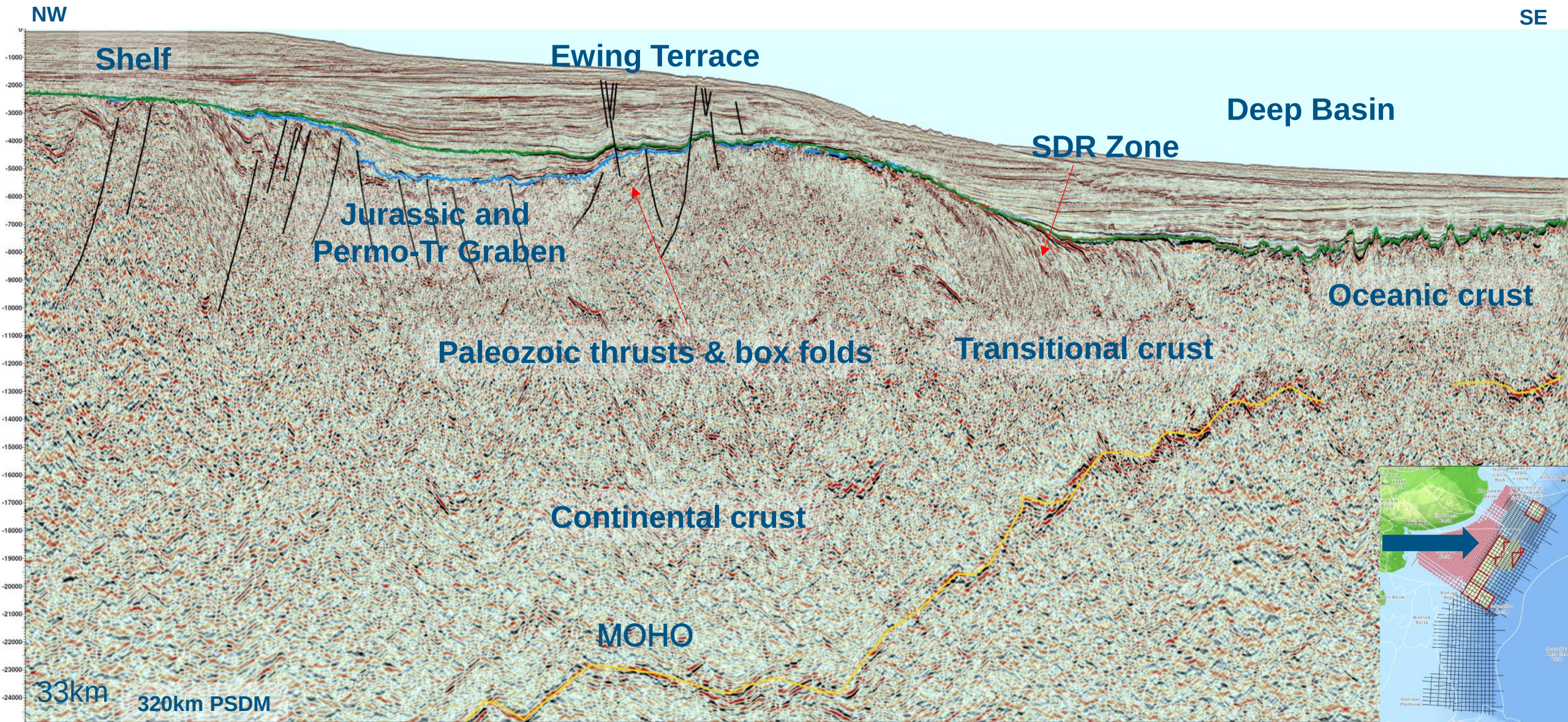


Ca 64,000km 2D
2018-2019
12km Long streamer

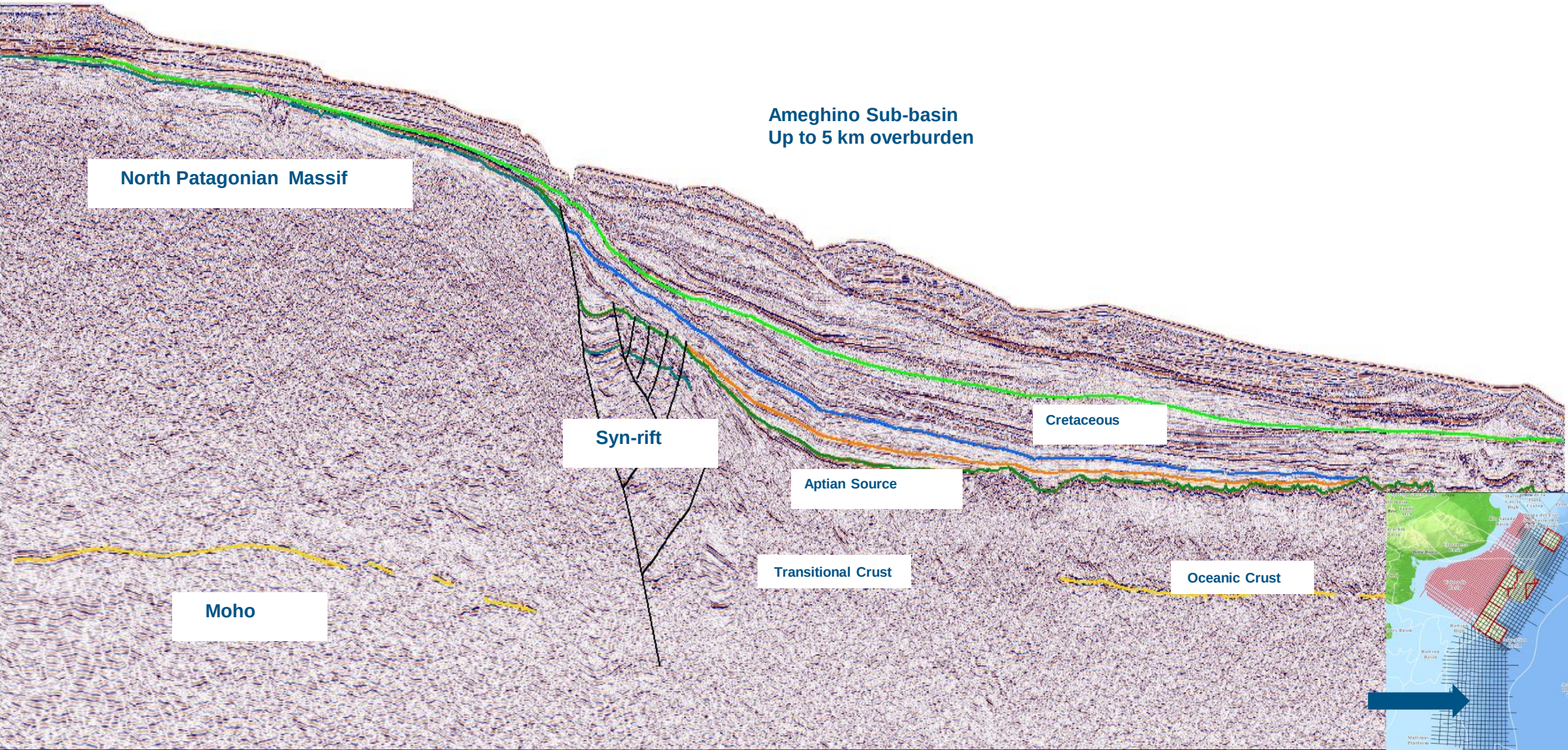
- Argentina Offshore License Round 1 Awards –
 - 7/14 blocks Argentina North
 - 11/24 Austral-Malvinas
- Offshore Round 2 – Southern Argentina and Colorado Basins



Northern Argentina's Atlantic Margin Structure



PSTM Round 2 Northern Argentina Margin Structure

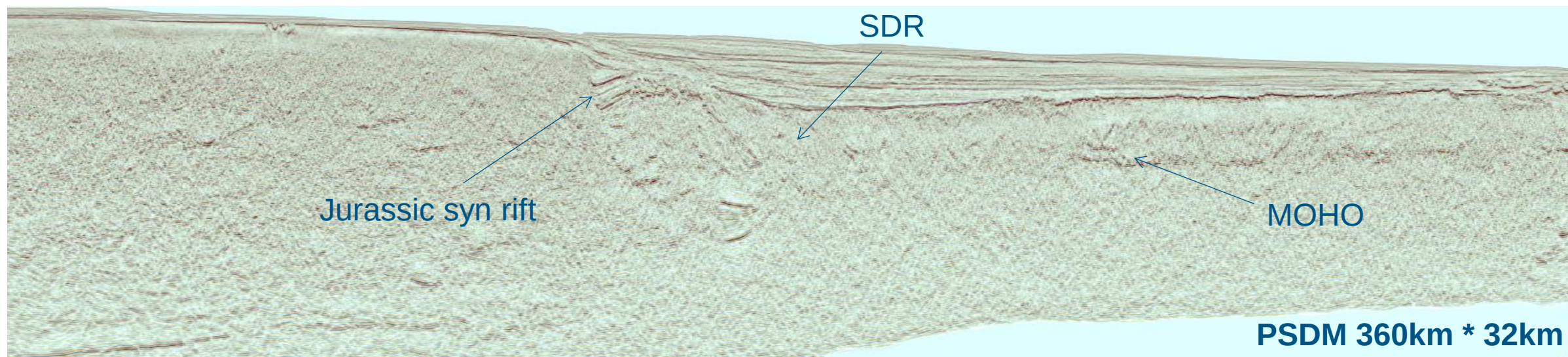
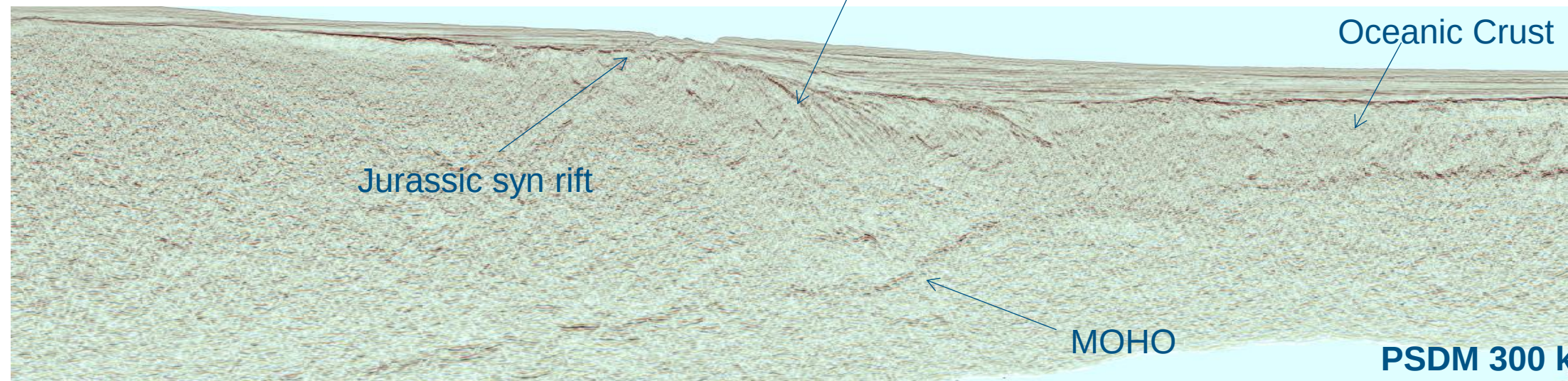


