

Supplementary material

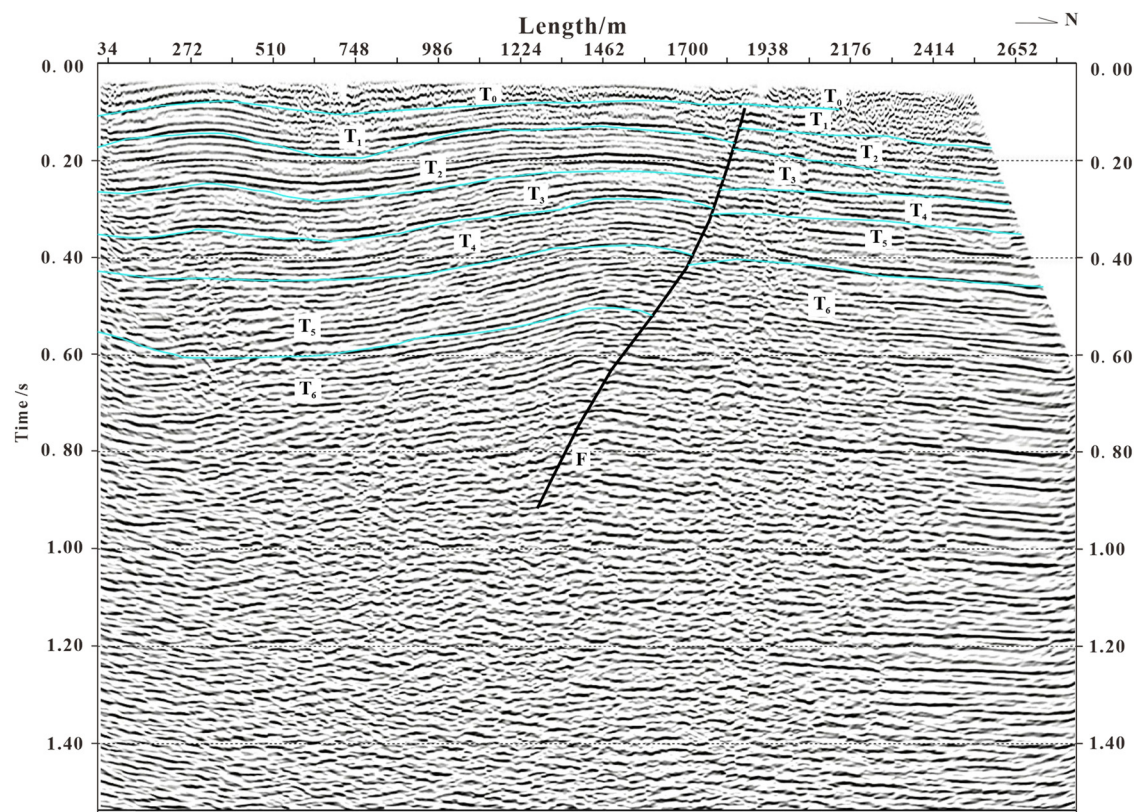


Figure S1: Time section of the shallow seismic profile W1. Cyan lines are the interpreted boundaries of the seven groups (T₀–T₆).

