



Late Cenozoic faulting in the transition zone between Hangay and Goby Altay (Mongolia)

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The Hangay and Goby Altay orogenes are located in the juxtaposition, equally oriented, although are morphologically very different. Difference in the morphology is founded upon profound contrast in the tectonic regime. For Goby Altay the recent transpressive conditions with strike-slip and thrusts are typical. Within Hangay dome the normal faults are the most indicative (Cunningham, 2001). Thus, in the sufficiently close proximity are found the structures, formed under the conditions of acting the tangential and radial forces. How they do interact? We investigated faulting and paleostress in the Hangay - Goby Altay transition zone, which was studied weakly. Neotectonically this zone is represented by low South Hangay block and Valley of Lakes basin.

In the western part of transition zone compressive conditions and transpression in NE direction are changed by the strike-slip conditions and extension in NW direction. Holocene active strike-slip faults were discovered by (Walker et al, 2007) along the northern sublatitudinal limitation of South Hangay block. In the eastern part of transition zone we have discovered left lateral strike-slip faults, obliquely intersecting Valley of Lakes basin. On the southwest they are connected with the strike-slip faults of the Gobi Altay, while on north east they adjoin the WNW trending thrusts, which limit South Hangay block. The activation of the movements along the faults began in the Pleiocene, simultaneously with active uplifting of the Gobi Altay ridge. We also revealed the signs of the strike-slip movement activity in Late Pleistocene and Holocene. Paleostress reconstructions are shown the compressive to strike-slip types of deformations with N or NE directions of the main compressive axis. Such a regime of deformations is changes abruptly by NW extension regime north to the southern

boundary of East Hangay. The NE trending normal faults are controlled the volcanic and geothermal activity in this part of the Hangay dome.

Thus, the active faulting in the Hangay - Goby Altay transition zone is consistent with regional stress field of the South Mongolia induced by the India-Eurasia collision process. The tranpressive faulting is gradually moving to the northeast and reworking the Miocene and Early Pliocene structures along the southern slope of Hangay dome.