



## **Imaging exhumed lower continental crust and proto-oceanic crust in the distal Jequitinhonha basin, Brazil**

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Twelve combined wide-angle refraction and coincident multi-channel seismic profiles were acquired in the Jequitinhonha-Camamu-Almada, Jacuípe, and Sergipe-Alagoas basins, NE Brazil, during the SALSA experiment in 2014. Profiles SL11 and SL12 image the Jequitinhonha basin, perpendicularly to the coast, with 15 and 11 four-channel ocean-bottom seismometers, respectively. Profile SL10 runs parallel to the coast, crossing profiles SL11 and SL12, imaging the proximal Jequitinhonha and Camamu-Almada basins with 17 ocean-bottom seismometers. Forward modelling, combined with pre-stack depth migration to increase the horizontal resolution of the velocity models, indicates that sediment thickness varies between 3.3 km and 6.2 km in the distal basin. Crustal thickness at the western edge of the profiles is of around 20 km, with velocity gradients indicating a continental origin. It decreases to less than 5 km in the distal basin, with high seismic velocities and gradients, not compatible with normal oceanic crust nor exhumed upper mantle. Typical oceanic crust is never imaged along these about 200 km-long profiles and we propose that the transitional crust in the Jequitinhonha basin is a mixture of exhumed lower continental crust and proto-oceanic crust.

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