1st and 2nd November

Atlantic Ireland 2016

DoubleTree by Hilton Hotel Dublin - Burlington Road

Upper Leeson Street, Dublin 4

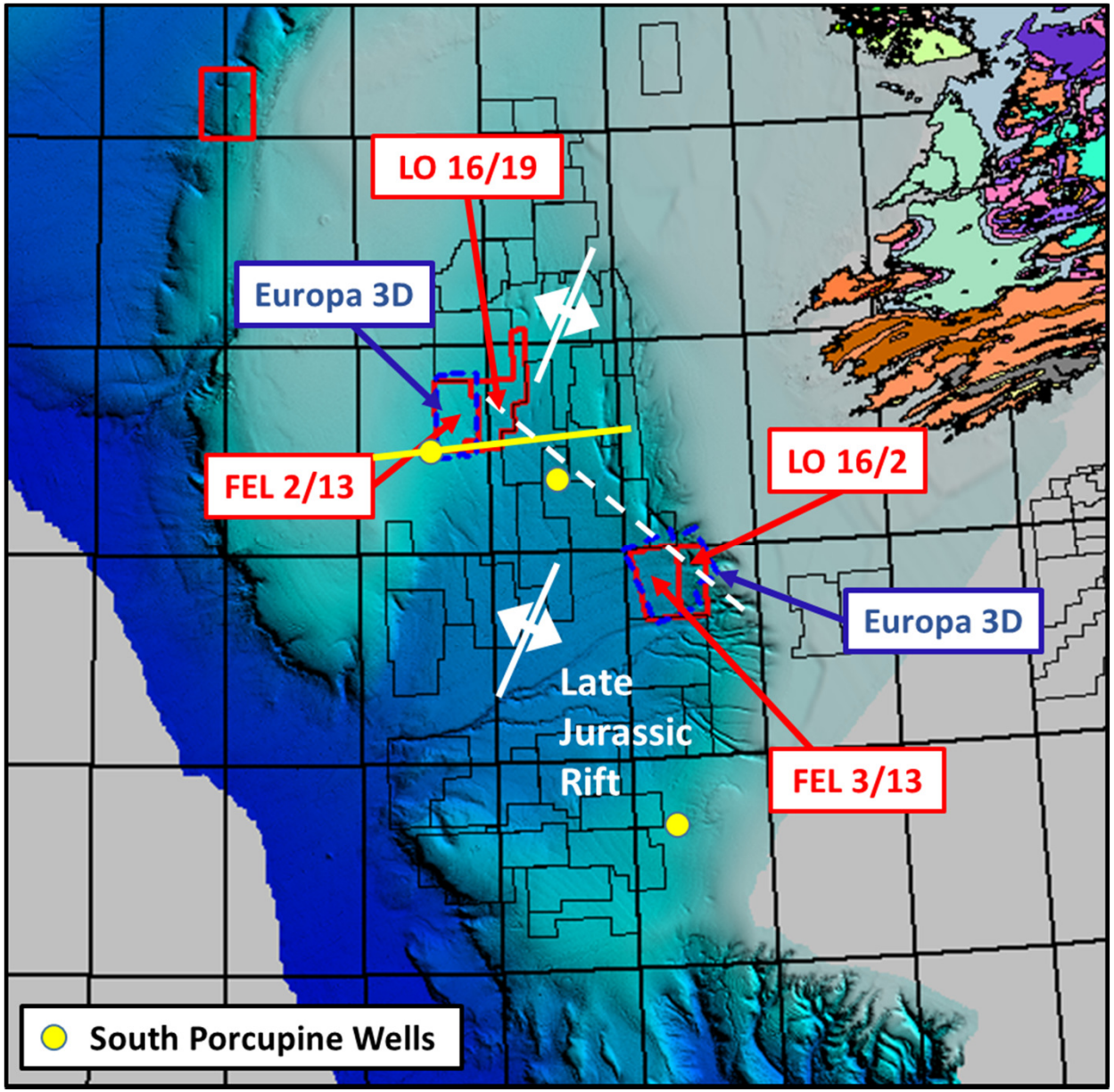
Insights into the geology of the South Porcupine from 3D seismic over FEL's 2/13 & 3/13