Crustal Architecture Argentine Basin

NW

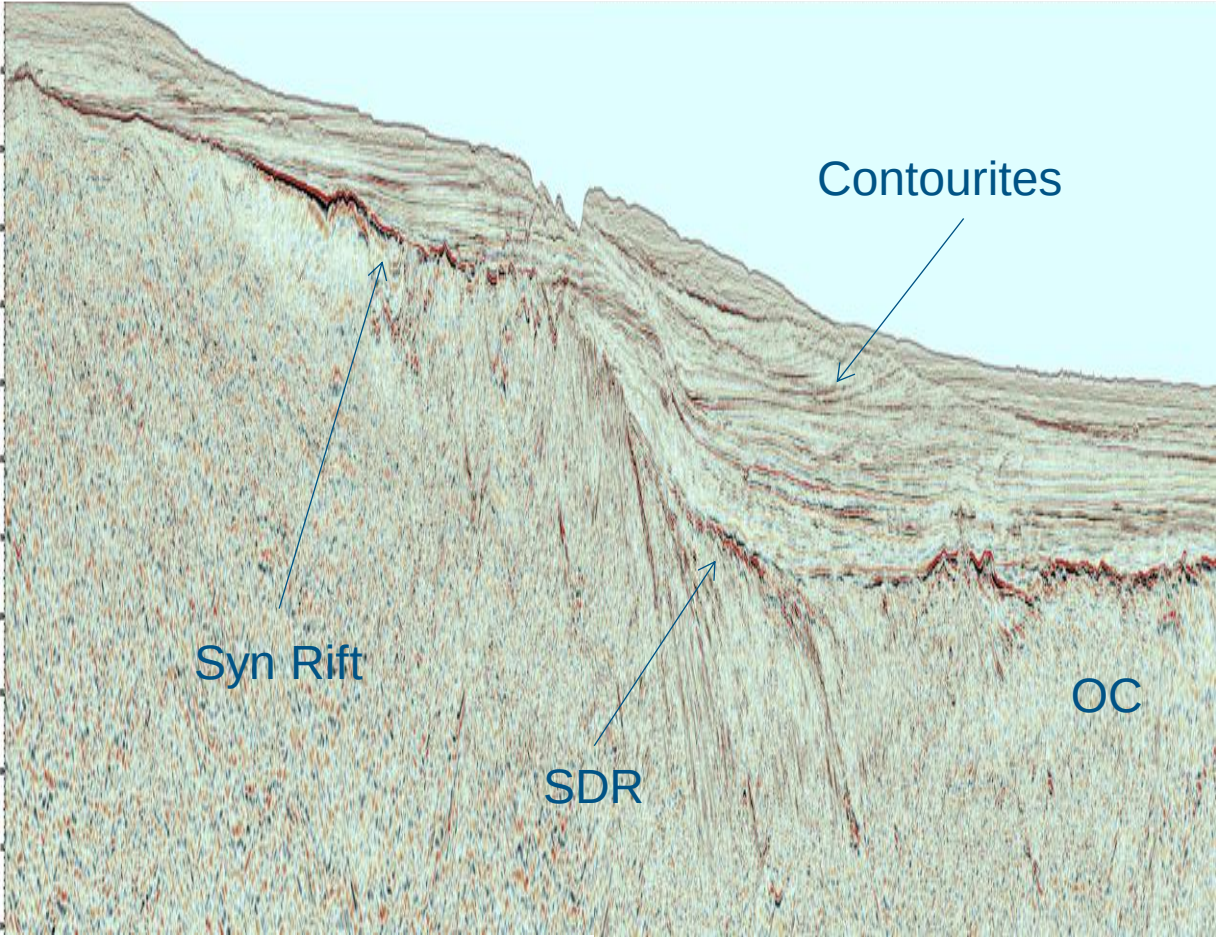
SDR

SE



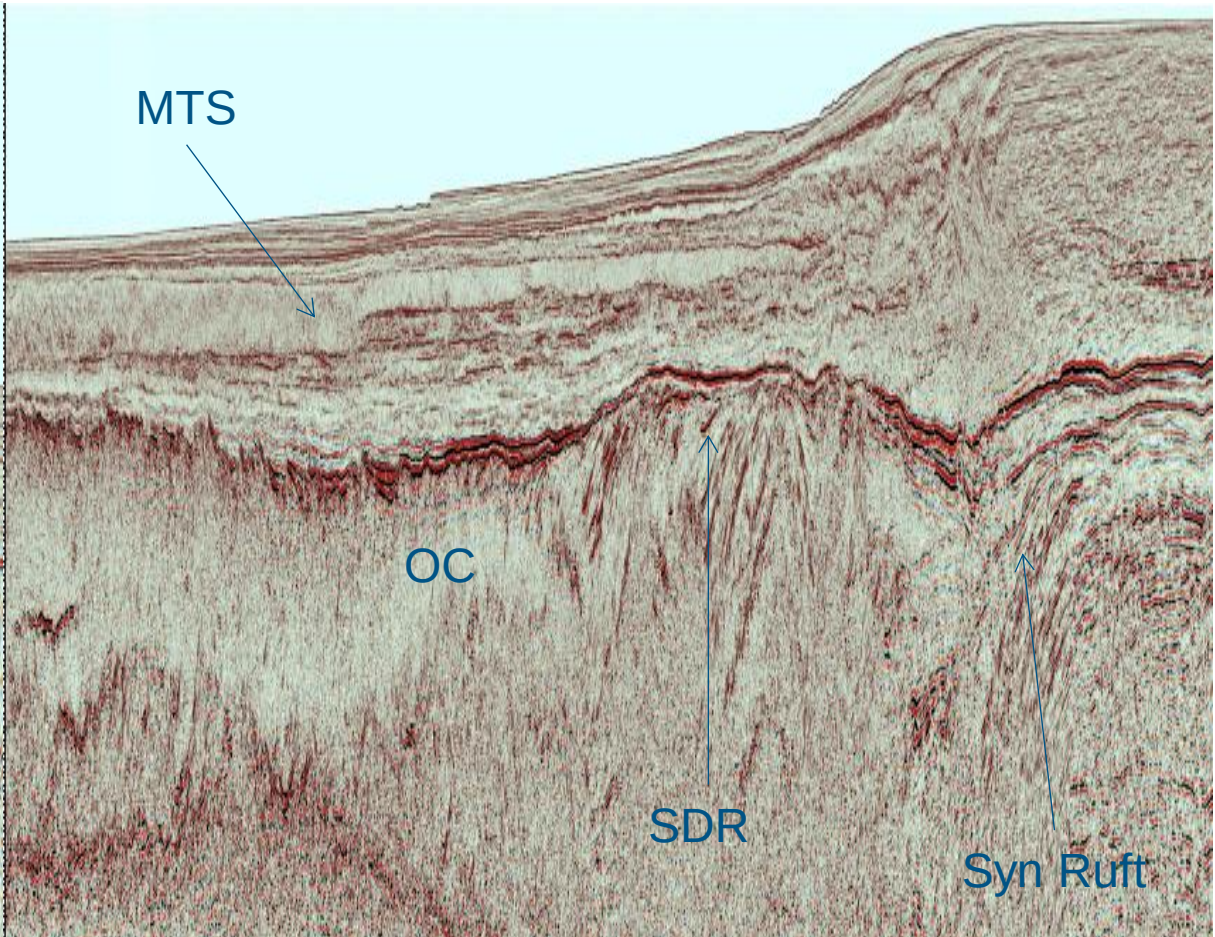
Conjugate with Orange Basin South Africa