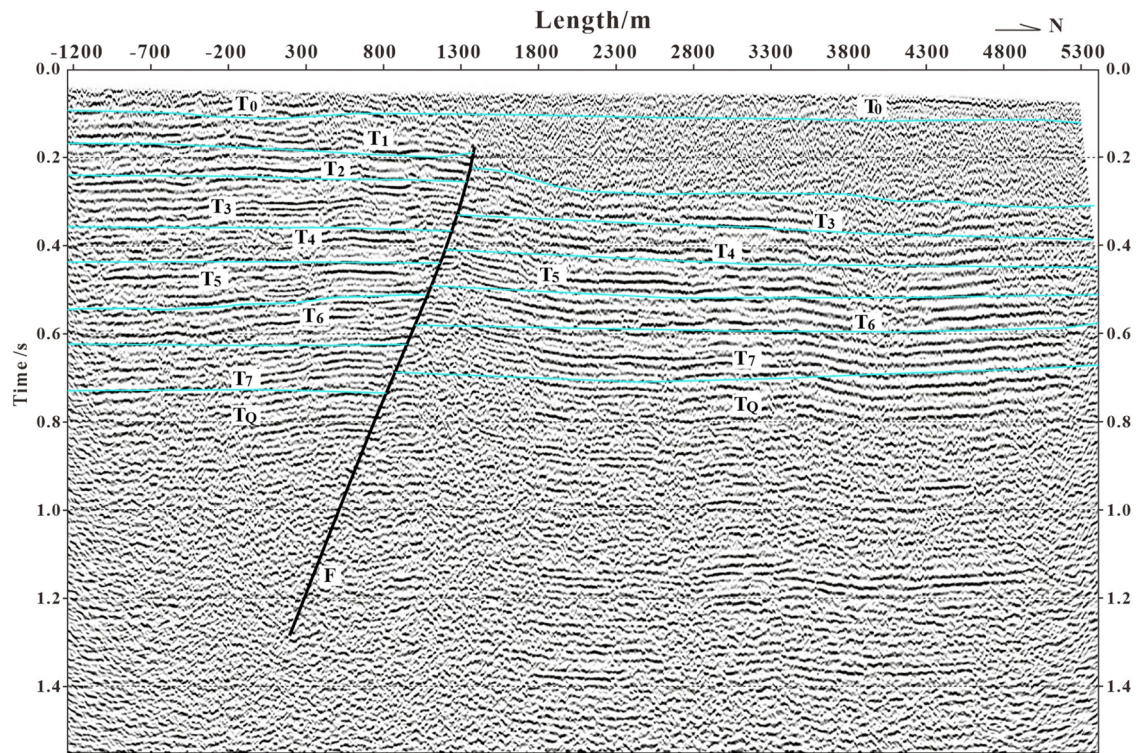


Figure S2: Time section of the shallow seismic profile W3. Cyan lines are the interpreted boundaries of the nine groups (T₀–T₇, T_Q).

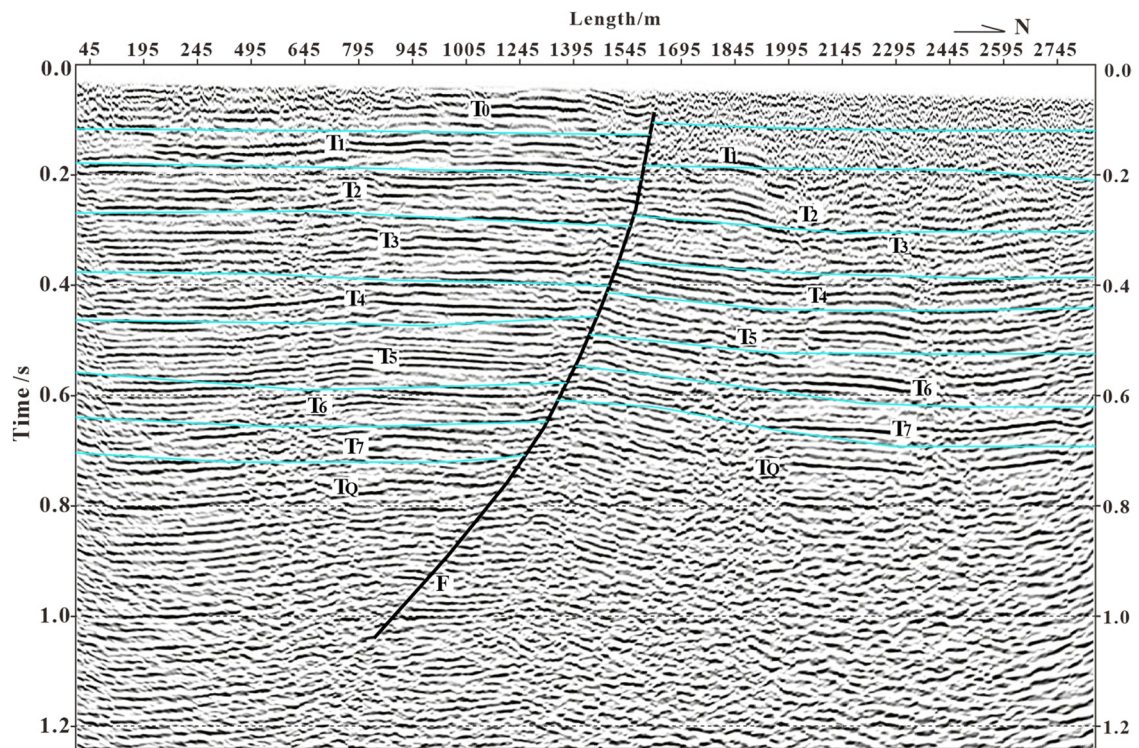


Figure S3: Time section of the shallow seismic profile W4. Cyan lines are the interpreted boundaries of the nine groups (T₀–T₇, T_Q).