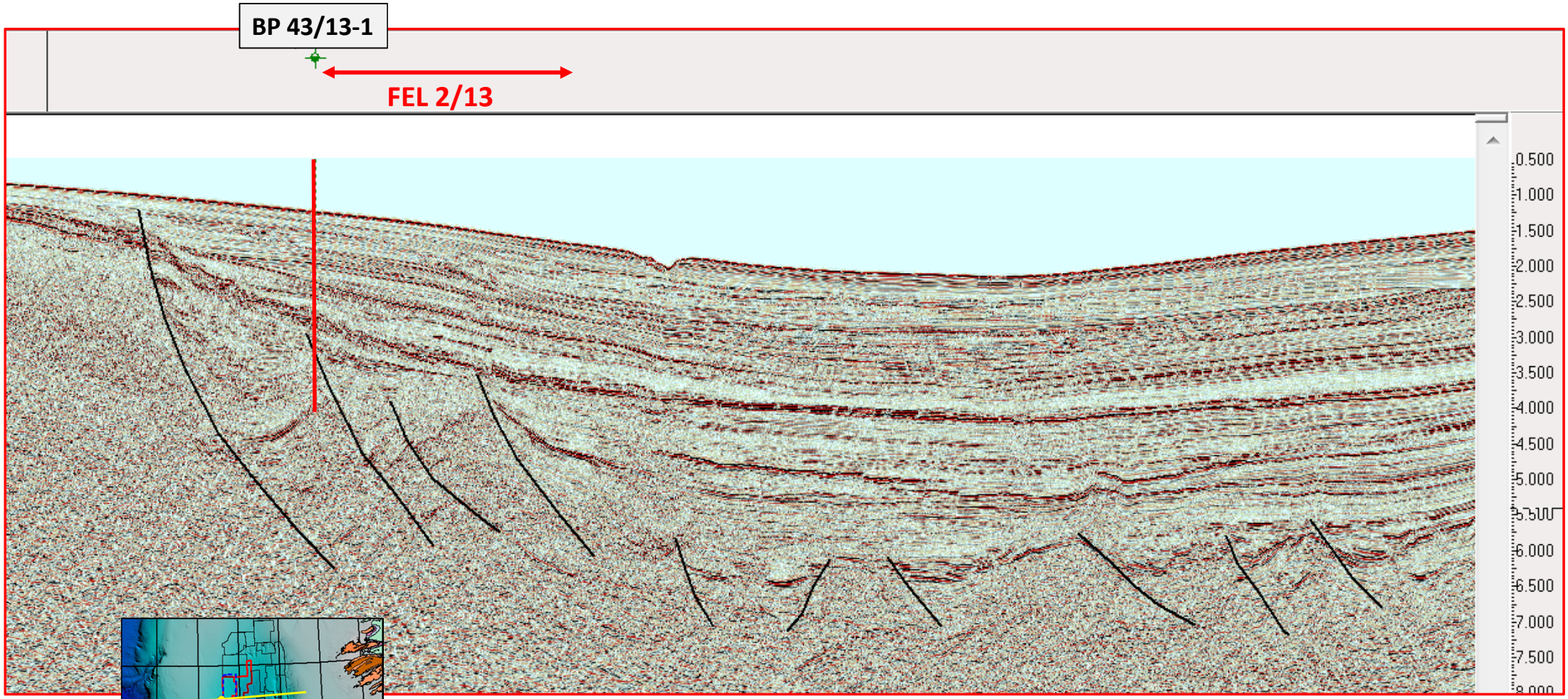
Neil Parkinson & Rowland Thomas

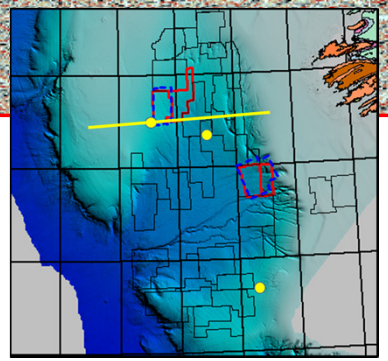
Europa Oil & Gas

We would like to acknowledge our former partners in these licences, Kosmos Energy, who supervised the seismic acquisition and processing and laid the foundations for much of our post-rift interpretation. The views expressed in this presentation are entirely those of the authors.

Introduction







PAD14-051 Long Offset

Line length ~ 100km

Vert. Ex. ~ x5

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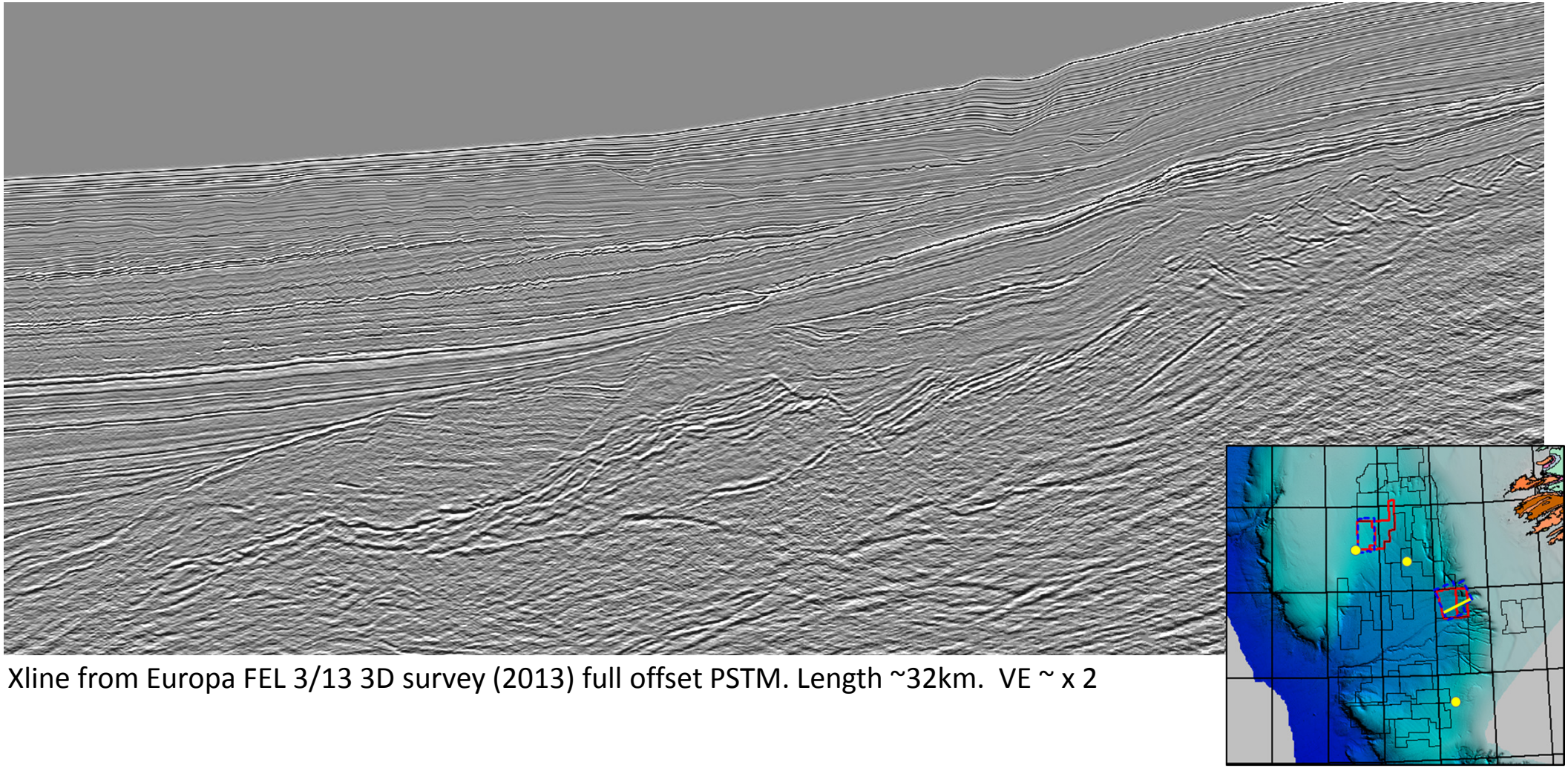

Xline from Europa FEL 3/13 3D survey (2013) full offset PSTM. Length ~32km. VE ~ x 2