Sea level



Argentine Basin

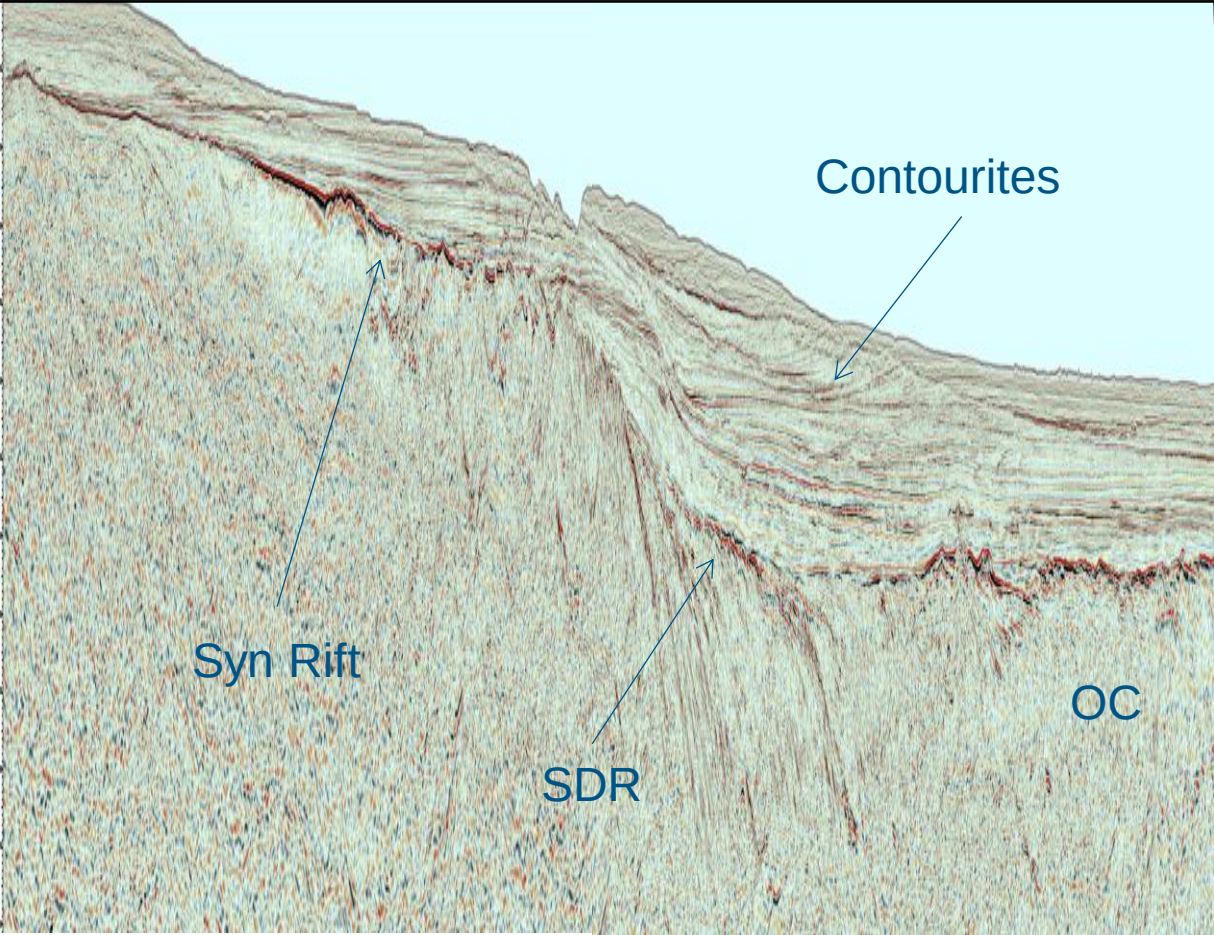
300km 2D PSDM



Orange Basin

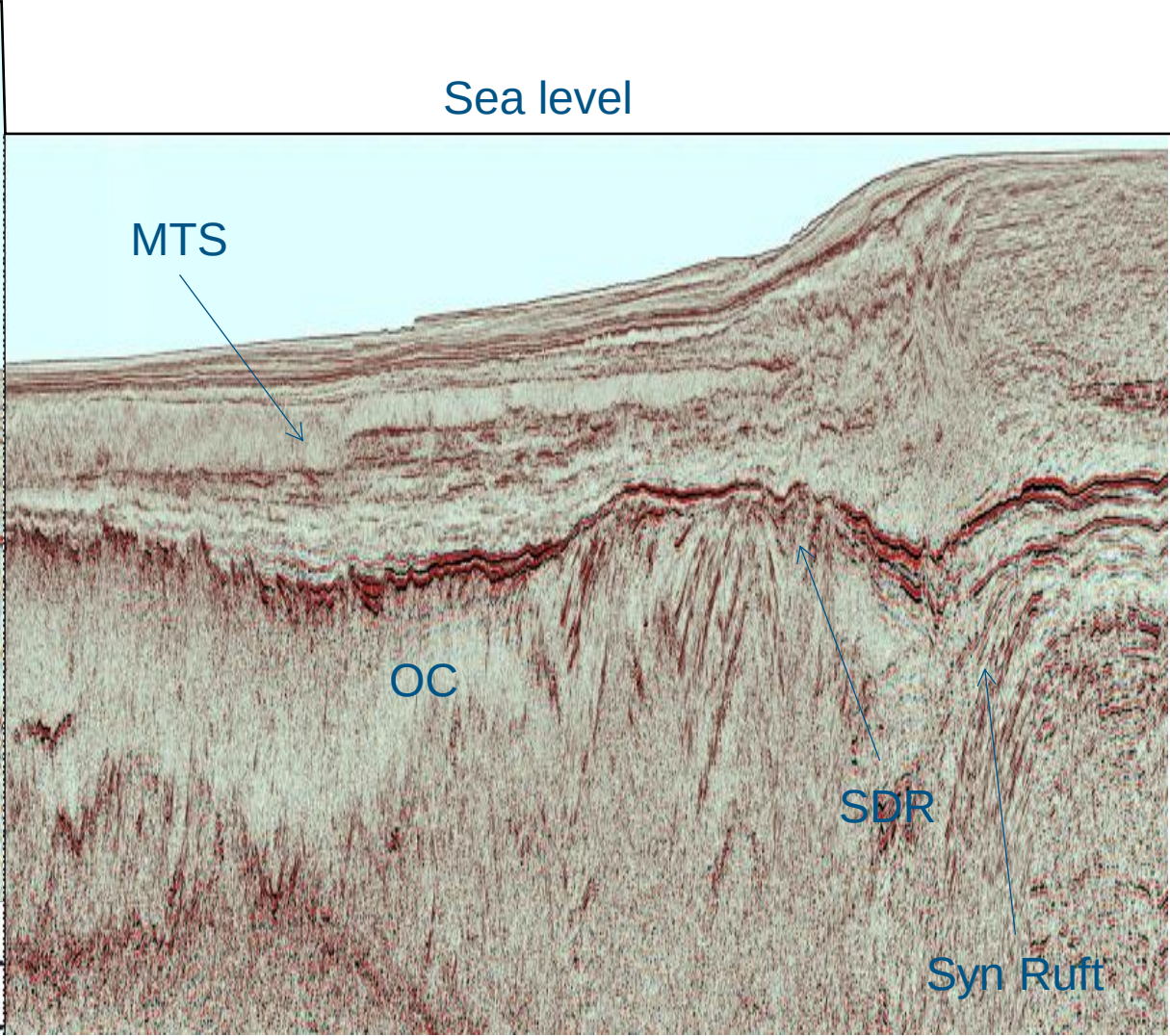
300km 2D PSDM

Conjugate with Orange Basin South Africa



Argentine Basin

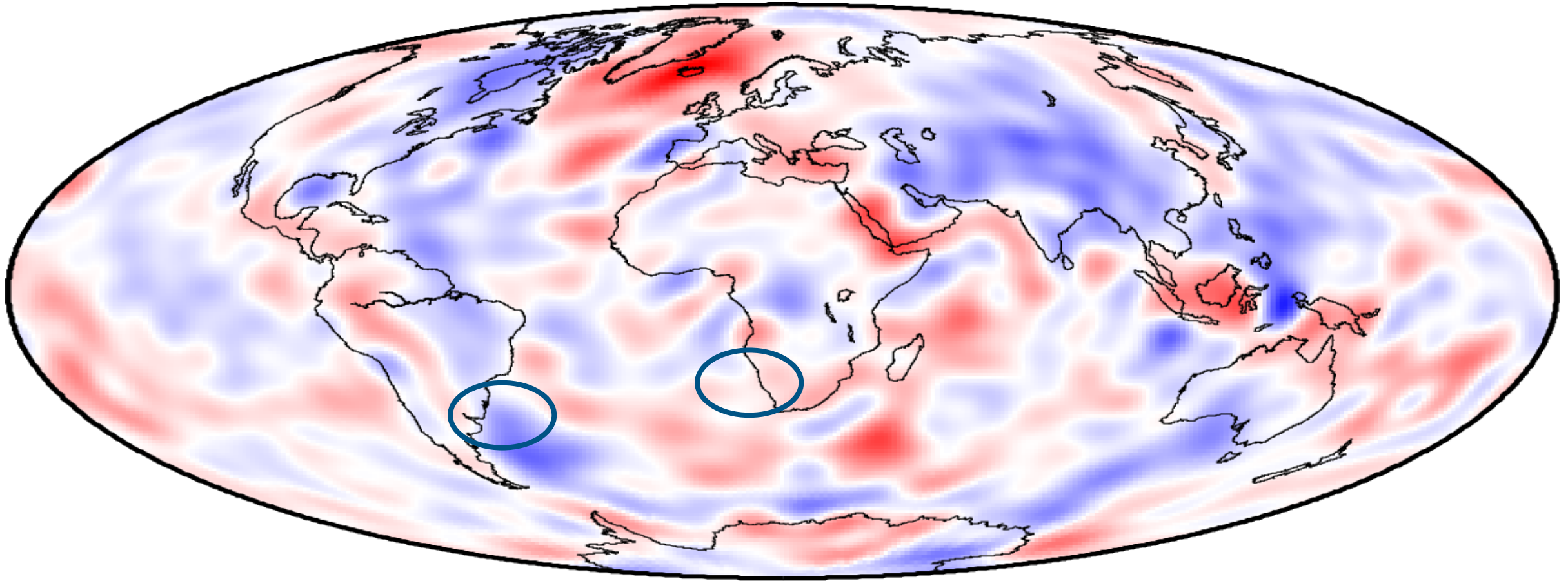
300km 2D PSDM



Orange Basin

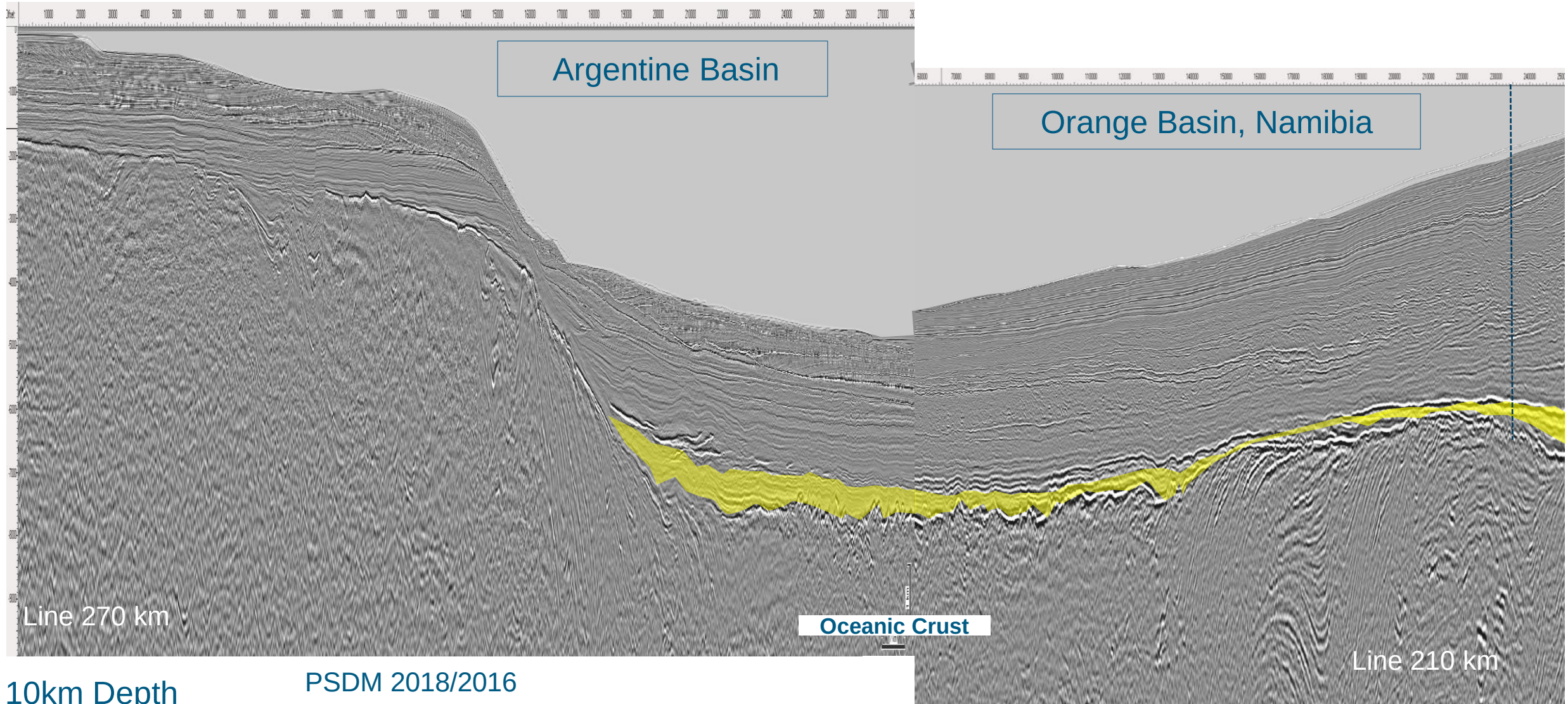
300km 2D PSDM

Current Day Dynamic Topography

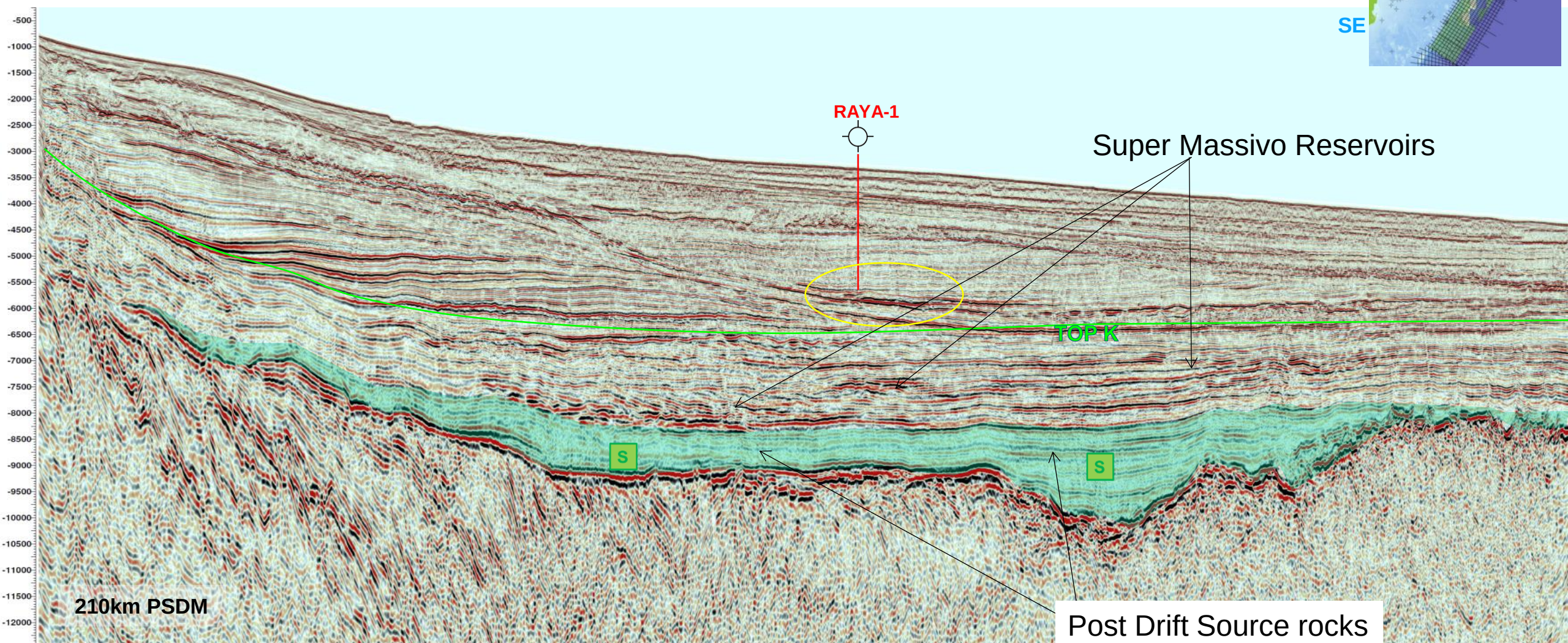
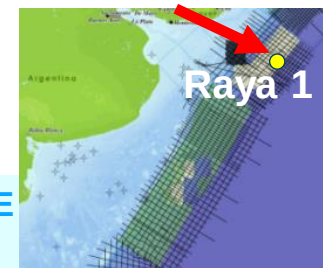