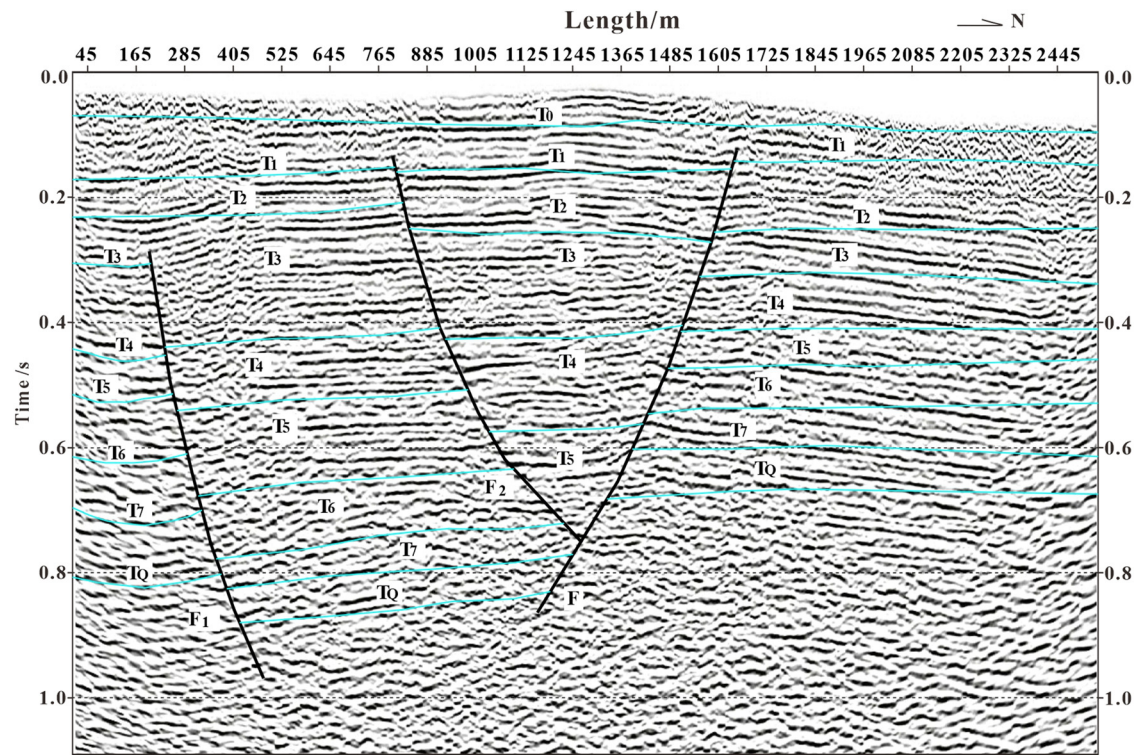


Figure S4: Time section of the shallow seismic profile W5. Cyan lines are the interpreted boundaries of the nine groups (T₀–T₇, T_Q).

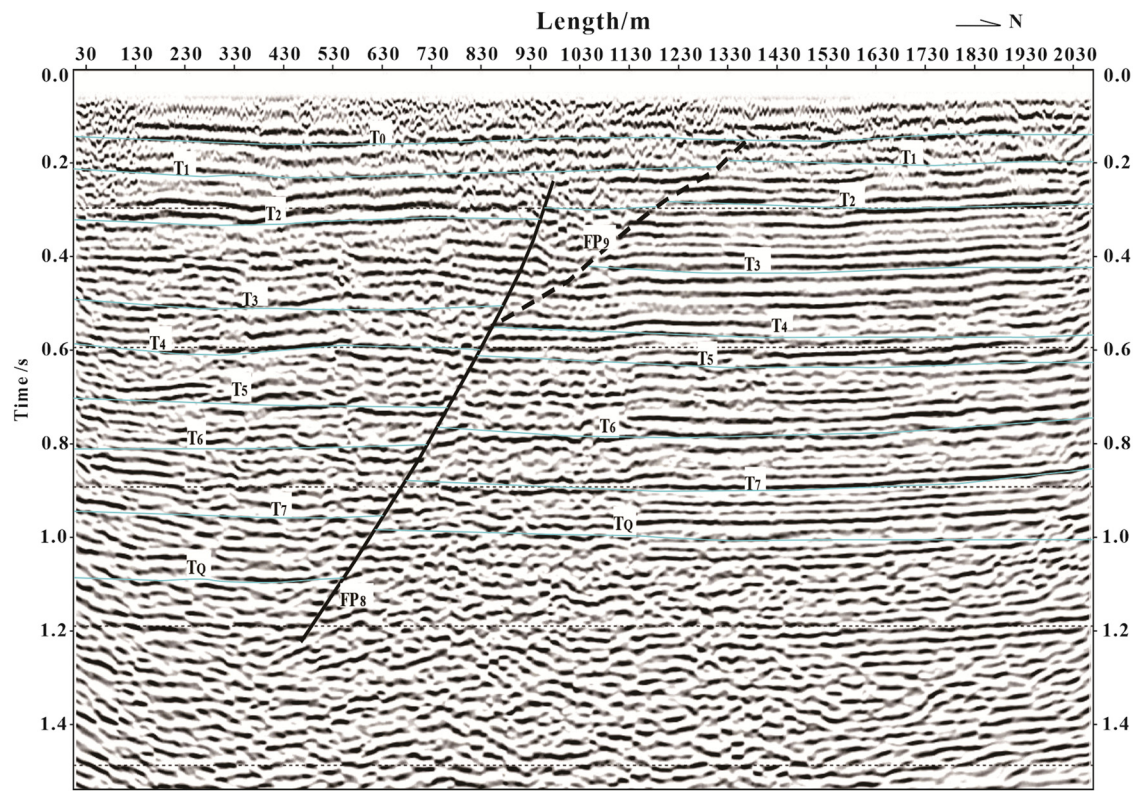


Figure S5: Time section of the shallow seismic profile W6. Cyan lines are the interpreted boundaries of the nine groups (T₀–T₇, T_Q).

