# Geochemical types of gold mineralization in the south-eastern part of the East Sayan

B. DAMDINOV[1]

[1]Geological Institute SB RAS, Ulan-Ude, Russia, damdinov@mail.ru

The south-eastern part of the East Sayan is a well-known gold mine district in Russia. Region presents a fold area which consists of rocks with age from Archean to Late Paleozopic. In this region Tuva-Mongolian microcontinent, island-arc and ophiolitic complexes fragments as well as volcanogenic and carbonate-terrigenous suites are presented [1]. Igneous rocks such as granitoids and basic rocks have similar ages. Gold mineralization of this region is related to Archean foundation, island arc and ophiolitic complexes. Part of gold ore objects are hosted by igneous and carbonate-terrigenous rocks. Several types of gold mineralization are established. Selection of these types is based to geochemical association of ore-forming elements as well as association of main ore minerals containing these ore-forming elements. The largest deposits of this region are assigned to gold-polymetallic (Au-Ag-Fe-Cu-Zn-Pb±Sb, As) type. There are deposits of Urik-Kitoy gold mining area (Zun-Holbinskoe, Barun-Holbinskoe, Zun-Ospinskoe et al. deposits). Au-Fe type deposits are related to black shales and present gold-pyrrhotite ores (Olginskoe et al. deposits). The Au-Te, Au-Bi-Te, Au-Bi, Au-As types are intrusion-related (Konevinskoe, Tainskoe et al. deposits). Au-Cu-Sb and Au-Cu-Hg types are presented by gold-fahlore ores in the carbonate suites (Dynamitnoe, Yuzhnoe deposits). Au-As type is hosted by lisvenitized shales (Verhnehonchenskoe deposit). All of the gold mineralization types have a mineral and chemical composition features, different ages and genesis.

[1] Kuzmichev A. B. (2004) Tectonic history of Tuva-Mongolian massif: Early Baikalian, Late Baikalian and Early Caledonian stages. Moscow: Probel-2000, 192 p. (in Russian).