

MAIN EARLY PROTEROZOIC GEODYNAMIC EVENTS KODARO-UDOKANIAN ZONE: ATTEMPT OF PLATE-TECTONIC MODEL CONSTRUCTION (EAST SIBERIA)

FALKIN EVGENY MIHAILOVICH

MAIN EARLY PROTEROZOIC GEODYNAMIC EVENTS IN KODARO-UDOKANIAN ZONE: ATTEMPT OF PLATE-TECTONIC MODEL CONSTRUCTION (EAST SIBERIA) 1FALKIN E.M., 2BARKOVSKY O.V., 2ABRAMOV B.N. 1Mining Institute of Technical University, Chita, Russia; 2Institute of Natural Resources, Chita, Russia. Early Proterozoic sedimentary processes which occurred in the south-west shore of the Aldanian continent have formed a passive margin (Kodaro-Udokanian zone) with usual set of facies. General thickness of the complex is 5000-7000 m. Continental rifting formations are unknown. The boundaries with primitive continental Archean crust (crystalline schists, migmatites and gneissoid granites) are tectonic. Proterozoic oceanic rocks are observed on the west in the suture of the Muysky zone only. Radiometric age of sedimentary process beginning is no less than 2180±50 Ma. Approximately 1900 Ma ago reversion of geodynamic regime had happened and subduction of ocean crust under the Aldanian plate had started. Subduction was accompanied by intrusions of rapakivi-granite formation (1900-1780 Ma). Effusive analogs are absent. Alkalinity of granites increases in the direction of the continent. Granites continued to intrude till collision of the Aldanian and the Stanovik-Angarian continents has begun and partly during it. Complexes-indicators of collision situation are contrusion-obduction massives of stratified gabbroids (1800 Ma), stocks and dykes of granites with biotite, muscovite, often with tourmaline (1820 Ma). The upper sedimentary complex of the Aldanian plate moved to the south-west in the course of subduction and collision. This movement was accompanied by the system of overthrusts which consisted of comparatively thin plates of Archean and Proterozoic rocks. Migration of thin plates coincides with general movement. Fault planes of the of thrustings are characterized by layers of tectonic breccias, crushed conglomerates and metamorphic schists. Metamorphism decreases up as well as down relatively this zones. Acute folding takes place near fault planes. The continental crust enlarges at twice and Early Proterozoic orogen is formed as the results of enumerated processes.