

## **Geochemical features uralid as reflection of geodynamic development of the region (Polar Urals)**

I. V. KOZYREVA AND N. YU. NIKULOVA

Institute of Geology of Komi Science Center of Ural Branch of Russian Academy of Sciences,  
167982, Syktyvkar, Pervomayskaya 54  
E-mail: kozyreva@geo.komisc.ru

Geochemical, lithological and mineralogical features of basal uralide beds have been studied in two sections of interformational contact zone. Pre-Paleozoic sediments are represented by Upper-Riphean basic volcanites. The basement is overlaid by terrigenous Upper Cambrian-Lower Ordovician sediments with cross-bedding and azimuthal unconformity. By silica content the igneous rocks of basement are related to ultrabasic rocks ( $\text{SiO}_2$  37.23–43.26 wt %), to the environments of volcanic arcs and active continental margins [2]. The presence of feldspar debris testifies to acid magmatic rocks of earth crust continental blocks as the source of material [1].

The studied rocks contain insignificant quantity of hydrolysate material of weathering crust, which is characteristic of gold-bearing continental Lower Paleozoic varieties. Dry land can be suggested here in Late Cambrian-Early Ordovician time. During vertical movements, related to tectonic processes in continental margins at the onset of riftogenic stage, the clastic material was carried to low parts of the relief. Sequentially the paleovalley was occupied by shallow water marine bay. Sandstone-aleurite sediments, and on lifted areas – sandstone-gravel sediments, were deposited there. Basal conglomerates, characteristic for coastal facies at normal transgressive cycle, are absent here. The changes of material composition of the rocks upward the section reflect the stabilization of tectonic mode and changes of clastic sources, where the leading role is obtained by the areas composed of non-altered in weathering crust and non-auriferous acid rocks.

Supported financially by the Program of fundamental research UB RAS 12-C-5-1020 “General and local criteria of difference of high disperse exogenic and low temperature hydrothermal ore-forming systems”

[1] Dickinson, W.R., Valloni, R., Plate settings and provenance of sands in modern ocean basins, *Geology*. 1980. Vol. 8. P. 82-86 [2] Pearce T. H. Gorman B. E., Birkett T. C. The relationship between major element chemistry and tectonic environment of basic and intermediate volcanic rocks, *Earth Planet, Sci. Lett.* 1977. V. 36. P. 121–132