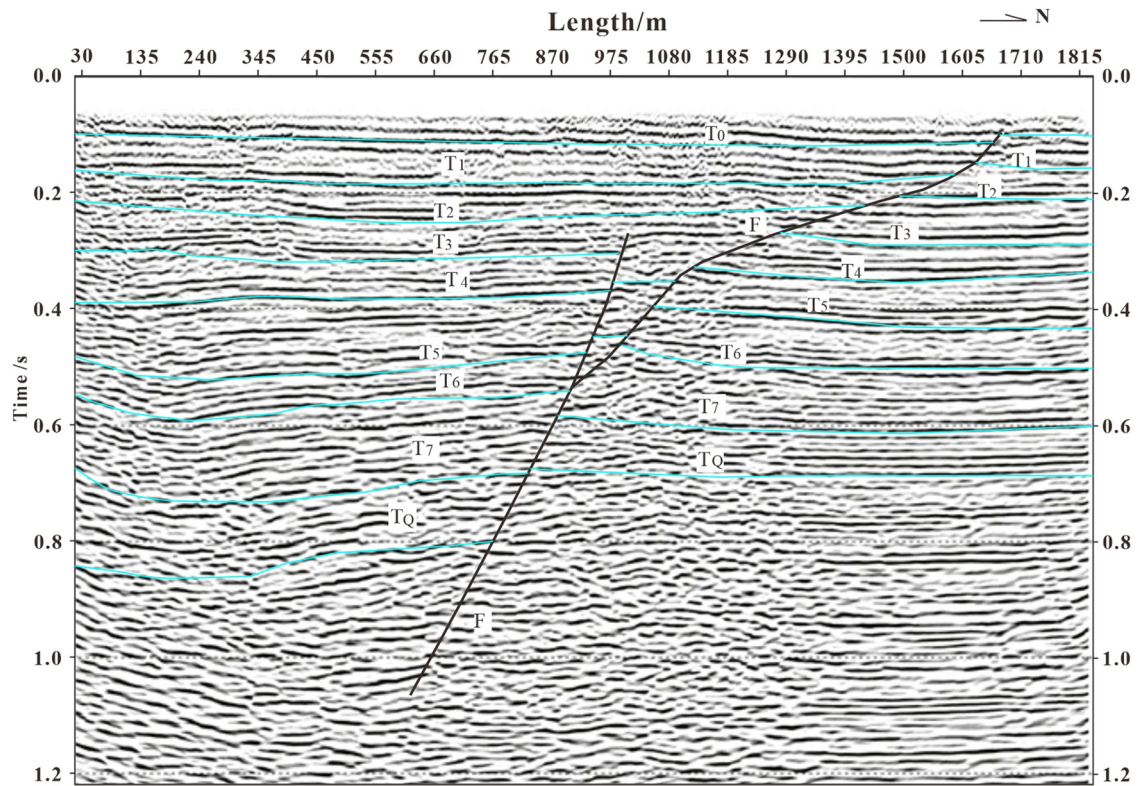


Figure S6: Time section of the shallow seismic profile W7. Cyan lines are the interpreted boundaries of the nine groups (T₀–T₇, T_Q).

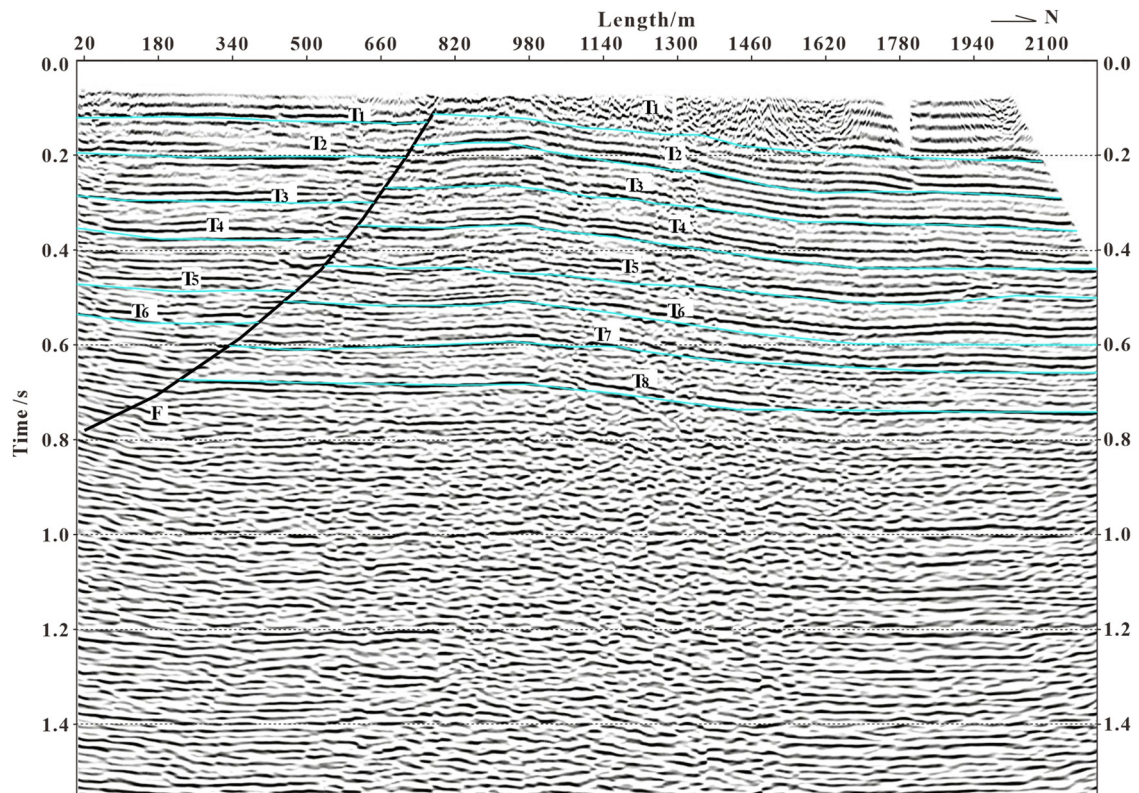


Figure S7: Time section of the shallow seismic profile W8. Cyan lines are the interpreted boundaries of the eight groups (T₁–T₈).

