

Relation of layering and trace element content in the Horoman peridotite: enrichment of highly incompatible element at H-L contact

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The Horoman peridotite in the Hidaka metamorphic belt is characterized by conspicuous layered structure corresponding to the variation of melt components. Similar layered structure occurs in orogenic lherzolite massifs worldwide implying the heterogeneity of upper mantle at continental margin or at rift zone in terms of lithology and chemical compositions. In the Lower Zone of the Horoman peridotite, the boundary between harzburgite and lherzolite are enriched in highly incompatible elements such as light rare earth elements more than ten times greater than surroundings. The processes responsible for such enrichments may be due to (1) an interaction between melt and lherzolite forming harzburgite band or (2) late metasomatism by melt flowing along lithological boundary.