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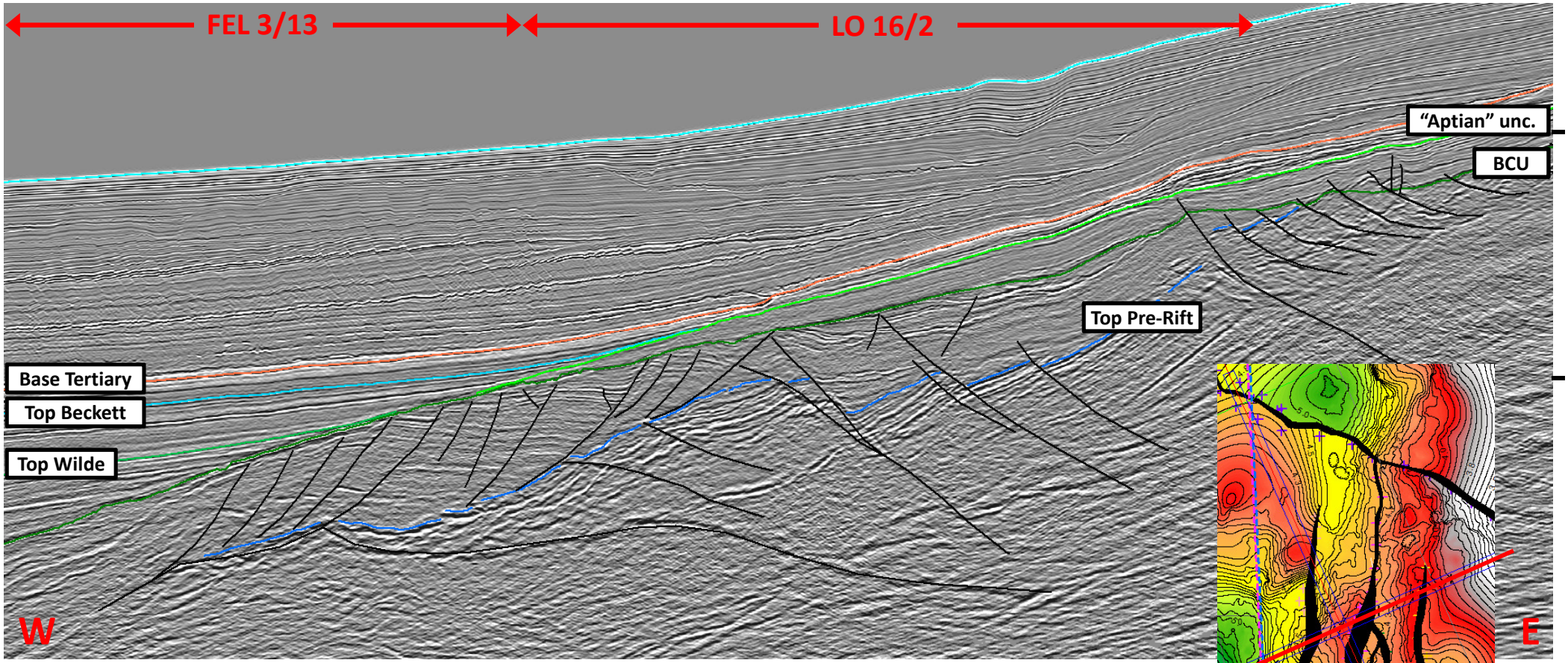

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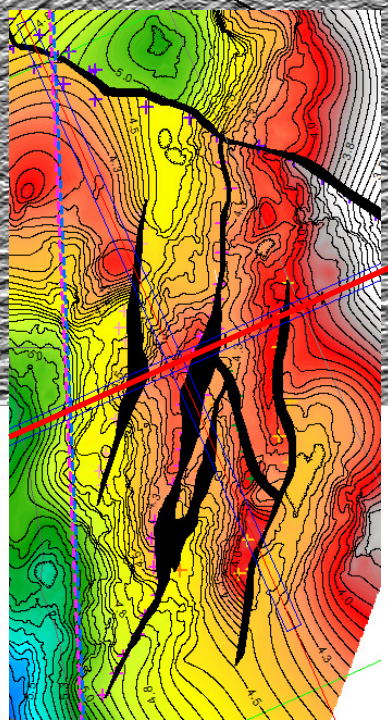