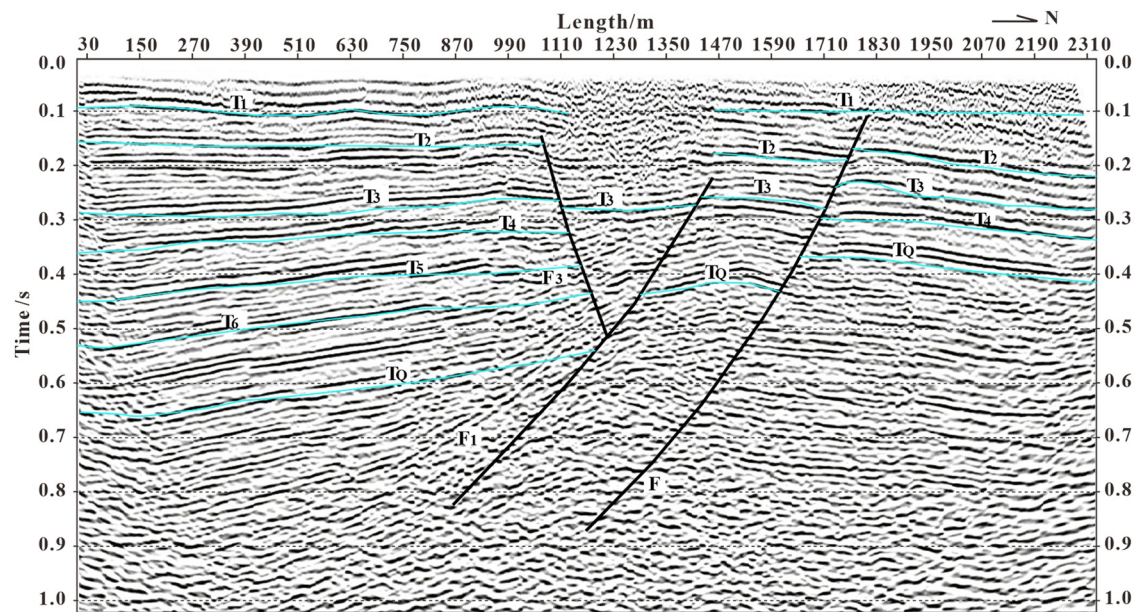


Figure S8: Time section of the shallow seismic profile W9. Cyan lines are the interpreted boundaries of the seven groups (T_1 – T_6 , T_Q).

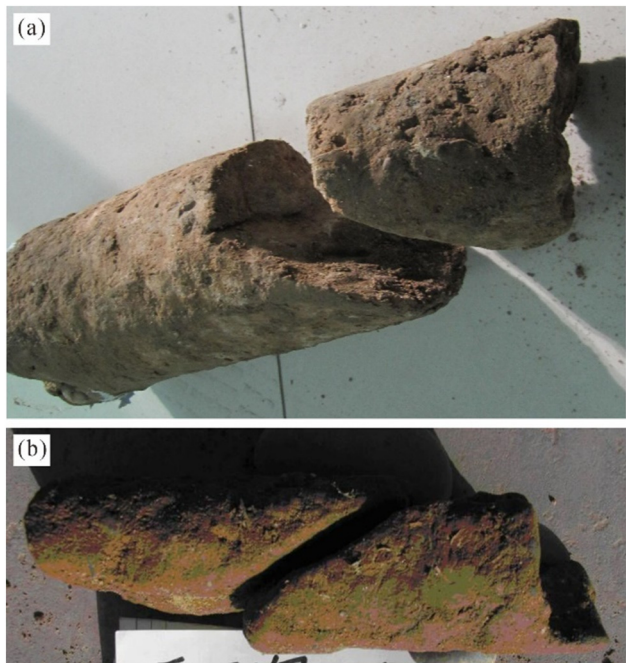


Figure S9: Photos of fault plane in boreholes of (a) WZ4-3 and (b) WZ4-1.

