GEOCHEMICAL INVESTIGATION OF BASIC VOLCANITE-HOSTED AUTOCHTHONOUS LATERITIC BAUXITE OCCURRENCE IN MURATBAGI (ISPARTA-TURKEY)

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Autochthonous bauxite occurrence is situated at the top of the Islikayatepe volcanite, located northwest of Muratbagi village (Sarkikaraagac-Isparta). There are three different bauxite levels in the profile and each level has basic volcanite, partly weathered volcanite (saprolite) and bauxite. A total thickness of profile is 167 meters. Lateritic bauxites contains average 39.98 % Al_2O_3, 25.22 % Fe_2O_3, 5.60 % TiO_2, 14.19 % SiO_2, 82.66 ppm Ni, 65 ppm Sc, 111 ppm Y. Average rare earth elements (REE) of bauxites are 194.1 ppm. Light rare earth element (LREE; La-Sm) is 144 ppm, and heavy rare earth element (HREE; Gd-Lu) is 46.1 ppm. Chondrite-normalized REE values for the bauxites are $(La/Lu)_N$ = 5.23, $(Gd/Yb)_N$= 3.72, $(La/Sm)_N$= 2.02, $(La/Yb)_N$ = 1.52, Eu/Eu* = 1.04 and Ce/Ce* = 0.73; basalt-normalized REE values for the bauxites are $(La/Lu)_N$= 1.35, $(Gd/Yb)_N$= 2.01, $(La/Sm)_N$= 1.11, $(La/Yb)_N$= 1.52, Eu/Eu* = 0.97, Ce/Ce* = 0.72. HREE has strongly positive correlation with Fe_2O_3, Cu, Y. While Al_2O_3 is showing strongly positive correlation with CaO, Cr_2O_3, Th, Zr, Sc and strongly negative correlation with Na_2O, K_2O, MnO, Ni, Zn, Fe_2O_3 has strongly positive correlation with TiO_2, P_2O_5, Cu, V, Y, HREE and has strongly negative correlation with MgO, Pb, U, Ce. In factor analysis was realized to the bauxites, the first two factors that eigen values over 1, correspond with 68 % of total variation. Two significant groups are determined in cluster analysis such as «Main component group» and «Trace element group» of basic volcanite-hosted lateritic bauxite.

PLATINUM MINERALIZATION IN THE NIZHNY TAGIL AND KACHKANAR ULTRAMAFIC COMPLEXES, URALS, RUSSIA: A GENETIC MODEL

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We present a model to account for the PGE-(Pt) enrichment of the Uralian type Complexes and for the specificity of the PGM composition. This model takes into consideration the systematic association of the PGE mineralization with chromitite concentration (with the definition of a *CR factor*) and the specific textures of the PGE mineralized chromitite. It is largely inspired by the comparison with the mode of emplacement of the chromite pods in ophiolite complexes.

The Nizhny Tagil Complex is composed of a dunite core with a rim of wehrlite and pyroxenite. The dunite unit, which has a uniform mineral composition (olivine $Fo_{89.8\text{-}92.1}$, av. 0.25 wt% CaO, Fig. 1), represents an accumulation of olivine and minor chromite from a mafic magma in an open-system magma chamber. After solidification of the dunite, differentiation began with the formation of the wehrlite (olivine $Fo_{77.9\text{-}88.8}$) and pyroxenite, corresponding to the closure of the magmatic system. Two main types of chromitite occurrence are observed in the dunite body: small (100 × 5 cm) scattered schlieren of chromite crystals within the ultramafic unit and much larger (up to 100 × 5 m) concentrations. The chromite composition in both types is similar and uniform [Cr/(Cr+Al+Fe^{3+}) = 66.02,

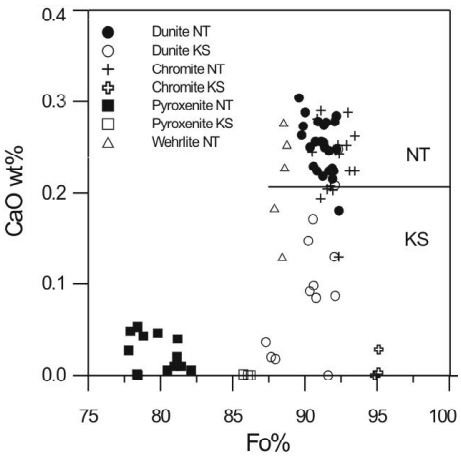

Fig. 1. Plot of CaO versus Fo content in olivine from the Nizhny Tagil (NT) and Kachkanar (KS) Complexes.