This is a pilot study proposal for Faculty Research Investment Program at Baylor. The pilot study is aimed at gathering the needed pilot data for developing a competitive NSF research proposal (targeted date: January 15, 2008). The planned NSF proposal is going to be a collaborative project between Baylor University (Feng and Dworkin) and Louisiana State University (Kam-biu Liu) that also entails the collaboration of 4-6 scientists from Kazakhstan and China (the planned NSF budget is $450,000). We propose to reconstruct a detailed climatic history of the last 10,000 years in the westerlies-dominated Central Asia (NW China and Eastern Kazakhstan) based on a multi-proxy study of total 15-20 lake cores. A high-resolution reconstruction of climatic changes from the proposed study area shall provide a more comprehensive context for understanding hemispheric- and global-scale forcing mechanisms and ocean-atmosphere-continent couplings throughout the past 10,000 years. The PI's (Feng) past experiences working on NSF projects repeatedly affirmed the importance of gathering pilot data for developing competitive proposals. His first two NSF research grants were secured through pilot studies supported by MSU internal grants; third by a grant from National Geographic Society. He is confident that he and his collaborators will be able to develop a very competitive NSF proposal if the request pilot study is supported.