

STRUCTURE AND FORMING DYNAMICS OF ORES IN GOLD-SULPHIDE DEPOSITS

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Gold sulphide deposits are generated at late-orogenesis and re-working periods. The forming of sequential stages of mineral ore complexes, including one or more mineral associations, occur at various deep levels during relative-rest periods of folded-block dislocations with variable stress field. The earliest pre-ore mineral complex is presented by disseminated pyrite and chalcopyrite-pyrrhotite associations formed under general compression. The early ore complex includes disseminated-veinlet pyrite-arsenopyrite association with submicroscopic gold formed under compression at middle depth as well as veinlet sulphide-polymetallic assemblage with shotty gold, fixing the transfer to tension. The middle variably-ore complex is presented by vein-veinlet quartz-berthierite-antimonite-scheelite association with re-deposited coarse fine gold formed at shallow depth and common tension. The last quartz-carbonate complex, closing ore-forming, is accompanied by cinnabar, realgar, orpiment, native arsenic, silver minerals, and re-deposited gold. This complex occurs under near-surface conditions with widespread brittle tension deformations.