

MINERAL DEPOSITS ASSOCIATED WITH COALS AND BLACK SHALES: A COMPARATIVE ANALYSIS

SEREDIN, V.V. and DANILCHEVA, J. A. Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry, Moscow, Russia.

In spite of the fact that mineral deposits in the coal basins of the Russian Far East were formed in continental environments, they show many features similar to some deposits associated with black shales. Among these are: (1) formation of both types deposits during riftogenic stages; (2) tectonic control over the ore deposits by large faults; (3) determined (anticipated) links with mafic or bimodal volcanism; (4) multistage formation of the ore deposits; (5) stratabound morphology of a main ore bodies and occurrence of a smaller and often richer cross-cutting bodies; (6) localization of the bulk of mineralization in carbon-rich layers, with the maximum contents sometimes restricted to their lowest part; (7) development of mineralization or geochemical anomalies in both overlaying and underlying host rocks poor in organic matter; (8) lateral and vertical geochemical zonality; (9) association of lithophile, chalcophile and siderophile trace elements within the ore bodies or in some of their parts; (10) mineral and organic mode of occurrences of some elements. Examples of some Ge-, REE- and Au-PGE deposits and occurrences in Cenozoic coal-bearing depressions of the Russian Far East will be considered with special attention to their common and different features with mineral deposits associated with black shales.