

## **Lithostratigraphy and Evolution of Sedimentary Cover of Wrangel Island (Chukotka)**

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### **ABSTRACT**

The numerous current hypotheses on structural evolution of the present day Arctic require validation using data from regional geological studies. We are focusing on sedimentary cover of Wrangel Island, because it is the key region for understanding the geological evolution of Arctic. There are 3 Tectonic Zones of Wrangel Island (Sokolov et al., 2017): Northern, Central and Southern Zones, which differ in lithological, stratigraphic and structural features. Northern tectonic zone presented by Upper Silurian-Lower Devonian, Devonian-Carboniferous, Permian and Triassic deposits. They are crumpled in folds of submeridional pro-deleting which were formed in the conditions of the sub width compression during an Elsmirian phase of deformations. Upper Silurian-Lower Devonian deposits aren't in the Central and Southern Tectonic Zone. Metamorphic basement is Proterozoic and perhaps early Cambrian age (Sokolov et al., 2017). Basement deformed together with Devonian-Lower Carboniferous deposits in folds which unconformity overlaid by not deformed deposits of Lower (?) and Middle Carboniferous-Permian Units. The Southern zone includes the Neoproterozoic metamorphic basement and Devonian – Triassic sedimentary cover. Deposit of Southern zone are characteristic by northern vergent thrust- folded deformations formed at the end of late Cimmerian phase of deformations. The analysis of paleogeographic and geochemical data provides grounds for the assumption that Southern and Northern Tectonic zones were separated by uplift of Baikalian basement in Paleozoic time. This work was supported by Rosneft company (RN-shelf-Arctic), Russian Science Foundation (RSF 16-17-10251)