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Early Cretaceous Baoder extensional granitic dome and its tectonic implications, Sunite Zuoqi, China-Mongolia Border area

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Baoder dome is developed in the China-Mongolia border area of Sunite Zuoqi, which is an asymmetric syn-kinematic extensional dome. This dome consists of core Early Cretaceous granitic pluton ($131 \pm 1\text{Ma}$), ductile shear zone and brittle detachment fault from center to outside. The hanging wall are undeformed Late Jurassic granodiorite ($159 \pm 1\text{Ma}$), Devonian schists and Early Cretaceous basin. Ductile shear zone and detachment fault only developed in the southwestern part. Detailed field observation and microstructures showed that core pluton and ductile shear zone were formed in a same tectonic stress field, which indicated a unified top-to-the-NW shearing. The deformation grade increased toward outside. All those implied that formation of foliations of the dome are closely related to emplacement and uplift of the pluton, which similar to other Early Cretaceous plutons in South Mongolia (Daoudene et al. [1]). Thus, the Baoder dome is similar to other extensional domes in NE Asia (Wang et al. [2,3]) which reflected geological features of syn-kinematic granitic dome during regional extensional detachment settings. sional figures/photos/tables. Abstracts that exceed the one-page limit will be returned to authors.

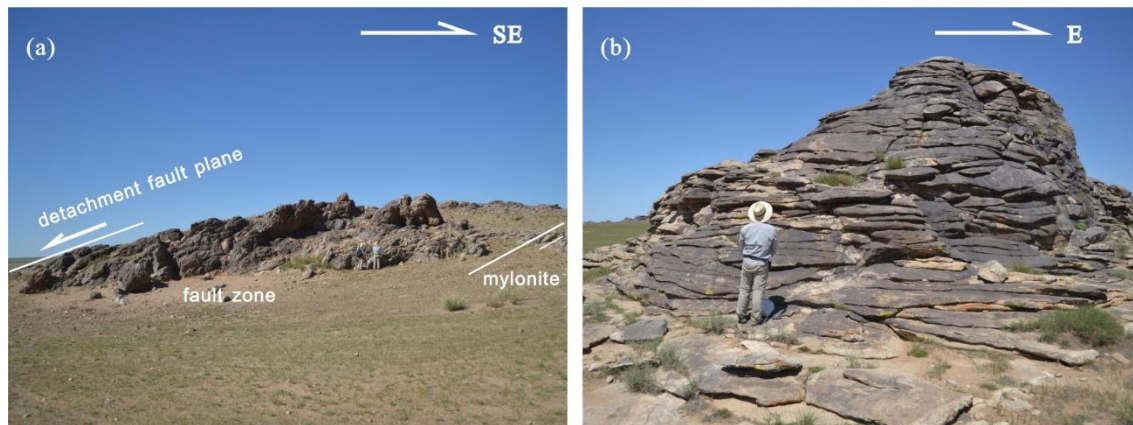


Figure 1: (a) Detachment zone of the dome, fault zone contains microbreccia); (b) Core pluton in the centre with sub-horizontal magmatic foliations and late cleavages, north Sunite Zuoqi, Inner Mongolia, China

References:

- [1] Daoudene Y et al. (2012) Tectonics 31, TC3001: 1-23
- [2] Wang T et al. (2011) Tectonics 31, TC3001: 1-23
- [3] Wang T et al. (2012) Lithos 154: 315-345

