

Workshop on Scientific Drilling of Weihe Basin (China)

Weihe Basin, enclosed by the Chinese Loess Plateau (CLP) to the north and the Qinling Mountains to the south, is an outstanding, world-class site for obtaining high-resolution terrestrial records of Cenozoic climate and environmental changes. Weihe Basin is an elongated rift basin formed after the collision between the Indian and Eurasian plates in the early Cenozoic. Previous geophysical and sedimentary investigations indicate that the Weihe Basin is filled by 6000-8000 m of a continuous fluvial-lacustrine sedimentary sequence spanning the Eocene through Holocene, which will provide an excellent archive for deciphering the long-term evolution of the East Asian monsoon. This unique basin is also an ideal location for studying basin-mountain coupling and tectonic-climate interactions, as well as the dynamic impact of the deep lithosphere on shallow-to-surface sedimentary environments. In addition, Weihe Basin contains abundant helium, geothermal and groundwater resources, which have great economic potential for green energy utilization.

Institute of Earth Environment, Chinese Academy of Sciences (IEECAS) plans to convene a workshop in October 16-18, 2019, in Xi'an, China, to discuss a scientific drilling project in Weihe Basin and related technical and logistic issues for the submission of a full proposal to ICDP. The three-day workshop will be organized as a series of talks about regional tectonics and geology, geophysics and stratigraphy of Weihe Basin, drilling operations, and a preliminary deep drilling proposal. The objectives are to address the scientific significance of deep drilling in Weihe basin, and to construct a feasible logistics management plan for future drilling. A field excursion to Weihe Basin will be incorporated into the schedule for all participants to view potential drilling sites and examine local geologic settings.

Colleagues of the international scientific community interested in the Weihe Basin project are invited to submit their application by 20 June 2019 to Dr. Youbin Sun (sunyb@ieecas.cn) and Dr. Li Ai (ailli@ieecas.cn) with contact details, a summary of research interests and expertise, and a brief description of their intended project contribution. Preference will be given to scientists from ICDP member countries. Successful applicants will be notified in late June.

Conveners:

Prof. Zhisheng An, Institute of Earth Environment, Chinese Academy of Sciences (CAS)
Prof. Jun Chen, Nanjing University
Prof. Peter Molnar, University of Colorado at Boulder

Organising Committee:

Prof. Youbin Sun (sunyb@ieecas.cn), Institute of Earth Environment (CAS)
Prof. Maosheng Zhang, Xi'an Centre of Geological Survey, China Geological Survey (CGS)
Prof. Huayu Lu, Nanjing University

