

NEOPROTEROZOIC OROGENIC BELTS OF THE WESTERN MARGIN SIBERIAN CRATON: PETROLOGY AND TECTONIC EVOLUTION

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The Proterozoic fold-nappe belts outcrop along almost all stretch of the western boundary of the Siberian craton. The Central Taimyr accretionary belt and Angara belt (Yenisey Ridge) are their most expressive specimens. The first frames the Siberian craton on the north-west, the second - on the south-west. There are about 1500 km in between, however, the same Neoproterozoic collision-accretionary events are impressed in both belts, that allows us to speak about the tectonic evolution of the overall western margin of the Siberian craton in Neoproterozoic. Within these belts the large blocks of the continental crust represented zonal metamorphized sediments of passive continental margins with calc-alkalic S-granites of 920-850 Ma age (U-Pb method, zircon) are established. They are divided by the large sutures along which the ophiolite plates and nappes are observed. The age of more ancient ophiolites are estimated as 1200-1000 Ma (Rb-Sr, Ar-Ar methods), the age of the other ophiolites are 850-740 Ma (U-Pb, Sm-Nd methods). The combined isotopic-geochemical (Sm-Nd, Rb-Sr, Ar-Ar) study of garnet amphibolites from trust foots of the ophiolite covers both in Taimyr and in the Yenisey Ridge showed the same age, 620-600 Ma, which we consider as the obduction time of the Neoproterozoic ophiolites and island arcs onto the continental margin.