Top Pre-Rift TWT

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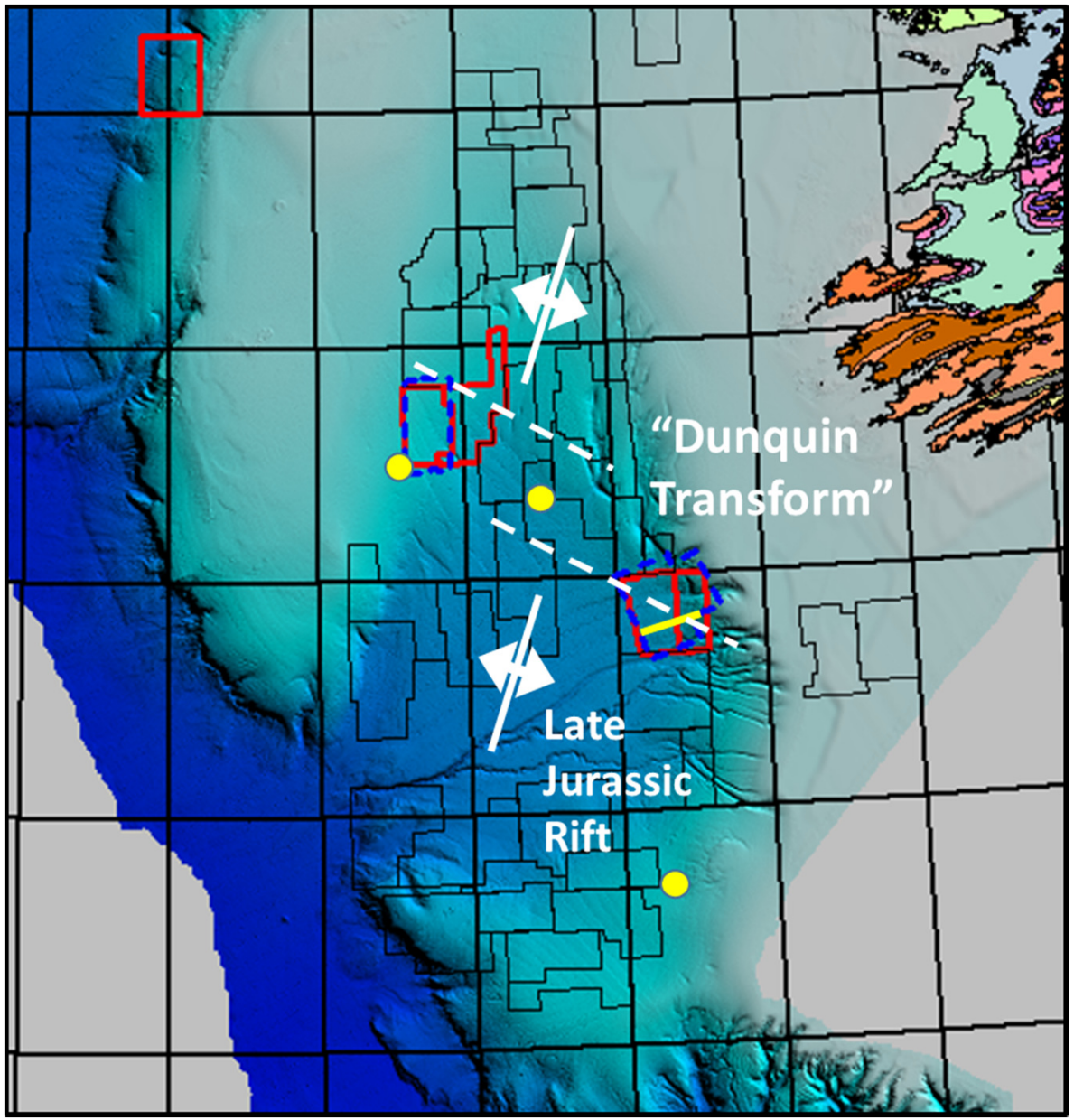
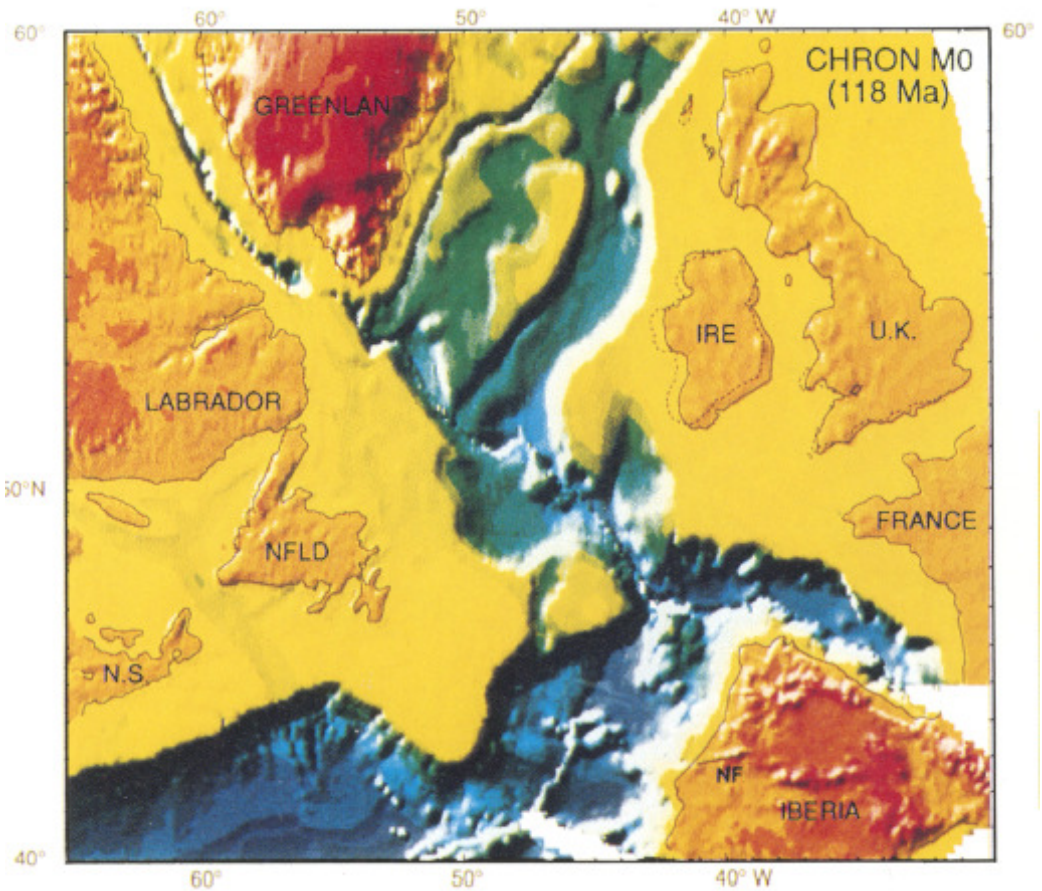
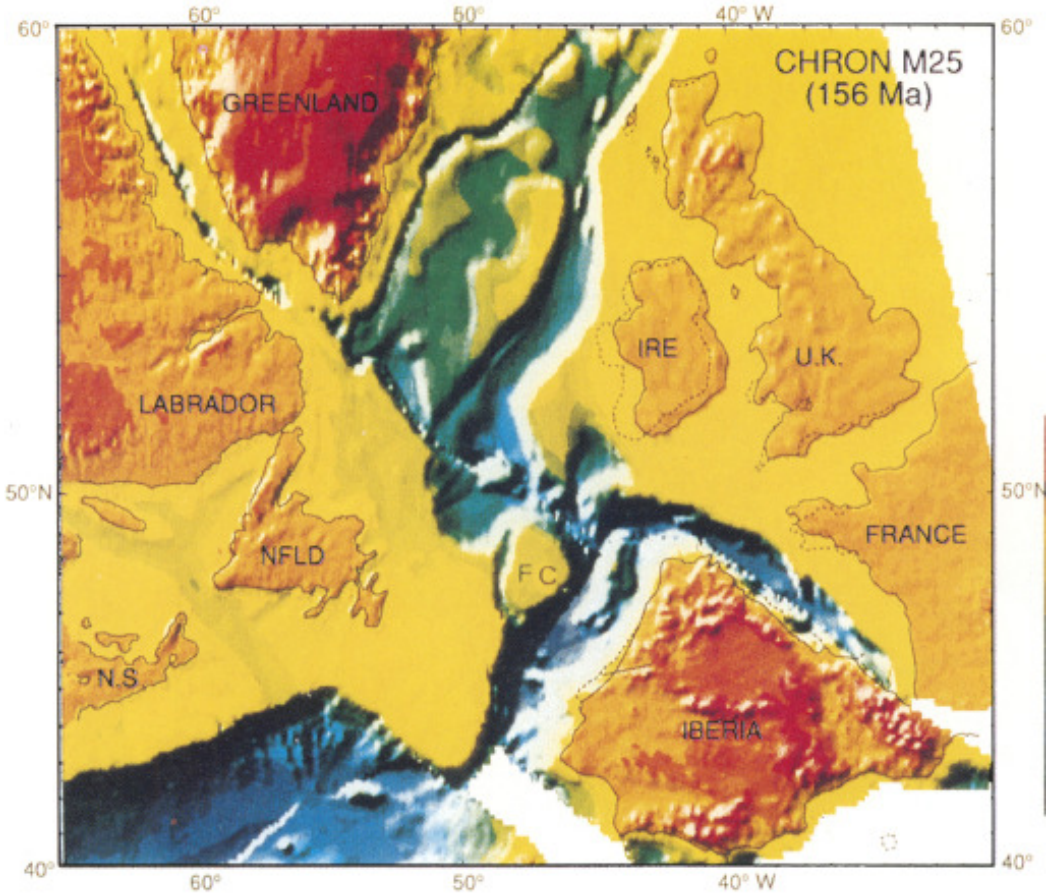
Upper Jurassic Extension - Regional Context