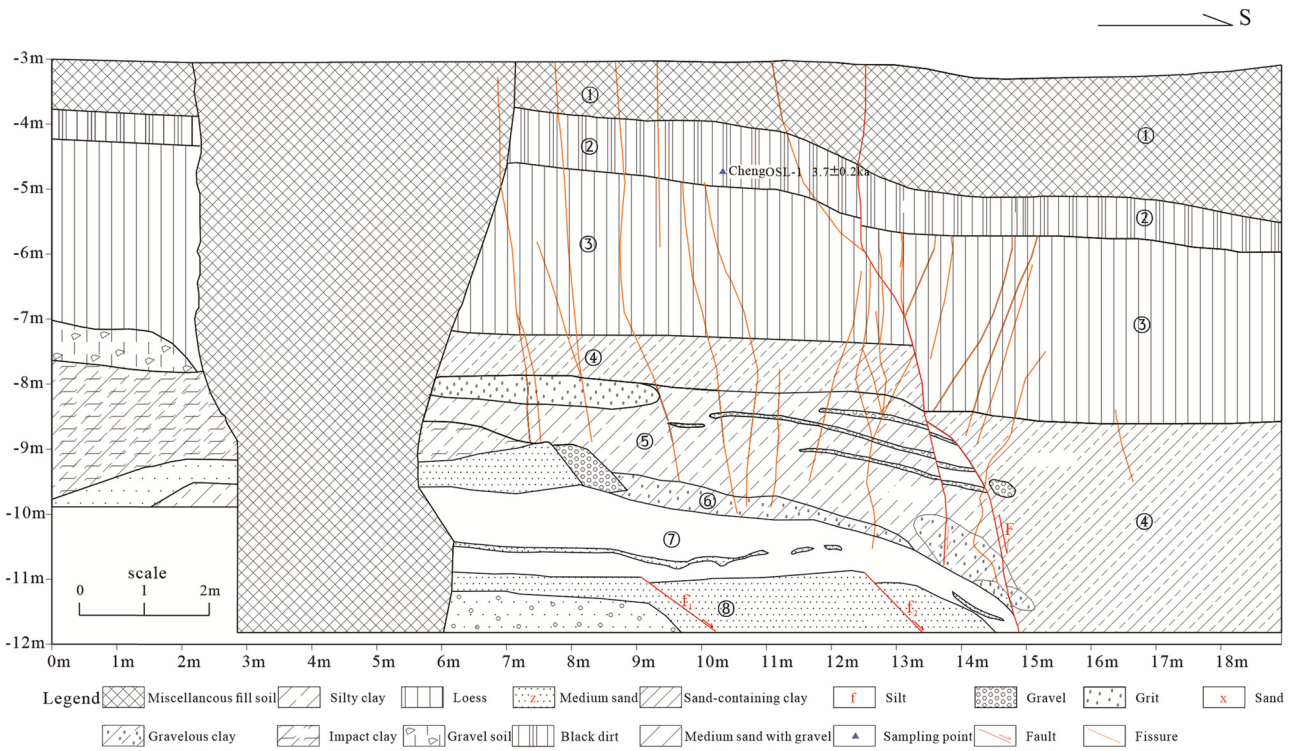


Figure S10: Sketch of the trench TC2. The OSL sample was collected from Unit ②.

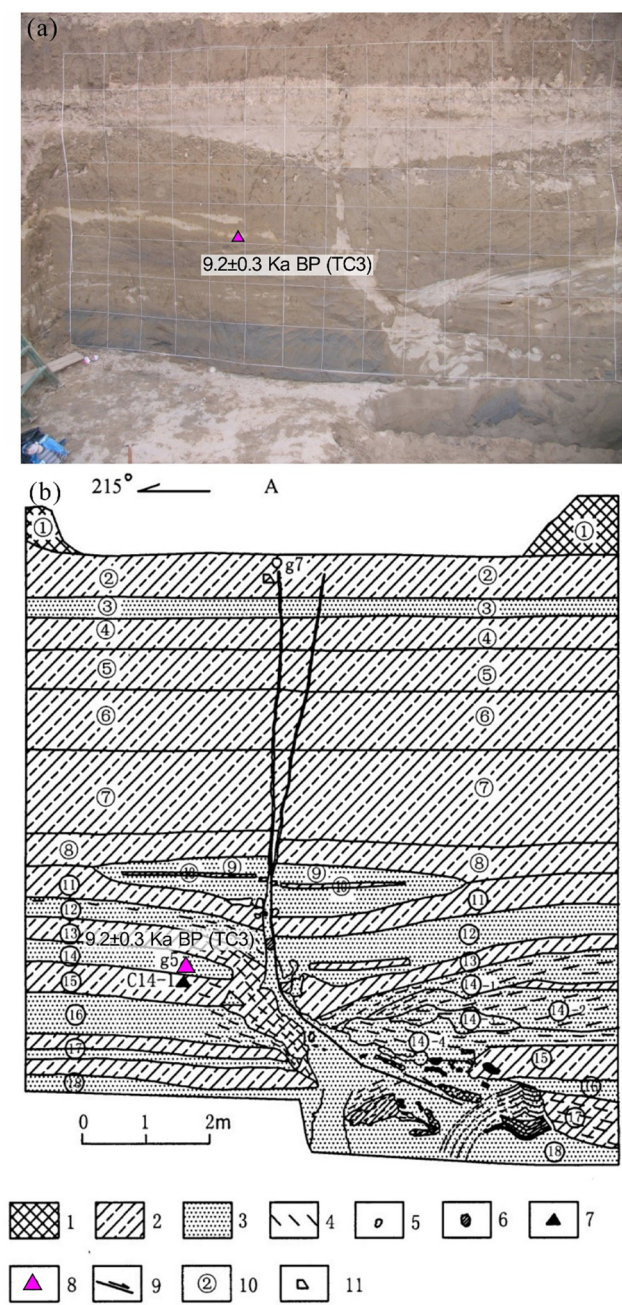


Figure S11: (a) Photograph and (b) corresponding sketch of the trench TC3. The OSL sample was collected from Unit (14), which shows in light tone in the photo. 1-Miscellaneous fill soil; 2-Silty clay; 3-Sand; 4-Dip direction of strata; 5-Calcareous concretion; 6-Clay chunks formed by earthquakes; 7-Radiocarbon sample; 8-OSL sample; 9-Fault; 10-Stratum and relevant unit number; 11-Ancient tiles.