Basin subsidence expression and constant convection cells

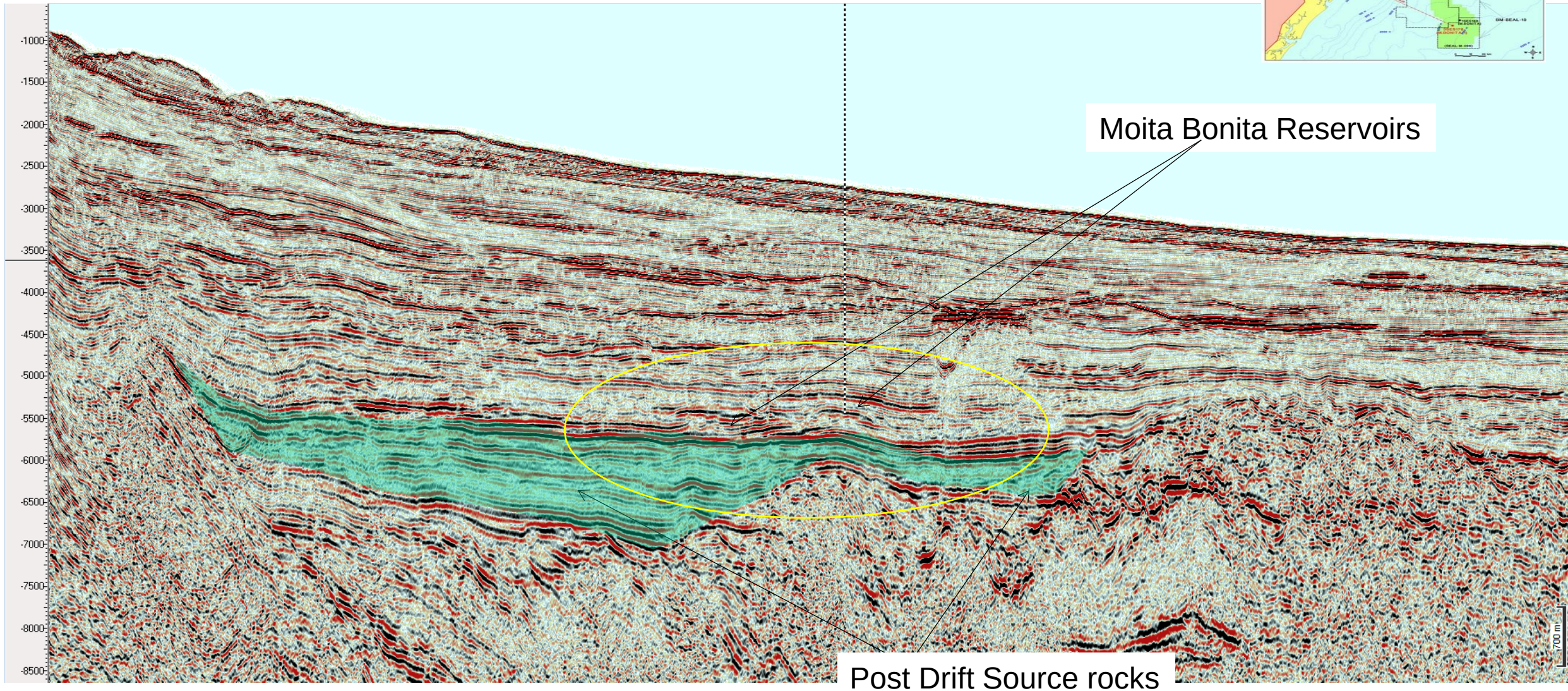
Aptian source rock signature



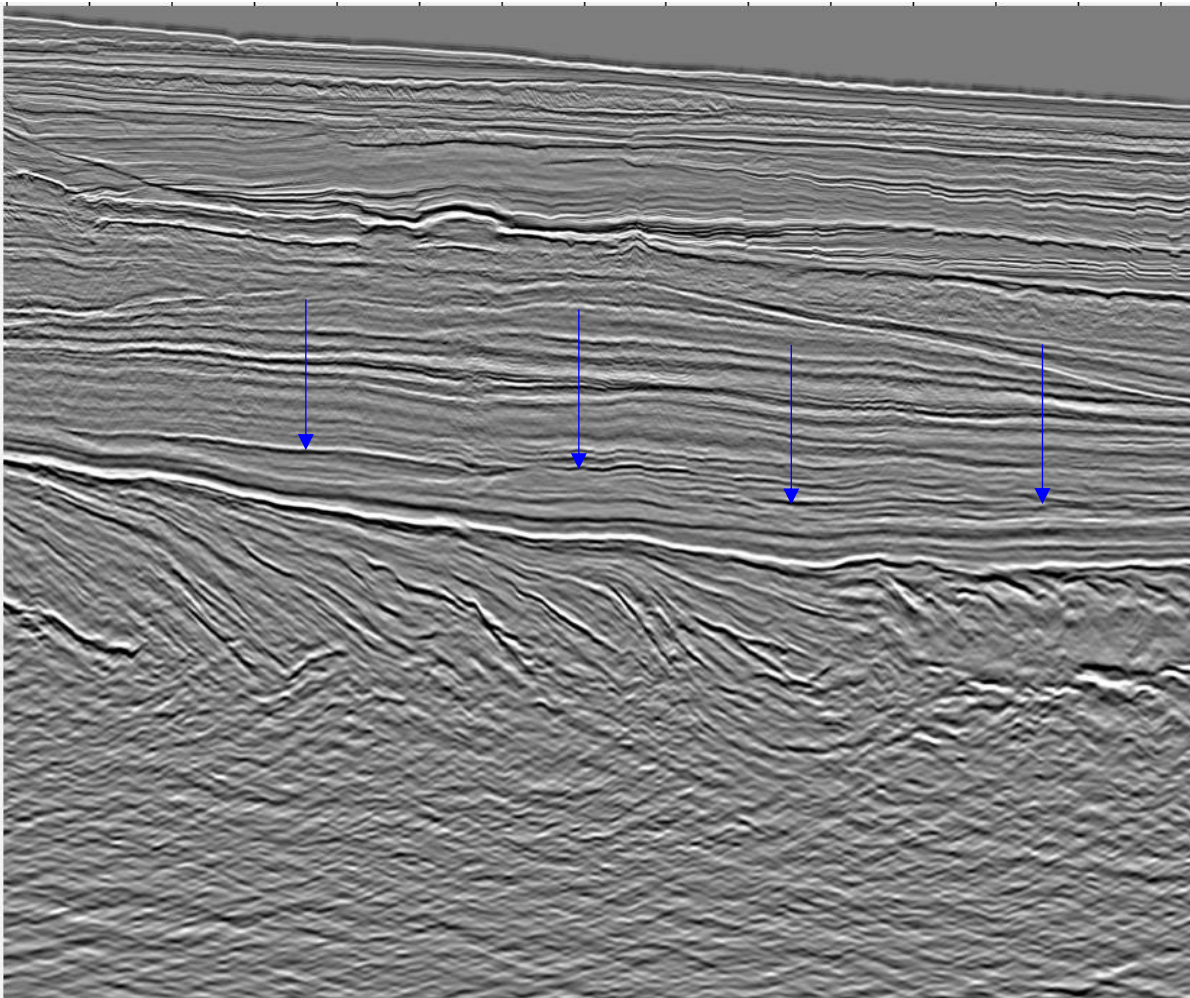
Southern Pelotas Basin, Uruguay



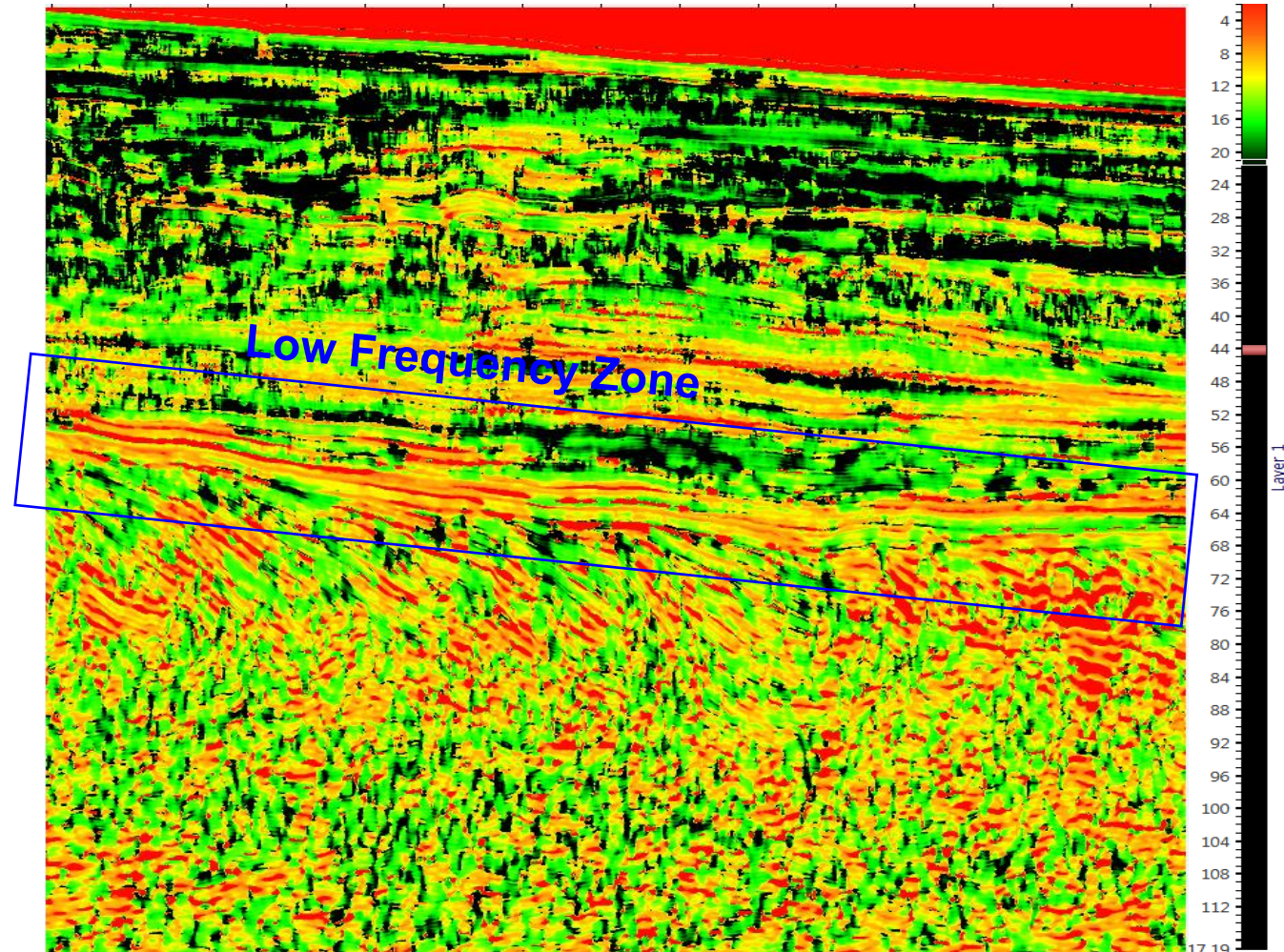
Sergipe Line: Moita Bonita



Aptian Source: vs Loeseth et al criteria

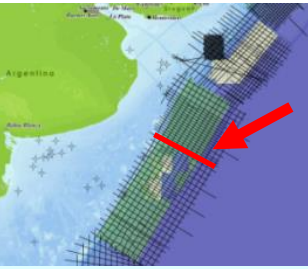
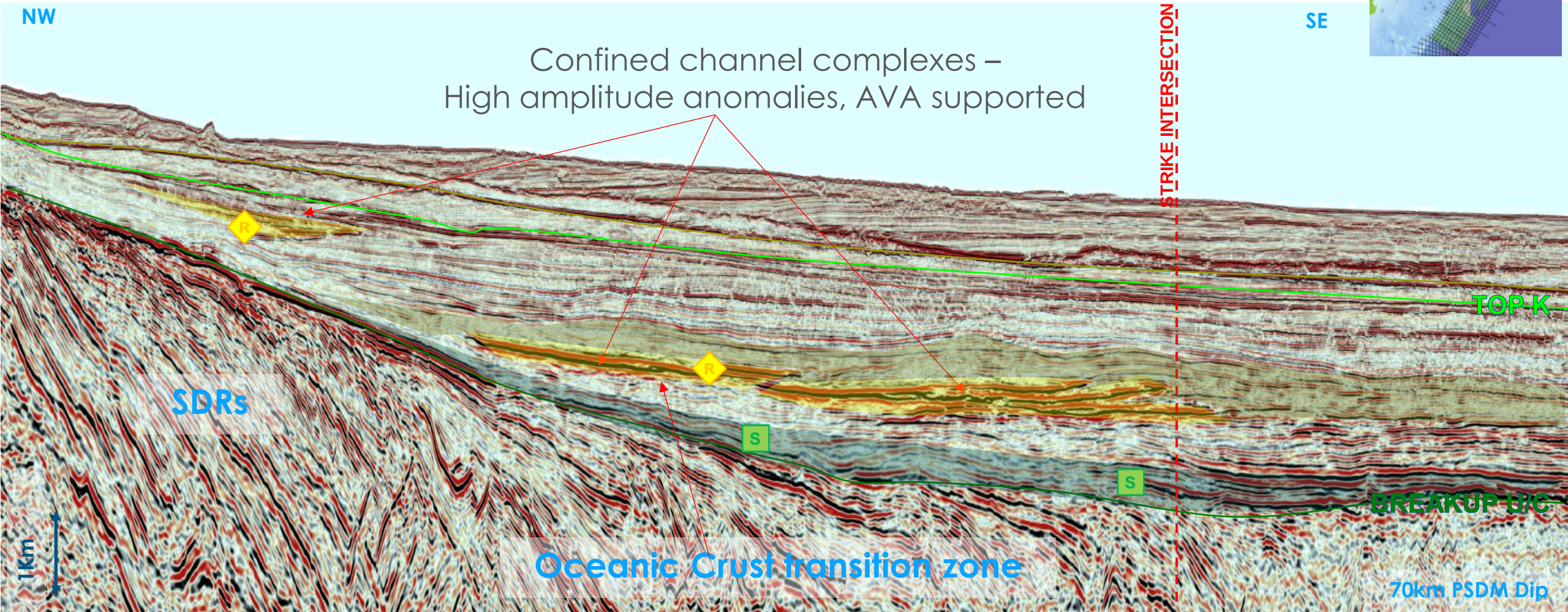


Final PSTM



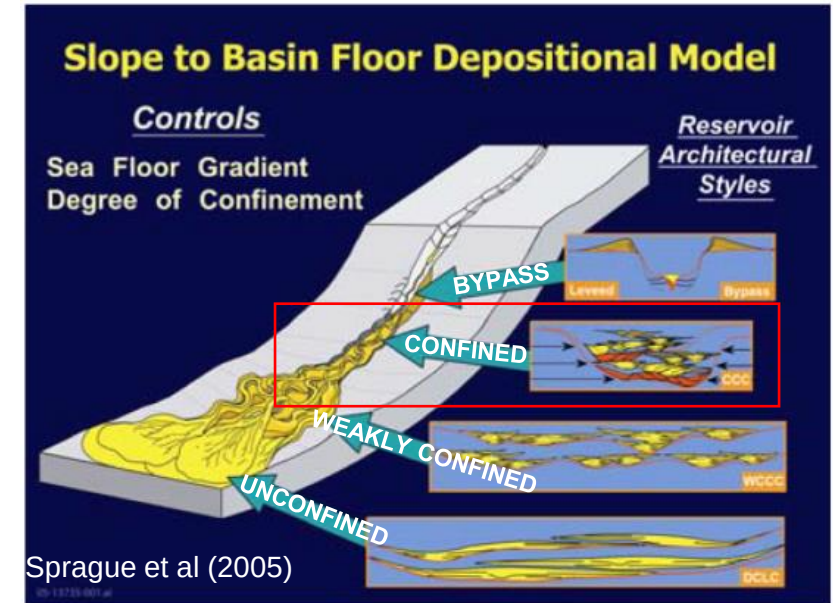
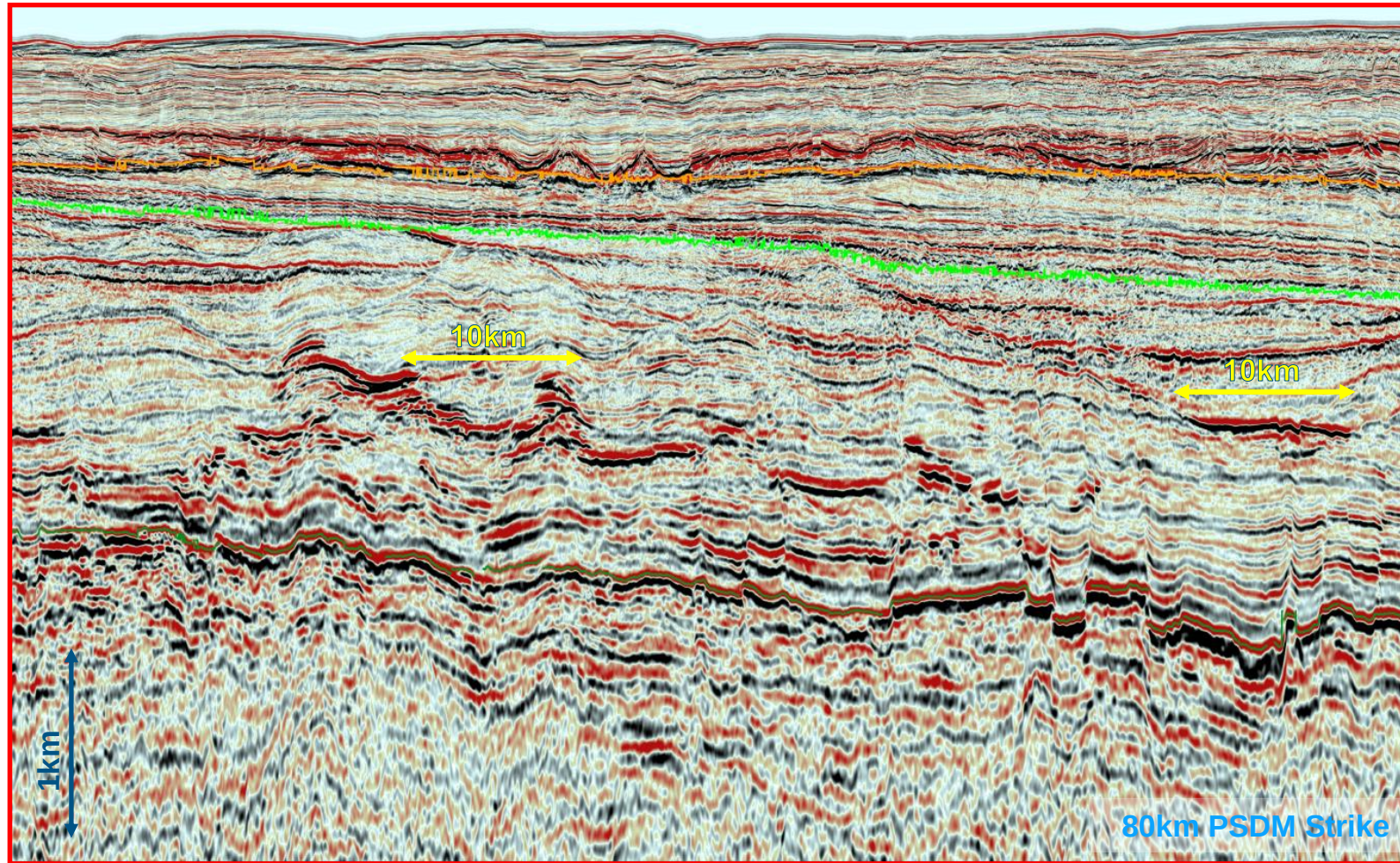
Dominant Frequency Attribute

