

Figure 9. Well Cross Section of exploratory wells in the Pelotas Basin (see location in Fig. 2), flattened at the top of the volcanic rocks. (1) Volcanic unit “H” (flat lying volcanic) in well 1-RSS-3RS is composed by a tholeiitic basaltic suite (basalt, trachybasalt, trachyandesite and basaltic andesite) containing low  $TiO_2$ ; gray to brown color; amygdaloidal texture and  $39Ar/40Ar$  reported age of  $118.3 \pm 1.9$  Ma.; (2) Volcanic unit “H” in well 2-BPS-6BP, composed by amygdaloidal trachyandesite and basalt. (3) Volcanic unit “H” in well 2-SCS-2SC, composed by trachyandesites having amygdaloidal textures and fine grain size. (4) Volcanic unit “H” in well 1-SCS-1-SC (south of Santos basin), composed of gray to brown porphyritic trachyandesite and basalt, reported ages of  $114 \pm 3$  Ma ( $39K/40Ar$ ) and  $113.2 \pm 0.1$  Ma ( $39Ar/40Ar$ ). (5) Volcanic unit “A” (early rift volcanic flows) in well 1-RSS-3RS is composed by an alkaline basaltic suite having high  $TiO_2$ . Reported radiometric  $39Ar/40Ar$  of  $125 \pm 07$  Ma. (6) Volcanic section probably corresponding to the volcanic units “C” (SDRs), composed by tholeiitic basalts having high  $TiO_2$  and amygdaloidal texture (mainly at the top of the layer). Reported radiometric age for this interval has not been considered by presenting analytical and stratigraphic inconsistencies with the seismic stratigraphic analysis (Lobo, 2007). (7) Brown segments correspond to the cored intervals at wells.

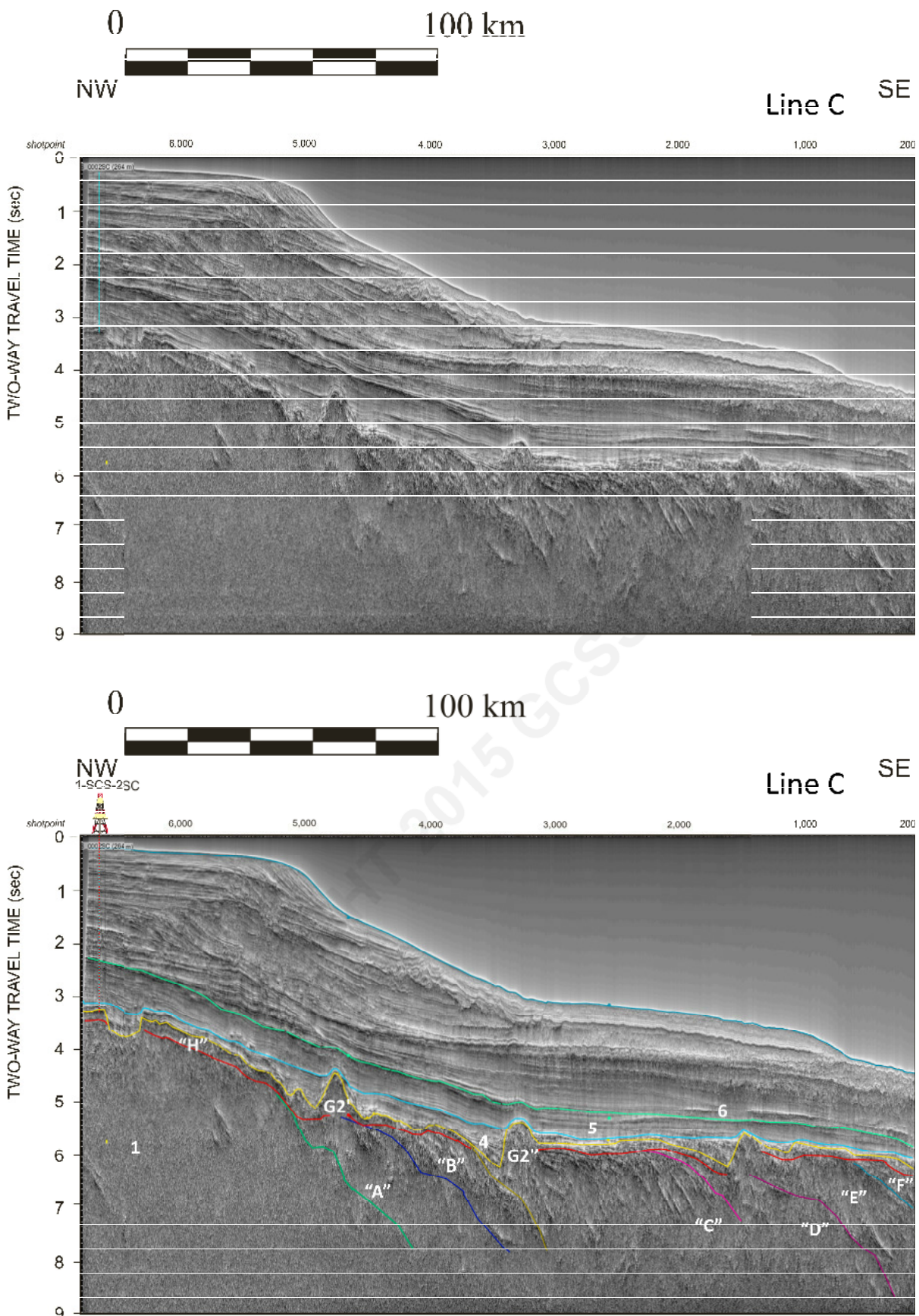


Figure 10. Seismic profile in the northern Pelotas basin (Line C; see location in Fig. 2). Seismic example without (top) and with (bottom) interpretation. References are the same as in Figure 6. Units “G2” correspond to the shallow mounded features covered by sediments.



