Figure F1. Regional map of NanTroSEIZE transect area offshore Kii Peninsula, Japan, with locations of Expedition 358 sites.

Figure F2. Seismic reflection profile crossing Site C0002 with depth ranges for various holes (modified from Tobin et al., 2020). Enlargements show overlap among Holes C0002P (Expedition 348) and C0002Q–C0002T (Expedition 358). See Figure F1 for location of drill site and orientation of seismic line.

Figure F3. Seismic reflection profile crossing Site C0025. Blue circles = interpreted boundary between fore-arc basin deposits and accretionary prism (modified from Tobin et al., 2020). See Figure F1 for location of drill site and orientation of seismic line. TWT = two-way traveltime.

Figure F4. Comparison of proportional estimates for lithologies based on visual inspection of cuttings, Hole C0002P Subunit VB (modified from Tobin et al., 2015b) and Holes C0002Q–C0002S (modified from Kitajima et al., 2020). Note the large differences between overlapping depth intervals at nearby sites.

Figure F5. Simplified stratigraphic column, Hole C0025A (modified from Kimura et al., 2020).

Figure F6. Representative X-ray diffractograms from scans of oriented clay-sized specimens (<2 µm spherical equivalent), Holes C0002R and C0025A. Diagnostic peaks for computation of weight percent are identified for smectite (001), illite (001), undifferentiated chlorite (002) + kaolinite (001), and quartz (100). Subsidiary peaks for individual clay minerals and quartz are also shown. Saddle:peak intensity ratio for smectite (001) was used to determine percent expandability (Rettke, 1981). °2θ position of illite (002)/smectite (003) peak was used to determine %illite in I/S mixed-layer clay (Moore and Reynolds, 1989a).

Figure F7. Normalized relative abundance values of minerals in clay-sized fraction from cuttings and core, Holes C0002Q–C0002T. Weight percent values were computed using SVD normalization factors (Table T1). Computations are tabulated in Table T3.

Figure F8. Comparison of XRD data, Holes C0002P (Underwood, 2017a) and C0002Q–C0002T. Values of total clay minerals are from shipboard measurements of bulk powders (Tobin et al., 2015b; Kitajima et al., 2020). Weight percent values (Table T3) were computed using SVD normalization factors (Table T1).

Figure F9. Simplified stratigraphic column with normalized abundances of clay-sized minerals, Hole C0025A. Weight percent values were computed using SVD normalization factors (Table T1). Computations are tabulated in Table T3. Dashed lines show comparative mean values for Units II (lower fore-arc basin) and III (trench-slope facies), as documented in shallow coring intervals of Site C0002 (Guo and Underwood, 2012).

Figure F10. Comparison of diagenetic indicators, Holes C0002P (Underwood 2017a) and C0002Q–C0002T. Expandability values for smectite + I/S mixed-layer clay follow saddle:peak method of Rettke (1981). Computations of %illite in I/S mixed-layer clay follow peak-position method of Moore and Reynolds (1989a). Boundaries in illite crystallinity (Kübler) index (from Warr and Ferreiro Mählmann, 2015) are meant only to provide a qualitative reference frame for generic conditions of advanced diagenesis and incipient metamorphism.

Figure F11. Indicators of clay diagenesis, Site C0025. Boundaries between zones of diagenesis, anchimetamorphism, and epimetamorphism (from Warr and Ferreiro Mählmann, 2015) are meant only to provide a qualitative reference frame for geologic conditions in generic detrital source areas.