Argentine Basin – Play Example



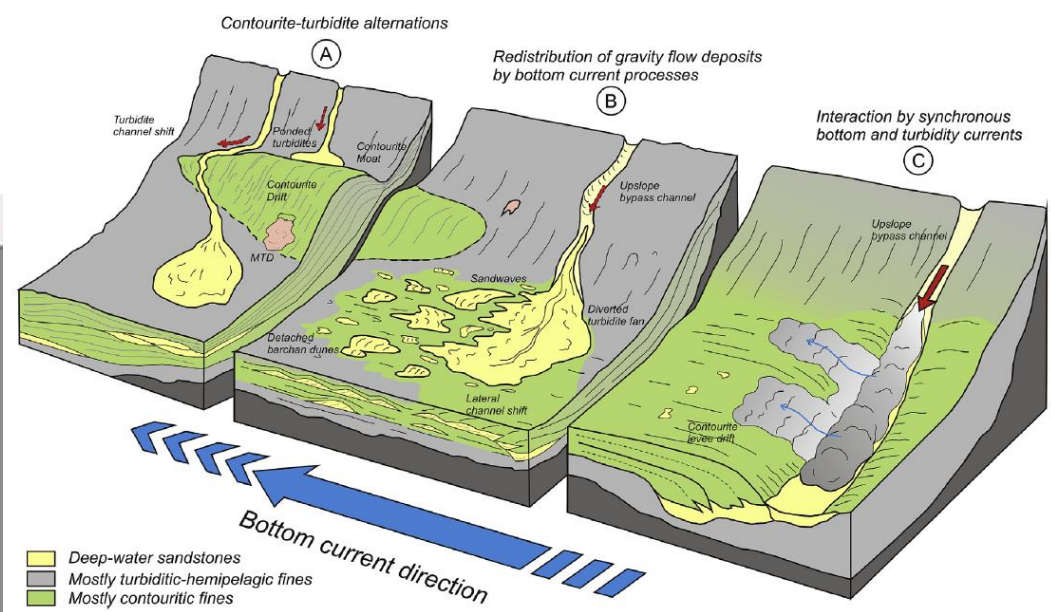
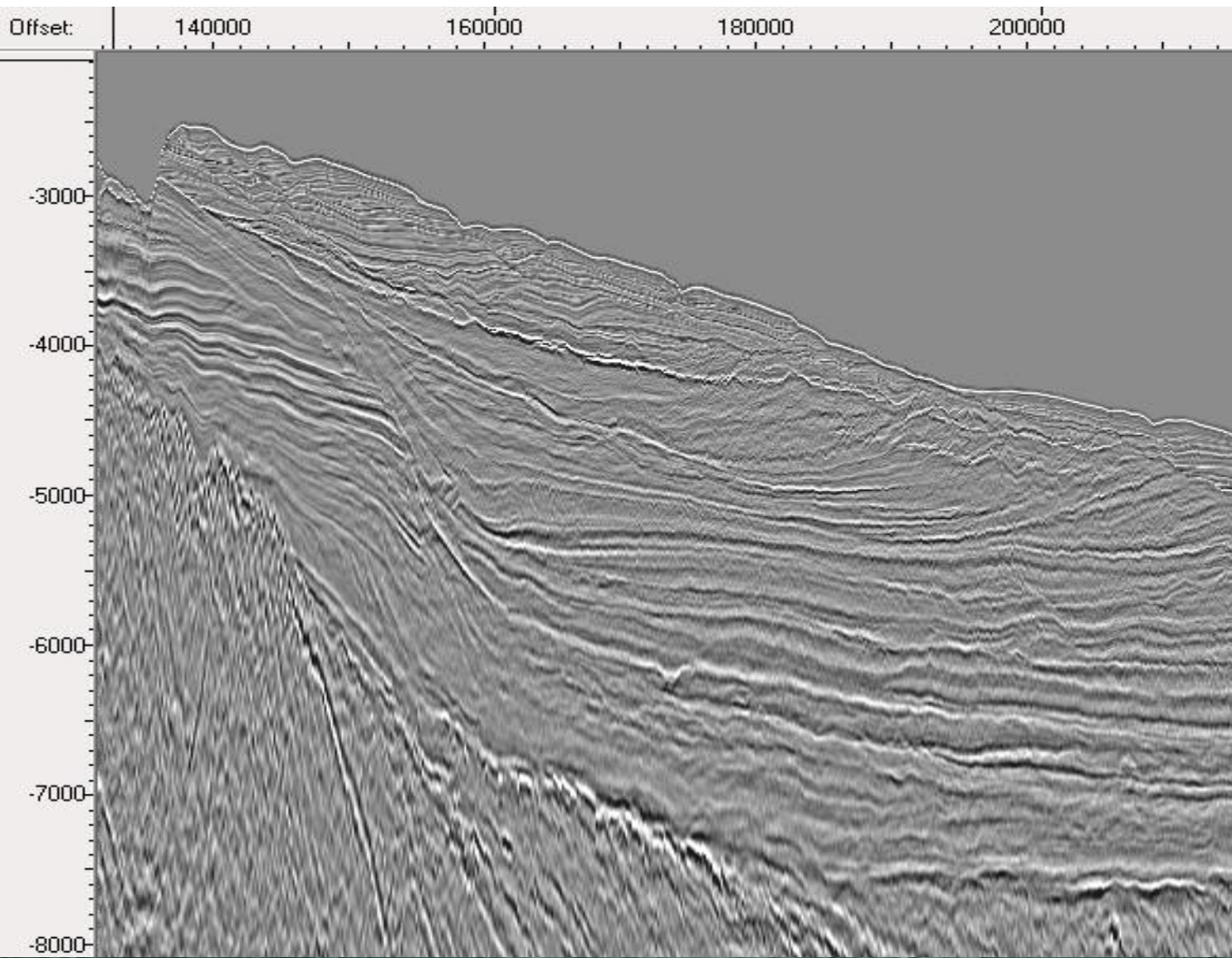
Aptian source modelled in oil window

Argentina Basin – Play Example



- Coarse-grained channels and fine-grained contourite drift mounds formed by deep water processes
- Well-sorted, clean sandstone reservoirs predicted by model

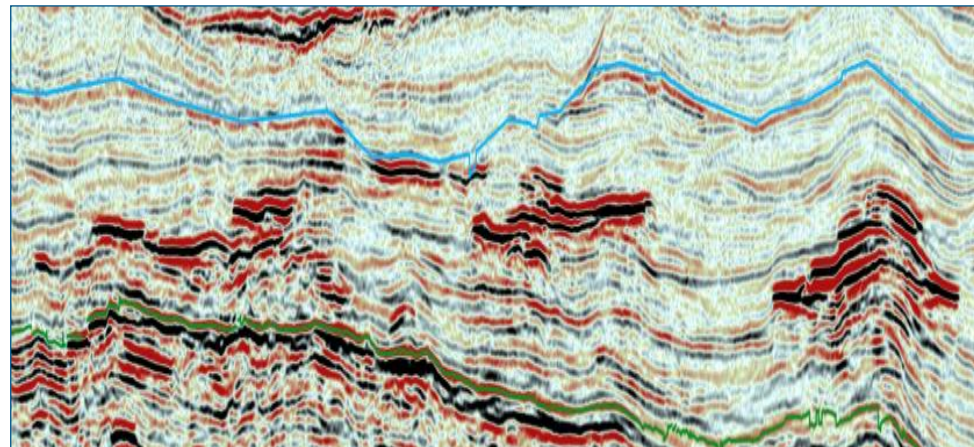
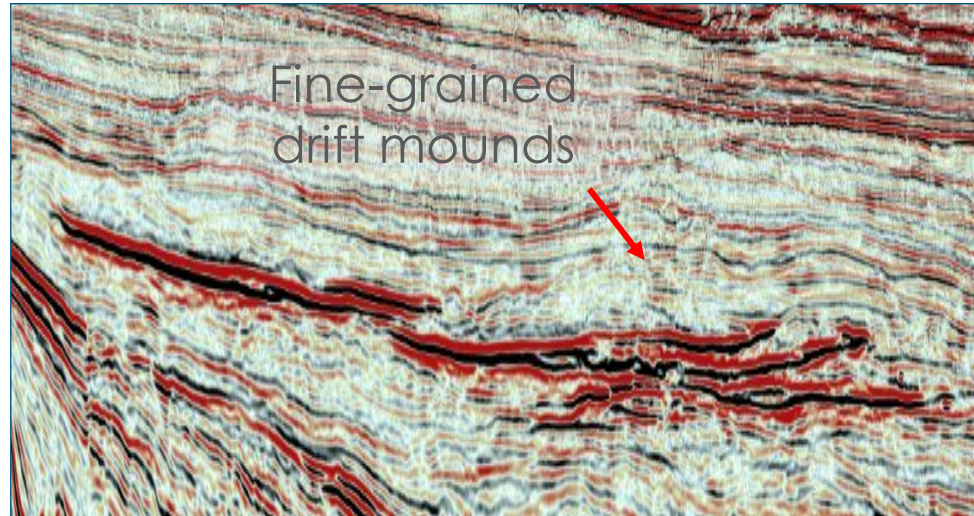
Argentina



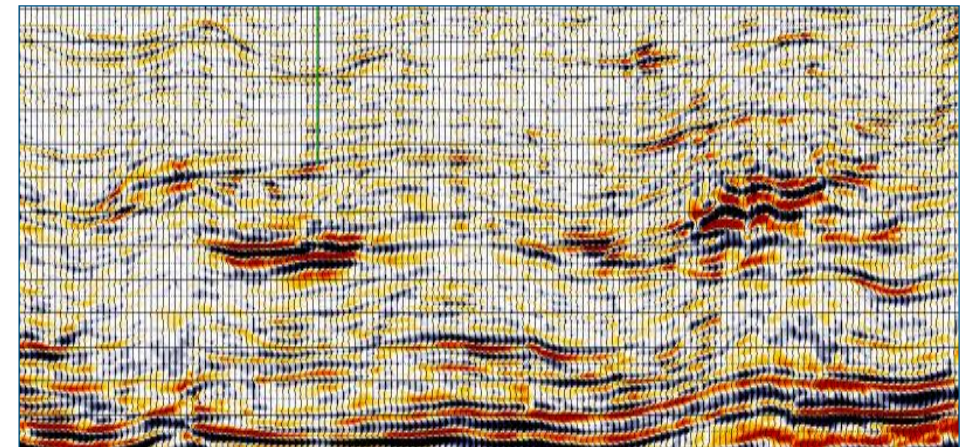
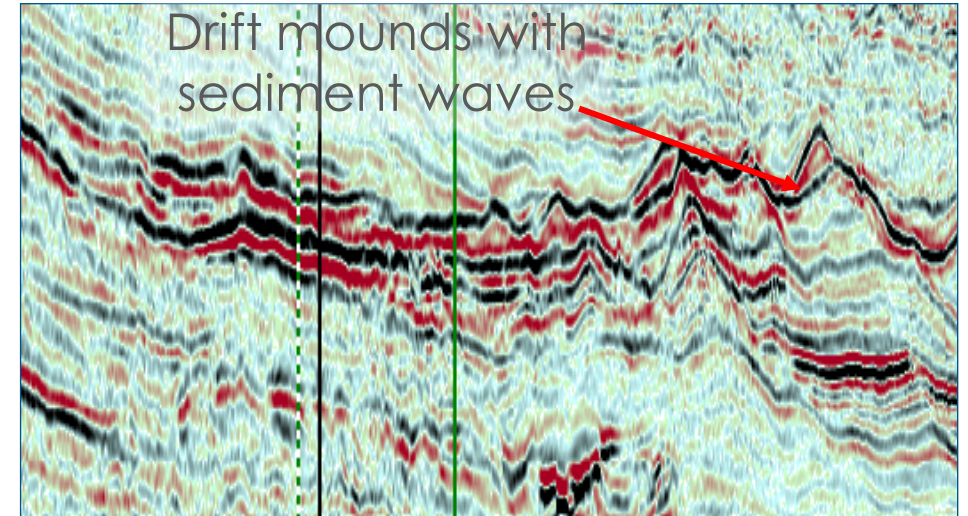
Argentina Basin – Play Example

- Supported by amplitude & AVA anomalies
- Huge areas:
Sergipe
1900km²
(3BBO)
Argentina
5700km²
- Directly overlie oil-mature Aptian source