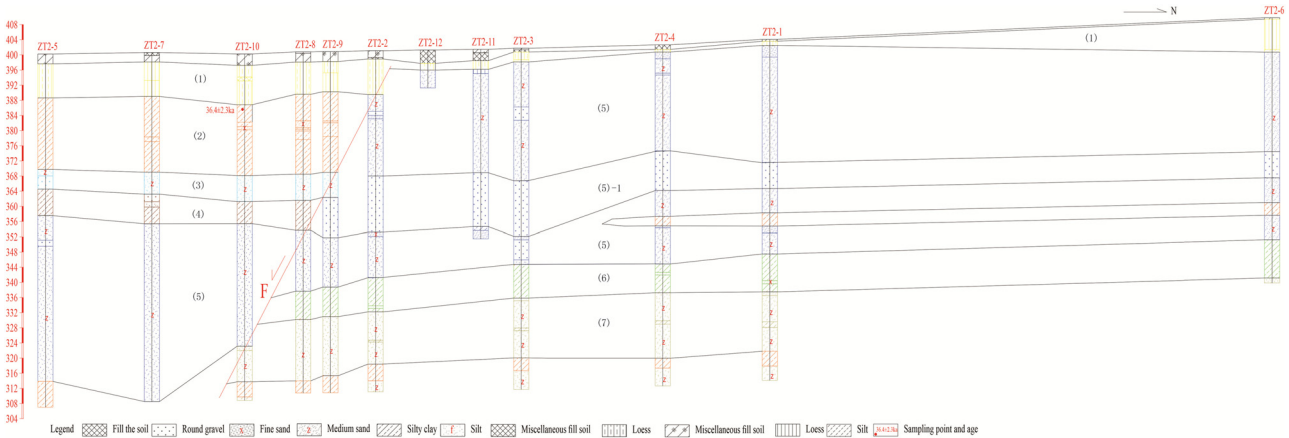


Figure S12: Drilling section of ZT2. The background colors represent different layers (Unit (1) to Unit (7)). F is the interpreted Weihe fault.

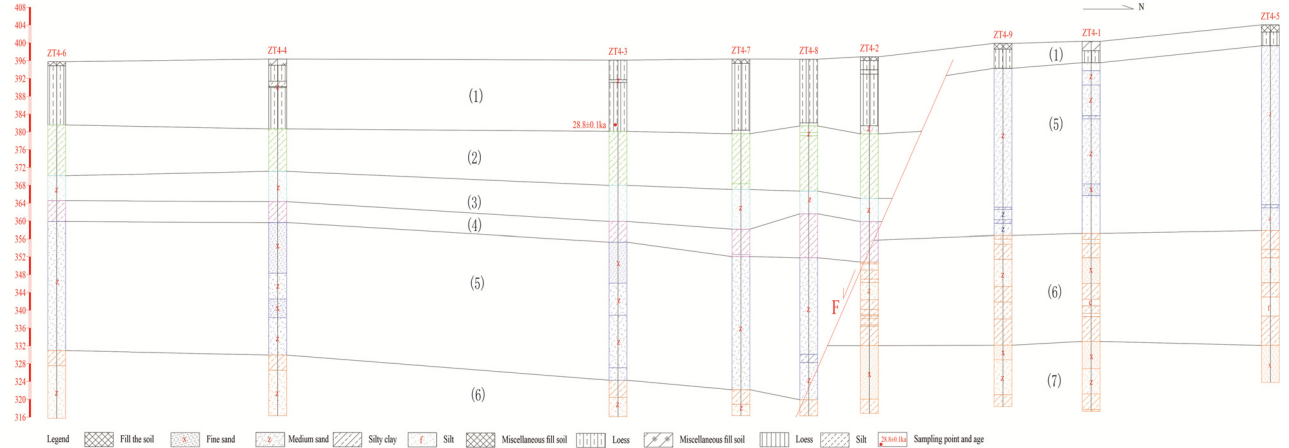


Figure S13: Drilling section of ZT4. The background colors represent different layers (Unit (1) to Unit (7)). F is the interpreted Weihe fault.