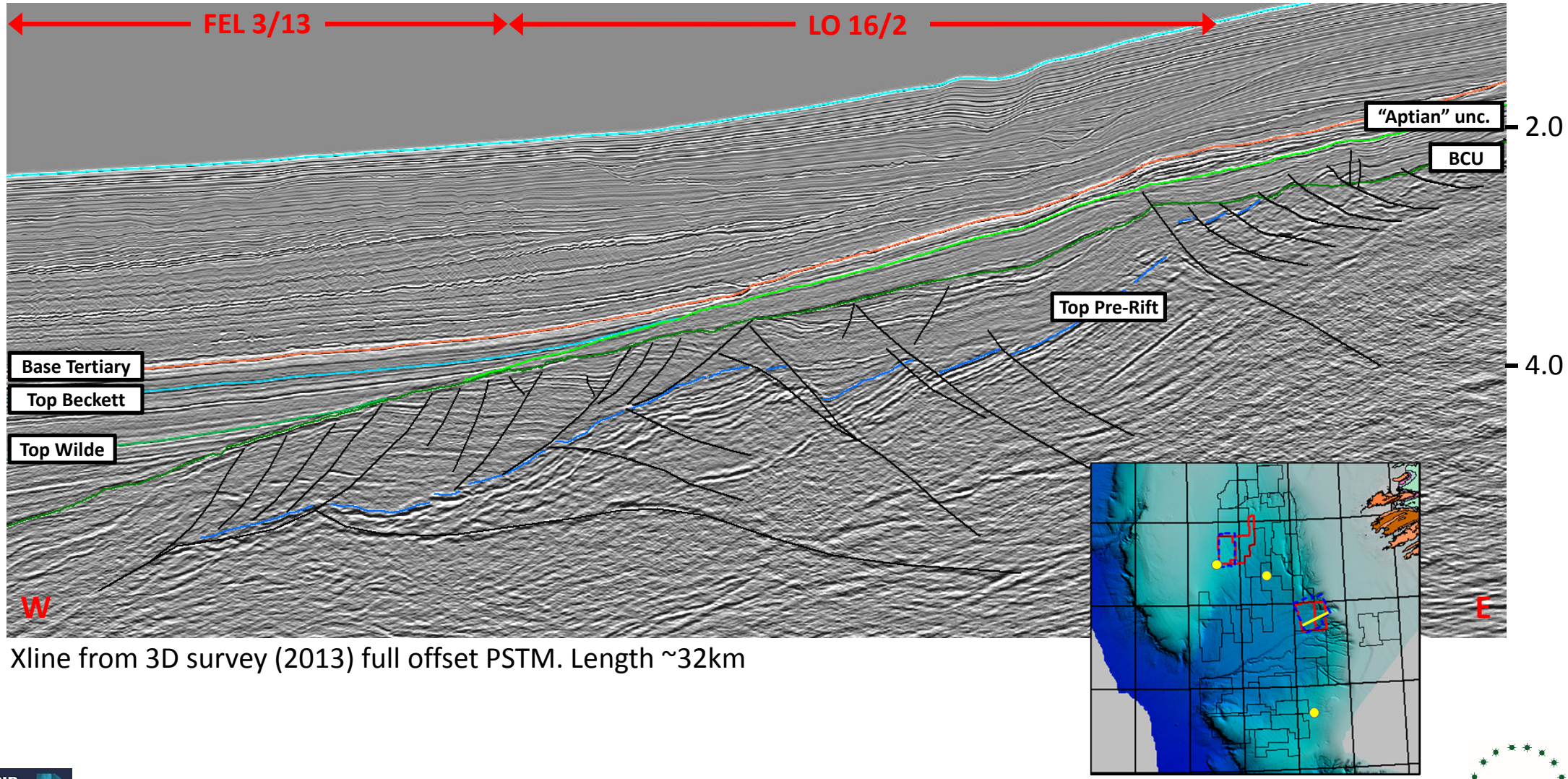
De-stretched plate reconstructions from Srivastava & Verhoef (1992)