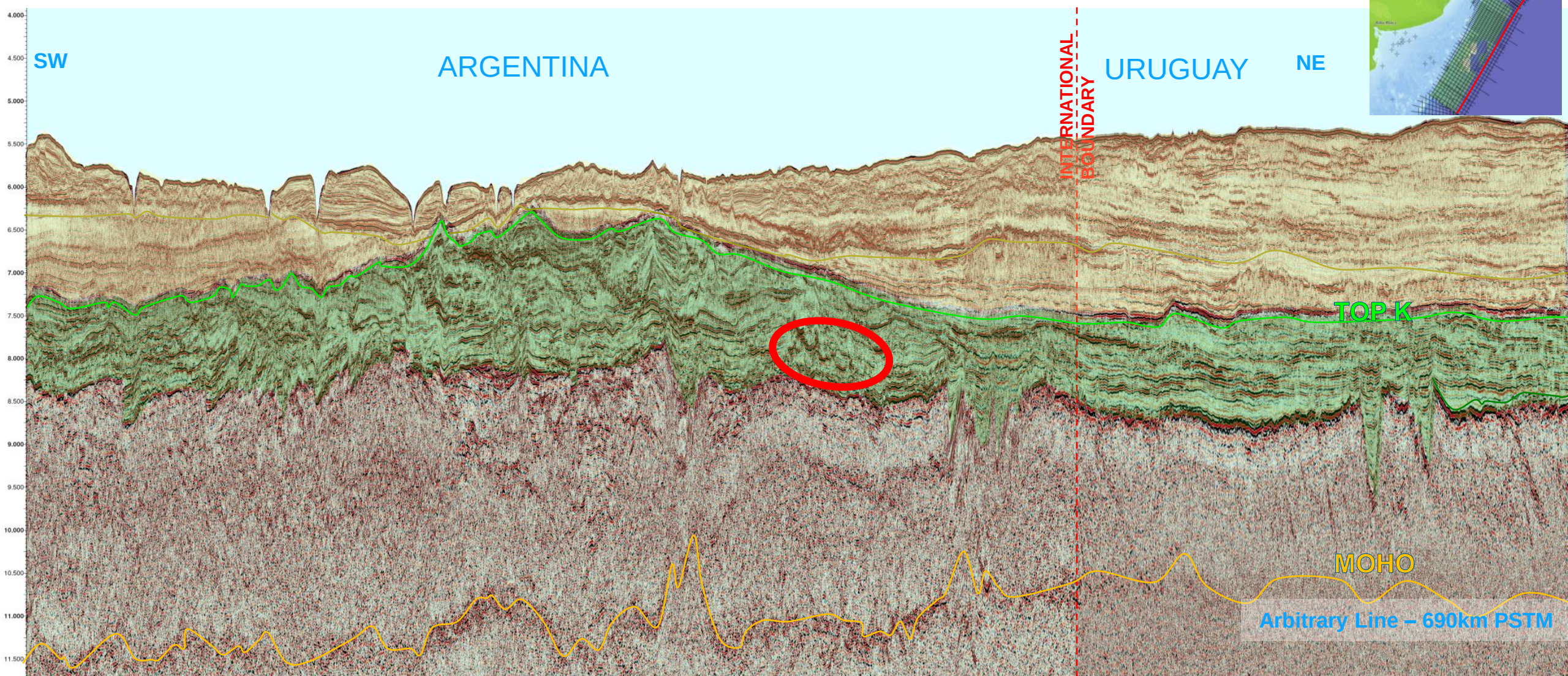
Argentina



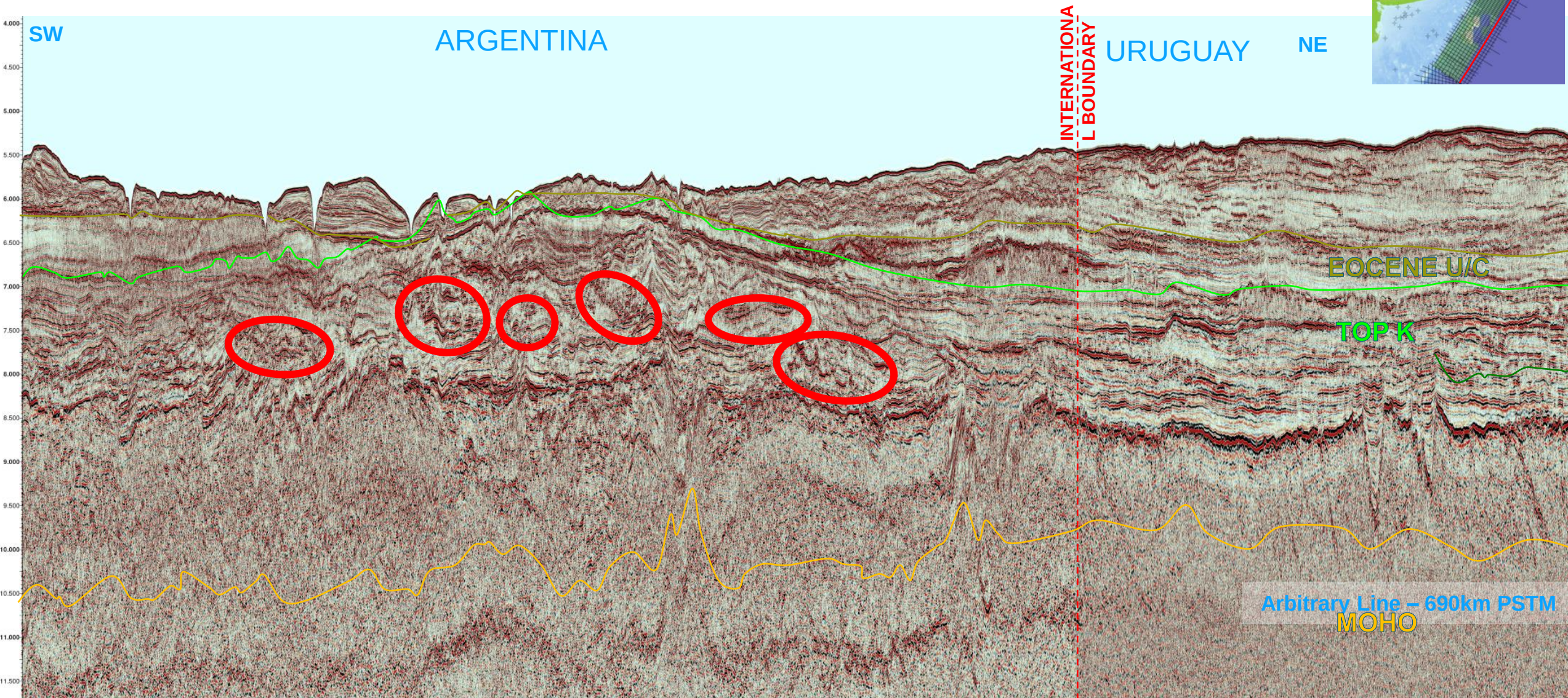
Sergipe



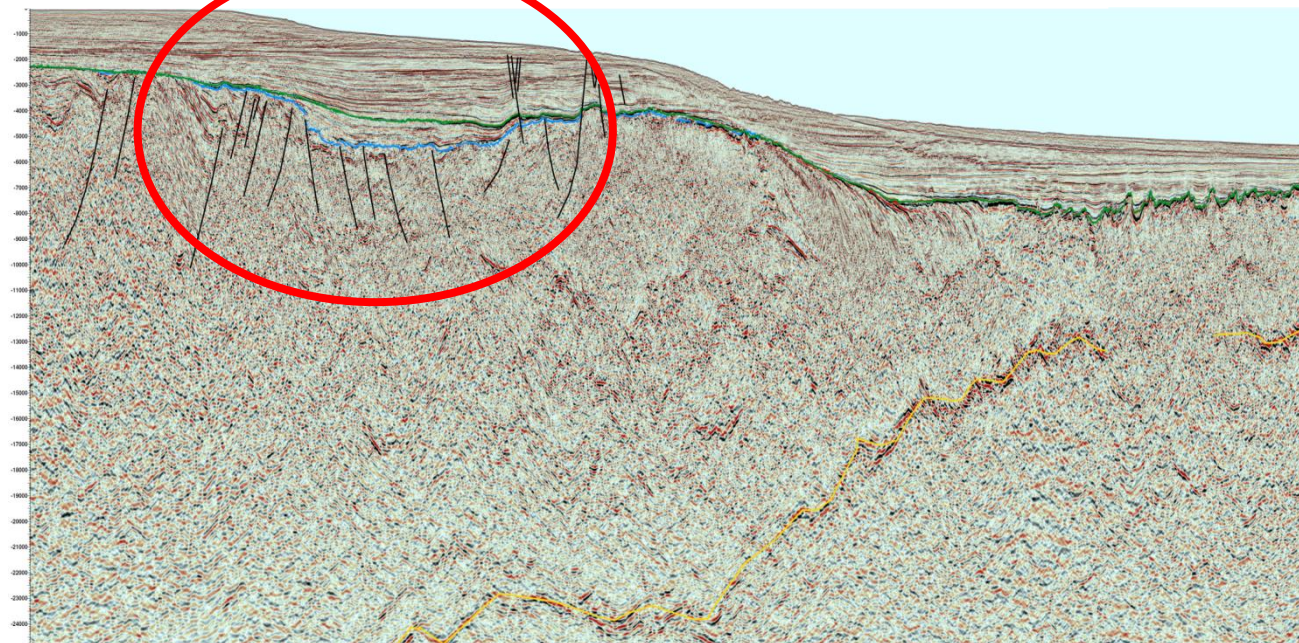
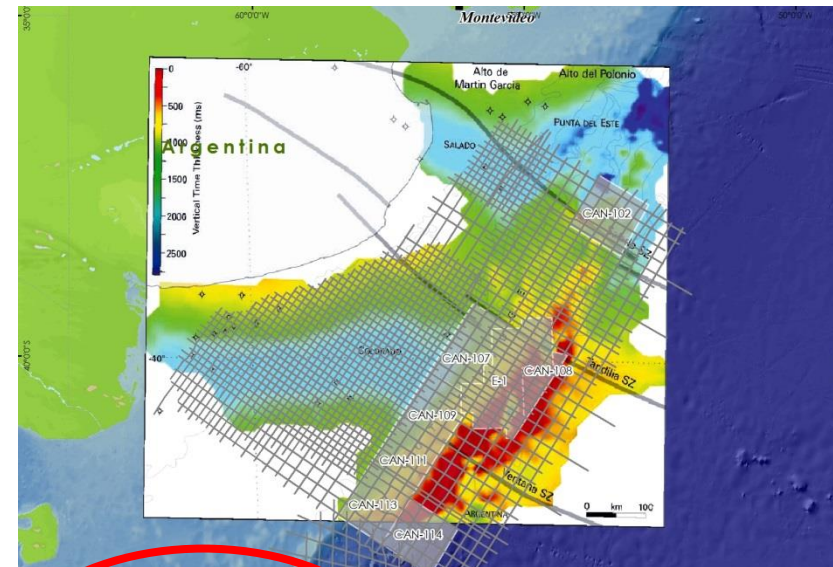
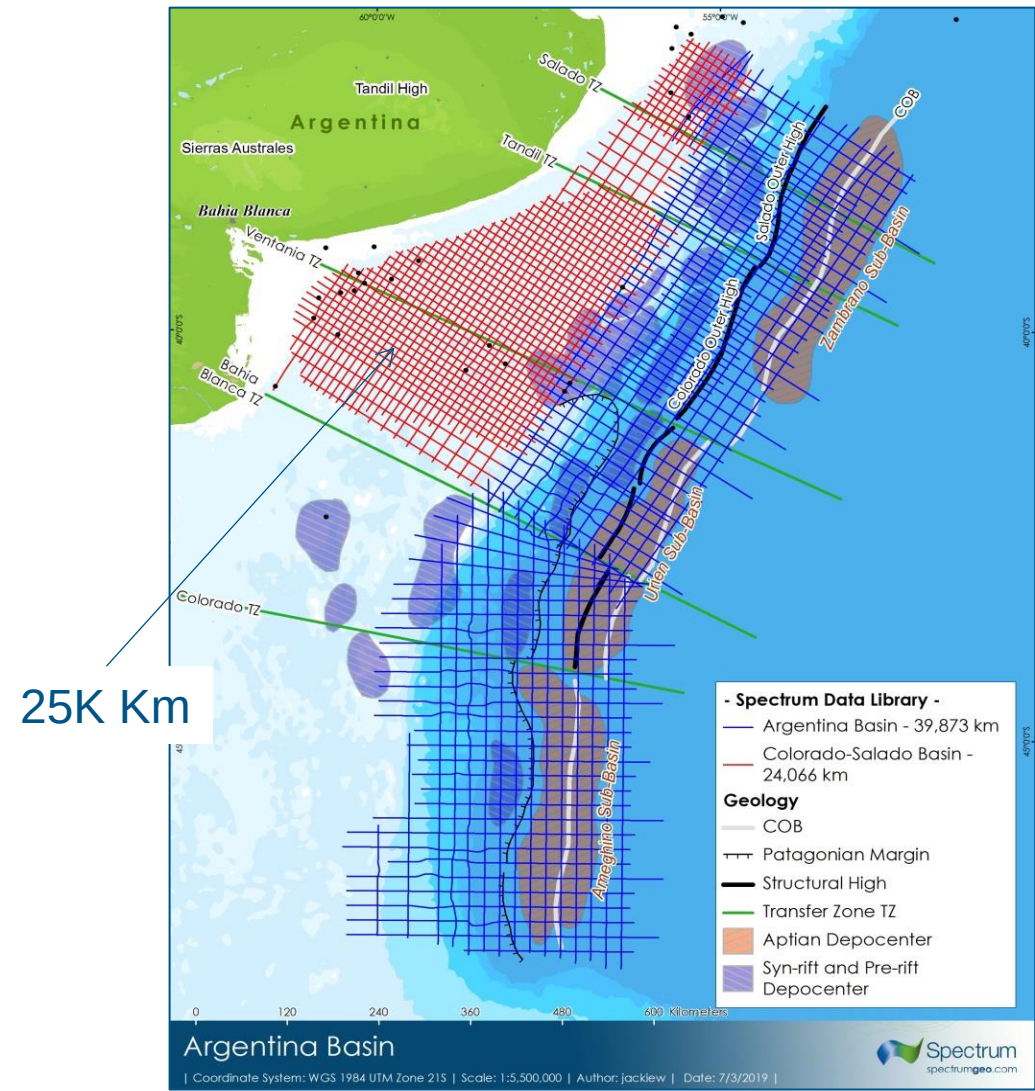
Argentine Basin Argentina to Uruguay



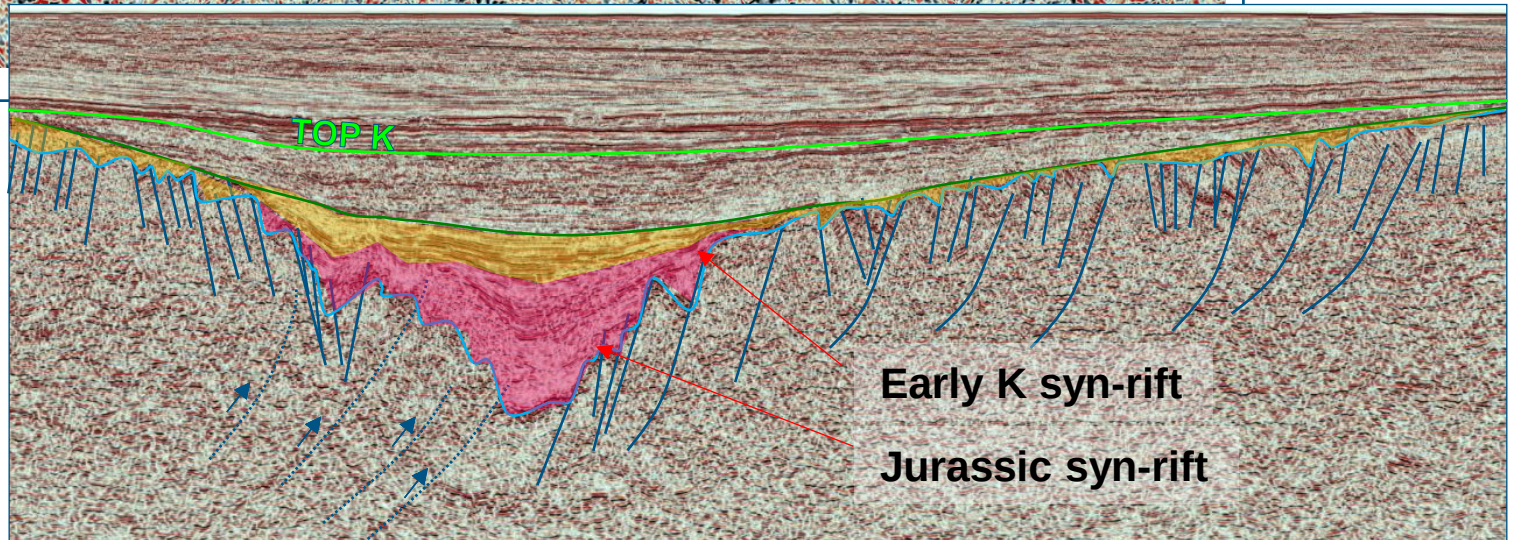
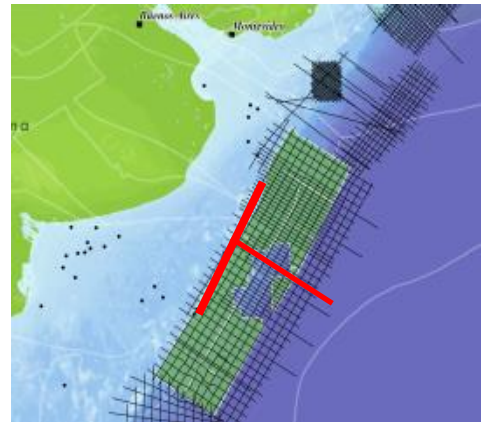
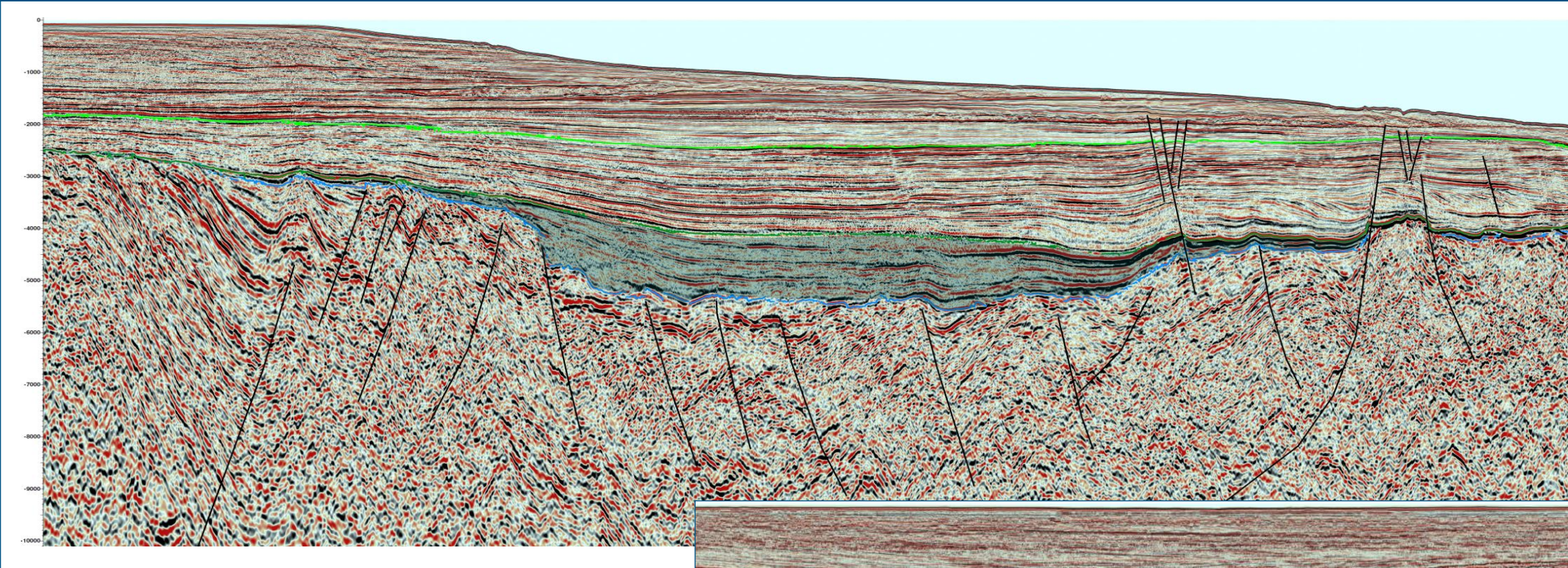
Argentina Basin – Play Example



