

DEEP STRUCTURE OF TIEN-SHAN REGION OBTAINED FROM GEOPHYSICAL RESEARCHES

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Deep structure of Tien-Shan region obtained from geophysical researches. MUSIENKO E., KALMETYEVA Z.A. Institute of Seismology, Bishkek, the Kyrgyz Republic. Tien-Shan is an example of an intercontinental mountain range that has been created since Late Oligocene by active convergence of the two plates of lithosphere. We used geological, seismological and geophysical data obtained from magnetic, gravity, electro-magnetic and other geophysical measurements in order to constrain 2D combined models of crust up to the depth about 80 km along sections crossing Tien-Shan chain and surrounding regions. Deep structure of Tien-Shan orogeny is quite different from one of adjacent Kazakh shield. There are differences in crustal thickness and density and velocity structure. We obtained also sufficient variations in thickness and depth of electro-conductive layer within orogenic area in compare with shield. As for predominant mineral composition of Tien-Shan crust within depths 25-50 km crust mainly consists of granite and granite-diorite rocks.