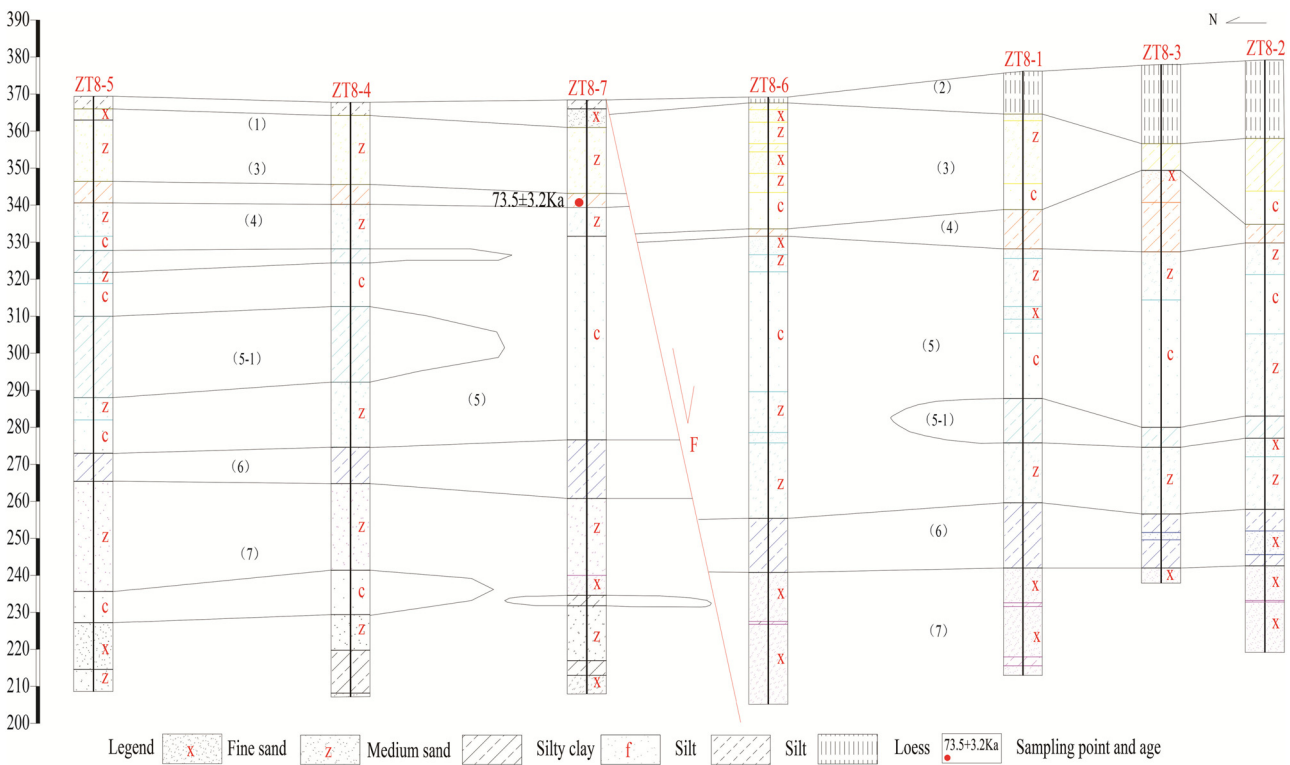


Figure S14: Drilling section of ZT8. The background colors represent different layers (Unit (1) to Unit (7)). F is the interpreted Weihe fault.

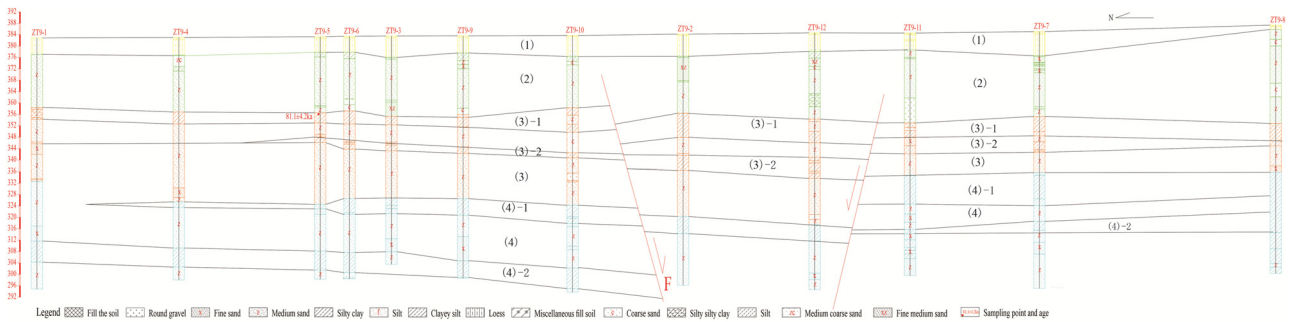


Figure S15: Drilling section of ZT9. The background colors represent different layers (Unit (1) to Unit (4)). F is the interpreted Weihe fault.

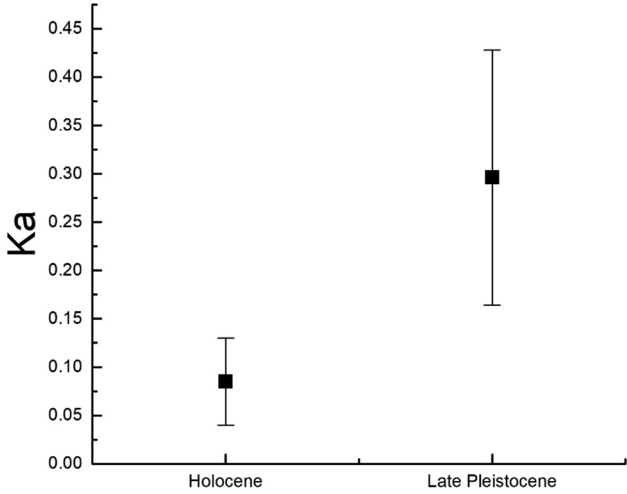


Figure S16: Error bars for the calculated slip rates of Weihe fault.