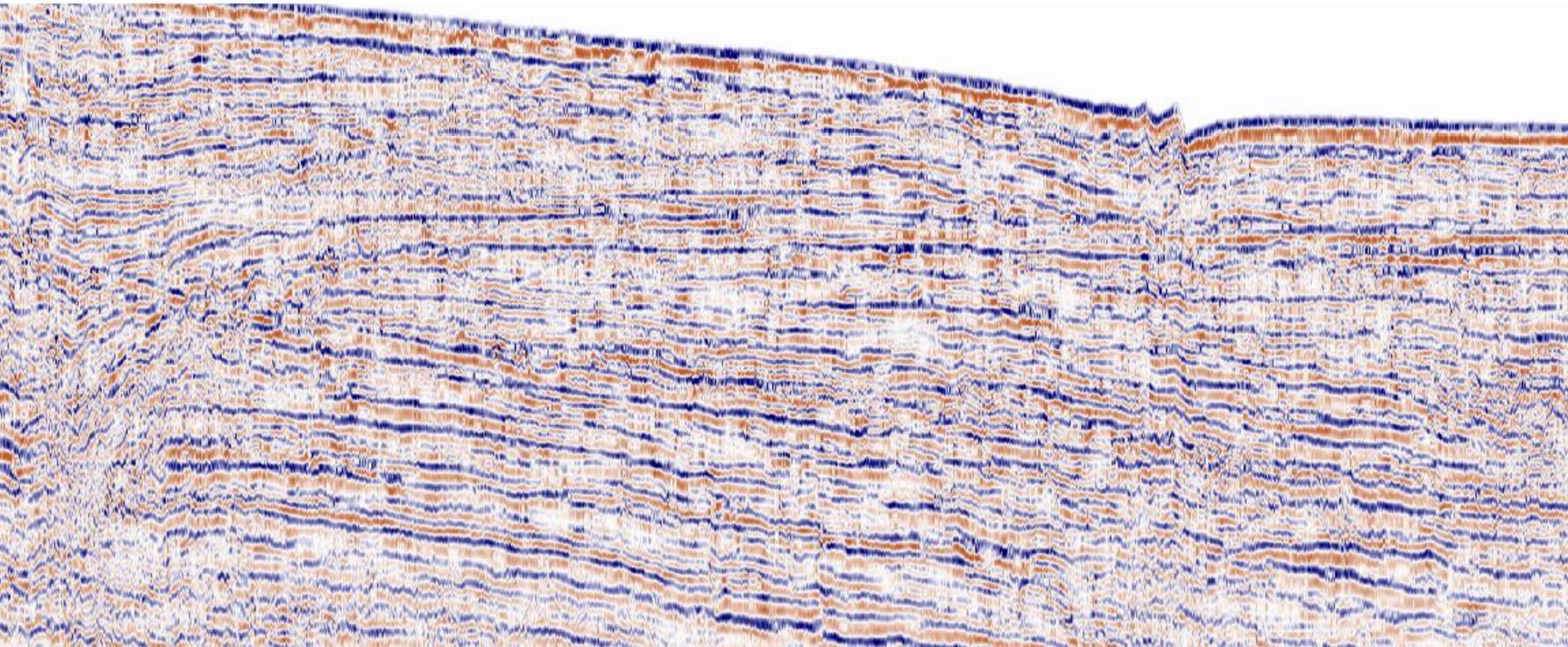
Colorado and Argentine Basin Seismic



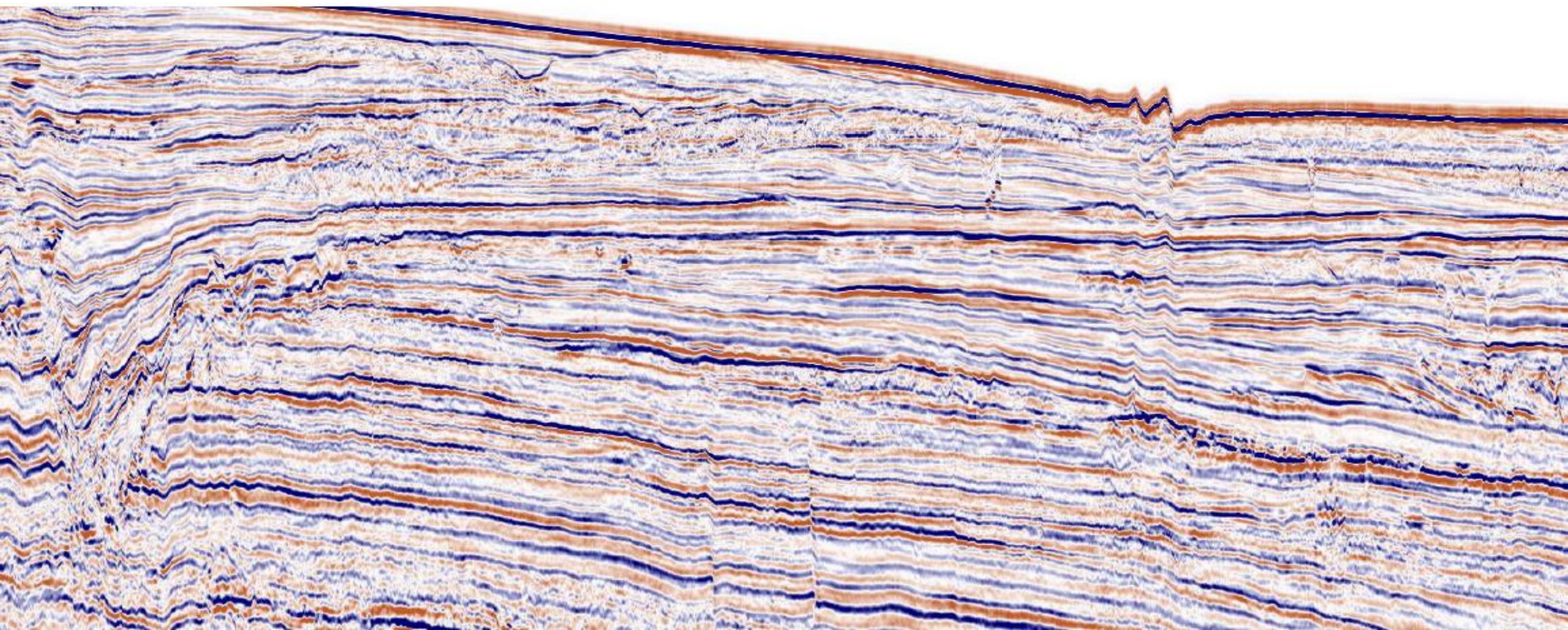
Colorado Basin and Ewing Terrace



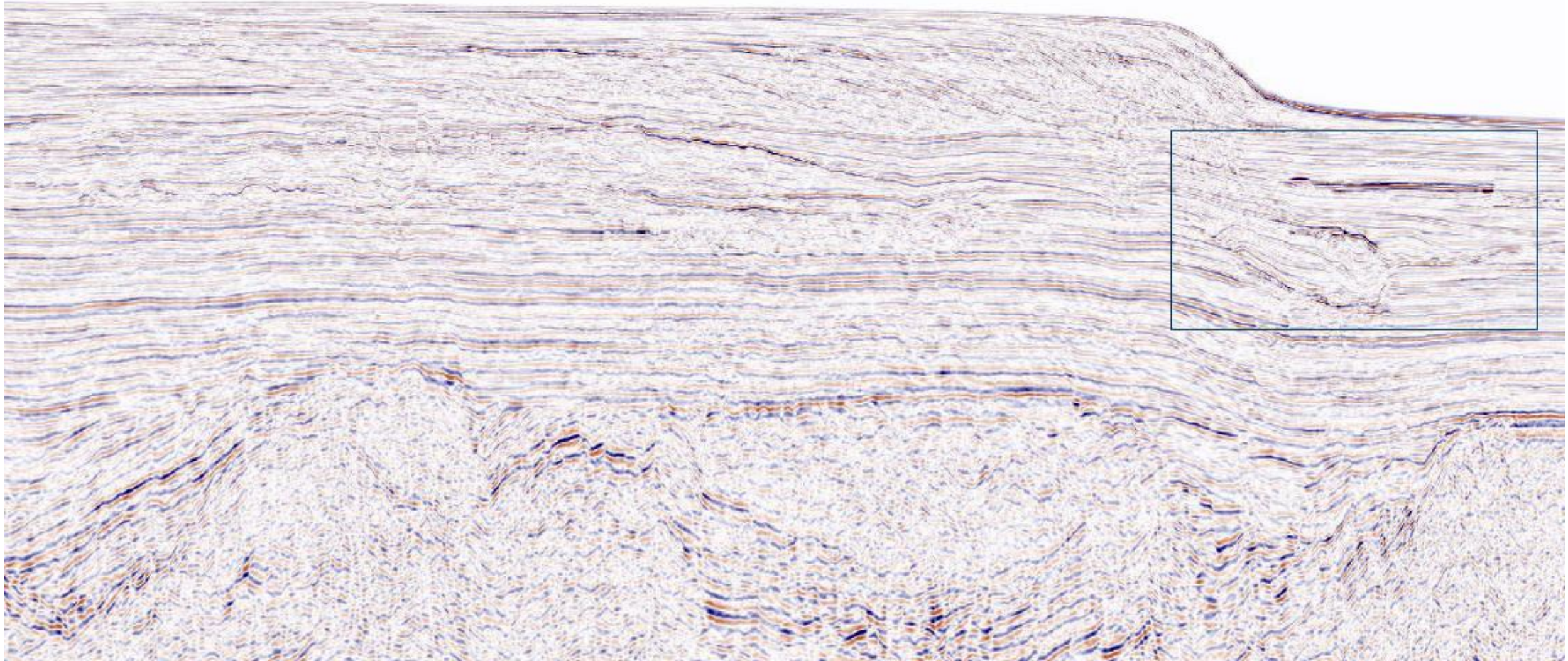
Legacy stack – line 1 , zoom



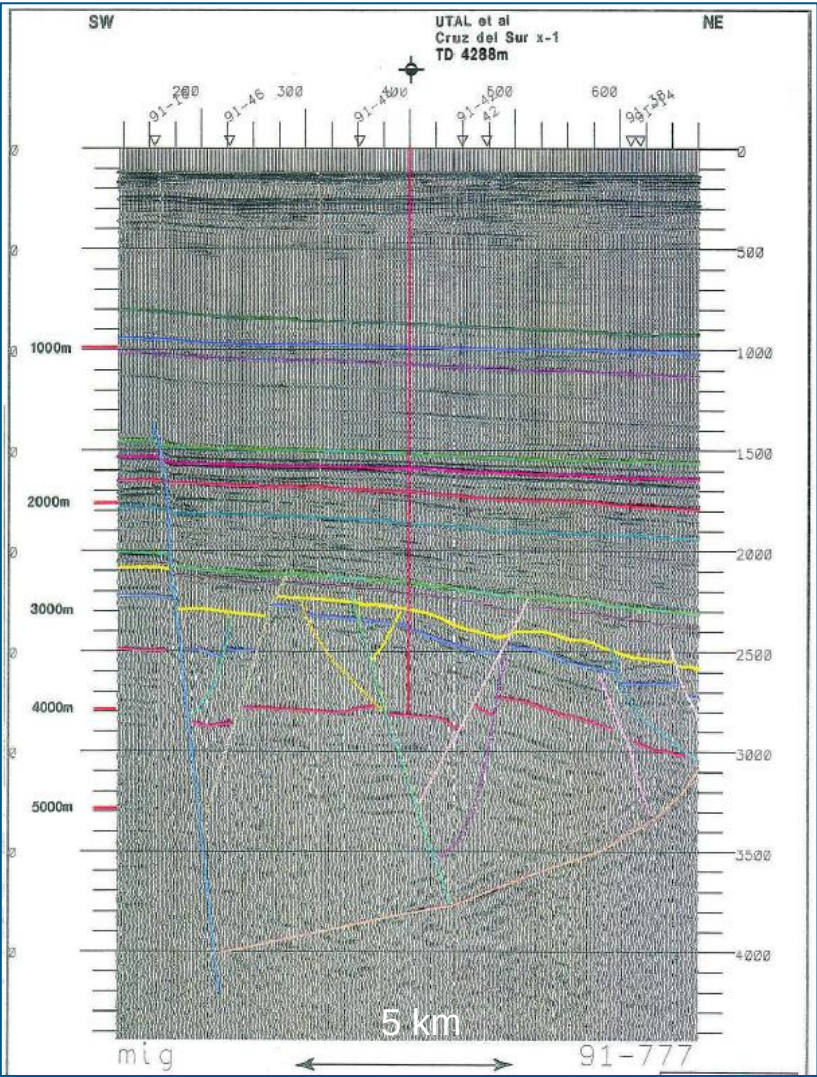
2019 PSTM stack – line 1, zoom



Upper Colorado and Ewing Terrace Bright Spots

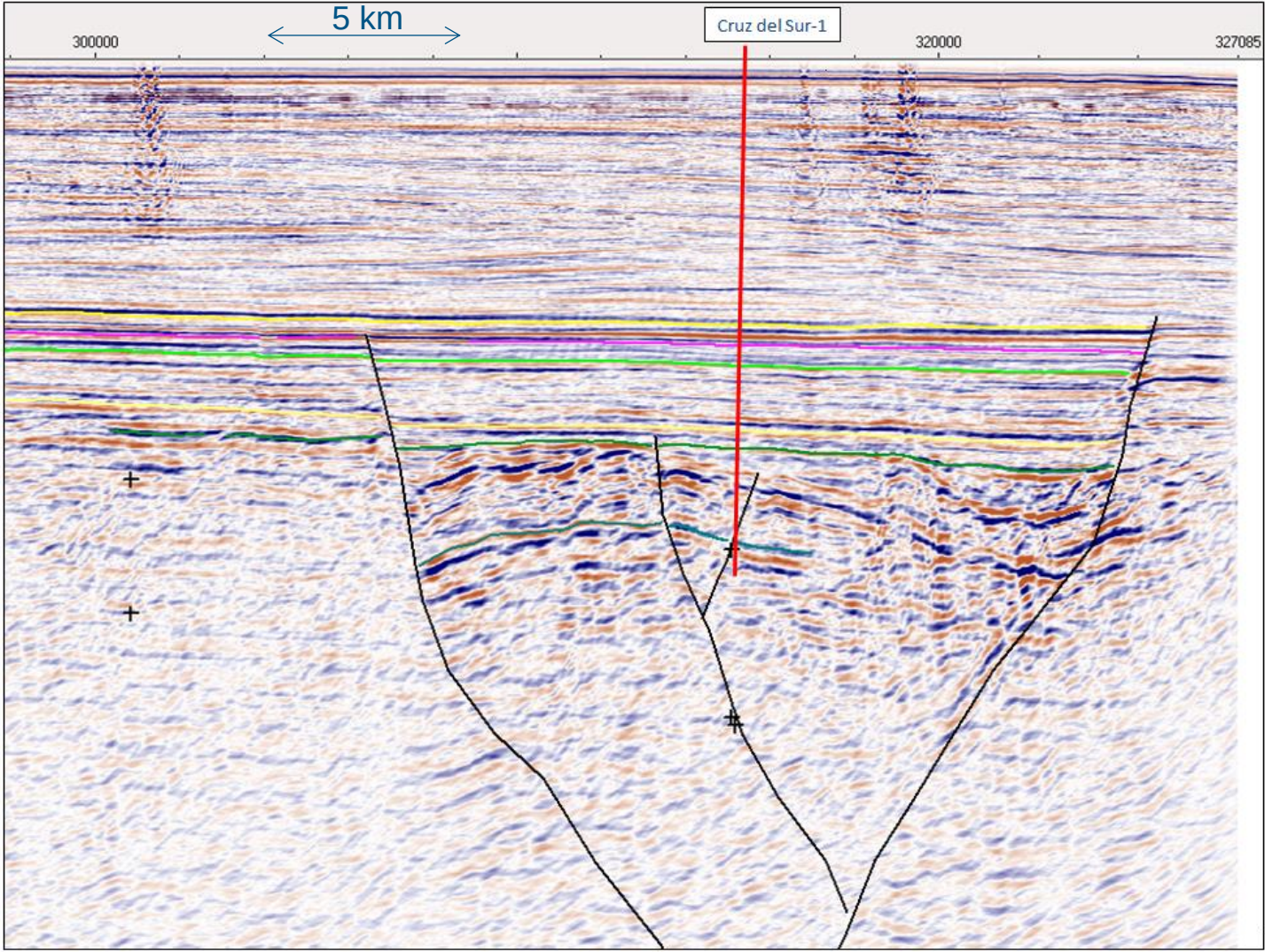


Legacy line through Cruz del Sur-1

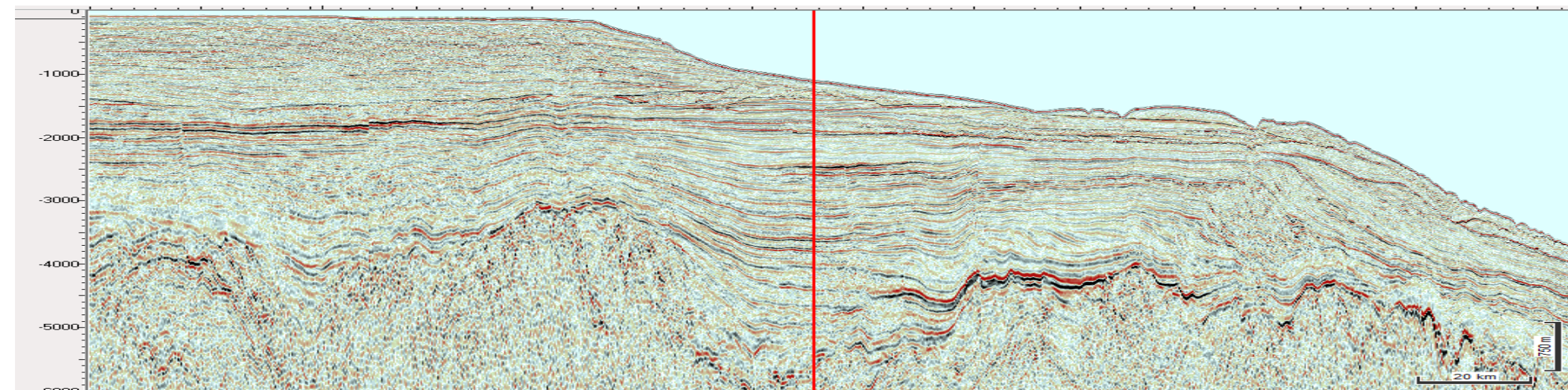
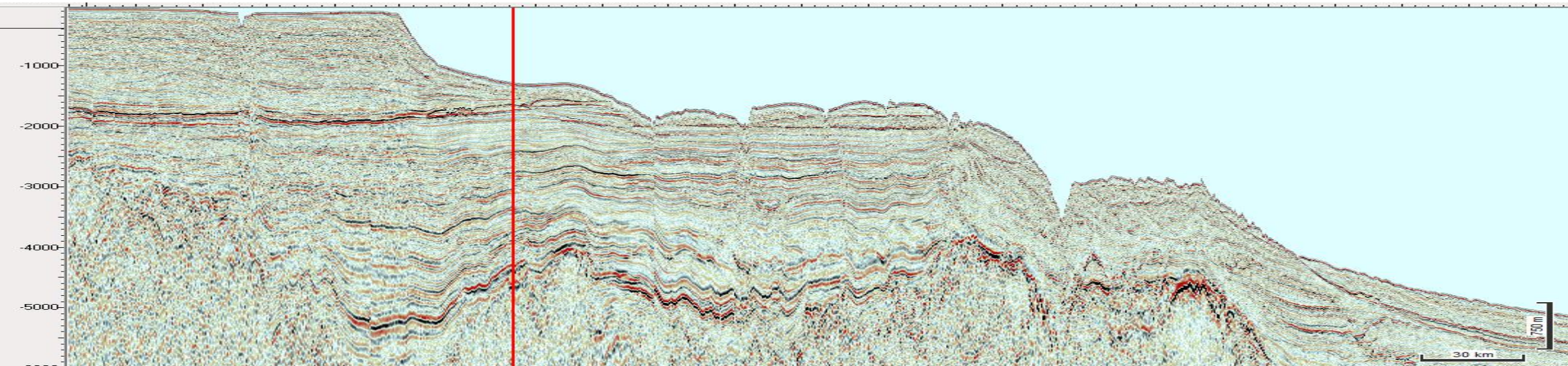


Stevens 1994

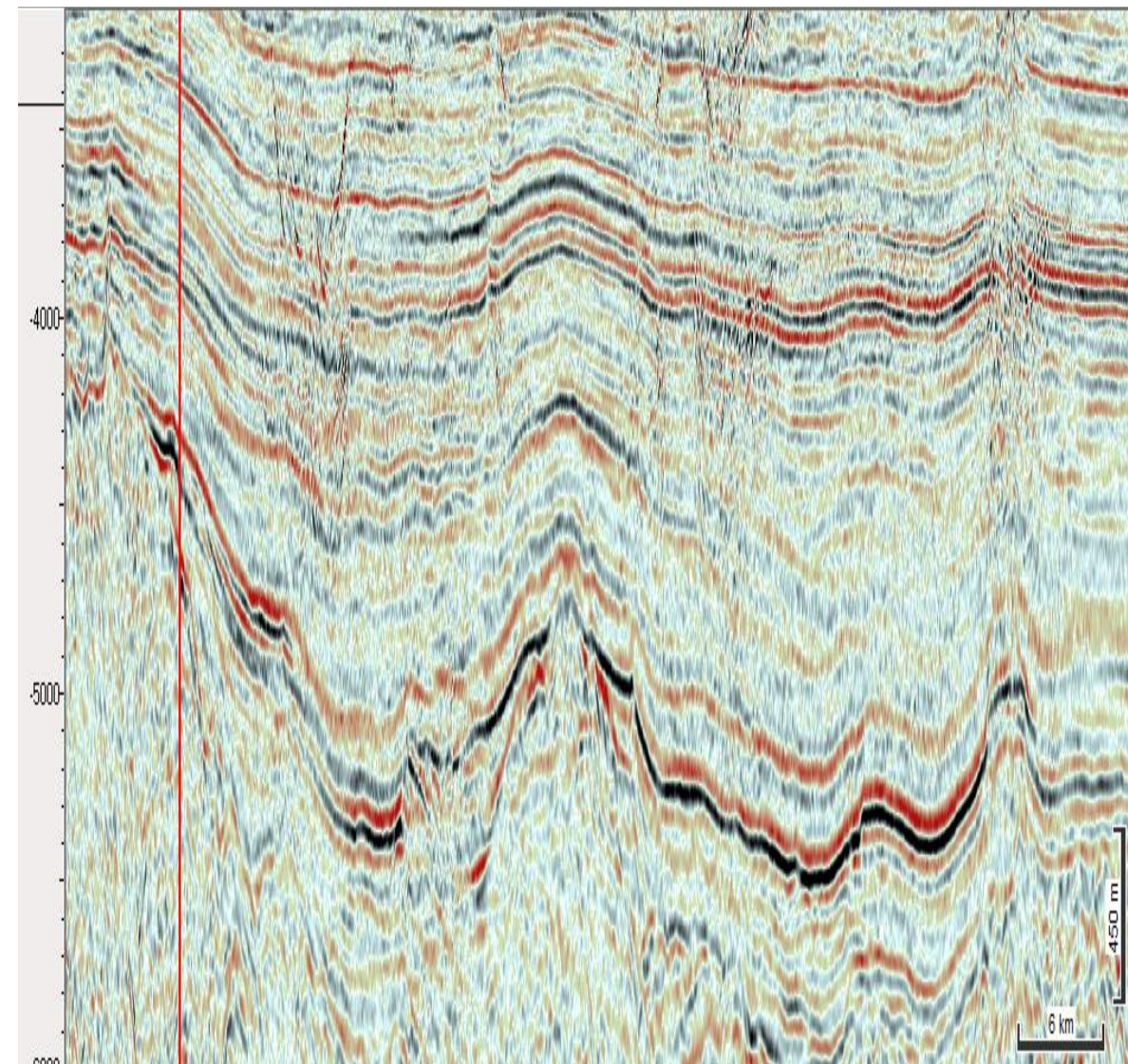
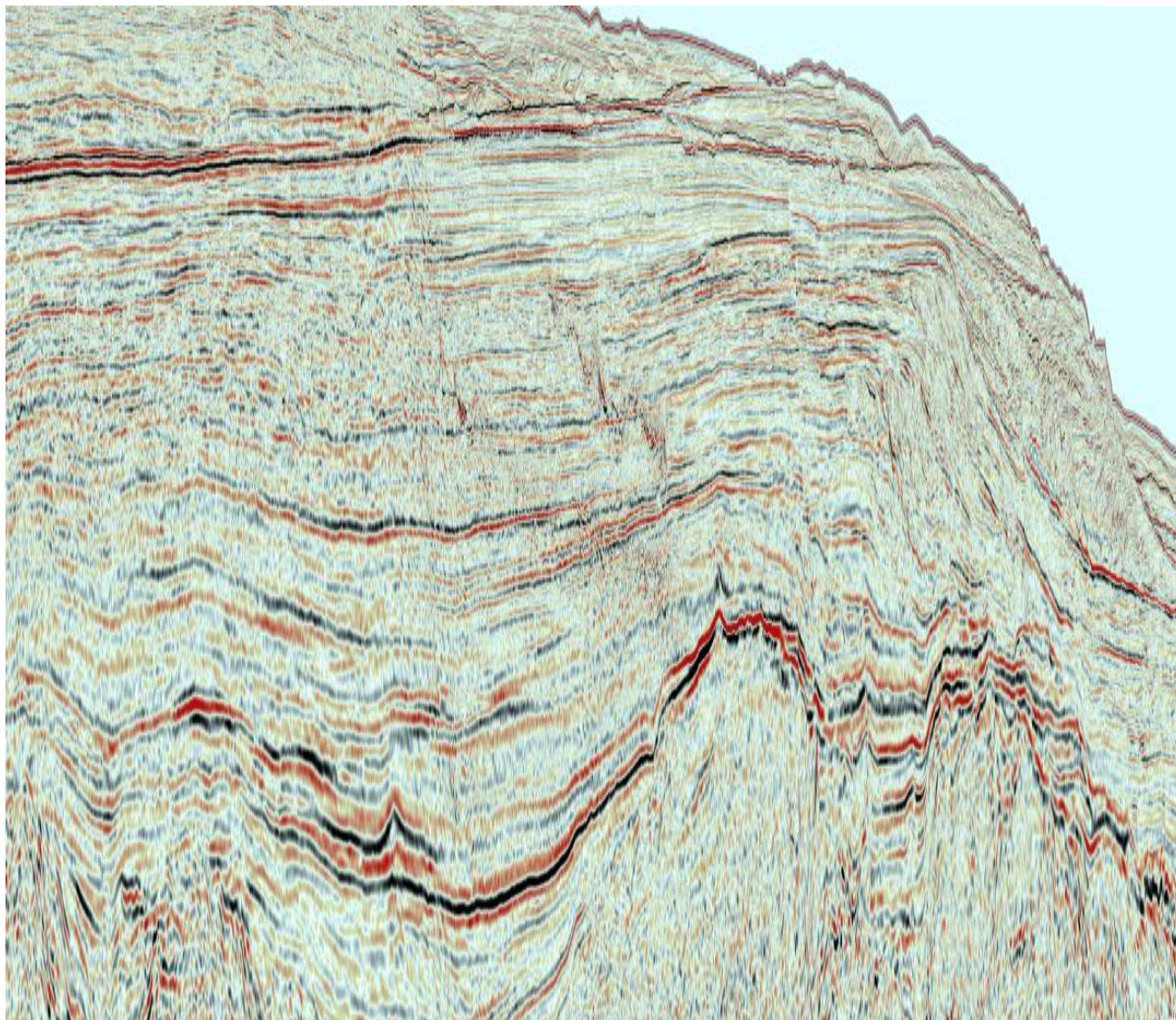
2019 Fast Track PSTM



Upper Colorado and Ewing Terrace Structures



Upper Slope – Ewing Terrace & Outer High



Northern Argentina –

A Surfit of New Frontiers lighting-up exploration for big oil.

Exploration Innovations at the frontier

- Dynamic topography and basin glue
- Source rocks from seismic character
- Contourite and mixed systems plays

Exploration Plays driving Round 2:

- Argentine basin: basin floor fans, and base slope channels. Aptian source. Oil.
- Colorado: Charge focus from offshore and syn-rift shelf. Permo-Trias and Jurassic source, untested syn-rift charge focus structures. Oil.

Thank you

