

**Figure 5.** Regional satellite magnetic map (EMAG2). Dashed red line is the ocean crust boundary; dark gray dashed lines are the ocean fracture zones. LMA; M4; M2; M0 correspond to the magnetic anomalies discussed after Moulin *et al.*, 2010.

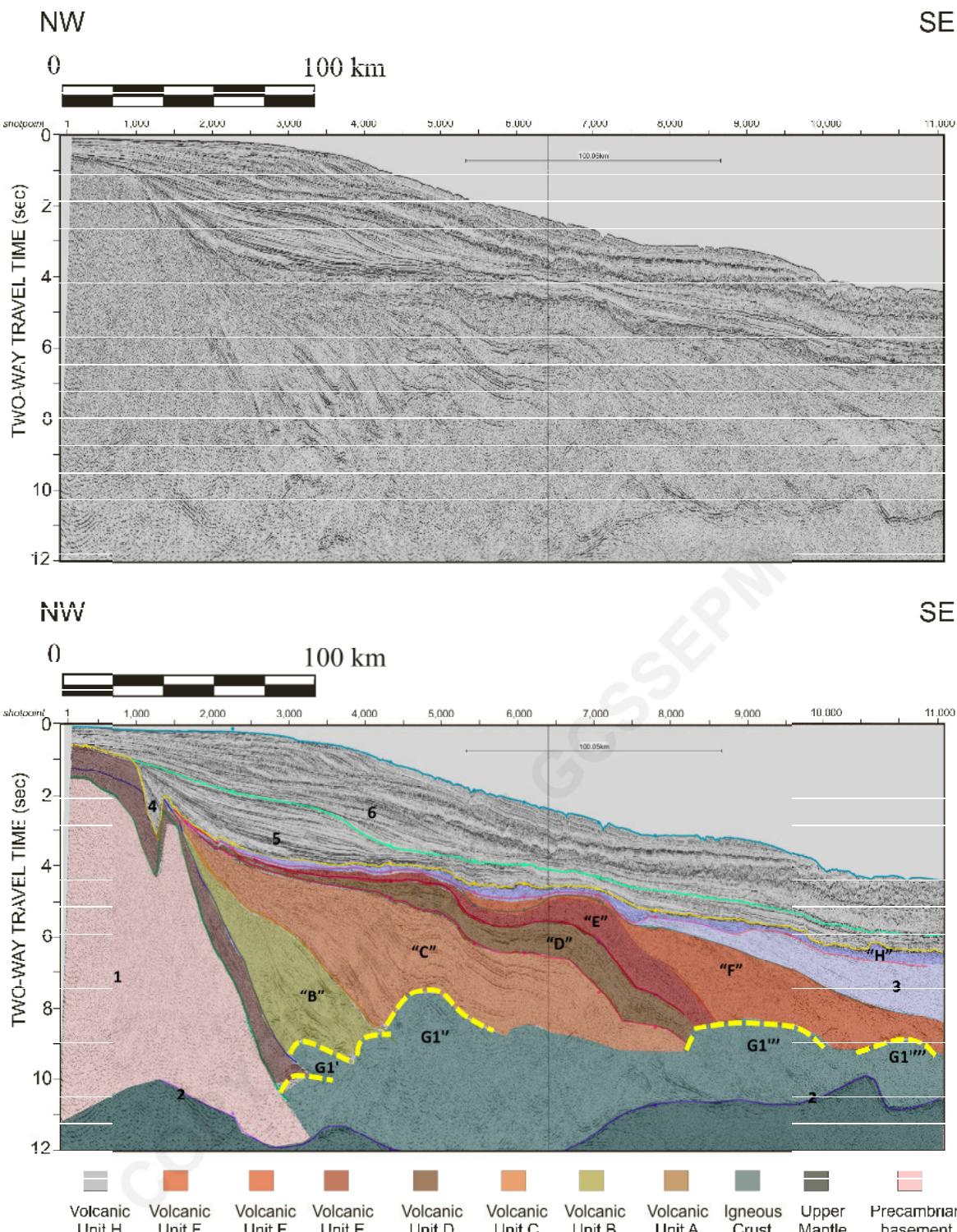


Figure 6. Seismic profile in the northern Pelotas basin (Line A, see location in Fig. 2). Seismic example without (top) and with (bottom) interpretation. 1: Crystalline basement; 2: reflection Moho; 3: oceanic crust; 4: synrift deposits ; 5: Cretaceous sedimentary section; 6: Tertiary sedimentary section. Volcanic units "A," "B," "C," "D," "E," "F," and "H" (flat volcanic layers); and intrusive igneous unit "G1" (yellow dashed lines) are the deep seismic mounded features below the SDR wedges.