

Sources of Neoproterozoic Metasediments of the Baikal-Patom Belt: Sm-Nd and Pb Isotope Data

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First systematic data on $\epsilon_{Nd}(T)$ and Pb-isotope ratios in the Neoproterozoic sedimentary sequence of the Baikal-Patom fold belt (BPB, Northern Transbaikalia) are reported. The range of obtained $\epsilon_{Nd}(T)$ is $-19.4 \dots -2.0$. The rocks of the Ballaganach and most part of the Dal'nyaya Taiga groups are characterized by $\epsilon_{Nd}(T)$ from -19.4 to -16.3 . Upsection the rocks show sharp change in $\epsilon_{Nd}(T)$ to $-8.3 \dots -2.0$. Values of $(^{206}\text{Pb}/^{204}\text{Pb})_t$, $(^{207}\text{Pb}/^{204}\text{Pb})_t$ and $(^{208}\text{Pb}/^{204}\text{Pb})_t$ for metamorphic pyrite are: 17.9-18.8, 15.58-15.69, 38.0-38.8. Our data, as well as its comparison with those of the inferred source areas suggest that the input of clastic material at the early stage of sedimentation in the Baikal-Patom belt was mainly related to the destruction of the Early Proterozoic crust of the Siberian craton. Owing to a change of sedimentation setting from passive continental margin to the "foreland" basin at the late stage, the clastic material of the Siberian craton was diluted by that from juvenile Neoproterozoic crust of the adjacent Baikal-Muya belt.

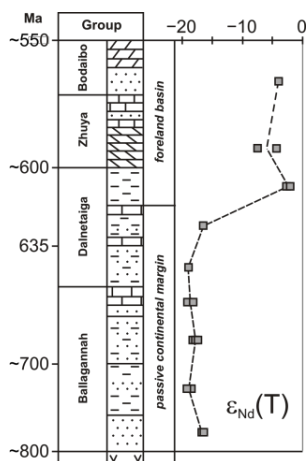


Figure 1: BPB stratigraphic column and the Sm-Nd data
The study is supported by the RSF grant 16-17-10221.

[1] Powerman *et al.* (2015) *Precambrian Res.* **267**, 39-71. [2] Chugaev *et al.* (2017) *Geochem. Int.*, **55**, 60-68.