

## **VOLCANIC COMPLEXES OF THE URAL SUPERDEEP BOREHOLE SD-4 SECTION**

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The borehole is drilled in the inner part of the Tagil paleorift. There was opened a section of Early Silurian and Late Ordovician units of the main volcanogeneic Urals zone, not disturbed by overlap, collision tectonics, 180 km to NNW from Ekaterinburg. It is an integral section (with thickness of more than 5 km) gently sloping bedding of volcanites and sediments S113-v1 of riodacite –andesite – basalt formation of island-arc type, deposited sedimentally normally at the depth of 5070 m also on massive non-shale and non- disturbed by fracture tectonics rhyolite-basalt volcanites of ophiolite basement, O3 –S11. Geochemistry peculiarities of both complex correspond to their formation of the late continental crust: their basalts contain much higher concentrations of niobium (up to 3 –12 ppm), than island-arc basalts (0,3-3 ppm), zirconium (80 - 280 ppm) and also often K<sub>2</sub>O and Na<sub>2</sub>O, Ba, La, Ce, that is components that enriched initial toleitic magmas during their contamination with material of continental crust. Thick (up to 1.5 km) width of riodacite –tuffaceous flintoids and turbidites in the lower part of the formation section S113–v1 doesn't contain argillaceous sediments - thin terrigenous material. Therefore the sea basin of paleorift didn't resemble modern near-arc basins. The specificity of section is also manifested by basalt pyroclastics of hydrovolcanic type eruptions and development of thick submarine ash flows riodacite, connected with rifting nature of magmatism.