a) M0 (intra-Aptian) Porcupine restores to face the Orphan Basin



b) M25 (Kimmeridgian) Porcupine restores to face Flemish Cap



Xline from 3D survey (2013) full offset PSTM. Length ~32km

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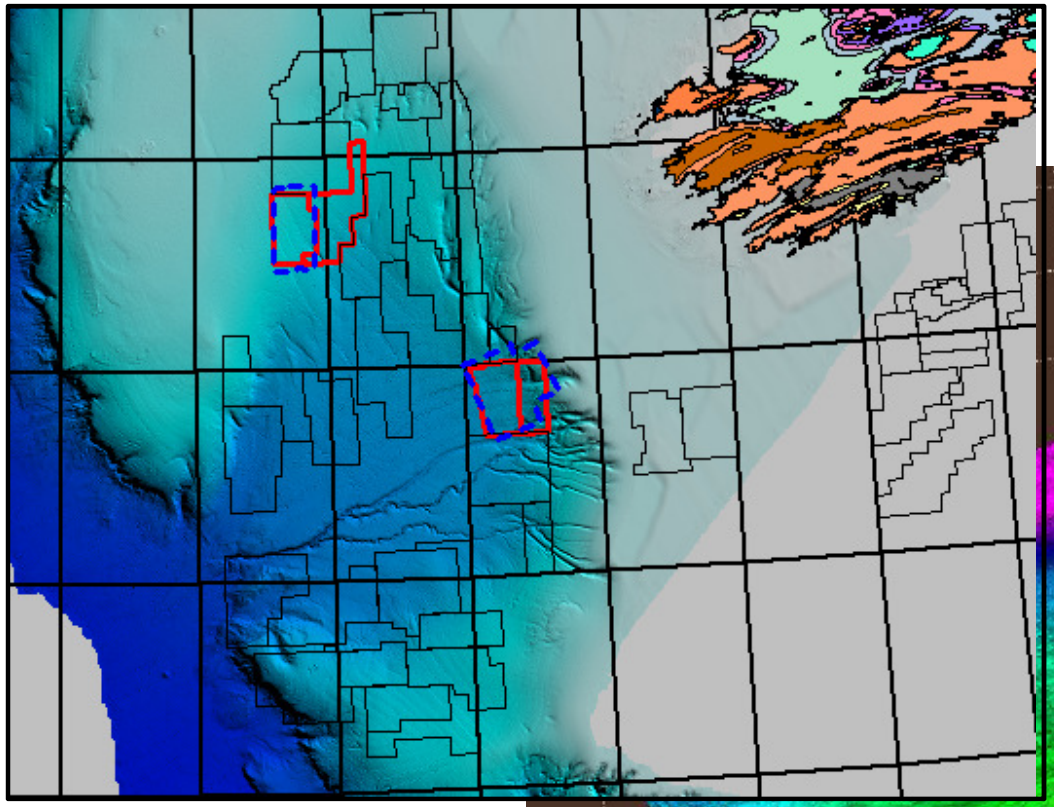
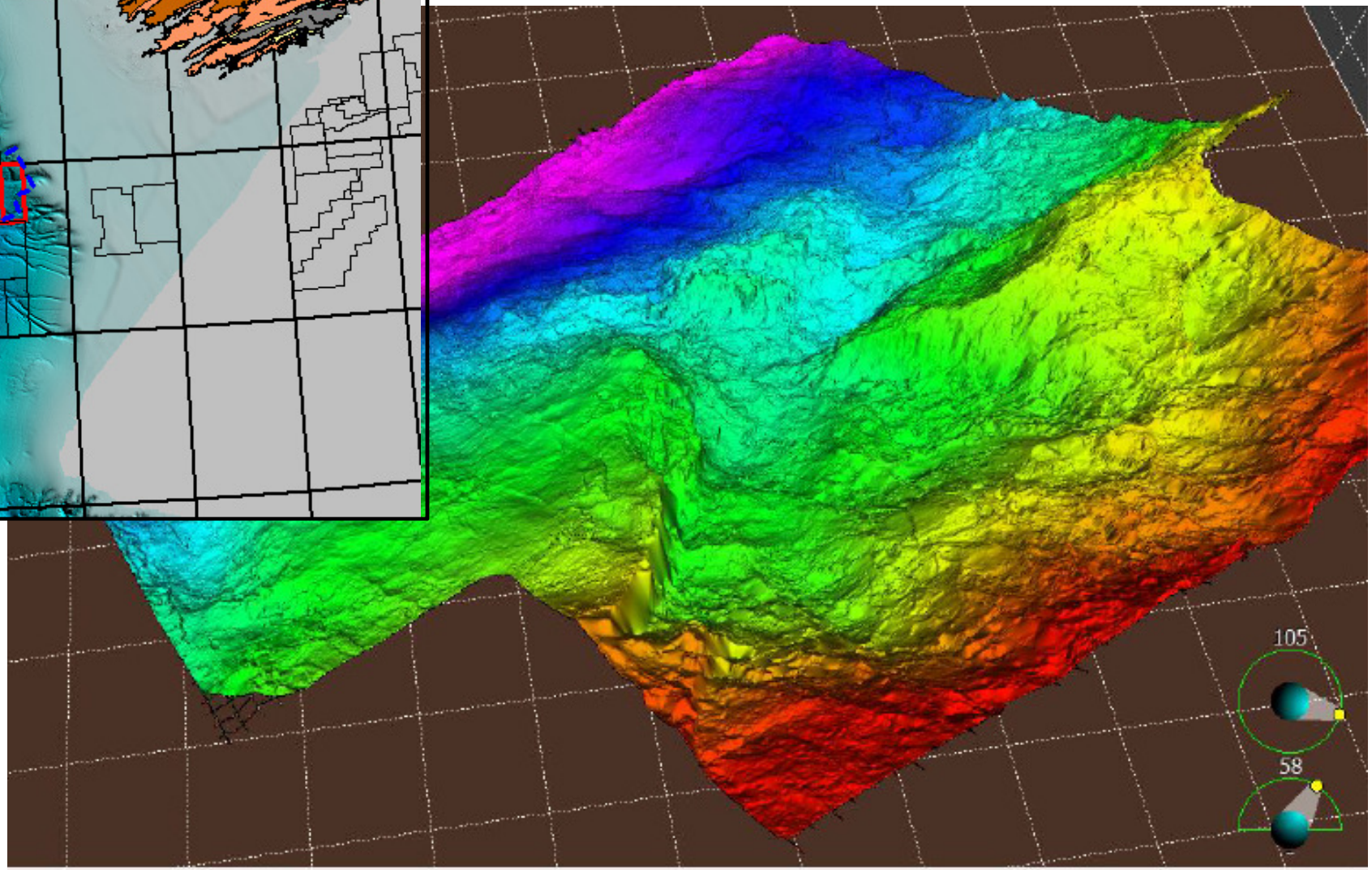
3D view of Base Cretaceous looking NW down canyon