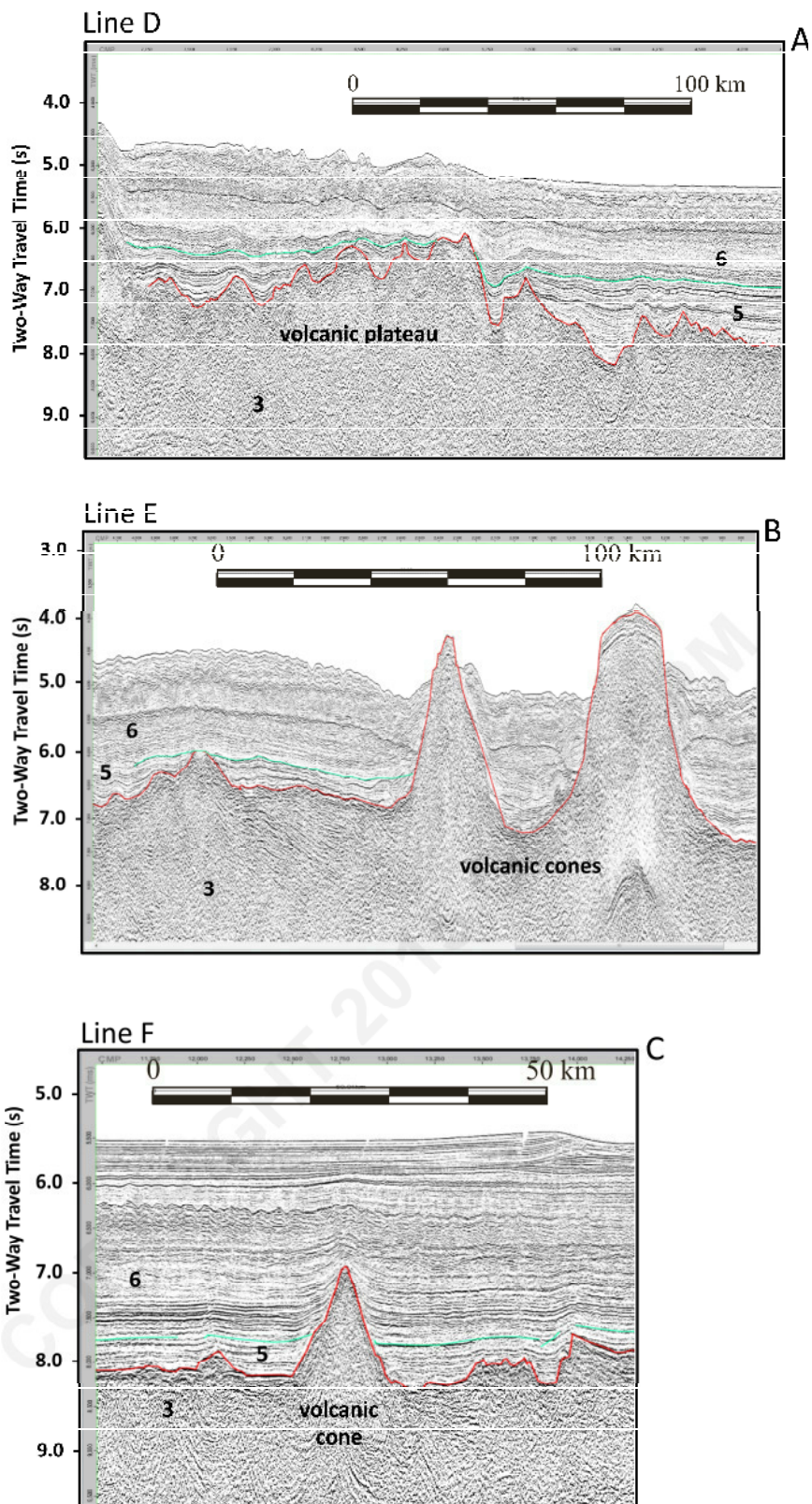


Figure 11. Regional seismic examples of oceanic crust of the Pelotas basin (Lines D, E, and F; see location in Fig. 2). References the same as in Figure 6. Line D extends from the southern Santos Basin and crosses a volcanic plateau associated with the Florianópolis Fracture Zone; Line E crosses volcanic cones associated with the Porto Alegre Fracture Zone, and Line F extends crosses a volcanic cone possibly associated with the Chui Fracture Zone.