

TECTONIC AND METAMORPHIC EVOLUTION OF THE SVECOFENNIAN ACCRETIONAL OROGEN (SE FINLAND AND NORTH LADOGA REGION)

Viktor A. GLEBOVITSKY, Irina S. SEDOVA

Institute of Precambrian Geology and Geochronology, Makarova emb., 2,
St.Petersburg 199034, Russia, E-mail: vg@vg.1404.edu

The data on a stratigraphy of the supracrustal units provide to correlate them through the Raahe-Ladoga suture. The basins developed near and in connection with volcanic arcs existed only during short time, not more than 30 Ma. Systematic of the available Sm-Nd isotope data for the crust forming plutonic rock (1.90-1.85 Ga), calculation the T_{DM} model ages which are of 2.3-2.4 Ga provide the conclusion that their magma of complexes which compose the new crust generated on the active continental margin was emplaced from juvenile sources and contaminated by metasedimentary rocks contained the Archaean clastic material.

The PT conditions were estimated and the prograde and retrograde paths of evolution were inferred. The initial anatexis migmatites appear in the sillimanite-muscovite zone, and the partial melting become more and more intensive in granulite facies. The homogenisation method, i.e. melt inclusions in a leucosome of the early migmatites, was used to determine temperatures in the zone where migmatization had commenced. The lowest temperature averaged 680°C and the highest was nearly to 770° - 800°C. For the pressure estimation a criometry of CO₂ inclusions was used. A pressure in the metamorphic zonality increases from 3.5 to 5.5 kb. It should be assumed that temperature did not fall significantly during the first stage of uplift, as the melt was at least preserved and likely appeared in the complex.

Speaker's name and mailing address: Viktor A. Glebovitsky, Institute of Precambrian Geology and Geochronology RAS, Makarova emb., 2, St.Petersburg 199034, Russia.

Tel: +7 812 328 4701 Fax: +7 812 328 4801 E-mail: vg@vg1404.spb.edu

Session Number and Session Title: 9-3, Tectonic Evolution...

Oral

I submitted three more abstracts of which I am the first author