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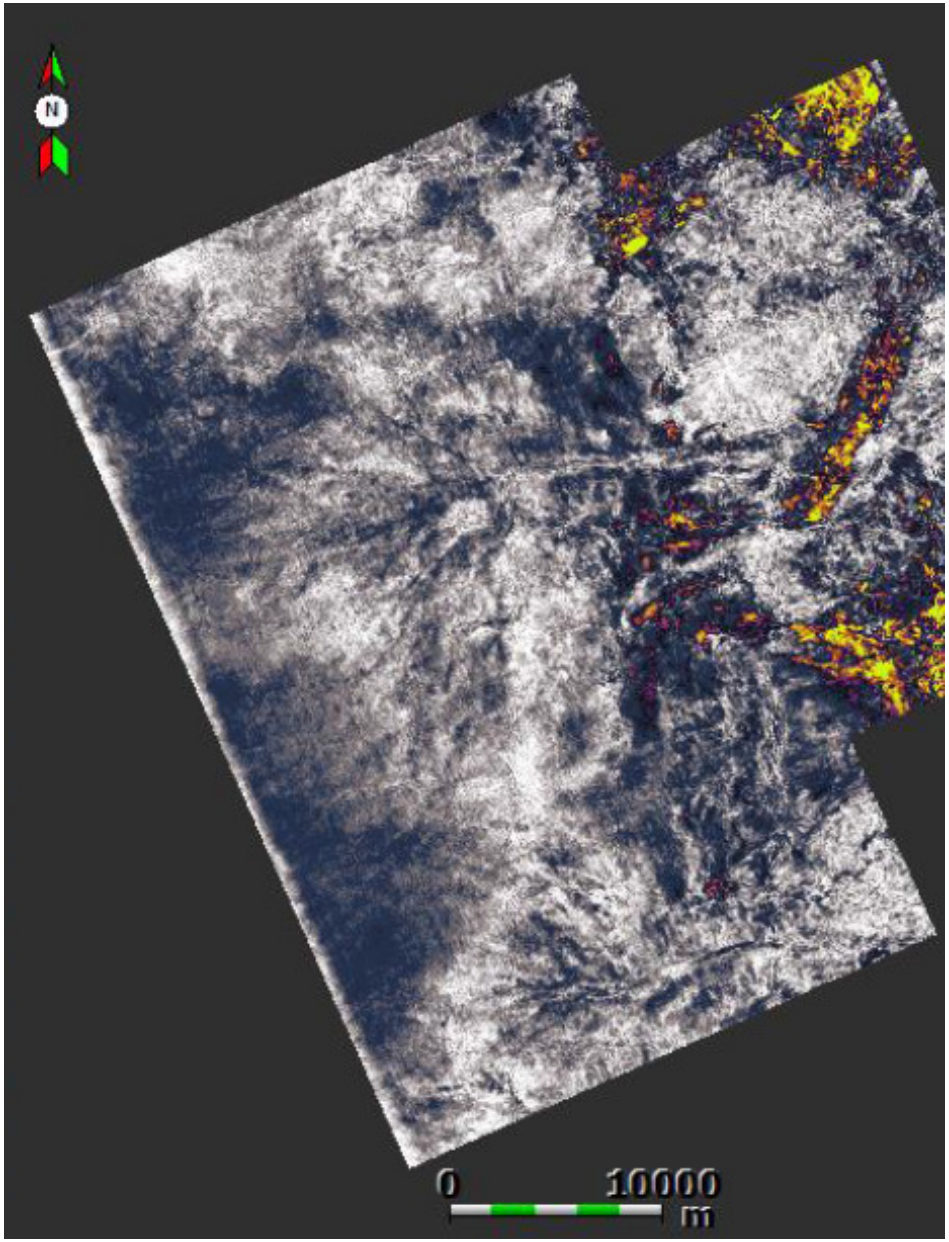
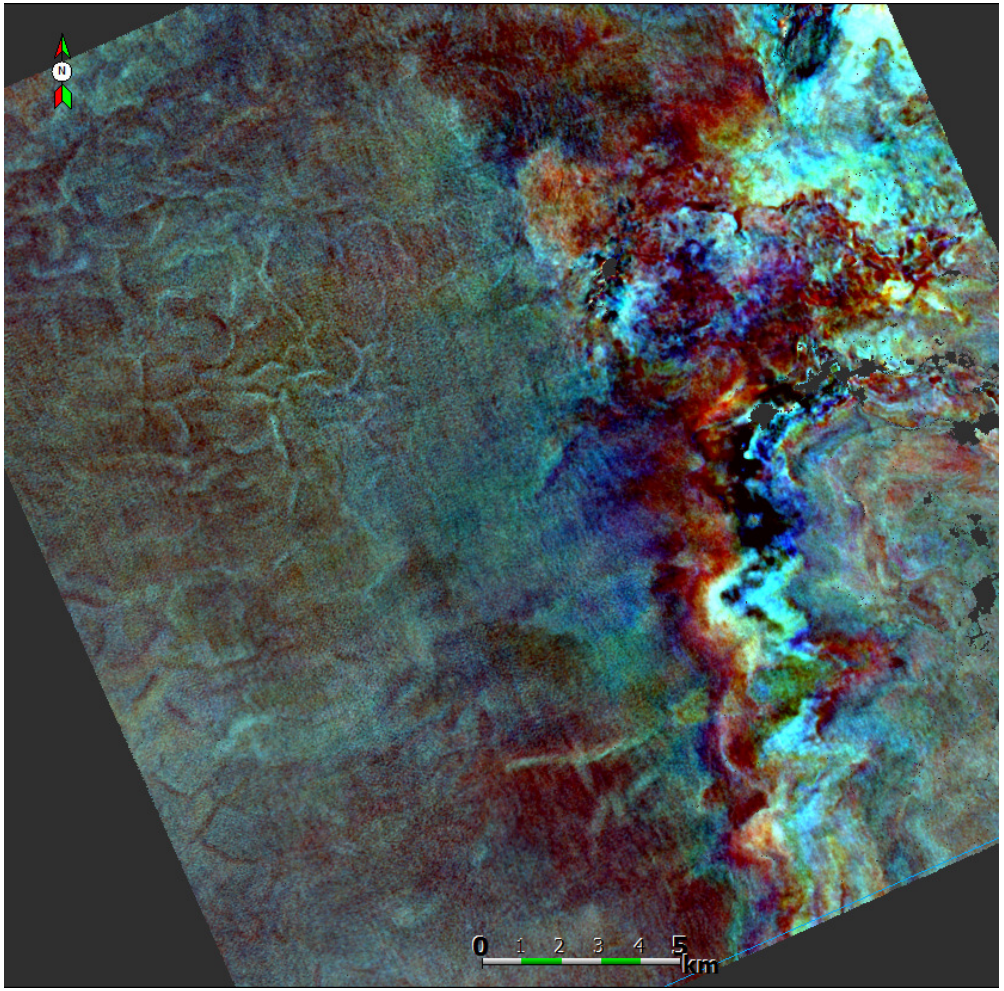
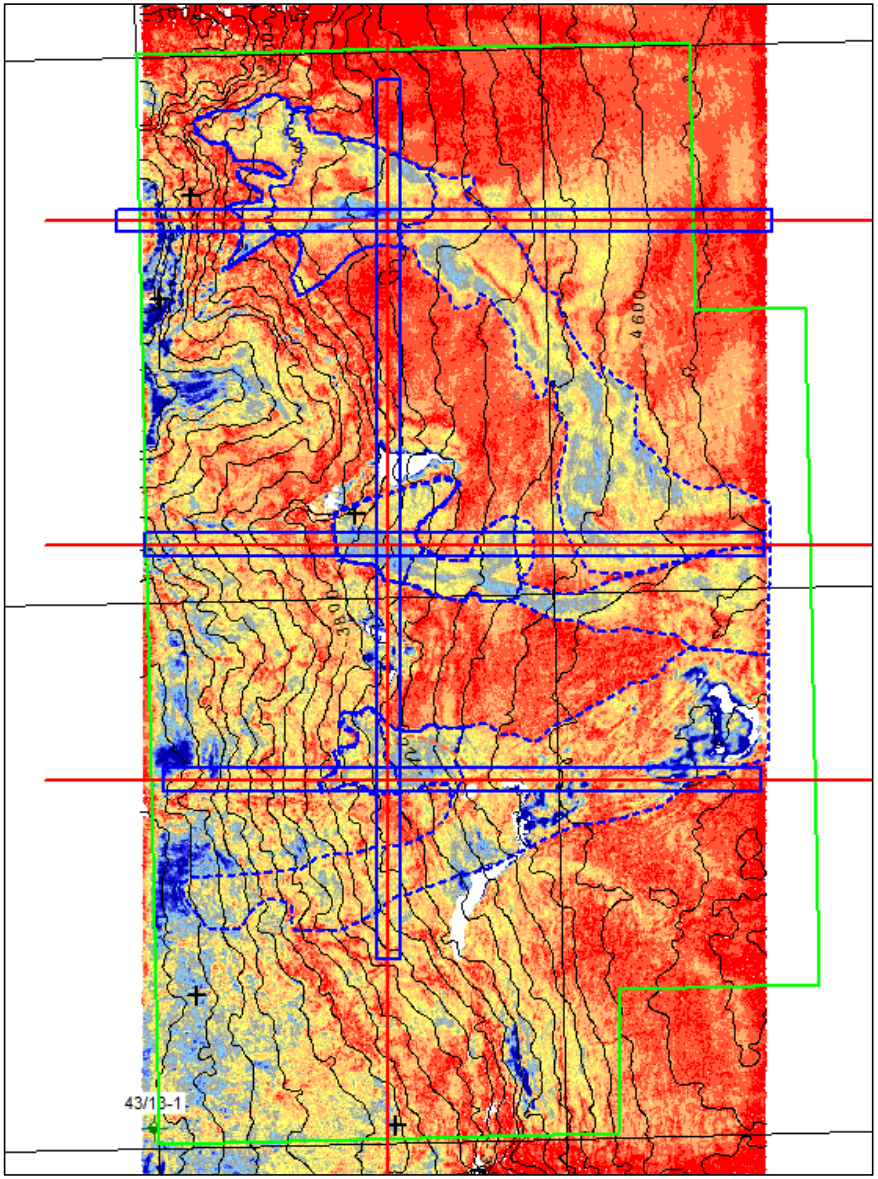
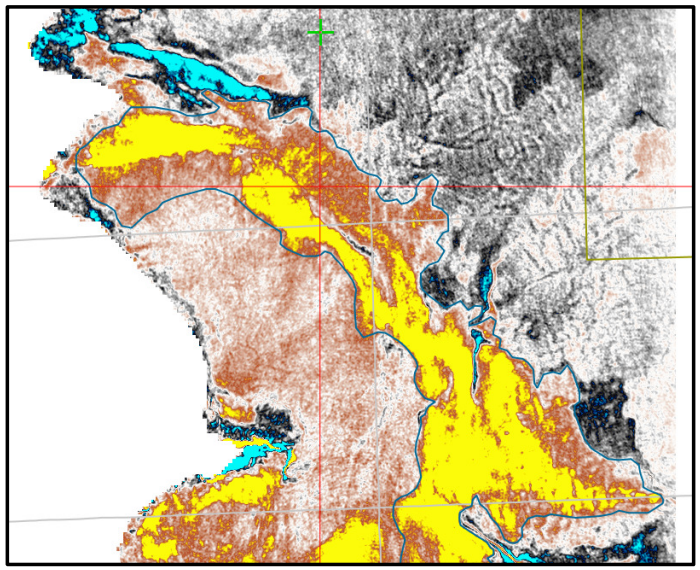


