



Fig. S2 XRD patterns of the oriented clay fraction samples in the selected six samples with (dashed lines) and without (solid lines) ethyleneglycole (E.G.) treatment from Hole U1545A. Sm: smectite; I-S: illite and smectite mixed layer mineral; I: illite; C,K: chlorite and kaolinite; Q: quartz; Ab: albite. The small boxes in each panel indicate the (060) bands from the XRD patterns of the random powder bulk samples, which are dominated by a peak centered at 1.50 Å, indicating the trioctahedral character of the smectite layers.