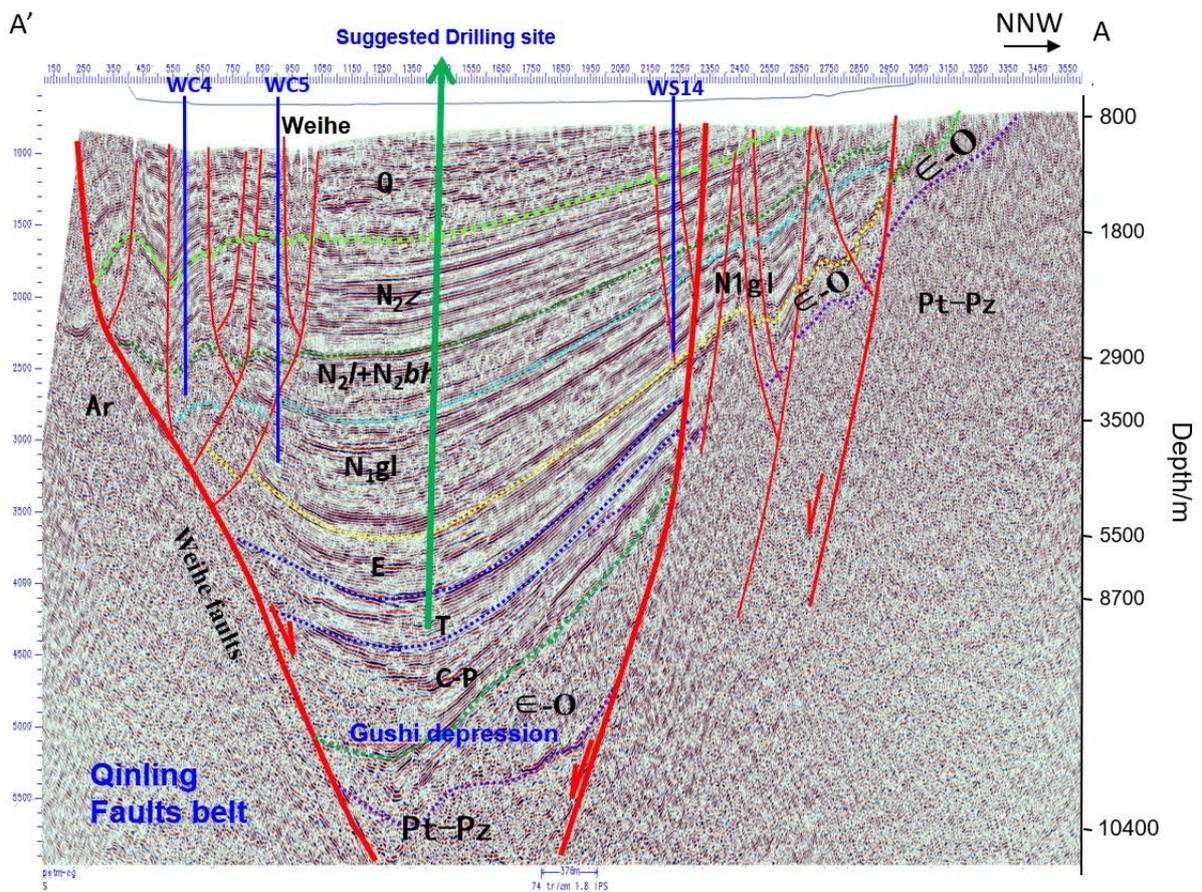
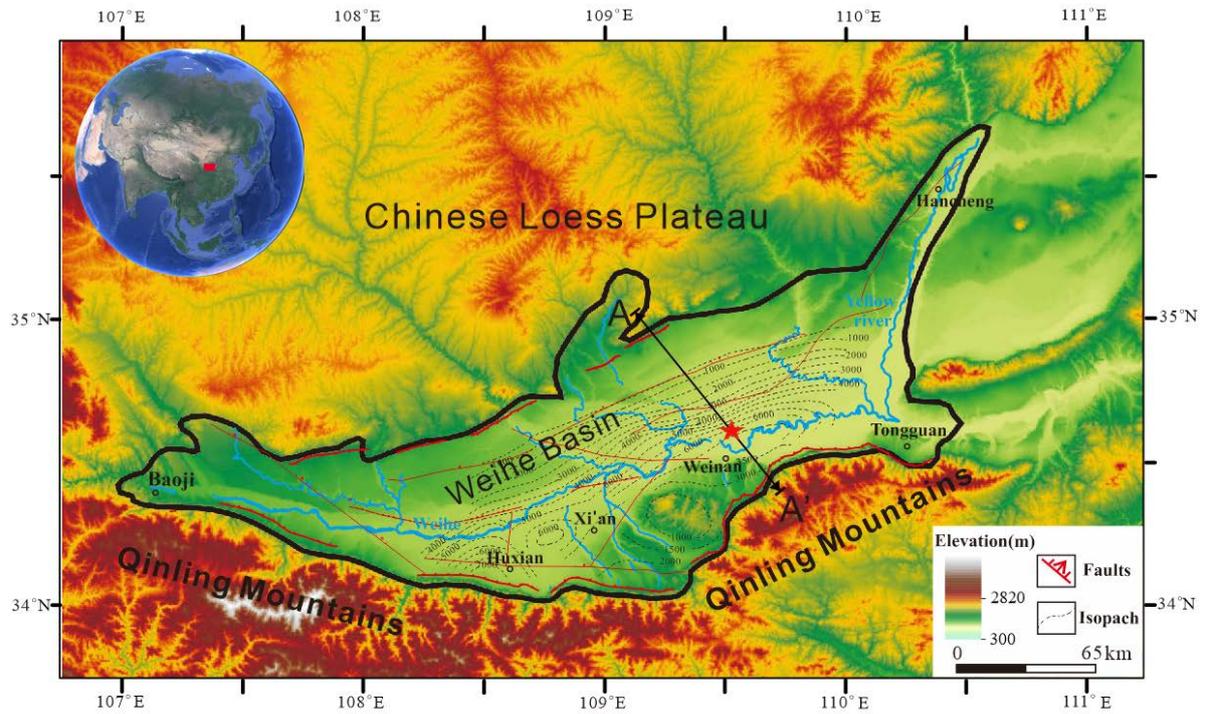


Figure 1. Cenozoic sediment isobaths map and seismic cross-section (AA') in the Weihe Basin