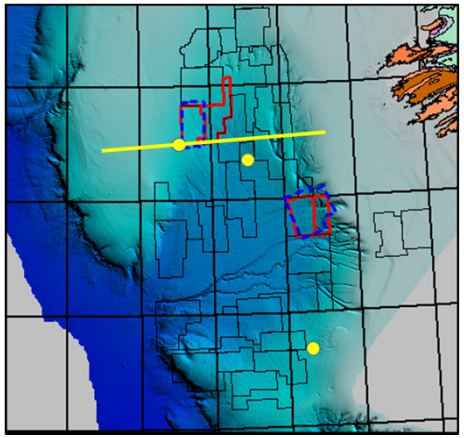


FEL 3/13 –LO 16/2 Lower Cretaceous Paleoscan™ Stratigraphic Slices

FEL 2/13 Lower Cretaceous Slope Channel Systems







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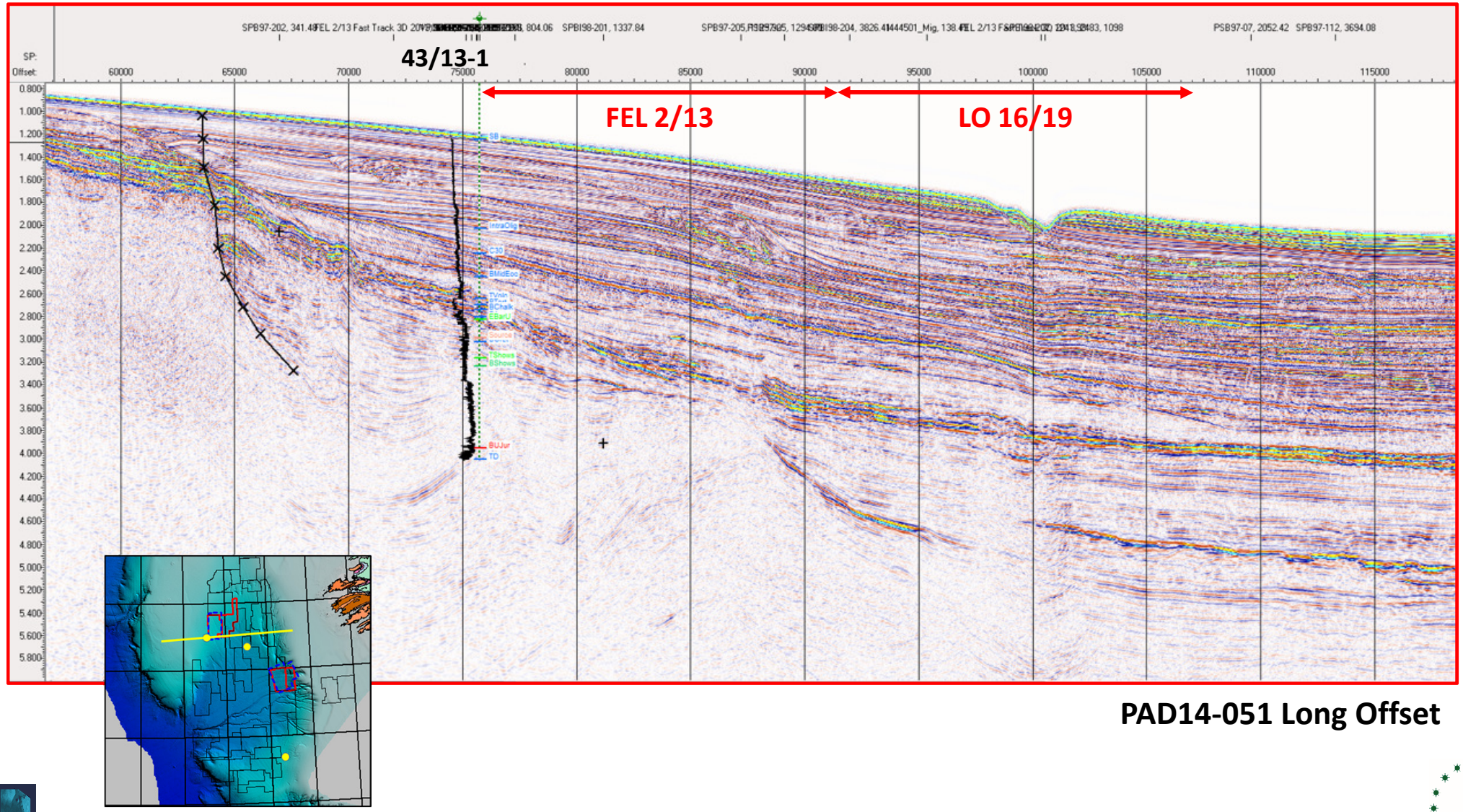

PAD14-051 Long Offset

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SUMMARY

- In SE Porcupine pre-rift faults are NNE-SSW down-to-east, syn-rift faults are N-S down-to-basin, detaching on pre-rift.
- Pre-rift mapping suggests WNW-ESE relays which may be linked to a “Dunquin Transform”, parallel to the basin extension direction and separating a high-extension, high-subsidence South Porcupine from a low-extension, low-subsidence North Porcupine.
- Paleogeography suggests the possibility of shallow marine Middle Jurassic.
- Long-lived post-rift canyon entry in the east, slope channels in the west push Cretaceous fans further out into the basin.
- No 2D interpretation survives contact with modern 3D.

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