# Supplementary data

Figure S1. Characteristic X-Ray Diffraction Patterns for sediments from Lake Futalaufquen sequence (FU54–55) and two tephra layers (FU2 and FU29).

Figure S2. Multivariate analysis carried out on elemental concentrations of the two zones identified in the sequence, made by Detrended Correspondence Analysis, including the variables dry density (DD), water content (WC), organic matter (OM), and *δ*15N and *δ*13C values, using CANOCO version 4.5. In relation to analyzed variables, the axes explain 68.7% and 84.3% of the total variance for Zone 1 and Zone 2, respectively.

Figure S3. Examples of different components of the amorphous phase.