Figure F1. A. IODP, ODP, and DSDP sites and larger scale tectonic features east of New Zealand. TVZ = Taupō Volcanic Zone (solid line), CVZ = Coromandel Volcanic Zone (dotted line). B. Expedition 372 and 375 sites across the Hikurangi subduction margin with smaller scale tectonic features. Maps created with GeoMapApp, Global Multiresolution Topography Data Synthesis (GMRT) after Ryan et al. (2009).

Figure F2. Total alkali vs. silica diagrams after Le Maitre et al. (2002) for the (A) Quaternary and (B) Neogene. The majority of tephras, independent of their age, are rhyolitic. Basaltic, dacitic, and trachytic glass shards are rare in the Quaternary but common in the Neogene (especially present in Sites U1520, 1123, and 1124). Shown are individual measurements of glass shards.

Figure F3. K_2O vs. SiO_2 classification diagram after Peccerillo and Taylor (1976) for the (A) Quaternary and (B) Neogene. Quaternary glass shards follow the calc-alkaline and high-K calc-alkaline series, with one glass shard of tholeiitic character. Neogene glass shards mostly follow the calc-alkaline series, a few glass shards straddle along the boundary between tholeiitic series and calc-alkaline series and silica-rich glass shards (>75 wt%) tend toward and plot within the high-K calc-alkaline series.