

Figure F1. A. Regional map of study area with location of drilled sites, 2004 earthquake rupture area, and Bengal-Nicobar Fan system. Dashed square = location of B. GR = Ganges River, IBR = Indo-Burman range (modified from McNeill et al., 2017d). B. Multichannel seismic reflection profiles across the North Sumatran forearc (location of the southern 2004 earthquake rupture zone) and Indian oceanic plate overlain on multibeam bathymetry. C. Site U1480 on seismic profile Line BGR06-101–102 (see B). Blue line = unconformity between the trench wedge and underlying Nicobar Fan sediments, green line = transition from reflective to less reflective stratigraphy, dashed red line = high-amplitude reflector with negative polarity toward the subduction zone (modified from McNeill et al., 2017b, based on data from McNeill et al., 2016). D. Site U1481 on seismic profile Line BGR06-103 (see B; modified from McNeill et al., 2017c, based on data from McNeill et al., 2016).

Figure F2. Sr concentration and isotopic ratios measured in pore fluid from Sites U1480 (blue) and U1481 (red). Lithostratigraphic units and ages correspond to those from the Site U1480 and Site U1481 chapters (McNeill et al., 2017b, 2017c). Enrichment in $^{87}\text{Sr}/^{86}\text{Sr}$ relative to the seawater (SW; arrow) ratio of 0.7092 is evidence for weathering of continentally derived silicates that release this radiogenic isotope. The decrease in $^{87}\text{Sr}/^{86}\text{Sr}$ ratios in the deepest samples suggests a contribution from Sr released by alteration of basement.

Figure F3. $^{87}\text{Sr}/^{86}\text{Sr}$ isotope ratios versus the inverse of Sr concentration, Sites U1480 (blue) and U1481 (red). Triangles = data from shallower than 300 mbsf, squares = data from 300 to 1100 mbsf, diamonds = data from deeper than 1100 mbsf. Only data deeper than 1100 mbsf were collected for Site U1481. Arrows point toward increasing sediment depths.