

Boron, Beryllium and Caesium occurrences in Mongolia

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In relation to the development of world sciences, much interest is being placed on a light metals which are mineral resources such as Boron, Beryllium and Caesium.

In our country, more than 20 boron occurs with small practical use. Boron is connected with Boron-bearing skarn and sedimentary deposit of a saline lake. The discovery of Boron mineral, which is abundant with tourmalines, has metasomatite origin. Those tourmalines are associated with Au-bearing sulphide copper minerals and other metals. The chemical feature of tourmaline from metasomatite of copper porphyry deposits are characterized as an indicator for Cu-Mo and Cu-Au porphyry deposits. Total combination of the indications on the sample of tourmalines have been established in the copper porphyry deposits Bayan-Uul, Nariin Khudag, Kharmagtai and others on the Central and South part in Mongolia.

Known occurrence of beryllium and caesium belong chiefly to the pegmatite type. As a by-product, beryl is found in conjunction with cassiterite and wolframite in quartz metasomatites of molybdenum-tungsten ores deposits. The discovery of the formation of Bertrandite tuffs and Caesium glass which are related with the Lake Mesozoic subvolcanic facies of rhyolite-porphyry were revealed in the Southern Mongolian rare-metallic belt and in the North Eastern part of Mongolia. These occurrences are the most interesting as a new type of non-traditional mineral resources of 21st century in Mongolia.