

The emergence of Miocene reefs in South China Sea and its resilient adaptability under varying eustatic, climatic and oceanographic conditions

Manoj Mathew^{1,*}, Adelya Makhankova², David Menier³, Benjamin Sautter², Christian Betzler⁴, Bernard Pierson⁵

¹Shale Gas Research Group, Institute of Hydrocarbon Recovery, Universiti Teknologi PETRONAS, 32610 Bandar Seri Iskandar, Malaysia

²Department of Geosciences, Universiti Teknologi PETRONAS, 32610 Bandar Seri Iskandar, Malaysia

³Laboratoire Géosciences Océan (LGO), Université Bretagne Sud, 56017 Vannes Cedex, France

⁴Institute of Geology, CEN, University of Hamburg, Bundesstrasse 55, 20146 Hamburg, Germany

⁵GEO-Instituut, Campus Arenberg, Katholieke Universiteit Leuven, Celestijnenlaan 200E, B-3001 Leuven-Heverlee, Belgium

*Corresponding author: Manoj Mathew
Universiti Teknologi PETRONAS
32610 Bandar Seri Iskandar, Malaysia
Phone: +60142361495
Email: manoj_mathew7@yahoo.com

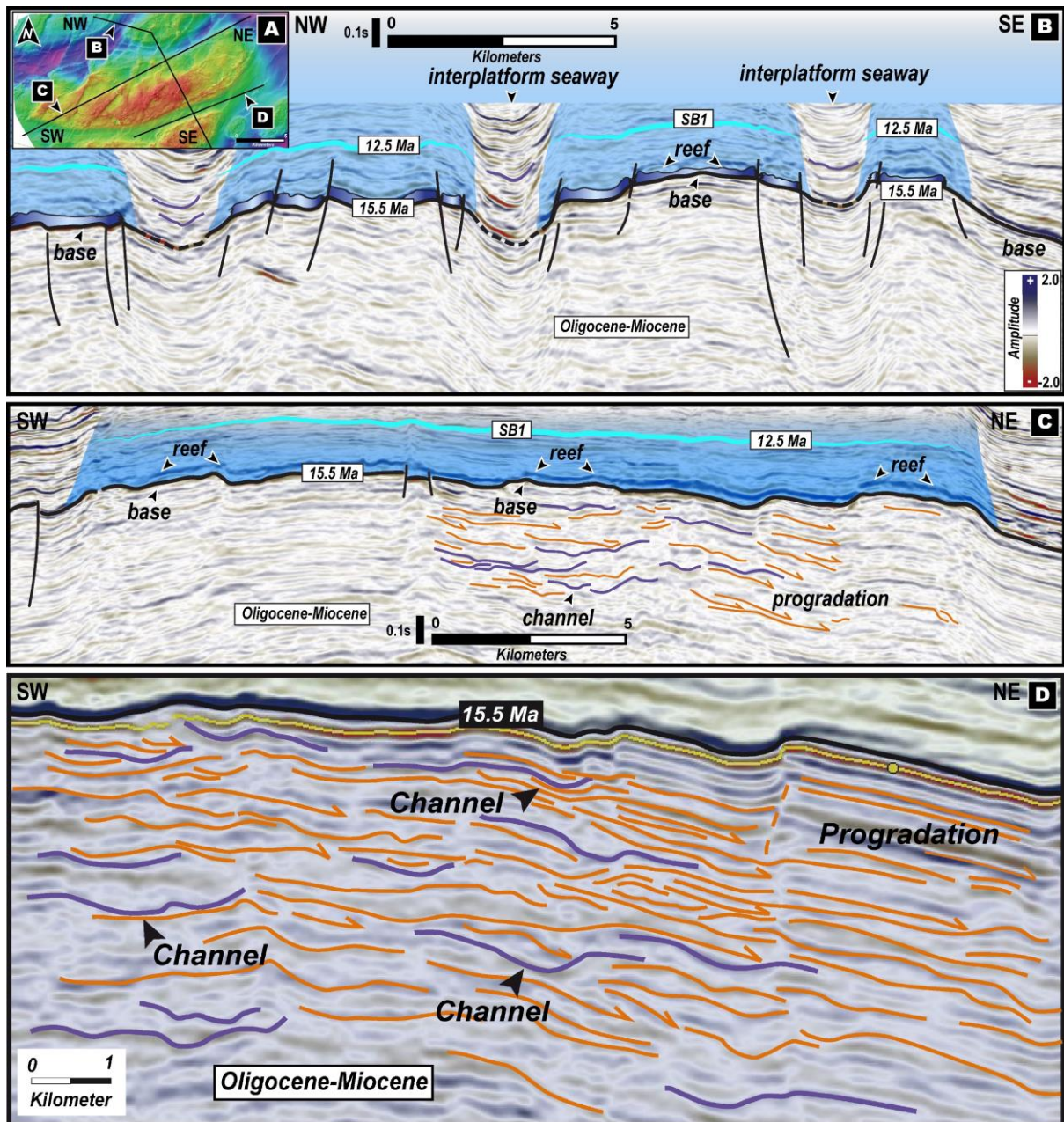


Figure S1. Seismic lines showing Middle Miocene carbonate platforms of Luconia overlying distinct progradation features of Oligo–Miocene paleodelta systems. Interplatform seaways that are confined between the carbonate platforms display an internal architecture that demonstrates repeated incisions by possibly tidal channels and filling phases from above the 15.5 Ma boundary. Below the 15.5 Ma boundary, observations can be made of a sedimentary architecture resembling a progradational deltaic system with numerous channels. Also shown are ages of platform sequence boundaries (SB) recognized and interpreted in this work. Base maps and images in (A), (B), (C) and (D) were visualized, interpreted and constructed with Eliis PaleoScan software version 2018.1.0 (<http://www.eliis.fr/products/paleoscan%E2%84%A2-software>). Figure labels were added using Adobe Illustrator version CS5.1 (<http://www.adobe.com/products/illustrator.html>).