

VISIBLE AND INVISIBLE GOLD MINERALIZATION IN METAMORPHIC ROCKS OF KIZYL-KUM (CENTRAL ASIA)

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The Kizyl-Kum desert is a Large-scale gold-bearing region of the world with mezo-thermal gold deposits in metamorphic terrigenous-carbonaceous rocks (O-S, Rf): gold-scheelite-quartz type (Muruntau, Miuntenbai), gold - sulphide – arsenious (Kokpatas, Daughyz) and others. The giant stockwork has been constituted during three stages: 1-pre-dyke gold-rare-metal-quartz (basic mineralization of a veined and disseminated type), 2-post-dyke gold-sulphide-quartz (gold, pyrite, arsenopyrite, Bi-minerals in veins and veinlets) and 3-quartz-gold-silver-polymetallic (gold, sulphides, selenides, Pb, Bi, Ag, Sb-tellurides in veins and veinlets). The Kokpatas and Daughyz deposits with a gold-sulphide-arsenious type of mineralization make large-scale stock works, originated during two stages: 1-gold-sulphide-arsenious (gold-pyrite-arsenopyrite as a basic stage), 2-gold-sulphide - sulphosalt (gold - tetrahedrite and quartz-antimonite) . Visible (0,2 mkm) gold has been revealed using a gravitational. Volume, size, weight and morphology have been estimated for 2026 mikro-granulars. The finest gold class occurs within the Daughyz ores (not above 4 mkm) and Kokpatas (0,2 mkm, mainly 5-50 mkm). In the Muruntau sulphides visible native gold prevails, and a share of a fine class increases with depth. Invisible gold content in the Kokpatas deposits in pyrite of the individual crystals reaches up to 0,15%, in arsenopyrite-0,12, in the Muruntau-0,06 in pyrite, 0,1 in arsenopyrite. Invisible (0,2 mkm) gold doesn't show the relation to other elements (As, Fe, Se, Sb and others), and visible gold in pyrite is confined to the arsenious areas.